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Staples and the New Industrialism in the Growth of Post-Confederation Halifax*

In the late nineteenth and early twentieth centuries, the course of urban development in the Maritimes diverged sharply from the path followed by central Canada. Because Maritime cities grew at slower rates and with fewer opportunities than their Ontario and Quebec counterparts, they remained much smaller in size and less diverse in their functional activities.[1] Scholars are now attempting to explain this divergence. Several have emphasized the differentiating role of the entrepreneur. T.W. Acheson, for example, has argued recently that the Maritime entrepreneurial class, comprised mostly of a long-established mercantile elite, was unable to meet the challenge of the new industrialism of the late nineteenth century. The limited industrial experience of these community-oriented businessmen and their lack of access to capital markets led eventually to the collapse of the region's urban-industrial base and to its almost complete takeover by central Canadian interests.[2] A second group of scholars has stressed the vulnerability of the region to external forces. The demise of both shipbuilding and the carrying trade as a consequence of changing shipping technologies adversely affected the economic growth of Yarmouth and Saint John.[3] At the same time, forces of continentalism in the guise of freight rate equalization policies, business reorganization and concentration, and changing

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1 For an overview and comparative analysis of regional urbanization in Canada, see R.E. Preston, "The Evolution of Urban Canada: The Post-1867 Period", in R.M. Irving, ed., *Readings in Canadian Geography* (3rd ed., Toronto, 1978), pp. 19-46.

2 T.W. Acheson, "The National Policy and the Industrialization of the Maritimes, 1880-1910", *Acadiensis*, I (Spring 1972), pp. 3-28. For other studies focusing on this theme, see D. Frank, "The Cape Breton Coal Industry and the Rise and Fall of the British Empire Steel Corporation", *Acadiensis*, VI (Autumn 1977), pp. 3-34; and D.A. Sutherland, "The Personnel and Policies of the Halifax Board of Trade, 1890-1914", in Lewis R. Fischer and Eric W. Sager, eds., *The Enterprising Canadians: Entrepreneurs and Economic Development in Eastern Canada, 1820-1914* (St. John's, 1979).

3 D. Alexander, "The Port of Yarmouth, Nova Scotia, 1840-1889", in K. Matthews and G. Panting, eds., *Ships and Shipbuilding in the North Atlantic Region* (St. John's, 1978); and E. McGahan, "The Port of Saint John, New Brunswick, 1867-1911", *Urban History Review*, No. 3 (1976), pp. 3-13.

market potentials all robbed industrial towns such as New Glasgow and Amherst of access to central and western Canadian markets, thereby crippling their economic base.[4] A final group, represented by economic historians such as S.A. Saunders and David Alexander, has argued that Maritime economic development has been restricted by the marginal quality and poor management of the region's resource base.[5] Although these studies focus almost exclusively on the plight of individual staples to the neglect of the urban process, nevertheless they suggest that the resource hinterland of the Maritimes was too limited in size, variety, and richness to support intensive and sustained urban development.

This essay extends these enquiries into Maritime urban development. It offers a theoretical perspective on regional urban growth in Canada and examines the industrialization of Halifax in the post-Confederation period down to the eve of World War I to show how the regional staple economy of the Maritimes and the comparative advantages of other Canadian cities adversely influenced the course of urban-industrial development in the Nova Scotian capital.

There can be little doubt that the growth of cities in the nineteenth century was influenced by staple production.[6] Across Canada, regional urban systems first emerged when foreign and inter-regional demand fostered increased staple flows and where the commodities were sufficiently bulky, weighty and perishable to require urban-based linkages in the transport, manufacturing, and service sectors. As late as World War I, nearly one-third of Canada's industrial output was based directly upon primary production, and the indirect impact of staples on the secondary and tertiary sectors must have been considerable.[7] By this time, the growth of Canadian cities was also influenced by what Harold Innis has termed the "discrepancy between the centre and the margin",[8] that is,

4 E.R. Forbes, "Misguided Symmetry: The Destruction of Regional Transportation Policy for the Maritimes", in D.J. Bercuson, ed., *Canada and the Burden of Unity* (Toronto, 1977) and B. Archibald, "The Development of Underdevelopment in the Atlantic Provinces" (unpublished MA thesis, Dalhousie University, 1971).

5 D. Alexander, "Economic Growth in the Atlantic Region, 1880-1940", *Acadiensis*, VIII (Autumn 1978), pp. 47-76; R.E. Caves and R. Holton, *The Canadian Economy: Prospect and Retrospect* (Cambridge, Mass., 1959), pp. 140-94; and S.A. Saunders, *The Economic History of the Maritime Provinces: A Study Prepared for the Royal Commission on Dominion-Provincial Relations* (Ottawa, King's Printer, 1939), pp. 14-33 and 90-9.

6 This theme has been taken up in several recent studies by Canadian geographers. See D.M. Ray, *Canada: The Urban Challenge of Growth and Change* (Ottawa, The Ministry of State for Urban Affairs, 1974), pp. 23-6; and J.W. Simmons, "The Growth of the Canadian Urban System", *Research Paper 65* (Toronto, 1974).

7 Calculated from data presented in A.G. Green, *Regional Aspects of Canada's Economic Growth* (Toronto, 1971), p. 86.

8 H.A. Innis, *The Fur Trade in Canada* (Toronto, 1957), p. 385.

by continentalism — the polarizing effects of core-periphery development. In 1910, nearly 70 per cent of the country's non-primary production was concentrated in the rapidly industrializing towns and cities of Ontario and Quebec.[9] The effects of this concentration were considerable. Quite simply, the accumulated comparative advantages of heartland cities restricted urban development in the periphery.

Thus, a framework for examining the growth of Canadian cities is of necessity derived from the staple theory of regional economic growth and the core-periphery or heartland-hinterland conceptualization of regions.[10] The core supplies those factors of production (capital, labour, technology and entrepreneurship) that are used to develop the resource base of the periphery. In return, the periphery exports staple commodities (those raw materials or resource intensive goods occupying a central position in the region's exports) to the source of demand in the core. Within this context, heartland and hinterland cities function as intermediaries (see Figure 1). As intermediaries, their economic base is characterized by functions based on handling the factors of production which include trading, transportation, manufacturing, and financial and business activities. However, the degree of specialization and the composition of economic sectors differs in heartland and hinterland cities. It is unlikely that the hinterland city will have a fully diversified economic base. Depending upon the type and distribution of resources found within the periphery, cities here will function mainly as resource towns, as central places, or as break-in-bulk points. In the heartland city manufacturing is emphasized because the core's accessibility to national markets creates an initial advantage.[11] The external economies of concentrated human resources also favour heartland cities as financial and business headquarters.

Further differences between heartland and hinterland cities become evident by examining the circular and cumulative process of urban growth. The stimuli for growth are the regional economy's urban-based functions. They set in motion the multiplier effect which spawns additional basic and non-basic economic

9 Green, *Regional Aspects of Canada's Economic Growth*, p. 86.

10 R.E. Caves, "Vent for Surplus Models of Trade and Growth", in R.E. Baldwin *et al.*, eds., *Trade, Growth and the Balance of Payments* (Chicago, 1965); J. Friedmann, "Regional Economic Policy in Developing Areas", *Papers and Proceedings of the Regional Science Association*, XII (1963), pp. 41-61; J.M. Gilmour, *Spatial Evolution of Manufacturing:Southern Ontario 1851-1891* (Toronto, 1972), pp. 12-25; and M.H. Watkins, "A Staple Theory of Economic Growth", *The Canadian Journal of Economics and Political Science*, 28 (1963), pp. 141-58. I have explored some of the ideas presented in this section in a related paper: L.D. McCann, "Urban Growth in a Staple Economy: The Emergence of Vancouver as a Regional Metropolis, 1886-1914", in L.J. Evenden, ed., *Vancouver: Western Metropolis* (Victoria, 1978).

11 A.R. Pred, "Industrialization, Initial Advantage and American Metropolitan Growth", *Geographical Review*, 55 (1965), pp. 165-80.

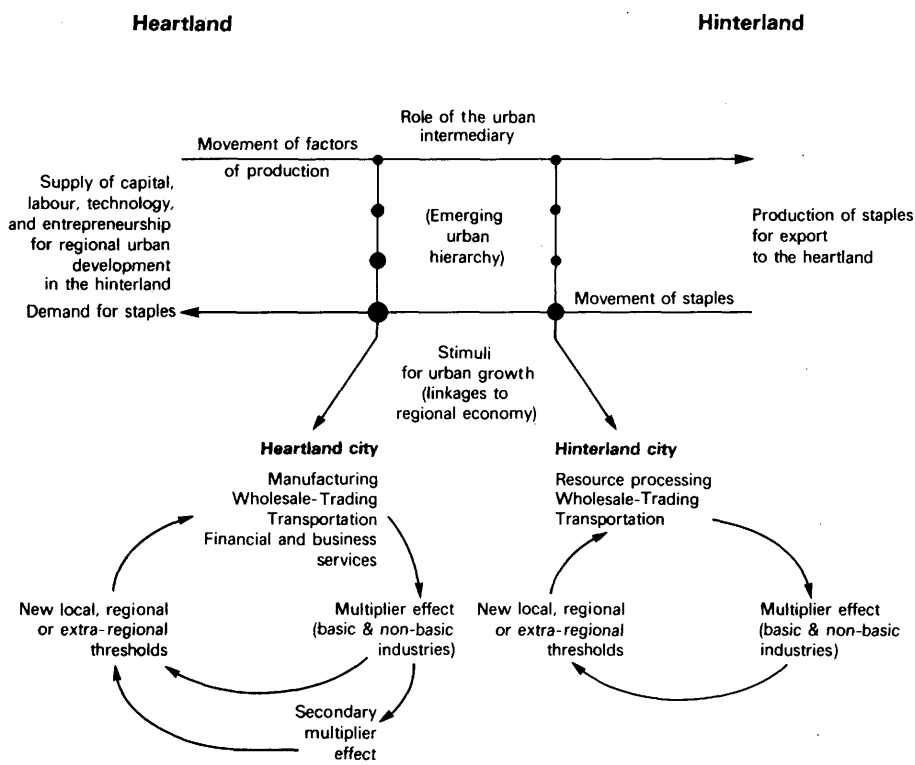

Figure 1: The Process of Urban Growth in a Heartland-Hinterland Economic System

activity. Manufacturing is the leading sector in most heartland cities and the creator of employment and population growth. This sector comprises manufacturers of primary, consumer and producer goods. Primary manufacturing industries are indicative of forward linkage effects, while the consumer goods destined for industrial markets are the result of backward connections.[12] Manufacturers of consumer and producer goods are minimal in the hinterland because the heartland can meet national market demands more efficiently. The stimulus for growth in the hinterland city is the wholesale-trading complex, particularly if the regional economy depends upon the staple trade.

