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The Mercantile-Industrial Transition in The Metals Towns of Pictou County, 1857-1931*

From the 1880s through to the early 1900s, many communities in the Maritimes successfully made the transition from mercantile to industrial capitalism: trading centres developed manufacturing enterprise; resource communities acquired new technologies to process staples; entirely new industrial towns were established. But urban well-being was not sustained during the economic crisis of the 1920s, which forced factories to close, unemployment to increase, and people to migrate. The interpretation of this cycle of growth and decline has produced conflicting explanations of the urban-industrial collapse. Some have stressed entrepreneurial failure;[1] others technological change in shipping,[2] or a marginal location and poor resource endowment.[3] The forces of continentalism have also been emphasized. According to this interpretation, freight rate altera-

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1 T.W. Acheson, "The National Policy and the Industrialization of the Maritimes, 1880-1910", *Acadiensis*, I (Spring 1972), pp. 2-28; 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; D. Macgillivray, "Henry Melville Whitney Comes to Cape Breton: The Saga of a Gilded Age Entrepreneur", *Acadiensis*, IX (Autumn 1979), pp. 44-70; D.A. Sutherland, "The Personnel and Policies of the Halifax Board of Trade, 1890-1914", in L.R. Fischer and E.W. Sager, eds., *The Enterprising Canadians* (St. John's, 1979), pp. 203-4.

2 E.W. Sager and L.R. Fischer, "Patterns of Investment in the Shipping Industry of Atlantic Canada, 1820-1900", *Acadiensis*, IX (Autumn 1979), pp. 19-43.

3 D. Alexander, "Economic Growth in the Atlantic Region, 1880-1940", *Acadiensis*, VIII (Autumn 1978), pp. 47-76; R.H. Babcock, "Economic Development in Portland (Me.) and Saint John (N.B.) during the Age of Iron and Steam, 1850-1914", *American Review of Canadian Studies*, IX (Spring 1979), pp. 1-37; R.E. Caves and R. Holton, *The Canadian Economy: Prospect and Retrospect* (Cambridge, Mass., 1959), pp. 140-94; L.D. McCann, "Staples and the New Industrialism in the Growth of Post-Confederation Halifax", *Acadiensis*, VIII (Spring 1979), pp. 47-79; S.A. Saunders, *The Economic History of the Maritime Provinces* (Ottawa, 1939), pp. 14-33 and 90-9.

tions,[4] failed political prowess,[5] business reorganization and concentration,[6] and advantages accruing to external economies[7] all favoured the growth of central Canadian cities over their Maritime counterparts. From these studies, something is known of the collapse in Cape Breton, Halifax, Saint John, Yarmouth, and several other places, but a consensus has yet to emerge in this debate about the precise explanation of the region's urban-industrial failure.

In the mid-nineteenth century, Nova Scotia's mercantile economy was tied closely to the production and trade of staple commodities.[8] The structure of colonial manufacturing was dominated by staple processing and commerce-serving industries. In 1861 sawmilling and shipbuilding together accounted for just over 60 per cent of the total value of manufacturing. There was some grist milling and tanning, a little brewing and distilling, and the rudiments of local market manufacturing, but demand usually exceeded supply. Of necessity, most of Nova Scotia's requirements for hardware, machinery, textiles, furniture, glass, cordage, leather products, sugar, confectionery, and tobacco were satisfied by British and American imports. Even when production did take place, the scale of output was small. The largest industrial enterprise of the period, an iron works at Londonderry in Colchester County, employed fewer than forty men on a regular basis and turned out annually only about $40,000 worth of iron products.[9] Few manufacturers employed a work force of more than ten men, although some of the sawmill and shipyard operators did on a seasonal basis. The spatial pattern of this manufacturing activity was itself typical of a mercantile economy. Every county in Nova Scotia processed staple commodities for both domestic and export markets. Numerous grist mills were employed in grinding grain for local markets. The colony's sawmills shipped most of their products directly to foreign markets. The lumber trade was a rural industry which had only a limited impact on urban development in Nova Scotia.[10] Urban

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), pp. 60-86.

5 E.R. Forbes, *The Maritimes Rights Movement, 1919-1927* (Montreal, 1979).

6 J.D. Frost, "Principles of Interest: The Bank of Nova Scotia and the Industrialization of the Maritimes, 1880-1910" (MA thesis, Queen's University, 1979).

7 B.S. Keirstead, *The Theory of Economic Change* (Toronto, 1948), pp. 269-81; McCann, "Staples and the New Industrialism in the Growth of Post-Confederation Halifax".

8 In 1861, the agriculture, fishing, forestry, and mining sectors absorbed about two-thirds of the colony's labour force; their products and the sale of ships totalled nearly three-quarters of the value of exports. Calculated from data in Nova Scotia, *Census Report of Nova Scotia, 1860-61*, Appendix 5; and Nova Scotia, *Journals and Proceedings of the House of Assembly, 1862*, Appendix 1.

9 Nova Scotia, *Census Report of Nova Scotia, 1860-61*, Appendix 8.

10 In New Brunswick, by comparison, the timber trade had a strong impact on urban development. See G. Wynn, "Industrialism, Entrepreneurship, and Opportunity in the New Brunswick Timber Trade", in Fischer and Sager, eds., *The Enterprising Canadians*, pp. 7-20.

ties with shipbuilding, though not strong, were somewhat more pronounced, but provincial centres suffered stiff competition in the ancilliary trades from Saint John, which had long controlled the Bay of Fundy economy.[11] Local market manufacturing that did exist was concentrated in the more populous communities. Halifax dominated all, manufacturing over one-half of the colony's products.[12]

It is clear that before Confederation the towns and cities of Nova Scotia had yet to experience the transforming effects of industrialization. Nova Scotia's policy of short-term tariffs and bounties was ineffective for fostering sustained industrial development, since these measures not only frequently conflicted with Imperial trade regulations, which were designed to restrict colonial manufacturing, but they also pandered to merchants who were often hostile to manufacturing enterprise.[13] Indeed, the press of the period often printed words to the effect that "what our manufacturers want . . . is not a high protective duty, but a market".[14] When petitioning the government for assistance, many manufacturers in all branches of industry cited the limited domestic market as the major deterrent impeding expansion.[15] Further exacerbating the problem was the geographical fragmentation of the region: "a parcel of little principalities, everyone of them pulling a different way, while the parent state has been pulling against them all".[16] Beyond these local limitations were the comparative advantages of foreign competitors. The United States and Great Britain had access to larger capital markets and cheaper industrial materials; both countries possessed more advanced technologies and skilled labour and they were able to enforce an effective protective tariff.[17] By Confederation, however, there was mounting evidence to suggest that Nova Scotia would overcome these obstacles and make the transition to industrial capitalism: manufacturing production doubled in the 1860s as the domestic market finally grew and machine-oriented technologies were introduced; merchants appeared more willing to support new manufacturing ventures; coal and iron deposits were claimed sufficient to provide the basis for an industrial "take-off"; and political union with the Canadas promised a railroad to create access to larger markets.[18]

11 T.W. Acheson, "The Great Merchant and Economic Development in St. John, 1820-1850", *Acadiensis*, VIII (Spring 1979), pp. 3-27; J.M.S. Careless, "Aspects of Metropolitanism in Atlantic Canada", in M. Wade, ed., *Regionalism in the Canadian Community, 1867-1967* (Toronto, 1969), pp. 117-29.

12 Calculated from data in Nova Scotia, *Census Report of Nova Scotia, 1860-61*, Appendix 8.

13 A.A. Lomas, "Industrial Development of Nova Scotia, 1830-1854" (MA thesis, Dalhousie University, 1950), pp. 129-49.

14 *Novascotian* (Halifax), 12 June 1848.

15 Lomas, "Industrial Development of Nova Scotia", pp. 311-6.

16 *Novascotian*, 12 June 1848.

17 D. Campbell, *History of Nova Scotia* (Montreal, 1874), pp. 506-8.

18 Discussion of the progress made in the economy at this time can be found in Campbell, *History*

The transformation of Nova Scotia's economic structure and the growth of its towns and cities in the post-Confederation period occurred simultaneously with the province's integration into the continental economy. Coal, iron, and steel industries, stimulated by external demand, spearheaded the transition from a mercantile to an industrial economy.[19] All were essentially urban activities aided substantially by the National Policy of industrial incentives and tariff protection. Indeed, urbanization was greatly affected by this pattern of development. In 1871, only 17 per cent of Nova Scotia's population lived in places of 1,000 or more people. The proportion stood at 24 per cent in 1891, just over 35 per cent twenty years later, and 44 per cent in 1931. During the early stages of industrialization, between 1871 and 1891, the trading communities of the mercantile era maintained leadership in size and business importance. By 1911, however, urban growth was more selective. The transition to industrial capitalism was most pronounced across the Cape Breton, Pictou, and Cumberland coal fields where the mining and manufacturing towns were typically either newly settled or considerably expanded in size. Glace Bay, New Waterford, Stellarton, Westville, and Springhill were essentially the products of externally controlled corporations. Industrial capitalism also made an impact on long-established commercial centres situated along the route of the Intercolonial railroad. Halifax headed the list of growing manufacturing cities on the strength of its entrepôt function; Dartmouth produced rope and hardware; Yarmouth manufactured cotton duck; Truro turned out hats and caps, woolens, and butter and cheese; Sydney and Sydney Mines manufactured primary steel; New Glasgow specialized in secondary steel products; and Amherst built railway cars, pianos, boots and shoes, foundry products, and woolen goods. Each place had expanded beyond its earlier mercantile function.[20]

The impact of the transition to an industrial economy was ultimately only

of Nova Scotia, pp. 506-17; A. Gesner, *The Industrial Resources of Nova Scotia* (Halifax, 1849), pp. 255-9 and 267-80. See also I. McKay, "Capital and Labour in the Halifax Baking and Confectionery Industry during the last Half of the Nineteenth Century", *Labour/Le Travailleur*, 3 (1978), pp. 65-108.

19 The following comment, made in 1913, indicates the degree, if not the fragility, of the region's economic transformation: "When it is remembered that each wage earner represents, on the average, a family of four members, it follows that over 30,000 persons in Nova Scotia are directly dependent for their means of livelihood on this [steel] industry; or, including the associate industry of coal, in which case the number of men employed is increased to 26,000, over 100,000 persons resident in the Province are dependent on the steel industry. In other words, if for any cause, the two largest companies discontinued operations, one out of every five persons living in the Province would be deprived of his or her present means of livelihood". C. Cantley, "A Sketch of the Development and Present Operations in the Iron and Steel Industry of Nova Scotia", *Transactions of the Canadian Mining Institute*, 16 (1913), p. 350.