Ultimately, the sustained growth and development of all cities depends upon local, regional or extra-regional thresholds, that is, upon the attainment of minimum income or population levels. Historically, heartland cities have attained higher thresholds more easily than hinterland cities and therefore have grown larger in size.[13] If it is accepted that industrialization was the "engine of growth" in the late nineteenth century, why did hinterland cities fail to industrialize? The main reasons, assessed most succinctly by Pred and by Muller, are the accumulation of external economies; transport and route developments; entrepreneurial behaviour, particularly combination practices, ologopolistic competition and inhibiting mercantile traditions; and initial advantages in the guise of site and situation, relative accessibility, factor immobility, and labour and capital availability.[14] These conditions placed hinterland cities at a comparative disadvantage against their heartland competitors.

An additional factor is the differentiating effect of the regional resource base. This factor is of particular significance for the cities of a staple economy. The economic base of a city which is dependent upon one particular staple can be seriously eroded by anything from resource depletion without substitution, loss of competitive position through inelastic foreign demand, and adverse shifts in demand resulting from competition from cheaper or synthetic sources of supply, to simply changes in taste. Differential urban growth is also related to the residentiary effects of individual staples.[15] Some staples, such as the cod fishery,

12 Backward linkages relate to inducements to invest in the production of goods required by the export sector; forward linkages relate to opportunities for investment in industries using the output of the export industry as an input; and final-demand linkages describe the inducement to invest in consumer goods industries producing for factors in the export sector. See Watkins, "A Staple Theory of Economic Growth", pp. 145-6.

13 A. R. Pred, *The Spatial Dynamics of U.S. Urban-Industrial Growth* (Cambridge, Mass., 1966), pp. 16-24 and 33-7.

14 *Ibid.*, pp. 46-83; and E.K. Muller, "Regional Urbanization and the Selective Growth of Towns in North America Regions", *Journal of Historical Geography*, 3 (1977), pp. 21-40.

15 The term residentiary is used to designate secondary and tertiary industries which locate in urban areas to serve the local or regional market. See D.A. North, "Location Theory and Regional Economic Growth", *Journal of Political Economy*, 58 (1955), pp. 243-58.

have traditionally produced only weakly developed linkage effects.[16] Others generate social structures which inhibit supportive community development, as in the case of the company town.[17] The type and strength of linkages with other economic sectors, particularly of the final-demand variety, are affected by labour force participation and income levels. The availability of labour for residentiary industries is further weakened by competition from other resource industries and by the limited skills of a resource-oriented labour force. The extent of domestic savings derived from the resource base also influences the degree to which staple entrepreneurs invest in other sectors of the economy.[18] In each situation, the location, type and size of the resource base, together with the nature of the control associated with the staple economy, directly affects urban growth. Moreover, the number and size of urban places, and certainly the timing of urban development, is critically related to the demand for staple commodities and to the supply of scarce factors of production. These, in turn, are influenced by the social, political and economic conditions of the metropolitan economy. Urban development in the hinterland is thus governed largely by external forces.

One city adversely affected by these factors during the late nineteenth and early twentieth centuries was Halifax. Although in the 1871 to 1921 period its population almost doubled from 29,582 to 58,372, Halifax dropped from Canada's fifth ranking city to its eleventh (see Figure 2). Concurrent with the decline of Halifax are other trends: the general instability of Canada's urban system, particularly between 1881 and 1911 when there was considerable reordering of ranks; Central Canada's absolute and proportional increase of cities of 10,000 people or more; and the initial appearance and rise to prominence of cities in the western periphery. Halifax is only one example of the widening urban disparity between the eastern margin and the rest of Canada. Indeed, by the end of World War I, seven Canadian cities had won higher ranks and rates of growth: Hamilton, Ottawa and London in Central Canada; and Winnipeg, Calgary, Edmonton and Vancouver in the western periphery. In the Maritimes, Halifax's downward path was not unique. Saint John and Charlottetown fared worse. The only exceptions to this pattern were Moncton, an important distribution point on the Intercolonial Railway, and Glace Bay and Sydney, the centres of coal and steel production in Cape Breton.

It is apparent that as the heartland-hinterland process emerged during the late nineteenth century, it changed regional development patterns and thereby

16 R. Ommer, "The Cod Fishery and a Theory of Settlement Development" (unpublished paper, McGill University, Department of Geography, 1976).

17 L. D. McCann, *Canadian Resource Towns: A Geographical Perspective*, forthcoming.

18 L.R. MacDonald, "Merchants against Industry: An Idea and its Origins", *Canadian Historical Review*, 56 (1975), pp. 263-81.

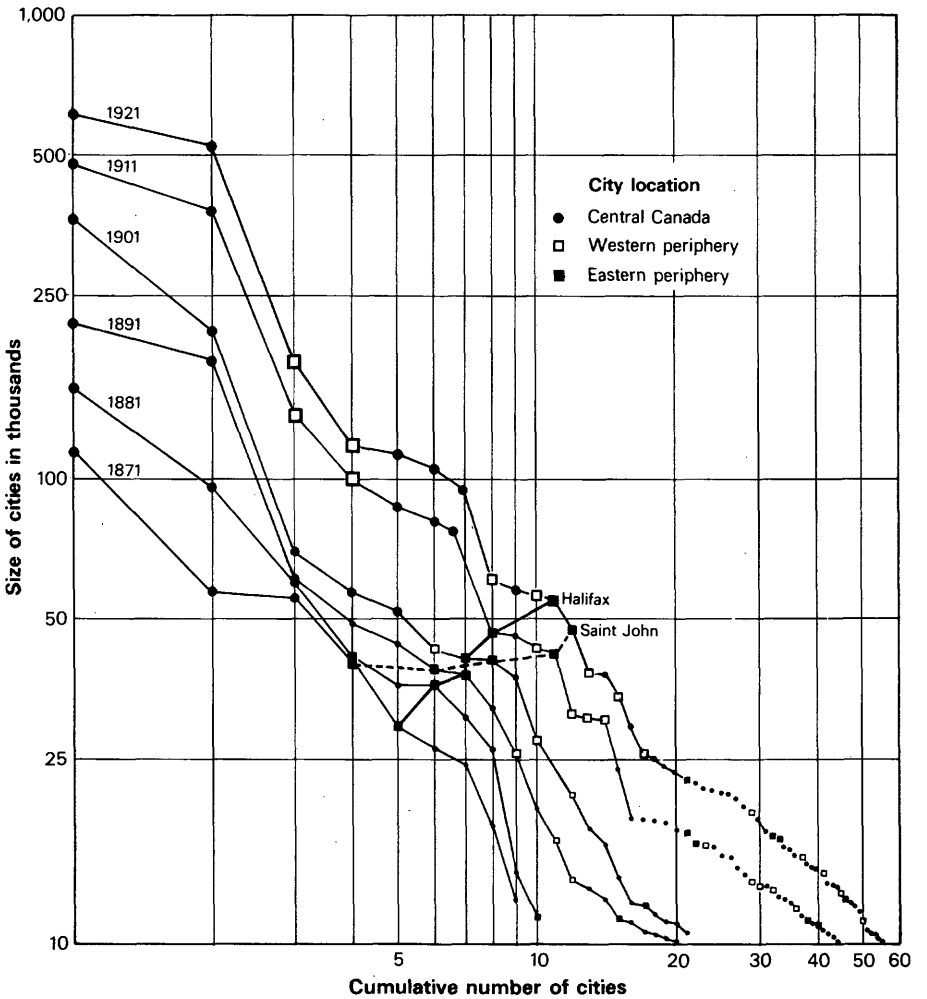

Figure 2: The Rank-Size Distribution of Canadian Cities, 1871-1921

created alternative bases for urban growth beyond those of staple production. This restructuring can be analyzed by the statistical technique of factor analysis.[19] By this procedure, measures of provincial labour force participation in 1881 and 1911 were summarized to outline the structural dimensions of the Canadian economic system (see Table 1 and Figure 3).[20] It is apparent that shortly after Confederation staple industries dominated the economy (Factor I). Agricultural production characterized Ontario and Quebec as well as Manitoba and Prince Edward Island. In British Columbia and the other Maritime provinces, fishing and mining absorbed a considerable share of the labour force. Of secondary importance to the Canadian economy, but certainly a harbinger of subsequent development, was a structural dimension of urban activity. Indeed, trading activities, government service, manufacturing and construction combined in 1881 to distinguish the industrializing core from the periphery (Factor II). Transportation comprised Factor III of the labour force analysis. It proved to be more important at the margins of the country than elsewhere. Even by 1881, therefore, the framework of the heartland-hinterland paradigm was well in place.[21] By 1911, it was an established pattern. Core-periphery contrasts, based on differences between urban-oriented activities and agricultural production, comprised the basic dimension of the economy (Factor I). Specialized secondary and tertiary activities were concentrated in Ontario and Quebec where during an earlier phase of agricultural production they had been merely supplemental. The agricultural frontier had shifted west to the newly created provinces of Saskatchewan and Alberta. Other forms of staple production were still important, but only on a restricted regional basis (Factor II). In the peripherally located provinces of Nova Scotia and British Columbia, mining and fishing comprised important elements of the economic base. These resource activities and government services comprise Factor III. The development of forestry, mining and other staples required extensive government investment in transportation facilities, which was most pronounced at the margin in

19 Michael Ray has employed the same technique to examine Canada in 1961. He concluded that core-periphery contrasts were particularly significant: "secondary manufacturing and service activity have gravitated toward the center, leaving hinterland areas reliant on primary activities which tend to play a diminishing role in national economies". "The Spatial Structure of Economic and Cultural Differences: A Factorial Ecology of Canada", *Papers and Proceedings of the Regional Science Association*, 23 (1969), p. 8.

20 To ensure comparability over time, these labour force data have been reclassified according to Canada, Dominion Bureau of Statistics, *Standard Industrial Classification Manual* (Ottawa, Queen's Printer, 1960).

21 This analysis confirms the aspatial examination of the evolution of Canada's economic system contained in O.J. Firestone, "Development of Canada's Economy, 1850-1900", in *Trends in the American Economy in the Nineteenth Century*, Studies in Income and Wealth, vol. 24 (Princeton, 1960), pp. 217-46.

Table 1

FACTOR ANALYSIS OF THE CANADIAN SPACE ECONOMY, 1881 and 1911
(Variable Loadings on Varimax Rotated Factors[1])

	1881 Factor			1911 Factor		
Labour Force Group[2]	I	II	III	I	II	III
Agriculture	.734			-.763		-.578
Fishing and trapping	-.905				-.949	
Forestry		.579				.585
Mining	-.850				.779	.545
Manufacturing		.742		.930		
Construction	-.624	.719		.666		
Trade		.938		.669	.500	
Transportation			.927			.974
Personal and professional services	.944			.876		
Government		.966				.906
% Total Variance	49.9	25.6	13.2	56.3	20.8	12.7
% Accumulated Variance	29.9	75.5	88.7	56.3	77.1	89.8

Source: Calculated by the author.

[1]Only variable loadings ≥.500 are indicated.
[2]Percentage of provincial labour force by industrial groups.

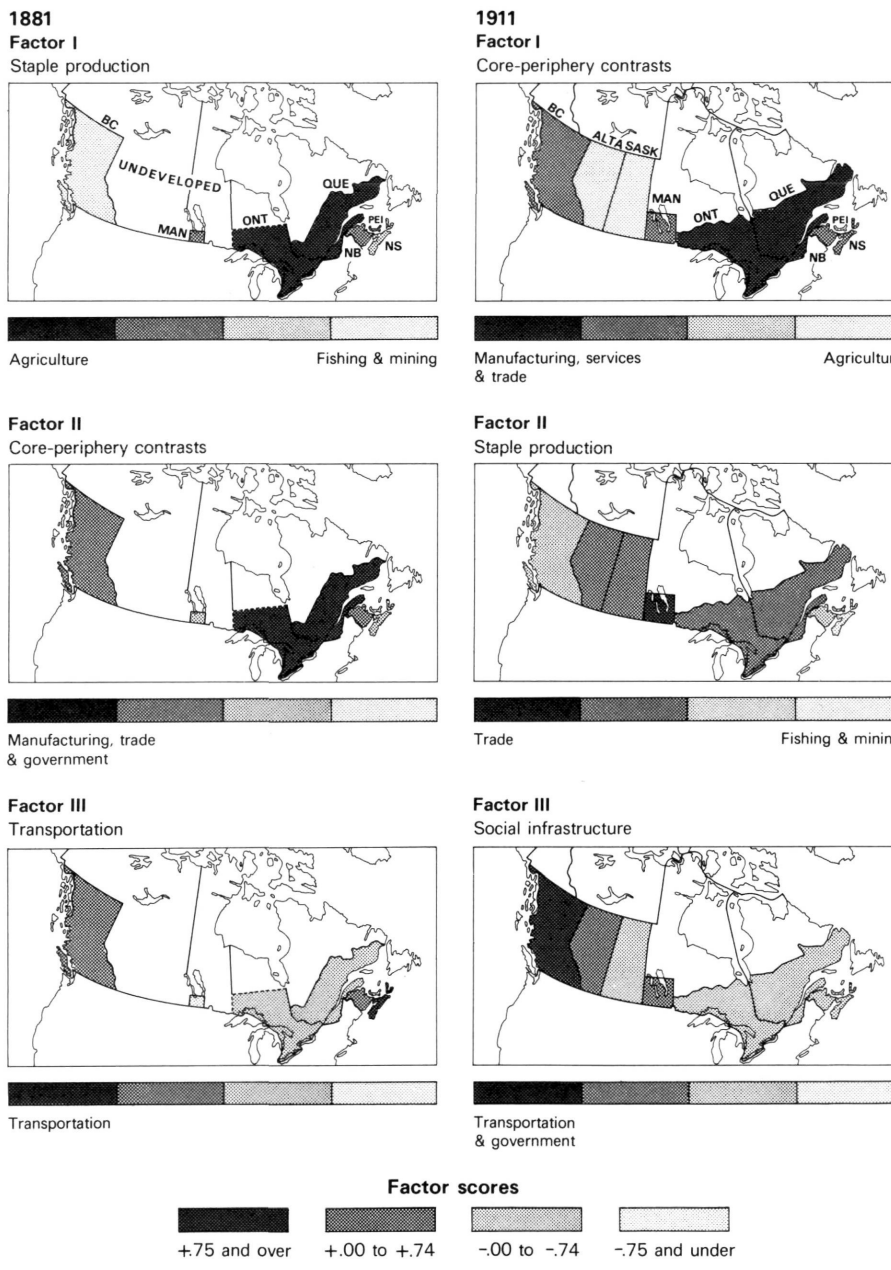

Figure 3: Changing Patterns of the Canadian Space Economy, 1881 and 1911

British Columbia and Alberta.[22]

Several conclusions can be drawn from this analysis. For cities in Central Canada whose core position gave them access to national markets, the wholesaling, transportation and resource processing functions of a staple economy were supplemented by the secondary manufacturing and business activities of the new industrialism. By contrast, the opportunity for diversification was limited in the cities of the Maritimes. For example, in 1910 the gross value of production of Nova Scotia's primary sector totalled only $45.3 million, or a mere 17 per cent of Ontario's $261.9 million. Disparity in the secondary and tertiary sectors was even greater. Nova Scotia's production in these spheres was $68.9 million, only 12 per cent of Ontario's $583.6 million output.[23] Even allowing for differences in population size and per capita comparisons, the opportunities for concentrated urban development were still limited. Halifax did indeed function at the margin of development.

Until the mid-nineteenth century Halifax's growth had been hesitant, conditioned by fluctuating demands for staples and by changes in Great Britain's foreign and trading policies.[24] Saint John surpassed Halifax in population during the 1830s and in 1861 the differential was 27,317 to 25,026.[25] Nonetheless, Halifax was still a leading commercial entrepôt and military and administrative outpost in British North America. At mid-century, it handled about three-quarters of Nova Scotia's imports and about two-thirds of its exports.[26] It traded fish, forest and agricultural products in exchange for British and American consumer and durable goods and for West Indian sugar, rum and molasses. Approximately one-half of Nova Scotia's merchant marine was registered to businessmen of the capital.[27] Accordingly, the waterfront contained various urban activities related to the wholesale-trading complex such as the packaging and processing of staples, transportation services, and the provisioning and repair activities associated with freight shipment.

Halifax was also the leading manufacturing centre of Nova Scotia and this

22 H.G.S. Aitken, "Government and Business in Canada: An Interpretation", *Business History Review*, 37-38 (1964), pp. 4-21.

23 Green, *Regional Aspects of Canada's Economic Growth*, p. 86.

24 These themes and the role of the Halifax merchantocracy in their development are examined in a most comprehensive study by D.A. Sutherland, "The Merchants of Halifax, 1815-1850: A Commercial Class in Pursuit of Metropolitan Status" (unpublished PhD thesis, University of Toronto, 1975).

25 Canada, *Census of Canada, 1870-71*, vol. 4, Table 1, pp. 232 and 344.

26 *Novascotian* (Halifax), extra, 14 February 1854.

27 Nova Scotia, House of Assembly, *Journals and Proceedings of the House of Assembly, 1851*, Appendix 78, Abstract of Provincial Shipping Tonnage. See also E. W. Sager, "The Shipping Fleet of Halifax, 1820-1905" (paper presented at the Atlantic Canada Studies Conference, University of New Brunswick, April, 1978).

activity absorbed about 22 per cent of the city's labour force in 1861 (see Table 2). Despite this pre-eminence, manufacturing was still pre-industrial in character. Since its structure was only weakly developed and its capitalization was slight, most manufacturers were small in scale, based on crafts production and catered principally to the local market.[28] This degree of underdevelopment was not due to the antagonistic attitude of the business community toward manufacturing. In fact, industrialization had been made an important platform in a programme of civic improvement. Both the Society for the Encouragement of Trade and Manufacturers, formed in 1839,[29] and its successor, the Nova Scotia Society for Developing and Encouraging Home Manufacturers, established shortly after Confederation in 1870,[30] campaigned vigorously for industrial development. But as the census data of the period indicate, their efforts brought only limited success. Large-scale manufacturing of the type found in Great Britain and the larger cities of the northeastern United States was not established in Halifax. For example, the boot and shoe industry, Halifax's largest manufacturing employer in 1871, claimed only 371 employees dispersed in 29 places of work.[31] In this respect Halifax was typical of other mid-nineteenth-century Canadian cities. They were essentially commercial in character and oriented to staple hinterlands; their complete industrial transformation awaited the last decades of the century.[32]

28 These generalizations are based on the following table compiled from data in the *Census of Nova Scotia, 1860-61*, Appendix 8, pp. 287-91. They can be compared to Pred, *Spatial Dynamics*, p. 170.

THE STRUCTURE OF MANUFACTURING IN HALIFAX, 1861
(Classified by Relationship to the Wholesale-Trading Complex)

	Establishments		Value Added	
Function	No.	%	Amount	%
Entrepôt	9	22.5	36,800	10.5
Commerce-serving	5	12.5	39,400	11.2
Local market	18	45.0	69,000	19.7
Construction	7	17.5	25,100	7.2
Other (gas factory)	1	2.5	180,000	51.4
Totals	40	100.0	350,300	100.0

29 Society for the Encouragement of Trade and Manufactures, Halifax, N.S., *Rules and Regulations* (Halifax, 1839).

30 Nova Scotia Society for Developing and Encouraging Home Manufactures, *Address to the People of Nova Scotia. . .Constitution of the Society* (Halifax, 1870).