20 Nova Scotia, *Journals and Proceedings of the House of Assembly, 1911*, Appendix 15; Canadian Manufacture's Association, *Evidence of the Industrial Ascendency of Nova Scotia* (Halifax, 1914).

short-lived. Some trading centres, which were never really part of the transition, experienced decline as early as the 1880s, and as a group they continued to do so thereafter (Table 1). In the 1890s and 1900s, several staple producing communities suffered losses as a consequence of depressed markets. By the 1920s, a region-wide collapse was clearly evident. Towns and cities that had previously grown rapidly now halted their progress either to stabilize in size or even to lose population. In fact, population reversals were experienced by eighteen of the province's thirty-seven urban communities. For the first time, once prosperous manufacturing centres fell upon difficult times. Amherst, Sydney Mines, New Glasgow, and Trenton were the most notable examples. The fragile structure of the new industrialism stood revealed.

Pictou County exemplifies well the cycle of growth and decline associated with the mercantile-industrial transition (Table 2).[21] The County is a natural and functional region which focuses on Pictou Harbour. Settlement has generally shunned the hills which surround the harbour to concentrate on the coal fields and to run along the several river valleys which flow north into the sea. In the mercantile period, this environment supported a fairly prosperous staple economy. Exports to foreign countries consistently exceeded international imports. At first the export trade was based on timber sales to Great Britain, but after mid-century coal shipped to the United States predominated (Figure 1). The town of Pictou, settled late in the eighteenth century by Presbyterian Scots, prospered through the early nineteenth century as a wholesale-trading centre. Its importance was challenged after Confederation by the growth of the coal industry at Stellarton (Albion Mines) and Westville, and by the emergence of Canada's first integrated metal-making and metal working complex at New Glasgow, Trenton, and Ferrona (Figures 2 - 5). The transition from a mercantile to an industrial economy was stimulated by several factors. After the monopoly of the General Mining Association was broken in 1857, American and Quebec capitalists invested heavily in the coal potential of the County. They were prompted by regional railway development, by Reciprocity with the United States (1854-1866), and by the expanding St. Lawrence market. The metals industry, in contrast, was the product of indigenous capital and entrepreneurship. From its beginning, New Glasgow serviced the surrounding agricultural community and built ships for the carrying trade. Several of its merchant families prospered, and when ship-building was on the verge of collapse in the early 1880s, they invested substantially in the new industrialism. Teaming with skilled craftsmen, they used local resources to develop the Nova Scotia Steel and Coal Company which remained as the leader in the Canadian metals

21 For an overview of the industrial development of Pictou County, see R.M. Guy, "Industrial Development and Urbanization of Pictou County to 1900" (MA thesis, Acadia University, 1962); J.M. Cameron, *Industrial History of the New Glasgow District* (New Glasgow, 1970) and *The Pictonian Colliers* (Kentville, 1974).

Table 1

SOURCES OF URBAN GROWTH AND THE MERCANTILE-INDUSTRIAL TRANSITION IN NOVA SCOTIA, 1871-1931

Urban Place and Dominant Source of Growth	Pop. 1871	Rate of Population Growth (%) 1871 -1881	1881 -1891	1891 -1901	1901 -1911	1911 -1921	1921 -1931	Pop. 1931	Date Place Became Urban
Traditional Mercantile Wholesale-trading Complex (includes primary fishing and lumbering)									
Coastal									
Annapolis Royal	747	37.2	-6.4	6.2	0	17.9	-11.7	739	1881
Antigonish	N.A.			164.7	-2.7	2.2	1.0	1764	1901
North Sydney	1200	26.7	65.3	84.9	16.6	21.5	-6.8	6139	*1871
Louisburg	N.A.				-3.8	14.5	-15.7	941	1901
Parrsboro	N.A.			41.7	-17.8	-2.8	-11.2	1919	1891
Digby	942	35.7	8.1	-16.7	8.4	-1.4	14.8	1412	1881
Bridgewater	1687	20.1	10.3	-1.4	6.2	34.5	3.7	3262	*1871
Lunenburg	1777	24.0	22.1	8.3	-8.1	4.1	-2.8	2727	*1871
Mahone Bay							-9.5	1065	1921
Pictou	2883	18.0	-11.9	7.9	-1.7	-6.0	5.5	3152	*1871
Liverpool	2204	.9	-8.0	-5.3	8.9	8.8	16.3	2669	*1871
Lockeport	1011	21.5	-.6	-8.4	-29.8	8.1	14.3	973	*1871
Shelburne	1423	-18.8	12.6	11.1	-.6	-5.2	8.3	1474	*1871
Wedgeport	N.A.				35.7	2.3	-9.1	1294	1901
Canso	704		25.7	30.8	9.3	.5	-3.1	1575	1891
Inland									
Bridgetown	974	8.1	6.1	-23.1	16.1	9.0	3.7	1126	1881
Kentville	1779	19.4	-20.6	2.7	33.1	17.9	11.6	3033	*1871
Wolfville	1697	10.8	4.4	-28.1	3.3	19.5	4.3	1818	*1871

New Industrialism									
Wholesale-trading and new or enlarged manufacturing									
Sydney	1700	28.2	11.3	308.3	78.9	27.2	2.4	23089	*1871
Truro	2114	63.8	47.8	17.5	1.9	23.8	4.5	7901	*1871
Amherst	1839	23.7	66.3	31.3	80.1	11.4	-25.5	7450	*1871
Oxford	1034	20.8	14.3	-10.0	8.3	.7	-19.2	1133	*1871
Dartmouth	2191	72.8	17.6	8.0	5.2	56.2	15.2	9100	*1871
Windsor	2281	11.1	11.6	.7	1.5	1.8	2.9	3032	*1871
New Glasgow	1676	54.8	45.5	17.8	43.5	40.5	-1.3	8858	*1871
Yarmouth	2500	39.4	74.7	5.6	2.6	7.1	-.2	7055	*1871
New or enlarged staple production									
Dominion	N.A.				67.5	-7.7	19.1	2846	1901
Glace Bay	N.A.			182.4	138.5	2.7	21.7	20706	1891
New Waterford	N.A.						37.9		1921
Joggins	N.A.				51.4	5.1	-42.3	1000	1901
Springhill	N.A.		434.8	-5.3	25.3	-.5	11.9	6355	1891
Inverness	N.A.					9.0	-2.1	2900	1911
Stellarton	1750	-8.6	50.7	-3.1	67.5	35.8	-5.8	5002	*1871
Westville	1675	31.5	43.1	10.1	27.3	3.0	-13.2	3946	*1871
New or enlarged staple production and manufacturing									
Sydney Mines	1494	56.6	4.3	30.7	134.1	11.5	-6.7	7769	*1871
New manufacturing									
Trenton	N.A.	6.8	51.2	55.7	41.7	101.1	-8.1	2613	1901
Regional Centre									
Halifax	29582	22.0	6.5	6.2	14.2	25.2	1.5	59275	*1871

Source: Calculated from data in Canada, *Census of Canada*, 1931, vol. 1, Table 13.

*Attained urban status (1,000 or more population) by 1871.

N.A.: data not available

Table 2

ECONOMIC DEVELOPMENT AND URBANIZATION IN PICTOU COUNTY, 1871-1931

	1871	1881	1891	1901	1911	1921	1931
Total county population	32,114	35,535	34,541	33,459	35,858	40,851	39,018
Total urban population	8,381	10,223	12,977	14,486	19,303	24,668	23,571
% population urban	26.1	28.7	37.6	43.3	53.8	60.4	60.4
Population of Urban Places							
Pictou	2,883	3,403	2,998	3,235	3,179	2,998	3,152
New Glasgow	1,676	2,595	3,776	4,447	6,383	8,971	8.858
Trenton	397	424	641	998	1,414	2,844	2,613
Stellarton	1,750	1,599	2,410	2,335	3,910	5,312	5,002
Westville	1,675	2,202	3,152	3,471	4,417	4,550	3,946
Value of coal production ($000s)	600	651	878	961	2,563	2,869	2,081
Value of urban manufacturing ($000s)[a]	n.a.	n.a.	n.a.	1,001	5,158	16,132[b]	8,071
% population, farmers	16.0	13.9	14.2	10.5	9.7	8.1	7.5
% population, miners	2.9	3.6	4.0	4.6	5.5	5.1	4.8
% population, urban manufacturing	n.a.	n.a.	n.a.	3.4	6.8	n.a.	2.8

Sources: Canada, *Census of Canada, 1871-1931*; and Nova Scotia, Department of Mines, *Report . . . for the Year, 1871-1931.*

a Places of 1,500 or more population.

b Value is for 1917.