31 Canada, *Census of Canada*, 1870-71, vol. 3, Tables 28-54.

32 G.W. Bertram, "Economic Growth in Canadian Industry, 1870-1915: The Staple Model and the Take-Off Hypothesis", *The Canadian Journal of Economics and Political Science*, 29 (1963), pp. 159-84.

Table 2

THE CHANGING ECONOMY OF HALIFAX, 1861 - 1911
(Distribution of Labour Force by Industrial Groups)

Industrial Group[1]	1861 No.	1861 %	1881 No.	1881 %	1911 No.	1911 %
Primary	292	4.6	291	2.2	243	1.4
Manufacturing	1,379	21.8	2,242	17.4	2,750	15.4
Construction	802	12.7	1,088	8.4	1,034	5.8
Trade	819	12.9	1,232	9.3	1,297	7.2
Transportation	666	10.5	1,205	9.5	2,205	12.3
Finance	13	.2	49	.4	223	1.2
Insurance and real estate	—	—	60	.5	220	1.2
Personal and professional services	840	13.3	3,900	30.2	3,817	21.3
Government[2]	141	2.2	277	3.1	1,706	9.5
Unspecified						
Commercial clerks	312	4.9	1,251	9.6	1,676	9.4
Labourers	1,072	16.9	1,014	7.8	2,738	15.3
Others	—	—	350	2.6	—	—
Total Labour Force	6,338	100.0	12,959	100.0	17,909	100.0

Sources: Nova Scotia, *Census of Nova Scotia,* 1860-61, Appendix 5, pp. 190-199;
Canada, *Census of Canada,* 1881, vol. 2, Table 14, pp. 232-243; and
Canada, *Census of Canada,* 1911, vol. 6, pp. 326-334.

[1] To ensure comparability over time, the labour force data for each year were reclassified according to : Canada, Dominion Bureau of Statistics, *Standard Industrial Classification Manual* (Ottawa, Queen's Printer, 1960).

[2] Excludes army and navy personnel of Great Britain (1861 and 1881) and Canada (1911).

The new industrialism was spurred by a combination of fiscal policies set in the guise of protective tariff schedules referred to collectively as the National Policy. Introduced in 1879, by the late 1880s these measures had encouraged the development of a number of manufacturing industries in Halifax which previously had either not existed or existed in only limited form. Several city foundries increased their capitalization to produce engines, tools, spikes, nails and construction materials for the expanding resource sector. More significantly, the mercantile community of Halifax responded favourably to these measures. Its most notable ventures were the Nova Scotia Sugar Refinery, capitalized initially in 1879 at $300,000, and the Halifax Cotton Company, formed in 1881 and also supported by locally subscribed shares of more than $500,000.[33] Both businesses were based on existing trading patterns with British West Indian suppliers.[34] As a consequence of these and other efforts, manufacturing in Halifax advanced appreciably, nearly doubling in value between 1900 and 1910 to achieve an annual level of production of more than $12 million.[35] With the aid of the National Policy and local entrepreneurial initiative, manufacturing had maintained its leading position over the other sectors of the economy. Yet Halifax could not claim hegemony in the Maritimes as a manufacturing centre. Sydney, Amherst, New Glasgow and Trenton in Nova Scotia and Saint John, Moncton, Marysville and Chatham in New Brunswick dominated several industrial categories.[36] Nor could Halifax claim to match the sizeable advances made by the cities of Central Canada. Of the 55 Canadian cities of 10,000 people or more in 1911, an overwhelming majority, 48 in fact, experienced higher rates of industrial growth between 1890 and 1910.[37] Later, in the two years preceding the disastrous Halifax Explosion of 1917, the city's rate of increase did not reach even one per cent. By this time, its value of production had fallen to less than 5 per cent that of either Toronto or Montreal.[38] Over the next decade, as freight rates climbed and mergers took effect, the decline

33 Acheson, "The National Policy and the Industrialization of the Maritimes", p. 7.

34 Examination of the Mercantile Agency Reference Books of Dun, Wiman and Company and of R.G. Dun and Company for the 1879-1914 period revealed that few American and British industries set up branch plants in Halifax. Besides the mercantile community and the small industries that expanded operations, it was noted that migrants to the city from within the province, Great Britain and the United States did establish in Halifax small manufacturing industries. See, for example, the biographies of local businessmen in *Our Dominion: Halifax* (Toronto, 1887), pp. 40-117.

35 Canada, Department of Trade and Commerce, *Canada as a Field for British Branch Industries* (Ottawa, King's Printer, 1922), p. 40.

36 Acheson, "National Policy and the Industrialization of the Maritimes", p. 5.

37 Canada, Dominion Bureau of Statistics, *The Canada Year Book, 1912* (Ottawa, King's Printer, 1914), p. 224.

38 Canada, Department of Trade and Commerce, *Canada as a Field for British Branch Industries*, p. 40.

became even more precipitous. Between 1920 and 1926, manufacturing employment in the city dropped from 7,171 to 3,287.[39]

The process of industrialization in Halifax down to the eve of World War I thus presents a paradox. On the one hand, boosters could point to the substantial number of newly established firms and to the sizeable gains in output, and could boast of the role of manufacturing as the city's leading employer. On the other, if they cared to, they might comment on the diminished relative importance of Halifax as a national manufacturing centre. This paradox is clearly demonstrated by the location quotient technique . By this method, the functional importance of any city can be accurately measured in comparison to other cities of an urban system. Using published occupation data from the 1881 and 1911 census, reclassified to ensure comparability over time, the location quotient is defined as the proportion of the urban labour force in a given industry (or occupation) divided by the proportion in that industry of some larger benchmark economy. The index takes on a value of one if the proportions are equal; a value of more than one measures an over concentration in the urban area; and a value of less than one indicates an under concentration.[40] From these measurements, it is clear that in absolute terms Halifax improved as a regional and national manufacturing centre over the 1881 to 1911 period (see Table 3). However, overshadowing this advance, cities in other regions bettered their standing relative to Halifax. For example, Halifax's national location quotient rose moderately from .79 to 1.14, but Hamilton's more than doubled from 1.21 to 2.62. This trend was shared by all the heartland cities, emphasizing the concentration of industrial activity in southern Ontario and Quebec.

Canadian industrialists in the late nineteenth century could pursue two manufacturing strategies: they could process staples and they could establish secondary industries. In Vancouver, manufacturers followed a strategy of staple processing so successfully that by 1911 nearly 2,800 workers or 5.5 per cent of the city's labour force worked in the forest products sector alone.[41] In Saint John the percentage was smaller but no less significant. However, in Halifax in 1911, less than 200 workers of a total labour force of about 18,000 manufactured staple commodities.[42] The explanation for this situation lies not in the weakness of local initiative, but in the distribution and character of the regional resource base which mitigated against the location of staple processing in Halifax. Theoretically, the most critical locational consideration in processing resources

39 Canada, Dominion Bureau of Statistics, *The Canada Year Book, 1922-23* (Ottawa, King's Printer, 1924), p. 438 and *The Canada Year Book, 1928* (Ottawa, King's Printer, 1929), pp. 453-4.

40 A.M. Isserman, "The Location Quotient Approach to Estimating Regional Economic Impacts", *Journal of the American Institute of Planners*, 43 (1977), pp. 33-41.

41 McCann, "Urban Growth in a Staple Economy", p. 30.

42 Canada, *Census of Canada, 1911*, vol. 6, Table 6, pp. 328-30.

Table 3

REGIONAL AND NATIONAL MANUFACTURING LOCATION QUOTIENTS FOR HALIFAX AND SELECTED CANADIAN CITIES, 1881 and 1911

	1881		1911	
Region and City	Regional	National	Regional	National
Eastern Periphery				
Halifax	1.04	.79	1.38	1.14
Saint John	2.39	.95	1.89	1.55
Sydney			3.59	2.99
Central Canada				
Montreal	2.00	.72	1.35	1.79
Quebec	2.31	.83	1.45	1.58
Sherbrooke			1.36	1.80
Toronto	2.18	1.02	1.50	1.94
Hamilton	2.58	1.21	2.03	2.62
London	2.39	1.11	1.84	2.38
Western Periphery				
Winnipeg			2.80	.96
Calgary			2.45	.83
Edmonton			3.16	1.08
Vancouver			.94	1.01

Sources: The location quotients have been calculated from labour force data in Canada, *Census of Canada, 1881*, vol. 2, Table 14; and *Canada, Census of Canada, 1911*, vol. 6, Table 6.

is usually the weight reduction factor. Manufacturing plants locate near the source of a raw material to eliminate the higher transportation costs of shipping this material en masse to a market. Of course, there are other locational considerations: the differential in freight rates for shipping either commodities or finished products; the specific material input requirements of vertically integrated (and often multinational) corporations; the specific amount of on-site processing required to meet external market demands; the level of technology available to the industry; power requirements for processing purposes; and the spatial biases of government tariff and fiscal policies.

Examination of Nova Scotia's fishery and forestry industries confirms Halifax's inability to engage in staple processing.[43] Unlike the salmon catch of British Columbia which was usually canned before export, much of the Nova Scotia fishery was exported in either a green or dried state. Accordingly, only a limited amount of processing took place. The similar distribution pattern of the primary and secondary phases of the industry indicate that this processing was indeed located near the source of the staple itself, away from Halifax (see Figure 4). The largest quantities of fish came from the rich bank areas lying offshore from the province's southeastern counties of Yarmouth, Shelburne, Queens, Lunenburg and Halifax, and from those fishing banks situated to the east and south of Cape Breton Island. Here, with the exception of firms interested principally in the fresh fish trade, most canning, curing and freezing establishments were organized in small individual units.[44] The largest centres associated with the secondary phase were Digby, Yarmouth, Wedgeport, Lunenburg, Shelburne and Canso.[45] Few processing plants were in evidence along Halifax's waterfront. Within surrounding Halifax County, they were dispersed widely in the small fishing villages which dotted the coast. Although the fishery therefore added little to the primary manufacturing base of Halifax's economy before World War I,[46] the city's wholesale-trading complex did control an important share of the export trade and even segments of the processing sector. This indicates that business acumen was not to blame for the manufacturing deficit. At least fifteen to twenty mercantile houses dealt directly in the fishery in any one year.[47] Some of these managed branches throughout the Maritimes. A.