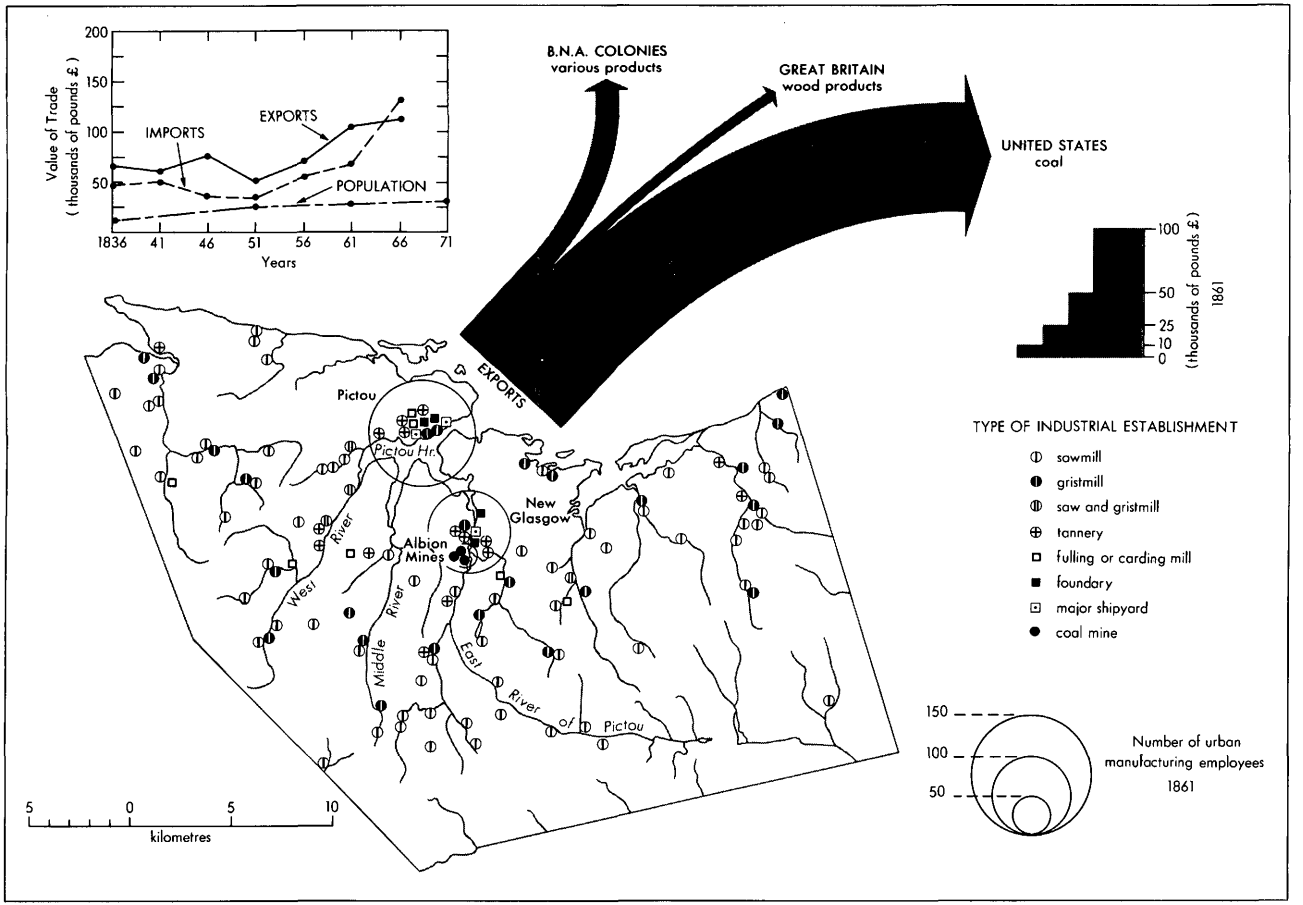
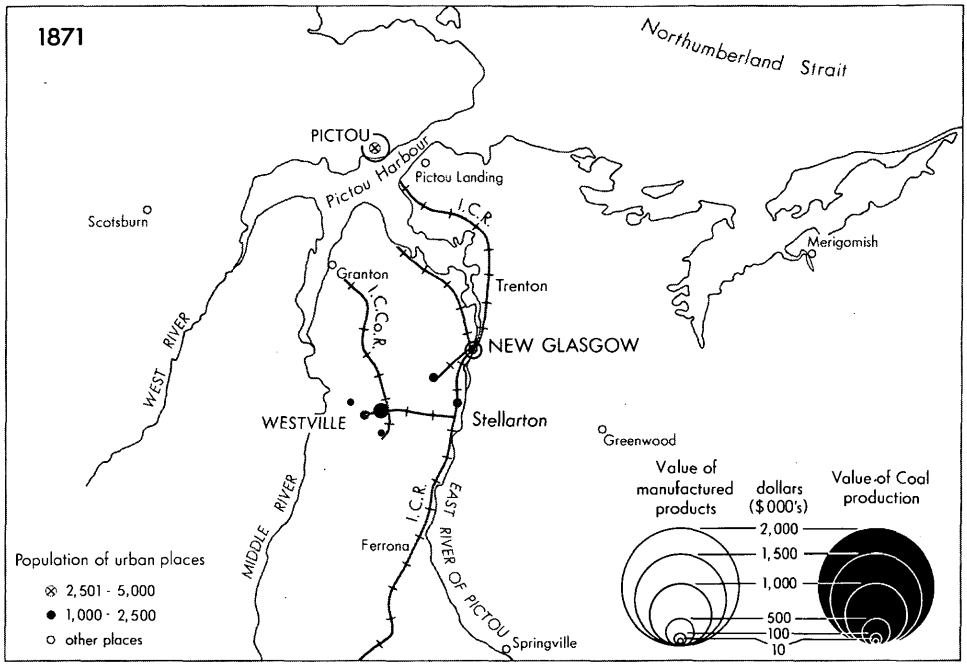


Fig 1. The Mercantile Landscape of Pictou County, c. 1861

Fig. 2. The Industrial Landscape of Pictou County, 1871



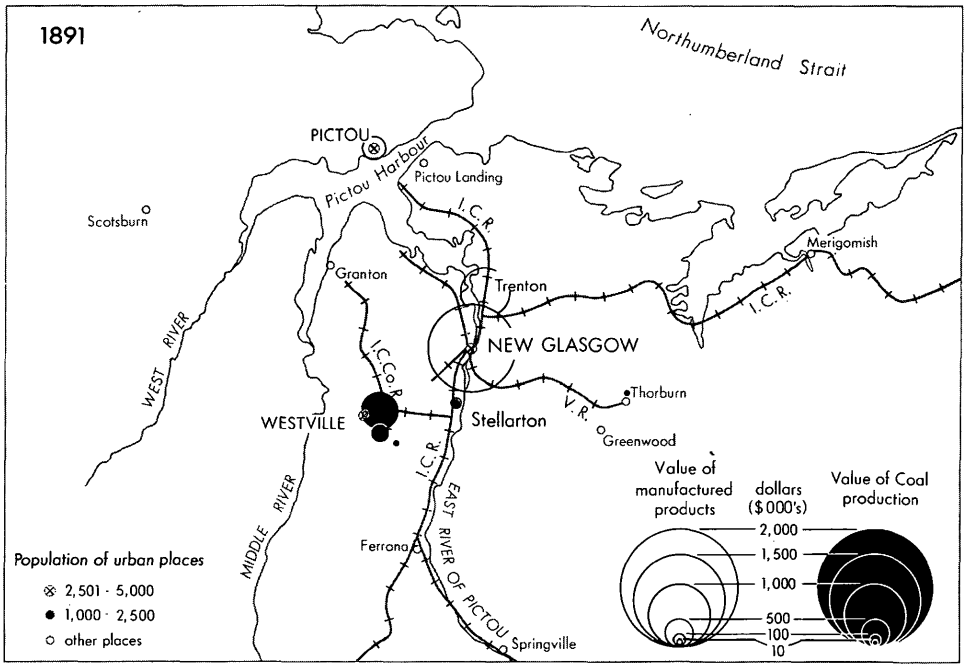
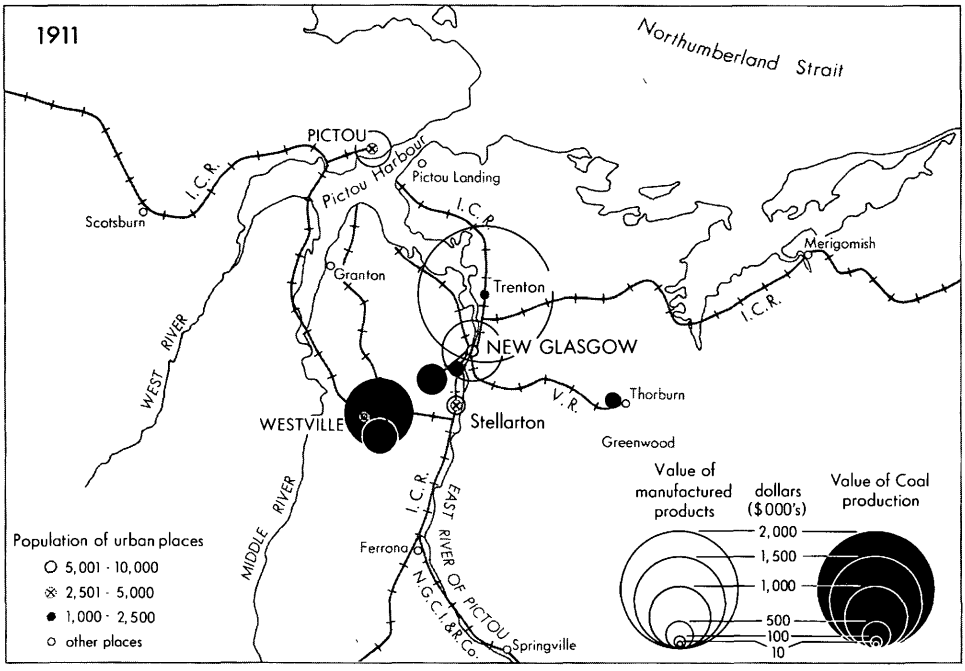


Fig. 3. The Industrial Landscape of Pictou County, 1891

Fig. 4. The Industrial Landscape of Pictou County, 1911



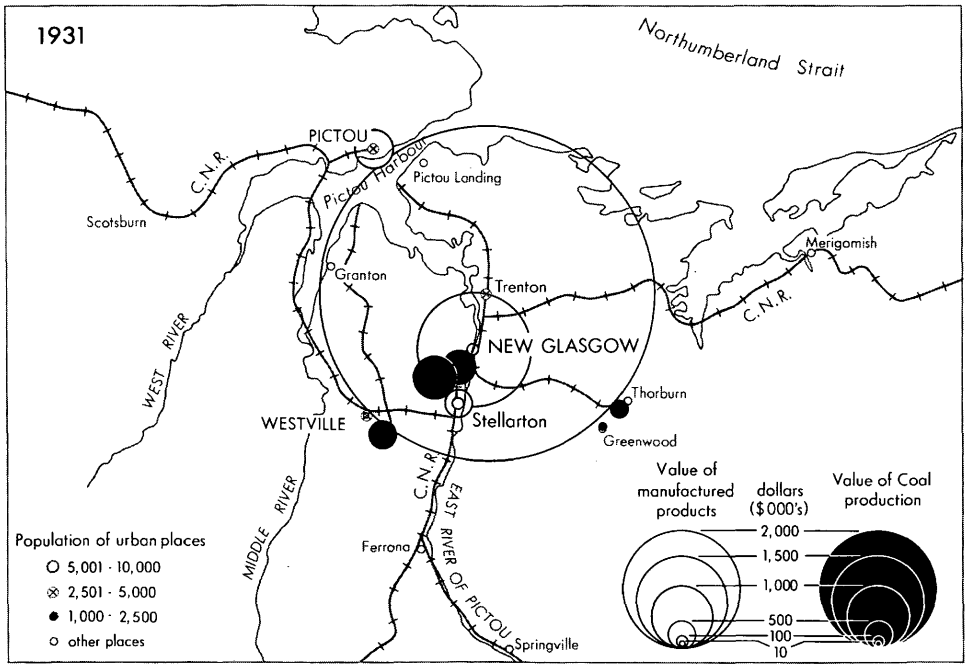


Fig. 5. The Industrial Landscape of Pictou County, 1931

industry until early in the twentieth century. Founded in the early 1870s, by World War I Scotia was a vertically integrated corporation of some 6,000 employees which mined iron ore and coal, produced primary pig iron and steel, and manufactured a wide array of secondary metal products.[22] By the close of the 1920s, however, Scotia was no longer a separate corporate entity, and its demise forced the loss of urban population in the County.

Scotia Steel had its origin in 1872 as the Hope Iron Works when two Pictou County tradesmen of Scottish descent, Graham Fraser and George Forrest MacKay, formed a partnership to produce marine and railway forgings. MacKay had learned the blacksmith's trade in his father's New Glasgow shop. Fraser, by contrast, served his apprenticeship in blacksmithing at the Rhode Island Locomotive Works in Providence.[23] The growing demand for forgings encouraged both men to form a new enterprise in 1874, the Nova Scotia Forge Company.[24] This also prospered until the inadequacy of New Glasgow's water supply forced the company to relocate, in 1878, in Smelt Brook (renamed Trenton in 1882), a rural community situated two miles north of New Glasgow. Like other forges, Scotia used wrought and scrap iron, but during the 1870s and 1880s technological changes in the metals industry influenced the course of local production. Pig iron and steel were increasingly used in quality forge work, but obtaining these materials regularly and in sufficient quantity was difficult. Nevertheless, it was considered uneconomical in the mid-1870s to produce either material in Pictou County because an integrated iron and steel complex would create a surplus in excess of local needs which was too costly to ship to extra-regional markets. Later, however, the National Policy's 1879 tariff schedule of $5 per ton on steel ingots made the proposal of establishing at least a steel plant more realistic. A profit could be earned because the freight rate for shipping steel products from Nova Scotia to the major market in Ontario averaged $4.50 per ton.[25] To raise the capital for such a steel-making venture, Fraser and MacKay turned to the local mercantile community.

Foremost among their backers were two of New Glasgow's leading merchant families, the Carmichaels and the McGregors.[26] James C. Carmichael first

22 Nova Scotia Steel and Coal Company, *Scotia: How Canada's Pioneer Steel Corporation was Evolved from a Country Forge* (New Glasgow, 1912); P.K. Parker, "The Nova Scotia Steel and Coal Company: Entrepreneurship and Industrial Development" (BA thesis, Mount Allison University, 1979).

23 Cameron, *Industrial History*, ch. IV; C.W. Parker, ed., *Who's Who and Why in Canada, 1914*, V (New York, 1915), p. 346.

24 "Articles of Copartnership", G.F. MacKay MSS File, Public Archives of Nova Scotia [hereafter PANS].

25 W.J.A. Donald, *The Canadian Iron and Steel Industry* (New York, 1915), pp. 85 and 93.

26 The importance of family and kinship ties in establishing businesses and the role of merchant families in funding nineteenth-century industrial enterprise are discussed in: P.D. Hall, "Family Structure and Economic Organization: Massachusetts Merchants, 1700-1850", in T.R. Hareven,

established a general store at the head of navigation on the East River in 1809, anticipating correctly the future growth of New Glasgow as a market town. The business prospered and Carmichael's son, James William, subsequently expanded and diversified the business. The firm of J.W. Carmichael and Company eventually rose to become the community's principal shipyard, constructing thirty-nine vessels before the demise of shipbuilding in the early 1880s. As well, the firm managed a trading fleet in support of the regional coal industry and served as agents of the Bank of Nova Scotia.[27] The McGregors likewise erected a substantial trading and shipping business. Roderick and James McGregor, sons of Rev. James D. McGregor, D.D., the first Presbyterian minister in the County, entered the wholesale-retail trade in 1830. By 1843, they had diversified their interests. James formed McGregor and Company and expanded into the hardware business. Roderick, in a separate and more prosperous venture with his sons, James Drummond and Peter Archibald, established R. McGregor and Sons. They became wholesale and retail grocers, provision dealers, general merchants, and shippers.[28] By the early 1880s, the Carmichaels and the McGregors were New Glasgow's leading merchant families.[29]

Within New Glasgow, these two families were the cornerstones of a cohesive group which was sustained by inter-marriage and reinforced by shared social and community interests. James C. Carmichael married Christian McKenzie, sister of Captain George McKenzie, New Glasgow's most successful early shipbuilder, who was himself married to Sarah McGregor, sister of Roderick and James, the merchants, and daughter of Rev. James D. McGregor. The town's two wealthiest families thus became interrelated through marriage into the McKenzie family. A similar pattern emerged in the next generation. When James W. Carmichael married Maria McColl and James D. McGregor married Elizabeth McColl, and his sister, Ann, married Jeffrey McColl, shipping merchant and banker, the Carmichaels and the McGregors once again became related through an intermediate family. The social network now embraced three of the four shipping and mercantile families who remained active into the 1880s: the Carmichaels, the McGregors, and the McColls. The alliance was strengthened further when the fourth active shipper, Andrew

ed., *Family and Kin in Urban Communities, 1700-1930* (New York, 1977), pp. 38-61; H.C. Livesay and G. Porter, "The Financial Role of Merchants in the Development of U.S. Manufacturing", *Explorations in Economic History*, 9 (1971), pp. 63-87.

27 *Eastern Chronicle* (New Glasgow), 4 May 1903; *Montreal Standard*, 5 May 1917; *Teare's Directory*, 1879 (Pictou, 1879), pp. 94-5.

28 H.C. Ritchie, "Geneological Records" (unpublished typescript, New Glasgow Regional Library, 1952); *Teare's Directory*, p. 95.

29 In 1882, the Carmichaels and the McGregors each had an estimated pecuniary strength of over $75,000; their closest competitor was rated at less than $40,000. Dun, Wiman and Company, *The Mercantile Agency Reference Book, 1882* (Montreal, 1882), p. 840.

Walker, married Georgina McKenzie, daughter of Captain George McKenzie and niece of James C. Carmichael. The mercantile elite of New Glasgow were thus part of an extended family.[30]

That Fraser and McKay should turn to this mercantile community for financial support was not surprising. Cooperation, certainly not opposition, was characteristic of the mercantile-industrial transition in Pictou County. After his apprenticeship in Rhode Island, Fraser was first employed in 1867 as a blacksmith at the Carmichael shipyard where his father, Thomas Fraser, was the construction foreman. When he left in 1869 to set up his own smithing business, J.W. Carmichael and Company awarded him several contracts. Fraser was also known to the McGregors, because his great, great grandfather, Simon Fraser, had been one of three elders who emigrated to Pictou County with Rev. James D. McGregor.[31] George Forrest MacKay, in turn, married Mary J. Walker, sister of Andrew Walker.[32] Together, Fraser and MacKay had developed one of the province's leading industrial operations whose assets had increased, in less than a decade, to equal those of the most successful mercantile houses in Pictou County.[33] The merchant fraternity was well aware of this, and of the coal and iron producing potential of the region.[34] Moreover, some of its members, as politicians, had debated the merits of the new National Policy.[35] Perhaps of most importance, this was a period of transition in shipping technologies, a passing from sail to steam; and the likely success of the proposed steel works promised the merchants a new source of earnings.[36] Of the leading New Glasgow mercantile families, the Carmichaels, the McGregors, and the Walkers purchased shares in the new Steel Company (Figure 6). The McColls did not, apparently because Jeffrey McColl was suffering financial duress in connection with the operation of the Pictou Bank.[37] In all, Pictou County investment accounted for 84 per cent of the subscribed shares; the remainder was raised principally in Halifax, and also in Guysborough and Antigonish

30 The reconstruction of marriage patterns has been compiled from information in Ritchie, "Geneological Records". I am indebted to Paul Parker for discovering this rich source of information.

31 Cameron, *Industrial History*, ch. VI.

32 Ritchie, "Geneological Records".

33 Dun, Wiman and Company, *Mercantile Reference Book, 1882*, p. 840.

34 J.W. Carmichael was one of the first people to take out a coal lease in Pictou County after the monopoly of the General Mining Association was broken in 1857. He did so in 1861, but by 1864 the lease had lapsed. RG 21, vol. 4, Coal Leases, PANS.

35 For example, J.W. Carmichael represented Pictou as a Liberal from 1867 to 1872, and again from 1874 to 1878. J.P. MacPhie, *Pictonians at Home and Abroad* (Boston, 1914), p. 209.

36 Rosemary E. Ommer, "Anticipating the Trend: the Pictou Ship Register, 1840-1889", *Acadiensis*, X (Autumn 1980), pp. 67-89.

37 J.M. Cameron, "The Pictou Bank", *Nova Scotia Historical Quarterly*, 6 (June 1976), p. 129.

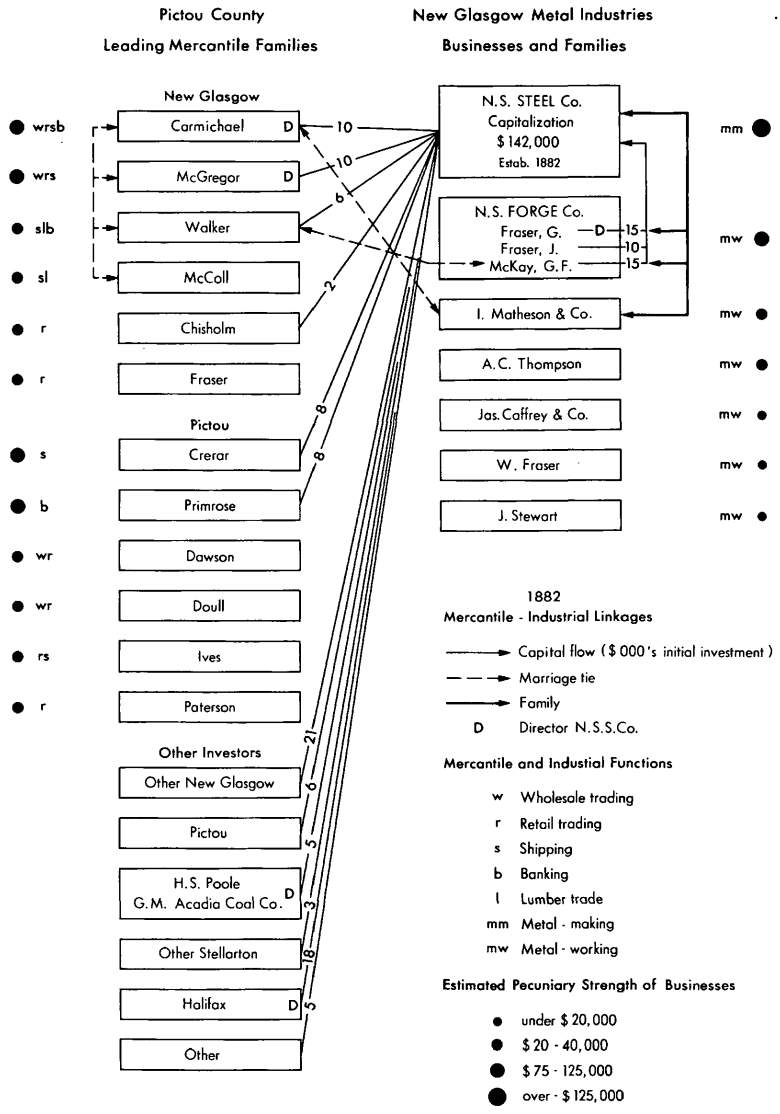


Fig. 6. The Mercantile-Industrial Transition in Pictou County, 1882

counties and in Montreal.[38]