43 The other major staple industries of the province, agriculture and mining, are not found immediately adjacent to Halifax, and for this reason were excluded from this analysis. Halifax did provide tertiary services for these industries.

44 Saunders, *The Economic History of the Maritime Provinces*, p. 78.

45 Nova Scotia, House of Assembly, *Journals and Proceedings of the House of Assembly of Nova Scotia, 1911*, Appendix 22, Industrial Opportunities in Nova Scotia, Canada.

46 The present concentration of fish processing in Halifax did not begin to take place until the mid-1930s when R.P. Bell established the forerunner of National Sea Foods Products. See C. Cox, *Canadian Strength* (Toronto, 1946), p. 35.

47 *McAlpine's Halifax Directory*, 1879-1914 (Halifax, 1880-1915).

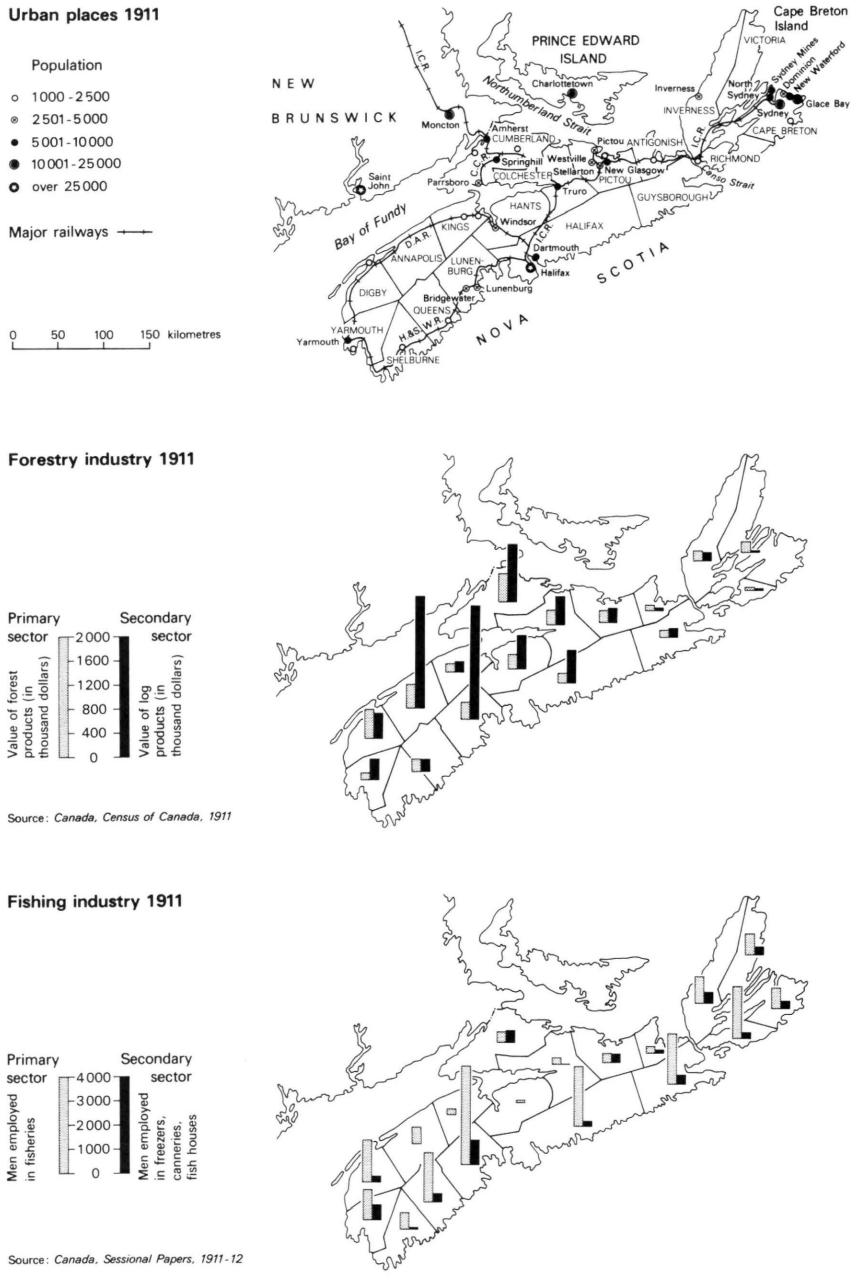

Figure 4: Distribution of Primary and Secondary Sectors of the Forestry and Fishing Industry, 1911

Wilson and Son owned a freezing plant at Canso in Guysborough County. Robin, Jones and Whitman, the largest dealer early in the twentieth century, operated either collection depots or processing plants at Canso, along the south shore in Lunenburg County, along Northumberland Strait in Cumberland County, and also in the Gaspé region.[48] Other houses dealt solely in the fresh fish trade.

By contrast, the investment and leadership of Halifax in the forest industry of the province was less important. The few sawmills of the city were small in scale and served mainly the local market. At Richmond, a one-time industrial suburb of Halifax located two miles north of the city's central docks, the wharf facilities of the federal government were equipped to handle lumber exports. However, other linkages with the regional hinterland were minimal. There were few supporting firms within the business community that provided brokerage, manufacturing, transportation or other services.[49] This was surprising, because by World War I the primary phase of the industry had surpassed fishing in value of output and the making of log products was Nova Scotia's second highest valued manufacturing industry.[50]

The lack of participation in the processing phases of the forest industry by Halifax is based on three locational factors. The supply of local water to power a sawmill was limited and in the immediate hinterland the forests comprised mainly stunted growth and cut-over areas.[51] Elsewhere, access to the forest was limited because over 80 per cent of it was privately owned, chiefly in small farm woodlots or large holdings typically controlled by out-of-province interests.[52] Of most significance was the province-wide distribution and export orientation of the industry which prevented centralization at Halifax. Traditionally, most counties and many of their settlements had shared in the logging, sawmilling and exporting phases of the industry. Some of these communities had further specialized in shipbuilding, although this industry had waned by the late nineteenth century.[53] Early in the twentieth, the forest products industry was concentrated away from Halifax in the western counties of Annapolis, Digby, Yarmouth, Shelburne, Queens and Lunenburg and to the north in Hants, Colchester and Cumberland. Here, many sawmills were located along streams or small rivers at tidewater sites in order to generate power and reduce assembly

48 The estimated pecuniary strength of Robin, Jones and Whitman in 1912 was about $500,000. R.G. Dun and Company, *The Mercantile Agency Reference Book, 1912*, p. 314.

49 *McAlpine's Halifax Directory, 1879-1914*.

50 Canada, *Census of Canada, 1911*, vol. 3, Table 12, pp. 12-14.

51 "Report of the Board of Works", *Annual Report of the City of Halifax 1891-92* (Halifax, 1892), pp. 59-86.

52 Saunders, *The Economic History of the Maritime Provinces*, pp. 81-3.

53 *Ibid.*, pp. 14-22 and D. Erskine, "The Atlantic Region", in J. Warkentin, ed., *Canada: A Geographical Interpretation* (Toronto, 1968), pp. 244-6 and 253-70.

and distribution costs. From a locational perspective, then, difficult lines of communication and high transportation costs made it impractical to channel raw materials over any long distance to Halifax for either processing or re-export. However, these costs did not entirely restrict the movement of finished products. This movement was usually confined to the winter season when Halifax did handle increased flows of lumber even from ice-bound areas as far away as northeastern New Brunswick.[54] The completion of the Intercolonial Railway in the mid-1870s facilitated this export trade as well as reinforcing Halifax's function as a regional entrepôt.

Hinterland cities are quite capable of growing to a substantial size either by engaging in resource processing or by servicing the resource hinterland. The growth of Vancouver before World War I is a case in point. But post-confederation Halifax was not strategically located to benefit from the industrial stimuli offered by the regional staple economy. It could, and did, act as a commercial entrepôt for staple production, channelling a sizeable share of the region's fish, forest, mineral and agricultural products to external markets; but it could not function as a processing centre for these resources. The scattered distribution, the nature of external demand and the limited supply of the region's staples restricted Halifax's accessibility to this path of industrial development.

The inability of Halifax to engage in staple processing thus provides a partial explanation for the city's more restricted course of industrial growth. Other reasons for Halifax's failure are related to its uncompetitive location at the margin. A comparative methodology, which establishes a clear picture of the structural characteristics of manufacturing in Halifax, in other towns and cities of Nova Scotia, and in major cities across Canada, isolates Halifax's shortcomings. From this analysis, it is possible to describe the external economies accruing to individual places. The changing production costs of manufacturing during the 1880 to 1910 period explain additional differentiating effects on urban-industrial growth.

Most of the larger towns and cities of Nova Scotia participated in the new industrialism to such an extent that their industrial output at least doubled in the last quarter of the nineteenth century. In a number of places the advance was considerably higher. Most notable were those specialized manufacturing centres located along the Intercolonial Railway whose rates of population growth were also the highest in the province (see Tables 4 and 5 and Figure 5). Indeed, the Intercolonial was itself an important agent in the initial industrialization of the region. To create traffic, its management had established a basic freight rate structure that was between 20 and 50 per cent lower than that of Ontario's. In

54 The major ports that competed with Halifax for the lumber export trade were Parrsboro, Amherst, Sheet Harbour, Yarmouth and Pictou.

Table 4

MANUFACTURING CHARACTERISTICS OF THE TWENTY LEADING TOWNS AND CITIES OF NOVA SCOTIA, 1910
(Ranked by Value of Production)

Urban Place	Population	Establishments	Employees	Fixed Capital ($000s)	Value of Products ($000s)	Value Added ($000s)	Horse Power
Halifax	46,619	112	4,014	14,069	12,140	2,227	4,742
Sydney	17,723	20	3,890	24,623	9,395	1,502	22,002
Amherst	8,973	19	2,142	15,764	4,626	934	3,608
Sydney Mines	7,470	6	507	1,935	2,540	586	2,850
Trenton	1,749	3	1,182	1,853	2,290	337	3,435
Bridgewater	2,775	6	153	196	1,560	316	565
Truro	6,107	14	688	2,046	1,335	224	896
Yarmouth	6,600	34	714	1,541	1,198	387	757
Dartmouth	5,058	11	476	1,681	1,145	242	2,040
New Glasgow	6,383	21	776	440	1,035	258	1,160
Pictou	3,179	9	243	380	628	179	331
Windsor	3,452	7	330	244	472	119	892
Kentville	2,304	8	144	248	308	103	202
Lunenburg	2,681	20	179	189	280	99	83
Canso	1,617	8	220	164	216	97	n.a.
Parrsboro	2,856	5	110	99	205	70	185
Stellarton	3,910	7	89	649	201	102	n.a.
Liverpool	2,109	8	136	111	187	58	121
North Sydney	5,418	5	106	159	169	43	n.a.
Glace Bay	16,652	4	33	38	133	56	n.a.

Sources: Canada, *Census of Canada, 1911*, vol. 3, Tables 11 and 12; and for data on horse power, Nova Scotia, House of Assembly, *Journals and Proceedings of the House of Assembly*, Appendix 15, Factories Report.

Table 5

STRUCTURAL INDICES OF MANUFACTURING IN THE TWENTY LEADING TOWNS AND CITIES OF NOVA SCOTIA, 1910
(Ranked by Value of Production)

			Average of Establishments						
Urban Place	% Pop. in Mnftg.	% Increase in Output 1890-1910	Labour	Capital ($000s)	Output ($000s)	Capital/ Labour	Capital/ Output	Output/ Labour	Labour/ Power
Halifax	8.6	69	36	126	108	3,505	6.2	3,025	.85
Sydney	21.9	2,704	195	1,251	470	6,330	16.4	2,415	.17
Amherst	23.9	526	113	830	243	7,359	16.9	2,160	.59
Sydney Mines	6.8	85	85	3,225	423	3,817	3.3	5,010	.17
Trenton	67.6	—	394	618	763	1,586	5.2	1,937	.34
Bridgewater	5.5	—	26	32	260	1,282	.6	10,198	.27
Truro	11.3	58	49	146	95	2,974	9.1	1,940	.76
Yarmouth	10.8	-3	21	45	35	2,158	4.0	1,678	.95
Dartmouth	9.4	10	43	152	104	3,532	6.9	2,406	.15
New Glasgow	12.2	—	207	21	49	567	1.7	1,333	.67
Pictou	7.6	—	27	42	70	1,564	2.1	2,582	.72
Windsor	9.6	34	47	35	68	741	1.9	1,432	.37
Kentville	6.4	79	18	31	39	1,722	2.4	2,138	.72
Lunenburg	6.7	-64	9	9	11	1,056	1.9	1,283	.37
Canso	13.6	204	28	20	27	745	1.7	982	n.a.
Parrsboro	3.9	-54	22	20	41	904	.5	1,864	.59
Stellarton	2.3	—	13	93	29	7,207	6.4	2,228	n.a.
Liverpool	6.4	15	17	14	23	818	1.9	1,371	1.13
North Sydney	1.9	-30	21	32	34	1,505	3.8	1,593	n.a.
Glace Bay	2.0	—	8	9	34	1,167	.7	4,015	n.a.

Sources: Calculated from data in Canada, *Census of Canada, 1911*, vol. 3, Tables 11 and 12; and Nova Scotia, House of Assembly, *Journals and Proceedings of the House of Assembly*, Appendix 15, Factories Report.

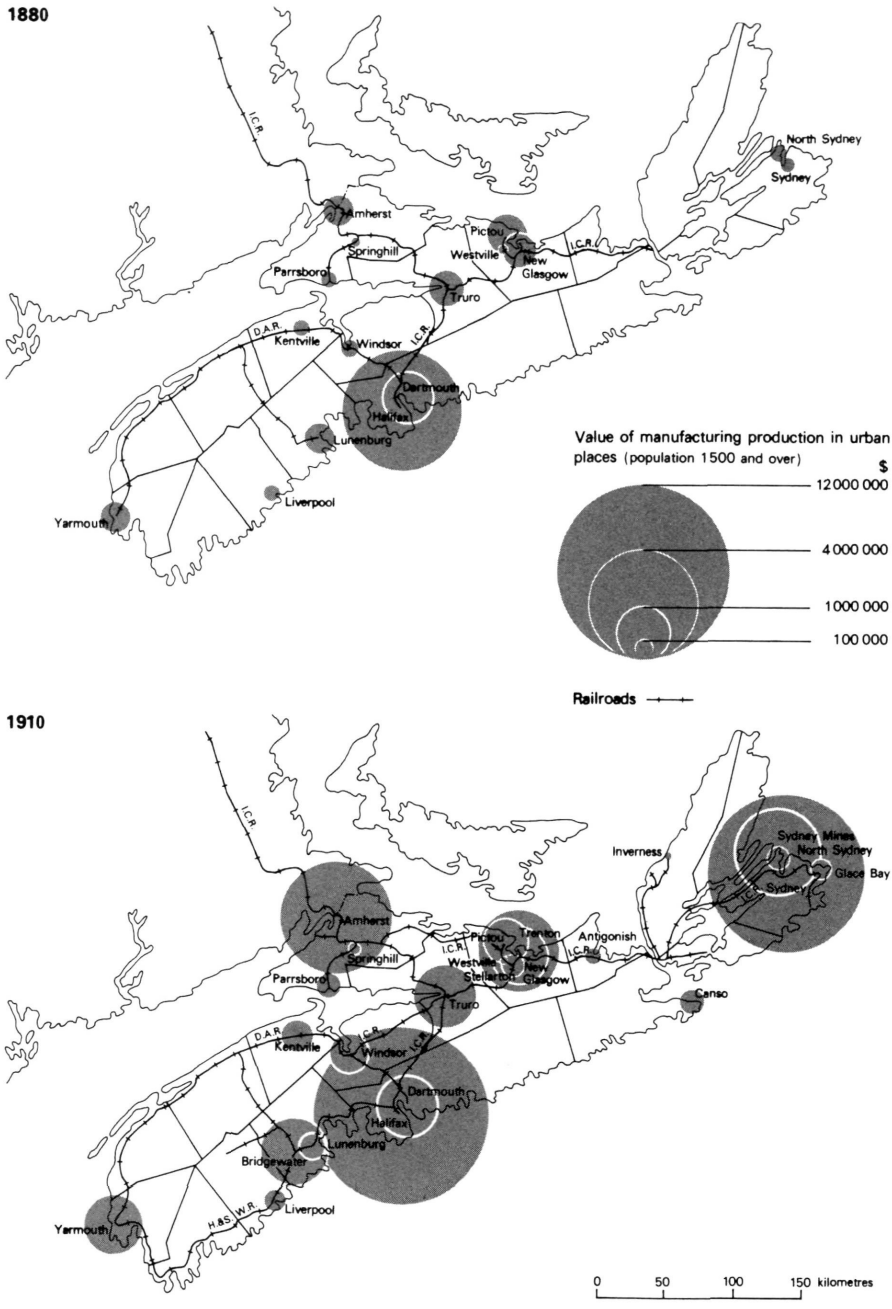

Figure 5: Changing Patterns of Manufacturing, 1880 and 1910

addition, it offered special rate concessions based upon "what the traffic would bear".[55] On traffic destined for markets west of Montreal, Nova Scotian manufacturers, including certain Halifax industries such as the sugar refineries,[56] enjoyed fixed arbitrary rates on the province to Montreal portion which gave them a stable relationship with competitors in Central Canada. The specific rate differential to the western provinces from Nova Scotia and from Ontario was about 8 cents per hundred weight.[57] Although these westbound rates did assist regional manufacturers, eastbound rates were about 12 per cent higher which meant that it was costly to import industrial materials from Central Canada. This imbalance increased the production costs of those manufacturers dependent upon external suppliers. Halifax, located far from national suppliers, was at a particular disadvantage in securing cheap materials for its industrial base.

Assisted by these freight tariffs and by other aspects of the National Policy, several of Nova Scotia's towns and cities did succeed in developing industries based on the particularistic circumstances of the region. "Busy" Amherst was led by enterprising captains of industry who capitalized on nearby coal resources to fuel their factories that produced railway cars, boots and shoes, engines, boilers, woollen goods and pianos.[58] The industrial complex of New Glasgow-Trenton-Stellarton, similarly aided by local coal deposits, developed beyond its early focus on wooden shipbuilding to establish itself as a major producer of steel products. Here, the integrated Nova Scotia Steel and Coal Company, assisted by government subsidies, became one of Canada's largest corporations with over 6,000 employees working throughout the region, spawning linked industries which manufactured railway cars, springs, boilers, tools, mining equipment, and even rifle sights.[59] In Cape Breton, the Sydney area contained Canada's leading coal, iron and steel complex. The locational incentives for this development were the largest accessible reserves of coal in Canada and iron ore easily transported from Wabana, Newfoundland.[60] Of the cities situated away from the Intercolonial, only Yarmouth and Bridgewater ranked in the leading ten. Other towns of lesser rank were specialized in

55 Forbes, "Misguided Symmetry", pp. 60-8; and R.A.C. Henry and Associates, *Railway Freight Rates in Canada* (Ottawa, 1939), pp. 266 and 268.

56 Acheson, "National Policy and the Industrialization of the Maritimes", p. 14.

57 Nova Scotia, *Journals and Proceedings, 1911*, Appendix 22, pp. 5-6.

58 R. Lamy, "The Development and Decline of Amherst as an Industrial Centre" (unpublished BA thesis, Mount Allison University, 1930).

59 Canadian Manufacture's Association, *Evidence of the Industrial Ascendency of Nova Scotia* (Halifax, 1914), n.p.; and *The Nova Scotia Steel and Coal Company* (Halifax, 1912), pp. 5-7.