The steel works, which began operations in July, 1883, was the first in Canada to produce steel ingots.[39] Despite a glutted domestic market in 1883 and reduced prices in 1884 and 1885, which fell even more in 1886, the demand for Scotia's products was enough to warrant increased production. Prices had sufficiently improved by 1887 that one year later Scotia paid an 8 per cent dividend on preferred shares.[40] Of course, a favourable tariff schedule was essential to attain this rate of profit. New negotiations in 1887 had resulted in a duty of $9 per ton on puddled bars, $4 on pig iron, and $2 on scrap iron; imported iron and steel ingots, billets, blooms, and slabs were also charged $9 per ton.[41] This arrangement placed a discriminatory duty against goods competing with Scotia's output, but allowed the company's material inputs to be imported at relatively low rates.[42] By the close of 1888, the steel works was operating at full capacity. So, too, was the Forge Company, which was its largest customer. Considering their complementary operations, common location, and overlapping directorships, as well as their desire for greater efficiency in management and operation, it was logical for the two enterprises to amalgamate in 1889 as the Nova Scotia Steel and Forge Company.[43]

During this initial growth phase, Scotia made a definite impact on the urban-industrial pattern of Pictou County. The wide variety of its output —

38 "Prospectus of the Nova Scotia Steel Company, 1882" and "Letters Patent Incorporating the Nova Scotia Steel Company, Limited, 1882", Hawker Siddeley Papers, MS 4-106, Dalhousie University Archives [hereafter DUA].

39 Scotia initially made steel by the Siemens-Martin open-hearth process using acid linings, but several years later introduced basic linings which permitted a wider range of material inputs. The Siemens-Martin process was favoured over the Bessemer method because it produced a stronger, higher quality steel which could sustain higher transportation costs. For an economist's perspective on innovations in the steel industry, see P. Temin, *Iron and Steel in Nineteenth Century America: An Economic Enquiry* (Cambridge, Mass., 1964), pp. 138-41.

40 Nova Scotia Steel Company, *Report of Directors . . . 1883-1887* (New Glasgow, 1884-1888). With few exceptions, Scotia continued to pay at least an 8 per cent dividend on preferred shares until World War I.

41 Donald, *The Canadian Iron and Steel Industry*, pp. 99 and 336; "Bounties for the Canadian Iron and Steel Industry", *The Iron Age*, 25 October 1906.

42 Graham Fraser's reaction to the new tariff schedule reveals something of the business attitudes of the New Glasgow industrialists: "On the whole the duty is very favourable to us. I believe the Montreal people are now squealing very hard about having to pay such a large duty on steel billets". G. Fraser to T. Cantley, 16 May 1887, Thomas Cantley Papers, MG 1, no. 174, PANS. Thomas Cantley provides another illustration of the New Glasgow social network. He was a native of New Glasgow who had joined Scotia in 1885 as a salesman at the invitation of Simon A. Fraser, his friend and Graham Fraser's brother. Previously, Cantley had worked in B.S. McCurdy's store and then formed a business of his own with McCurdy as a silent partner. Later, he would rise to attain the positions of general manager and president of Scotia Steel. Parker, *Who's Who*, pp. 1778-9.

43 Nova Scotia Steel and Forge Company, *Report of Directors . . . 1889*, p. 22.

"railway fishplates, plough plates, nail plate, bars and angles, tie plates, steel for agricultural implements, merchant steel in rounds, flats, and squares, angles and special sections, rivet steel, tramway and rail pits" — provided material inputs for local metal-working firms.[44] By the late 1880s, there were at least seven establishments with direct material linkages to Scotia.[45] Most were started by local Pictonians who had learned a metal-related trade, typically as a blacksmith or machinist, in either shipbuilding or coal mining, and then had set up a business of their own. Fraser Brothers, John Stewart, and I. Matheson and Company began in this way, and manufactured respectively marine engines, plows, and boilers for local customers before the steel works was established. Their rapid growth, and the appearance of several other metal-working firms in the mid-1880s, coincides directly with Scotia's expansion into steel production. Bailey Harrow Company, Robert Brown, and W.P. McNeil, when they initially began manufacturing, all made agricultural implements, and Donald Munro established the Munro Wire Works to fabricate all kinds of fencing and light structural steel products.[46] In addition to selling materials to these firms, Scotia extended backward linkages to other sectors of the regional economy. The most substantial were to the coal and transportation industries. By the close of the 1880s, Scotia was using some 30-36,000 tons of coal, or nearly 10 per cent of the total raised in Pictou County, to produce annually about 13,000 tons of finished steel products.[47] Raw materials and finished products were both shipped over the Intercolonial Railway, stimulating further the industrial economy.

The proximity of Scotia to the coal fields created certain economies, but the company's pig iron supply, a considerable production cost, had to be imported, chiefly from Scotland.[48] Throughout the 1880s, domestic production accounted

44 Nova Scotia Steel and Forge Company, *Report of Directors . . . 1890*, p. 33.

45 *Teare's Directory, 1879;* Dun, Wiman and Company, *Mercantile Reference Books, 1882-1890.*

46 Of these firms, the one which grew most rapidly was I. Matheson and Company. The firm itself illustrates well the continuing relationship between business success and New Glasgow's social network. Isaac Matheson, the firm's founder, was born at West River in Pictou County in 1814. He learned the blacksmith's trade in the coal mining industry, later married J.W. Carmichael's sister, and by the mid-1860s was the proprietor of the Acadia Foundry. Family ties were bound even tighter in the 1880s. James Matheson Carmichael married Christian Matheson, while his sister Christian Carmichael married William Grant Matheson. William, who had studied engineering at the University of New Brunswick and served his apprenticeship in Dundee, Scotland, succeeded his father, Isaac, as the head of the company. When the company was incorporated in 1896, however, James M. Carmichael was named as President and James C. McGregor as Vice-President. *Eastern Chronicle,* 12 September 1930; Cameron, *Industrial History*, ch. I; Ritchie, "Geneological Records".

47 Nova Scotia, Department of Mines, *Report . . . for the Year 1880-1890* (Halifax, 1881-1891); Nova Scotia Steel Company, *Report of Directors . . . 1882-1888.*

48 Scotia purchased most of its pig iron through the firm of William Jacks and Company of Glasgow. William Jacks also contracted with Scotia to supply skilled labour. Hawker Siddeley Papers, MS 4-106, DUA.

for only about one-third of total pig iron consumption, and by 1890 the gap was widening (Table 3). Nearly 90 per cent of Canadian output came from Londonderry, located some 150 km west of New Glasgow. Despite its relative importance, the Londonderry Iron Company had inherited the problems of its predecessor, the bankrupt Acadian Iron Furnace Company: high transportation costs; limited markets; an inconsistent supply of good quality coke; and as a consequence, both inadequate and inconsistent revenues.[49] Moreover, its pig iron was unsuited to Scotia's production techniques. The takeover of the Londonderry iron works in 1887 by Montreal interests, however, coincided with the upward revision in the same year of the duty on pig iron from $2 to $4 per ton.[50] This adjustment drove Scotia's production costs upward, at a time when the price of pig iron itself was rising from just over $19 per ton in 1886 to about $25 in 1890 (Table 3). With supply and demand conditions so unstable (material costs alone jumped almost 40 per cent between 1886 and 1890), some of Scotia's directors embarked on a programme of diversification to create an iron works.

The County's potential for iron production had been recognized for some time. The availability of coal was an obvious attraction. Other necessary raw materials, including iron ore and limestone, were known to the General Mining Association which had established an ill-fated and short-lived iron works in 1829.[51] By the 1880s, the various deposits of iron had been fully mapped and assessed to reveal an iron content ranging from 50 to 68 per cent.[52] E. Gilpin, the Province's Inspector of Mines, was convinced that "the iron deposits . . . are more varied and of greater extent than elsewhere in the province, and from their relation to shipping and fuel flux are destined to play an important part in the future".[53] These opinions were confirmed in 1890 by Robert Chambers, the mining engineer of the prospective New Glasgow Iron, Coal, and Railway Company, who judged that the deposits along the East River alone were capable of supplying a furnace of 20,000 tons annual capacity for fifteen years. When mixed with other regional ores, pig iron could be produced "at a price entirely below any competition".[54]

49 Donald, *The Canadian Iron and Steel Industry*, pp. 106-7 and 327; J.H. Bartlett, "The Manufacture of Iron in Canada", *Transactions of the American Institute of Mining, Metallurgical and Petroleum Engineers*, 14 (1885-86), pp. 539-41; C.O. Macdonald, *The Coal and Iron Industries of Nova Scotia* (Halifax, 1909), pp. 233-48.

50 Donald, *The Canadian Iron and Steel Industry*, p. 336.

51 Bartlett, "Manufacture of Iron in Canada", p. 538; Cantley, "A Sketch of the Iron and Steel Industry", p. 325; Gesner, *Industrial Resources*, p. 258.

52 See, for example, E. Gilpin, "The Iron Ores of Pictou County, Nova Scotia", *Transactions of the American Institute of Mining Engineers* (May 1895), pp. 1-26 and *The Iron Ores of Nova Scotia* (Montreal, 1891).