60 P.T. McGrath, "The Manufacture of Iron and Steel in Cape Breton", *The Engineering Journal*, 2 (1901), pp. 571-85.

character. Some, like Parrsboro and Canso, were limited to processing staples for export; others produced only for a local market.[61]

There are also clear indications that economic factors other than accessibility to industrial materials assisted the progress of the specialized centres of Nova Scotia and placed Halifax at a comparative disadvantage. Increased economies of scale, reduced production costs and labour-saving technologies, all influenced selective urban-industrial growth. A comprehensive analysis of the 1880 to 1910 period reveals that increases in plant size and the resulting reductions in material and labour costs were most pronounced in those places sharing in rapid growth.[62] As illustrated by Table 5, Sydney, Amherst, Trenton and Sydney Mines best exemplify this pattern. The lower labour/power ratios of these places point to the ability of the specialized industries there to exploit labour-saving technologies. In addition, the centres in which manufacturing had advanced most particularly had the largest investments in physical plant and the highest capital/labour and capital/output ratios. This indicates that local industrialists successfully raised capital and used it efficiently to their advantage over competing centres. As T.W. Acheson has shown, the Nova Scotia Steel and Coal Company of New Glasgow was strongly supported by the Halifax financial community,[63] and the economies of scale associated with this corporation's policy of vertical and horizontal integration apparently were considerable.[64] This case is supported by the example of the Dominion Iron and Steel Company at Sydney. Started in the early 1890s as the Dominion Coal Company by American interests, it reorganized shortly thereafter to produce iron and steel and was subsequently controlled by Montreal and Toronto capitalists.[65] It, too, was an integrated operation, possessing, for example, a substantial shipping fleet.[66]

By World War I, the manufacturing structure of Halifax had deviated little from that established in the earlier phases of industrialization (see Table 6). There was no coal nearby to give an initial advantage for specialized manufacturing as elsewhere in the province. Other industrial materials were in short supply. Halifax did not even manufacture many producer goods for either the export sector or a national industrial market because of the weak linkage effects

61 Nova Scotia, *Journals and Proceedings, 1911*, Appendix 22.

62 The detailed tabulations of this analysis have not been reproduced here; they are available on request from the author.

63 Acheson, "National Policy and the Industrialization of the Maritimes", pp. 24-6.

64 Canadian Manufacturers Association, *Industrial Ascendency of Nova Scotia.*

65 Acheson, "National Policy and the Industrialization of the Maritimes", p. 23.

66 Part of this fleet was used to ship coal to the Montreal industrial and domestic market. Instead of returning empty to Cape Breton, these ships sometimes carried wholesale goods for distribution in Cape Breton. This practise cut into the trade of Halifax. F.W. Gray, *Mining and Transportation* (Toronto, 1909), pp. 111-28.

Table 6

STRUCTURE OF MANUFACTURING IN HALIFAX, 1911
(By Number and Percentage of Employees)

Manufacturing Industry	Number	Percentage
Chemicals and drugs	47	1.3
Clothing	752	20.2
Food	669	18.0
Iron and steel	381	10.2
Leather and rubber goods	177	4.8
Liquors and beverages	65	1.7
Printers and engravers	279	7.5
Textiles	263	7.1
Vehicles for land	254	6.8
Vehicles for water	102	2.7
Wood products	179	4.8
Others	556	14.9
Totals	3,724	100.0

Source: Canada, *Census of Canada, 1911*, vol. 6, Table 6.

imparted by the regional staples, and also because of the sparsely populated hinterland which prevented the city from sharing in the substantial economies of production inherent in a dense network of rural and urban settlement such as in Central Canada.[67] Instead, the strength of Halifax's limited industrial structure was based on the manufacture of consumer products, such as refined sugar, confectionery goods, cotton cloth, boots and shoes and men's clothing. Some of these products entered national markets, a practise generally curtailed after the merger movement,[68] but most were consumed only by the regional market. The presence of these manufacturers was clearly a function of Halifax's entrepôt status and its nodal position with the region. As a port and rail terminus, Halifax maintained some of the advantages associated with reduced transfer costs. Its nodal position also created the advantage of relative accessibility, making it at least possible for the producers of consumers goods in Halifax to gain access to regional markets.

Structural indices point to additional explanations for Halifax's restricted industrial development. These indices isolate the external economies which favour urban-industrial growth in heartland economies and restrict such development in peripheral regions. Manufacturing in Halifax, compared to that in the other major industrial centres of Canada, was small in scale. The average capitalization, output, and number of workers employed in its factories was considerably less than that of almost every other city (Tables 7 and 8). Of particular significance, most factories in Halifax did not increase in size over the 1880 to 1910 period to the same extent as their counterparts in Central Canada. Some firms did, such as Clayton and Son and Moirs, makers of men's clothing and confectionery products, respectively, because they were able to effect economies of scale with lower cost purchases of cotton, sugar and other materials from local companies.[69] Without the advantage of scale economies, it was difficult to compensate for the distribution costs incurred by shipping to distant markets.[70] High factor costs had generally hindered plant expansion. Even in 1880, Halifax's ratio of material costs/output was the highest of any city, and this situation did not change by 1910 (see Table 9). Most materials had to be either shipped from distant regional or national suppliers, incurring burdensome transportation costs. Also, the limited presence in Halifax of particular types of manufacturing meant that localization economies which are normally associated with bulk purchases were of no consequence. Nor could

67 This theme is developed in J. Spelt, *Urban Development in South Central Ontario* (Toronto, 1972); and Gilmour, *Spatial Dynamics of Manufacturing*.

68 .T.W. Acheson, "The Maritimes and Empire Canada", in *Canada and the Burden of Unity*, pp. 94-5.

69 Both firms expanded considerably during the late nineteenth century. See the biographies of these firms in Halifax Board of Trade, *The City of Halifax: Its Advantages and Facilities* (Halifax, 1909), pp. 49-50 and 66-7.

70 Pred, *Spatial Dynamics*, pp. 49-71.

Table 7

MANUFACTURING CHARACTERISTICS OF THE TWENTY LEADING CITIES OF CANADA, 1910
(Ranked by Value of Production)

Urban Place	Population	Establishments	Employees	Fixed Capital ($000s)	Value of Products ($000s)	Value Added ($000s)
Montreal	470,480	1,104	67,841	132,476	166,297	42,530
Toronto	376,538	1,100	65,274	145,799	154,307	41,302
Hamilton	81,969	364	21,149	58,014	55,126	15,332
Winnipeg	136,035	177	11,705	26,024	32,694	6,657
Ottawa	87,701	203	9,232	21,099	20,924	5,740
Maisonneuve	18,864	20	9,112	7,919	20,814	1,917
Quebec	78,710	175	8,067	16,488	17,149	5,305
London	46,300	180	9,413	15,470	16,274	4,396
Brantford	23,132	111	6,492	19,972	15,866	4,901
Vancouver	100,401	130	8,966	22,815	15,070	349
Halifax	46,619	112	4,014	14,069	12,140	2,277
Peterborough	18,360	65	4,029	6,415	10,633	857
Saint John	42,511	177	5,270	9,242	10,082	2,239
Sydney	17,723	20	3,890	24,623	9,395	1,502
Berlin	15,196	76	3,980	8,501	9,266	2,956
Calgary	43,704	46	2,133	13,082	7,751	1,502
Guelph	15,175	78	3,072	7,152	7,392	2,008
Hull	18,222	31	2,918	8,780	7,259	1,434
Lachine	10,699	11	2,239	7,496	6,296	1,560
St. Catharines	12,484	58	3,139	5,290	6,024	2,028

Source: Canada, *Census of Canada, 1911*, vol. 3, Table 11.

Table 8
STRUCTURAL INDICES OF MANUFACTURING IN THE TWENTY LEADING CITIES OF CANADA, 1910.
(Ranked by Value of Production within Regions)

Region and Urban Place	% Pop. in Mnftg.	% Increase in Output 1890-1910	Average of Establishments					
			Labour	Capital ($000s)	Output ($000s)	Capital/ Labour	Capital/ Output	Capital/ Labour
Eastern Periphery								
Halifax	8.6	69	36	126	108	3,505	6.2	3,025
Saint John	12.4	24	30	52	57	1,754	4.1	1,191
Sydney	23.5	2,704	195	1,251	470	6,330	14.4	2,415
Central Canada								
Montreal	14.4	146	61	120	151	1,952	3.1	2,451
Toronto	17.3	243	59	133	140	2,234	3.5	2,364
Hamilton	25.8	293	58	159	151	2,743	3.8	2,606
Ottawa	10.5	137	46	104	103	2,285	3.7	2,266
Maissoneuve	48.3	469	456	396	1,041	869	4.1	2,284
Quebec	10.2	158	46	94	98	2,043	3.1	2,126
London	20.3	98	52	86	90	1,643	3.5	1,728
Brantford	28.1	258	58	180	143	3,076	4.1	2,443
Peterborough	21.9	309	62	99	163	1,592	7.5	2,639
Berlin	26.2	407	52	112	122	2,135	2.9	2,328
Guelph	20.2	149	39	92	95	2,328	3.6	2,406
Hull	16.0	463	94	283	234	3,009	6.1	2,576
Lachine	20.9	363	204	681	572	3,348	4.8	2,812
St. Catharines	21.7	146	54	102	104	1,886	2.9	1,919
Western Periphery								
Winnipeg	8.6	483	66	147	185	2,223	3.9	1,847
Vancouver	8.9	695	69	176	116	2,545	7.0	1,159
Calgary	4.9	2,894	46	284	169	6,133	8.7	3,634

Source: Calculated from data in Canada, *Census of Canada, 1911*, vol. 3, Table 11.