53 E. Gilpin, "Report on the Iron Ores of Pictou County, Nova Scotia, 1890", RG 21, Series A, vol. 26, PANS.

54 R.E. Chambers, "Report on the New Glasgow Iron, Coal, and Railway Company Properties

Table 3

IMPORTS, PRODUCTION, AND PRICES IN THE CANADIAN PIG IRON INDUSTRY, 1884-1900

Year	Imports of Pig Iron (tons)	Canadian Pig Iron Production (tons)	Scotia Pig Iron Production (tons)	Pig Iron Prices Quoted on Toronto Market[a] British	Bayview American	London-derry	Ferrona	Hamilton
1884	52,184	29,593		$21.25		$19.67		
1885	43,398	25,770		19.44		19.25		
1886	45,648	26,180		18.94		18.88		
1887	50,214	39,717		22.13		20.75		
1888	48,973	22,209		21.63		22.13		
1889	72,115	24,823		23.75		24.38		
1890	87,613	25,697		24.49		24.25		
1891	81,317	20,153		n.q.[b]	$23.00	n.q.		
1892	68,918	30,294	12,519		23.00	22.00		
1893	63,522	46,948	22,725		23.00	20.00	$19.50	
1894	45,790	62,867	29,867		21.50	20.00	19.50	
1895	35,060	31,692	17,447		19.88	20.00	19.50	
1896	37,141	52,052	14,702		19.50	20.00	19.50	
1897	28.940	33,254	22,500		19.50	20.00	19.50	
1898	40,995	19,576	21,627		19.50	20.00	19.50	
1899	48,594	31,861	31,100		n.q.	20.00	19.50	$20.33
1900	65,330	34,618	28,133			n.q.	n.q.	25.00

Sources: Donald, *The Canadian Iron and Steel Industry*, pp. 327-28; Nova Scotia Steel and Coal Company, *Report of the Directors . . . 1892-1900*; *Monetary Times*, 1884-1900.

a Prices are the yearly averages, calculated from the price quoted in the *Monetary Times* at the end of each month.

b n.q.: not quoted.

Substantial capital was required to establish the iron works. The blast furnace was estimated to cost $500,000. A railway to connect the ore deposits to the potential furnace site at Ferrona would require an additional $50,000. To secure this capital, a new pattern of financing and management emerged in Scotia's development. The mercantile interests, particularly J.D. McGregor and J.M. Carmichael, urged caution, arguing that if pig iron production were to be undertaken, then an entirely new and separate company should be formed, rather than risking Scotia's resources in the event the iron venture failed.[55] This strategy was eventually accepted and pursued by Graham Fraser in 1888.[56] However, when the necessary capital could not be raised and this particular incorporation attempt failed, John F. Stairs of Halifax, an industrialist and federal politician, and J. Walter Allison, also of Halifax and a financier, were newly enlisted as directors for the company's successful 1891 incorporation and capitalization drive.[57] New Glasgow interests — Fraser, MacKay, and Harvey Graham — retained control of the company, but the period of local entrepreneurial capitalism was at an end. There was not sufficient capital within Pictou County to finance entirely a new round of industrial expansion. Scotia would hereafter be dependent on national and foreign money markets for its development capital.

The blast furnace was "blown in" at Ferrona in 1892 and soon achieved a stable market despite a number of obstacles. Ferrona, located on the Intercolonial and situated approximately equidistant from the Bridgeville ores, coking coal at Westville, and the Trenton steel works, provided optimal accessibility to reduce production costs (see Figure 4). After an initial year of partial operation, the blast furnace was soon averaging an annual output of about 20,000 tons, or between one-third and one-half of the total Canadian production. Over half was consumed by Scotia's forge and newly upgraded steel plant; the remainder was sold elsewhere, chiefly to foundries in Ontario.[58] To capture this particular trade, different strategies were advanced. Low prices were offered during periods of slack demand, such as the early 1890s.[59] Overcoming high transportation costs was more troublesome. The Intercolonial Railway did offer competitive freight rates from the Maritimes to Quebec, but through charges on the

Outside the East River, 1890", Thomas Cantley Papers, MG 1, no. 174, PANS.

55 Nova Scotia Steel and Coal Company, *Scotia*, pp. 9-11; Donald, *The Canadian Iron and Steel Industry*, p. 112;; Cantley, "Sketch of the Iron and Steel Industry", p. 327.

56 Nova Scotia, "An Act to Incorporate the New Glasgow Iron, Coal, and Railway Company, Limited" (Halifax, 1888). Besides Fraser, other directors included G.E.R. Burpee, W. Jacks, H. Aitken, and D.C. Fraser.

57 Nova Scotia, "An Act to Incorporate the New Glasgow Iron, Coal, and Railway Company, Limited" (Halifax, 1891).

58 Nova Scotia Steel and Forge Company, *Report of Directors . . . 1892*, p. 39; Donald, *The Canadian Iron and Steel Industry*, p. 327; Guy, "Industrial Development", p. 122.

59 *Monetary Times* (Toronto), 31 August 1894.

Grand Trunk and Canadian Pacific lines were uncontrollably higher. Shipment by water, at best seasonable, was considered; but the central Canadian railways threatened to retaliate by cancelling the preferential rates they had given to some of Scotia's largest Ontario customers, which would naturally force these foundries to purchase materials elsewhere.[60] Price stability was therefore essential. To achieve this, the New Glasgow Iron, Coal, and Railway Company and the Londonderry Iron Company, Canada's major pig iron producers, entered into an agreement in 1896 ". . . for the regulation of prices, conditions, and terms upon which these companies shall sell their pig iron in the Province of Ontario and Quebec".[61] Government assistance, however, remained critical. The tariff on imported wrought iron scrap was boosted from $2 to $3 per ton in 1894, while a newly introduced bounty provided $2 for each ton of puddled iron bars or steel billets the company produced.[62] The various strategies proved successful, prompting the merger of the forge and steel works with the iron company in 1895 to create the Nova Scotia Steel Company. The reconstituted board included from Pictou County, Graham Fraser, J.D. McGregor, G.F. MacKay, and H.S. Poole, from Halifax, J.F. Stairs, J. McNab, Adam Burns, and J.W. Allison, and from Quebec, Frank Ross.[63] The merger was entirely logical. As an integrated unit, the new corporation would be more efficient, not only in administration and management,[64] but also in planning material flows and in devising marketing strategies.[65]

During this period of diversification in the 1890s, Scotia continued to influence the process of urbanization in Pictou County. The company's labour force at the forge and steel works rose from about 420 in 1890 to 750 in 1898.[66] Most workers lived in New Glasgow, but others resided in neighbouring Trenton, which doubled in population to almost 1,000 people. Some 250 men were employed at the blast furnace site, swelling the size of Ferrona.[67] The

60 J.F. Stairs to T. Cantley, 1 June 1894, Thomas Cantley Papers, MG 1, no. 174, PANS.

61 "Memorandum of Agreement . . . 23 January, 1896", Hawker Siddeley Papers, MS 4-106, DUA. The prices quoted in this document are slightly less than those quoted on the Toronto market (see Table 3), and also indicate that the market was most competitive in southern Ontario.

62 Donald, *The Canadian Iron and Steel Industry*, p. 336.

63 Details of the merger discussions, which took place during 1893 and 1894, appear in the Thomas Cantley Papers, MG 1, no. 174, PANS.

64 Economies in the metals industry are discussed in A. Chandler, *The Visible Hand* (Cambridge, Mass., 1977), pp. 258-72.

65 "The supply of pig iron being entirely under their own control enables them to secure orders which otherwise would have gone past them". Nova Scotia Steel Company, *Report of the Directors . . . 1896*, p. 52.

66 Cantley to Gilpin, 7 October 1890, RG 21, vol. 25(d), PANS; G.E. Drummond, "The Iron Industry in 1898", *Canadian Mining Review*, 18 (1899), p. 57.

67 J.S. Barrie, "The Coal and Iron Industries of Eastern Canada", *The Colliery Guardian*, 15

hamlets of Springville, Bridgeville, and Sunnybrae grew in support of nearby iron mining activity. In a similar way, employment in the coal and transportation sectors was supported by Scotia's business. The company annually purchased about 130,000 tons of coal, or up to 15 per cent of the County's total output; and in some years it paid out more than $100,000 in freight charges on the Intercolonial.[68] Without Scotia's presence, the urbanization process in Pictou County would have been arrested through the 1890s. Stellarton actually lost population between 1891 and 1901, and the growth of other urban places was at a low ebb (see Table 2). Sectors of New Glasgow and Trenton's economy which in the 1880s had multiplied in scale, now either stabilized in size or subtracted strength (Table 4). Even Scotia experienced a temporary financial crisis in 1896 when severely depressed prices and reduced bounties caused financial losses which forced the company to reduce the wages and salaries of all workmen and officials.[69] By the close of the decade, however, with the stimulus of markets opening on new resource frontiers across Canada, the "volume of business . . . done was larger than in any previous year in the Company's history".[70]

Despite the upturn in business, weaknesses had appeared in the structure of the regional metals industry. Foremost, the manganiferous character of the East River ores made it difficult to produce foundry pig iron at the Ferrona iron works.[71] To overcome this problem, Scotia tapped its holdings at Brookfield and Arisaig, and purchased ore from the Pictou Charcoal Iron Company and the Torbrooke Iron Company; but the use of these ores was not entirely satisfactory, which led Scotia to examine other sources.[72] One of these included the red hematites at Wabana on Bell Island, Newfoundland, which the company first tested in 1892 and purchased the next year for only $5,000. Within two years, Wabana ore comprised the major supply of iron for the Ferrona furnace. Despite the extra transportation costs of shipping from Newfoundland to Pictou County, a more economical pig iron was produced.[73] Scotia continued to search for additional sources of ore, since the payment of federal bounties on foreign ores, including those of Newfoundland, remained in question during the initial years of the Laurier administration, and the issue was not fully resolved until 1899.[74] Moreover, Scotia sold some of its Bell Island properties in 1899 to the

February 1901.

68 Nova Scotia, Department of Mines, *Report . . . for the Year, 1890-1899.*

69 Nova Scotia Steel Company, *Report of the Directors . . . 1897*, p. 58.

70 Nova Scotia Steel Company, *Report of the Directors . . . 1899*, p. 76.

71 Donald, *The Canadian Iron and Steel Industry*, p. 112.

72 Nova Scotia, Department of Mines, *Report for the Year, 1893, 1894, and 1896.*

73 "An Appreciation of Robert E. Chambers", Thomas Cantley Papers, MG 1, no. 167, folder 2, PANS.

74 "Bounties", *The Iron Age*, 25 October 1906, pp. 1074-5.

Table 4

THE URBAN ECONOMY OF NEW GLASGOW-TRENTON, SELECTED YEARS, 1882-1930
(by Estimated Pecuniary Strength)

Business Sector	Pecuniary Strength ($000s) 1882	1892	1901	1912	1921	1930
Metals manufacturing	54	1,082	710	1,281	1,425	222
Other manufacturing	112	160	158	203	219	225
Construction	7	19	25	63	176	61
Trade	185	299	350	458	884	727
Transportation and Communication	323	412	412	500	662	250
Community and Business Services	38	40	48	93	105	65
Totals	719	2,012	1,718	2,598	3,471	1,550

Sources: Calculated from data in Dun, Wiman and Company and R.G. Dun and Company, *Mercantile Agency Reference Books, 1882-1931.*

newly formed Dominion Iron and Steel Company for a reported $1,000,000, but by 1904, it was realized that the best iron deposits had been sold inadvertantly.[75] A flurry of exploration followed, chiefly in mainland Nova Scotia and on Bell Island, but also in Cuba and Brazil.[76] In the end, the vast submarine deposits under Conception Bay off Bell Island were judged best, and indeed they provided enough ore for Scotia's own use and for export abroad.