Table 9

MANUFACTURING PRODUCTION COSTS IN THE TWENTY LEADING CITIES OF CANADA, 1880-1910
(Ranked by Value of Production in 1910)

	Average Size of Establishments				Material Costs/ Output[1]				Labour Costs/ Output[2]				Total Costs/ Output			
Urban Place	1880	1890	1900	1910	1880	1890	1900	1910	1880	1890	1900	1910	1880	1890	1900	1910
Montreal	23	22	48	61	.62	.56	.51	.53	.17	.19	.25	.20	.79	.75	.76	.73
Toronto	14	11	50	59	.51	.49	.55	.49	.19	.21	.26	.23	.70	.70	.81	.72
Hamilton	15	8	44	58	.52	.50	.52	.51	.27	.23	.23	.21	.79	.73	.74	.72
Winnipeg	9	8	31	66	.56	.54	.58	.56	.24	.20	.21	.23	.80	.74	.79	.79
Ottawa	14	12	33	46	.64	.59	.49	.47	.19	.21	.31	.23	.83	.80	.80	.70
Maissoneuve	—	49	227	456	—	.90	.72	.67	—	.04	.15	.23	—	.94	.87	.80
Quebec	10	7	37	47	.61	.57	.55	.47	.17	.18	.24	.21	.78	.75	.79	.68
London	13	8	47	52	.53	.48	.46	.46	.17	.20	.27	.26	.70	.68	.73	.72
Brantford	9	11	82	58	.58	.44	.50	.47	.22	.24	.28	.22	.80	.68	.78	.69
Vancouver	—	12	30	69	—	.45	.54	.51	—	.29	.26	.26	—	.74	.80	.77
Halifax	9	12	31	36	.64	.61	.64	.62	.16	.16	.17	.14	.80	.77	.81	.76
Peterborough	9	9	49	62	.56	.55	.63	.71	.23	.22	.22	.18	.79	.77	.85	.79
Saint John	13	8	25	30	.62	.56	.52	.54	.18	.21	.24	.22	.80	.77	.76	.76
Sydney	1	2	30	195	.53	.39	.52	.18	.16	.34	.32	.23	.69	.73	.84	.41
Berlin	12	19	41	52	.53	.42	.53	.48	.23	.29	.26	.19	.78	.71	.79	.67
Calgary	—	6	31	46	—	.34	.52	.60	—	.37	.29	.20	—	.71	.81	.80
Guelph	10	12	32	39	.58	.57	.52	.52	.21	.23	.23	.20	.79	.80	.75	.72
Hull	33	22	188	94	.46	.51	.67	.60	.20	.25	.18	.19	.66	.76	.85	.79
Lachine	6	39	150	204	.28	.32	.53	.54	.20	.22	.19	.20	.48	.54	.72	.74
St. Catharines	9	12	48	54	.63	.58	.51	.43	.17	.18	.29	.23	.70	.76	.80	.66

Sources: Canada, *Census of Canada, 1901*, vol. 3, Table 20; and Canada, *Census of Canada, 1911*, vol. 3, Table 11.

[1] The term cost of materials includes the value of all materials whether in the raw or partly manufactured state.

[2] Salaries and wages of employees.

these economies be realized even by production linkages with related industrial firms because, with few exceptions, these too were minimal in the city.

To compensate for these high material costs, Halifax was forced to rely upon an efficient and productive factory system and on lower labour costs. As indicated by certain indices — capital/labour, capital/output and output/labour — Halifax did possess a comparatively efficient and productive industrial base and its labour costs were the lowest of any city.[71] But these advantages were not sufficient. Only certain labour intensive industries, such as the clothing and cotton cloth manufacturers, were in a position to take advantage of these competitive costs, principally because they employed a less-skilled and less-expensive female labour force.[72] To establish firms requiring a skilled and expensive work force would have incurred still higher costs. As it was, only three heartland cities (Maissoneuve, Peterborough and Hull) maintained a higher ratio of materials and labour costs/output than Halifax.[73] The external economies of the production process bear heavily on differential urban-industrial growth, particularly the availability to cities of such factor inputs as less expensive industrial materials, labour-saving technologies, and capital financing. The comparative advantages of heartland cities, and even of some Nova Scotian centres, therefore restricted the location of secondary manufacturing in Halifax. The city was at a clear disadvantage in overcoming the high costs of obtaining industrial materials and in distributing finished products to distant markets. Without these markets, it was difficult to initiate a new round of industrial growth, and the circular and cumulative process of growth was accordingly curtailed.

The problems of the peripheral industrial location of Halifax and of the city's vulnerability to the forces of continentalism were fully recognized by local businessmen and civic officials. In 1906 the Board of Trade appraised the industrial situation and confessed "we may as well face these difficulties fairly".[74] The Board then listed the critical obstacles to manufacturing development: the high cost of living, the need for cheaper power, and the distance from suppliers of materials and from markets. The high cost of rents, food and fuel was blamed for creating a shortage of skilled labour by driving away both 'provincials' and foreign immigrants.[75] There was little to compensate for

71 For example, in Halifax in 1901 an electrician earned 15¢ per hour, whereas in Toronto the comparable rate was 25¢. M.C. Urquhart and K.A.H. Buckley, eds., *Historical Statistics of Canada* (Toronto, 1965), pp. 86-7.

72 Canada, *Census of Canada, 1911*, vol. 3, Table 9, pp. 230-1.

73 "Nova Scotia is a coal producing province, yet Halifax has to pay $4.50 for a ton of coal making it higher than in almost any other place". *The Suburban*, vol. 3, No. 50 (13 January 1906), p. 6.

74 Halifax Board of Trade, *The Forty-First Annual Report of the Halifax Board of Trade for the Year 1906* (Halifax, 1907), p. 11.

75 *The Suburban* (13 January 1906), p. 6.

Halifax's location at the margin — the tyranny of location — other than the advantage offered by "the year round commerce of our port".[76]

But many cities did attempt to compensate for locational disadvantages by offering economic inducements to entice industry. In the late nineteenth century these bonuses were of many types, including the guarantee of a bond issue, property tax exemption, and direct grants of cash, land and even water.[77] Halifax, however, could offer few of these incentives because of its limited supply of industrial land, its serious shortage of water, and its restricted tax base.[78] The latter was the principal reason. Over one-third of the value of real property in the city was exempt from taxation because it was owned by various government and religious organizations.[79] This fact placed a considerable burden on the other land uses. To meet a continually rising civic debt, the city taxed not only private property, but also (despite the objections of mercantile interests) the value of goods held in local warehouses. To have granted bonuses, thereby forcing taxes to rise still further, quite obviously would have angered some local interest groups. As a consequence, bonusing was used sparingly. When it was practised, it usually aided those manufacturers aligned with the mercantile community. In this way, bonuses were given in the 1880s to the Halifax Cotton Factory, the Nova Scotia Sugar Refinery, and the Halifax Graving Dock Company.[80] After 1900, a bonus successfully enticed the Silliker Car Works away from Amherst, but a long-standing search for a steel ship-building enterprise had failed to materialize by World War I.[81]

By examining regional urban growth in Canada within the framework of the staple theory of economic development and the heartland-hinterland conceptualization of regions, it becomes obvious why Halifax diverged from the industrial path followed by cities such as Montreal, Toronto and Hamilton. It is

76 Halifax Board of Trade, *The Forty-First Annual Report,* p. 11.

77 For a general discussion of bonusing in Canada during the late nineteenth century, see T. Naylor, *The History of Canadian Business,* vol. 2 (Toronto, 1975), pp. 120-61.

78 These problems are constantly referred to in the Halifax press and also in the annual reports of the city. Despite the validity of these facts, the city was often subjected to criticism: "Inquiries regarding what inducements the City would give to new industries to locate here have been received on a number of occasions during the year, but as the City had no definite policy in this respect until recently, it has been found difficult to offset the inducements such as bonuses, exemptions, etc. that have been offered at other points". Halifax Board of Trade, *The Forty-Seventh Annual Report of the Halifax Board of Trade for the Year 1912* (Halifax, 1912), p. 24.

79 "City Assessor's Report for 1911-12", *Annual Report of the City of Halifax 1911-12* (Halifax, 1912), p. 115.

80 "Mayor's Address", *Annual Report of the City of Halifax, 1884-85* (Halifax, 1885), pp. xii-xiii and xxv; and "Mayor's Address", *Annual Report of the City of Halifax, 1885-86* (Halifax, 1886), pp. lviii-lix.

81 "Mayor's Address", *Annual Report of the City of Halifax, 1907-08* (Halifax, 1908), pp. 13-4 and 31.

apparent, for example, that staple commodities have had only a marginal impact on manufacturing in Halifax. Their dispersed regional pattern, their weak endowment, and their limited processing requirements are very visible reasons for its failure to become an industrialized entrepôt. The economy of Halifax was also seriously weakened by the marketing and production problems created by the heartland-hinterland process. The metropolitan economy had little need for goods manufactured at the margin because its own industrial base produced and marketed more competitively the same products that could be produced in the Maritimes. Compounding these problems the heartland even managed to submerge and lure away vital regional industries. This centripetal force also siphoned Halifax's banking community away from its hinterland source early in the twentieth century. The forces of continentalism were difficult to overcome.

As a consequence of these problems, Halifax was forced to depend increasingly upon the government extension of the metropolitan economy for stimulating its urban economy. In the late nineteenth and early twentieth centuries, the city emerged as an important defence, trade and transportation centre.[82] The predominantly federal responsibility for international trade, national defence, and railroad and port development fell upon this outpost of "Empire Canada". With the opening of the Canadian West, the federal government strengthened the port and the rail functions of Halifax so that it could handle the reciprocal movement of immigrants and grain. The government also strengthened the defence function. The increase was slow at first, especially after the withdrawal of the British forces in 1905, but it blossomed dramatically after the outbreak of war in 1914. The government stimulus during this period supplemented the weakening industrial base. Today, such federally supported areas as defence, transportation, research and public services are a mainstay of the local economy. Halifax has failed as an industrial city because it functions at the margin. It is only an intermediary, highly dependent upon a metropolitan economy.

82 REGIONAL AND NATIONAL LOCATION QUOTIENTS FOR SELECTED ECONOMIC FUNCTIONS OF HALIFAX, 1881 and 1911

	1881		1911	
	Regional	National	Regional	National
Manufacturing	1.04	.79	1.38	1.14
Trade	3.36	1.36	2.83	2.22
Transportation	1.50	1.53	2.12	1.67
Finance	2.84	1.42	2.66	1.84
Government	3.00	5.25	5.52	4.23

Sources: Calculated from labour force data in Canada, *Census of Canada, 1881*, vol. 2, Table 14; and Canada, *Census of Canada, 1911* vol. 6, Table 6.