The profits realized from the sale of its Bell Island properties were used by Scotia to overcome another shortcoming of the Pictou resource base, the inadequacy of local coal for coking purposes. By the late 1890s, the Ferrona blast furnace was purchasing up to 80,000 tons of fuel annually from regional collieries. The company did not mine its own coal because central Canadian and foreign interests had gained control of the best reserves before Scotia's officials embarked on their expansionary drive in the 1880s. They did work several leases, but these failed to yield coal of sufficient quality or quantity to warrant development.[77] This situation created several problems. A protracted

75 *Monetary Times*, 5 August 1904, p. 106.

76 "An Appreciation of Robert E. Chambers", Thomas Cantley Papers, MG 1, no. 167, folder 2, PANS; "Preliminary Report on Brazilian Iron Ores", Hawker Siddeley Papers, MS 4-106, DUA.

77 Before World War I, Scotia held five different coal leases in Pictou County. See RG 21, vol. 4, Coal Leases, PANS.

strike in 1887 cut off Scotia's fuel supply, forcing the temporary closure of the melting furnace at the steel works and a consequent loss of orders.[78] Prices were also subject to fluctuation. A more serious concern, however, was the quality of coke produced from mainland coal. Fuel efficiency was critical in the pig iron industry, and substantial economies could be won if a high grade coke were used. Early experiments with coke processed at the Intercolonial Coal Company's Drummond Mine at Westville did not prove successful; nor did a combination of Drummond and Springhill coal. Both were high in sulphur and ash content.[79] By 1898 a solution had been found: Cape Breton coal, purchased from the Dominion Coal Company, yielded a satisfactory coke which resulted in greater efficiency and substantially reduced production costs.[80] Nonetheless, since an essential link in Scotia's integrated chain of operations remained in the hands of other interests, Scotia used the money earned from the sale of its iron holdings to the Dominion Iron and Steel Company to purchase, in 1900, the Cape Breton coal mining holdings of the General Mining Association.[81] Although the press criticized this takeover as foolish and extravagant, by 1904 coal mining was the most profitable sector of the company.[82] A coal washing plant and coke ovens were built at Sydney Mines in 1901 to supply the Ferrona blast furnace. By shipping coke, a less bulky and cleaner product than coal, significant handling and transportation costs were saved.

Nevertheless, the geographical dispersion of Scotia's various activities remained a matter of concern. As early as 1897, the company had considered locating a blast furnace in either Sydney or Louisburg to minimize the costs of assembling materials. A new company, the Scotia Steel and Iron Company, was incorporated for this purpose, but achieved little because Scotia's directors failed to convince the federal government to extend the pig iron bounties beyond 1902.[83] Several joint ventures were considered during 1898 and 1899, including discussions with H.M. Whitney about Scotia's participation in the formation of the Dominion Iron and Steel Company, but when these, too, went unrealized, Scotia pursued a careful policy of self-management and vertical integration.[84]

78 Nova Scotia Steel Company, *Report of the Directors . . . 1887*, p. 14.

79 *Monetary Times*, 12 January 1898; Cantley, "Sketch of the Iron and Steel Industry", pp. 328-9.

80 *Maritime Mining Record*, 22 November 1899, p. 10; Canada, House of Commons, *Debates* (1903), p. 7934.

81 The sale was negotiated by Thomas Cantley in London during 1899. Cantley also spent much time in Europe, particularly in Scotland and Germany, during the early 1900s signing iron ore and coal contracts and examining new forge and steel making technologies. Parker, *Who's Who*, p. 179; Nova Scotia Steel and Coal Company, *Souvenir 1908* (New Glasgow, 1908), p. 15.

82 *Maritime Mining Record*, 20 February 1901, p. 12; and Nova Scotia Steel and Coal Company, *Report of the General Manager . . . 1909*, p. 7.

83 Canada, House of Commons, *Debates* (1903), p. 7933.

84 *Maritime Mining Record*, 22 November 1899, p. 10.

The company was reorganized in 1901 as the Nova Scotia Steel and Coal Company, and with increased capitalization in hand, set about the task of building a fully integrated iron and steel making complex at Sydney Mines.[85] There were good reasons for choosing this site. Cost analyses undertaken by the company during the 1890s suggested that a ton of pig iron could be produced for $5.50 at Sydney Mines, compared to actual costs of $10.50 at Ferrona (Table 5). Further savings of 20 per cent could be realized in the conversion of pig iron to steel billets. When completed in July 1905, the complex was judged the most efficient and technically advanced in Canada. By the close of the decade, Scotia employed some 2,300 coal miners and 700 iron and steel workers in Cape Breton alone. Sydney Mines was itself a "Scotia" town; rows of company built cottages housed many of the town's 7,500 residents.[86]

The growth of Scotia's Cape Breton interests had immediate repercussions on the economy of Pictou County. Closure of the blast furnace and iron mining operations greatly reduced the population of Ferrona; and the removal of the open hearth furnaces had a similar effect on Trenton. Both closures, and the simultaneous opening of Scotia's Marsh Colliery at Coalburn, resulted in lost orders for the County's coal industry (although these losses were concealed by the substantial and simultaneous increase in the extra-regional demand for the County's coal at this time).[87] On balance, however, the initial impact of Scotia's internal reorganization upon Pictou County was positive. With expansion, the company's primary iron and steel output doubled in size to average over 70,000 tons annually; and virtually all of this was shipped from Sydney Mines to the metal-working factories of New Glasgow and Trenton for use in either forging or conversion to steel products. Bounties, protective tariffs and preferential freight rates, so essential to the metals industry, encouraged the distribution of a varied range of goods to distant markets. For example, the steel products of New Glasgow and Trenton firms went mainly to the agricultural implements manufacturing industry in Ontario; Scotia's marine forgings were shipped to Victoria, Vancouver, Owen Sound, Levis, and some Maritime cities.[88] Scotia Steel's competitiveness in these markets was facilitated by an efficient and productive plant at Trenton where a number of improvements were made between 1906 and 1912:[89] the forge was entirely rebuilt and equipped with the

85 The company remained dominated by Nova Scotia financiers and industrialists. For a succinct discussion of the events leading to the incorporation, see D. Frank, "The Cape Breton Coal Industry", pp. 13-4.

86 Nova Scotia Steel and Coal Company, *Report of the General Manager . . . 1910*, p. 17.

87 Cameron, *Pictonian Colliers*, p. 98; *Monetary Times*, 19 August 1904. The mine was in production from 1902 to 1909, averaging about 40,000 tons of coal annually.

88 Thomas Cantley Papers, MG 1, vol. 167, folder 1913, PANS.

89 Cameron, *Industrial History*, ch. V; Nova Scotia Steel and Coal Company, *Report of the General Manager . . . 1905-1912*.

Table 5

ESTIMATED COSTS OF PIG IRON AND STEEL PRODUCTION AT FERRONA AND SYDNEY MINES

	Ferrona[a]			Sydney Mines[b]		
Item	Required Amount	Cost per Ton	Total	Required Amount	Cost per Ton	Total
Iron ore	2.0 tons	$1.75	$3.50	1.80 tons	$1.00	$1.80
Coke	1.4 tons	3.00	3.75	1.25 tons	1.52	1.80
Limestone	.5 tons	1.00	.50	.75 tons	.53	.40
Repairs			1.00			
Labour			1.30			1.50
Incidentals			.40			
Cost: one ton pig iron			10.50			5.50
Cost:						
Conversion to steel			8.00			5.00
Cost: one ton steel			18.50			10.50

Sources: RG 21, vol. 25(d), PANS; P.T. McGrath, "The Manufacture of Iron and Steel in Cape Breton", *The Engineering Magazine*, 2 (June 1901), pp. 582-3.

a Based upon actual production costs at Ferrona (pig iron) and Trenton (steel) using Pictou County materials during 1892-1893.

b Based upon production costs at Ferrona using Wabana ore and Cape Breton coke during 1896-1898.

most advanced hydraulic presses available; a new railway axle plant was developed which immediately supplied over 60 per cent of the Canadian market; a new 28-inch cogging mill was added; expensive heating furnaces were replaced; and most other operations, including the plate mill and nut and bolt division, were either expanded or upgraded. The company's labour force at these facilities, which totalled about 800 in 1910, increased by some 900 employees shortly after the Eastern Car Company was organized in 1912 as a wholly owned subsidiary of Scotia.[90] This move towards further diversification and vertical integration can be justified solely by the growing demand for railway rolling stock both in Canada and abroad; in the process, Scotia also improved its internal economics of scale by securing a guaranteed buyer for its steel products in a market which was becoming increasingly dominated by Hamilton's newly organized Steel Company of Canada (Figure 7).[91]

Throughout this period, Scotia's rolling mills continued to supply specialized materials to local metal-working industries. These firms had grown substantially since the business downturn of the mid-1890s to produce a wide variety of finished goods for regional and national markets.[92] Bailey-Underwood and the Brown Machine Company made agricultural implements, while bridges and structural steel work were produced by both W.P. McNeil and John Stewart. I. Matheson and Company continued to make boilers and engage in foundry work, and J.W. Cumming Manufacturing Company supplied mining equipment and forgings. The products of the Steel Furnishing Company included springs, mattresses, and office furniture. The Munro Wire Works manufactured various kinds of fencing. Finally, the Fraser Machine and Motor Company built marine engines for fishing boats, and the Canada Tool and Specialty Company filled custom orders for tools and other items. The labour force of these firms in 1912 totalled some 850 workers, an increase of almost 50 per cent since the late 1890s. Clearly, the continued growth of these smaller metal-working firms was assisted by Scotia's ability to supply specialized materials quickly and with minimal transportation costs. Other relationships, however, including family ties, the interchange of personnel, and capitalization assistance, should not be overlooked (Figure 7). In fact, these types of linkages were not limited to Pictou County. At Sydney Mines, H.T. Sutherland, President of Thompson and Sutherland and brother-in-law of Thomas Cantley, then

90 MG 1, no. 398, Eastern Car Company file, PANS; Cameron, *Industrial History*, ch. VII; New Glasgow *et al.*, Town Councils, *Nova Scotia's Industrial Centre* (New Glasgow, 1916), pp. 53-5.

91 D. Kerr, "The Location of the Iron and Steel Industry in Canada", in R.L. Gentilcore, ed., *Geographical Approaches to Canadian Problems* (Toronto, 1971), pp. 59-68; Donald, *The Canadian Iron and Steel Industry*, pp. 219-22.

92 Canadian Manufacture's Association, *Industrial Ascendency of Nova Scotia;* R.G. Dun and Company, *The Mercantile Reference Book, 1912.*

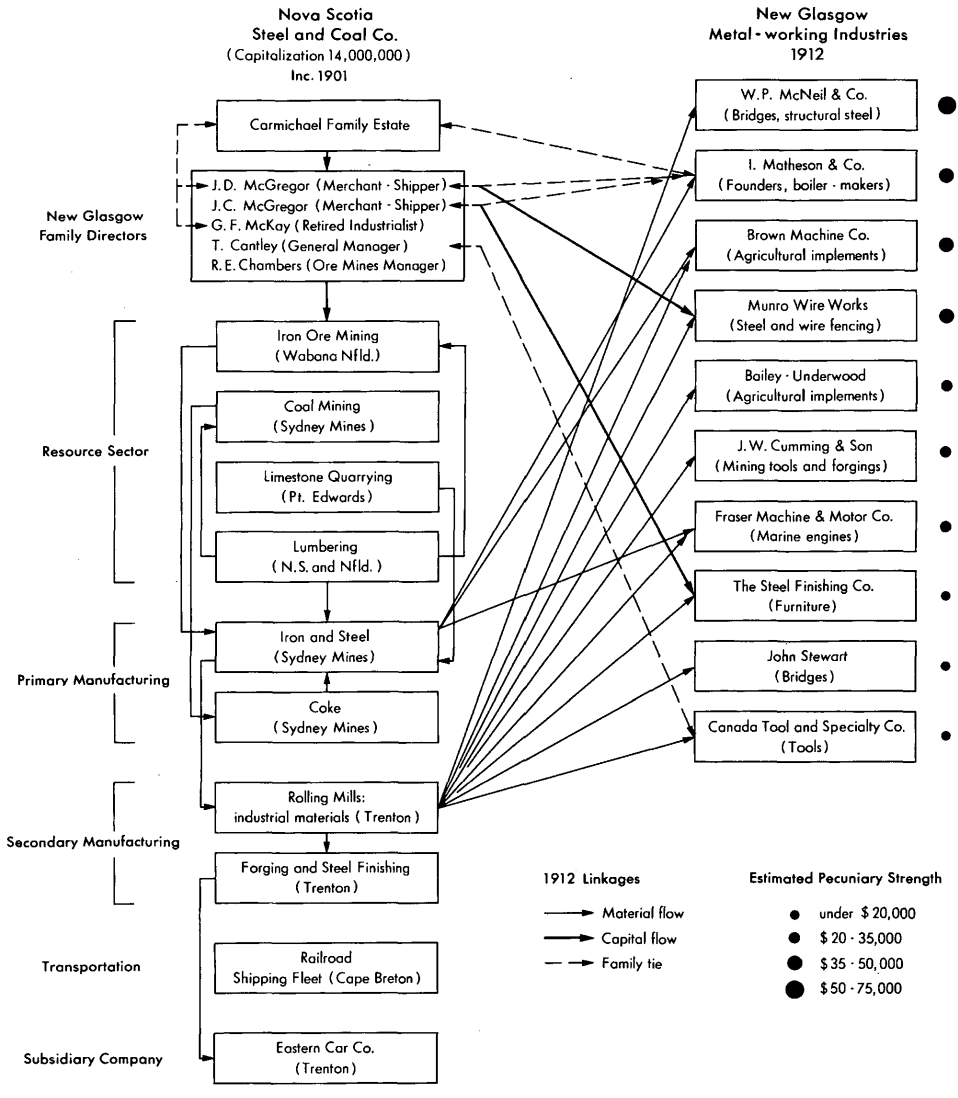


Fig. 7. The organization of the Nova Scotia Steel and Coal Company and Linkages with Metal-Working Industries, 1912

General Manager of Scotia, built a foundry and used Scotia's materials to make stoves for the company's chain of hardware stores.[93]

The development of the metals industry in the early twentieth century propelled a new round of town growth in Pictou County. Spurred by extra-regional demand and the artificial stimulus of war, the manufacturing output of New Glasgow and Trenton multiplied more than tenfold between 1900 and 1917, the peak of wartime production. As early as 1911, a factory survey by the provincial government had revealed that fully two-thirds of New Glasgow's industrial labour force and more than 90 per cent of Trenton's were engaged in the metals industry;[94] and this position of dominance was compounded during the war as factories turned to the production of munitions and Scotia embarked on a limited programme of shipbuilding.[95] Factories in Pictou County produced nearly $32,000,000 in war-related goods, or about 4 per cent of the Canadian total.[96] Scotia alone was awarded munitions contracts totalling at least $30,000,000, and the fact that Thomas Cantley served on the federal government's Shell Committee was no doubt instrumental in Scotia's ability to attract this type of manufacturing.[97] As a consequence of this concentrated wartime effort, New Glasgow's population doubled and Trenton's tripled between 1901 and 1921. The war effort had pushed the manufacturing labour force of both towns to an all-time high in 1917 of 3,156 men and women, and town growth occurred simultaneously. The temporary thrust of wartime production, however, was quickly withdrawn: manufacturing employment dropped to 2,655 in 1918 and stood at only 1,284 in 1919.[98] Unemployment became a common experience. There was a slight recovery during the 1920s , so that by 1931 Trenton provided industrial jobs for 784 workers and New Glasgow for 604; but even this advance failed to recapture the pre-war level of employment in 1911

93 *Eastern Chronicle*, 24 January 1935.

94 Nova Scotia, *Journals and Proceedings of the House of Assembly, 1911*, Appendix 15.

95 The federal government provided financial assistance between 1917 and 1920 for Scotia to build seven small freighters of up to 2,800 tons in size. Larger ships could not be built at Trenton because of the restricted size of the shipyard and Scotia's limited steel fabricating facilities. Scotia was even incapable of building ships that the company itself could use in the Wabana to Cape Breton iron trade. In fact, Scotia favoured Halifax as the province's most suitable shipbuilding location. "Resources of the Province of Nova Scotia as Regards Steel-Ship Construction", Thomas Cantley Papers, MG 1, no. 167, folder 7, PANS; and "Shipbuilding", Hawker Siddeley Papers, MS 4-106, DUA.

96 By comparison, Montreal was awarded contracts totalling $162,203,807; Toronto, $153,155,974; and Hamilton $68,896,058. MG 30, B4, vol. 36, F.E. Hirschfile, Public Archives of Canada. I am indebted to Peter Rider, National Museum of Man, for drawing my attention to the source of these data.

97 Cameron, *Industrial History*, chap. VI; M. Bliss, *A Canadian Millionaire* (Toronto, 1978), p. 245.

98 Canada, Census of Industry, "Preliminary Report: Industrial Statistics of the Maritime Provinces for 1919" (Ottawa, 1922).

when New Glasgow recorded 776 manufacturing employees and Trenton 1,182.[99] As a result, the urban economies of both towns suffered considerably, forcing almost all sectors to decline in financial strength (see Table 4). It was therefore inevitable that New Glasgow and Trenton should record population losses between 1921 and 1931. The urban-industrial economy had begun to collapse.

The cessation of wartime contracts alone is not sufficient to explain the decline of the metals industry and the consequent loss of urban population in Pictou County. Nor was the local resource base a decisive factor; Scotia's move to Cape Breton demonstrated that at least metal-working was still economically feasible in the County. While the immediate post-war recession lessened the external demand for marine forgings, mining equipment, and railway axles and cars — all key products in the region's export base — these same products were again in demand by the late 1920s, and a share of the market, albeit a smaller one, had been recaptured. Therefore, the most plausible reasons for the urban-industrial collapse are likely associated with the removal of the very incentives that initially propelled the metals industry to prominence: entrepreneurial initiative and the social milieu of community; government assistance in the guise of freight rate preferences, bounties, tariff protection, and grants-in-aid for infrastructural development; the internal economies of scale of Scotia, a vertically integrated organization; and the external economics of an integrated industrial complex, such as New Glasgow-Trenton.

Following Confederation, Pictou County was pulled incessantly into the national economy. Indeed, the basic contours of Canada's heartland-hinterland space economy were drawn in the late nineteenth and early twentieth centuries. As an industrial heartland emerged in southern Ontario and Quebec, the competitiveness of the periphery, comprised of highly localized regions such as Pictou County, was placed in jeopardy. From a theoretical perspective, it can be argued that advantages of external economies will gradually accrue to a developing heartland economy, forcing competitors in the periphery out of production. To test this proposition, data have been assembled which measure these economies as well as costs of production in selected towns and cities that competed in the Canadian metals industry (Tables 6 and 7). Because of certain deficiencies, these data must be interpreted carefully;[100] but they do suggest the comparative advantages and competitive position of New Glasgow and Trenton. Manufacturing establishments in the selected communities were generally comparable in average size, capitalization, and output. In terms of scale

99 Canada, *Census of Canada, 1911*, vol. 3, Tables 7 and 11; Canada, Census of Industry, "Manufacturing Industries of the Maritime Provinces, 1931" (Ottawa, 1933).

100 Because it is impossible to obtain data for only metal-making and metal-working industries in individual cities, we are forced to rely on aggregate data for all manufacturing types. This problem is not too serious, because the metals industry in the selected towns and cities clearly dominated the manufacturing structure.

Table 6

STRUCTURAL INDICES OF MANUFACTURING IN SELECTED CANADIAN METAL-MAKING AND METAL-WORKING TOWNS AND CITIES, 1910-1930

Date and Place	Average of Establishments					
	Labour	Capital ($000s)	Output ($000s)	Capital/ Labour	Output/ Capital[a]	Output/ Labour[a]
1910						
New Glasgow-Trenton	68	101	115	1,489	.20	303
Sydney Mines	85	3,225	423	3,817	.30	11,156
Sydney	195	1,251	470	6,330	.22	1,397
Hamilton	58	159	151	2,743	.26	725
Sault St. Marie	22	234	44	10,742	.04	493
1920						
New Glasgow-Trenton	35	169	241	4,801	.24	1,169
Sydney Mines	21	117	299	6,564	.53	2,970
Sydney	24	264	307	11,009	.38	4,156
Hamilton	40	182	217	4,586	.32	1,463
Sault Ste. Marie	28	401	306	14,398	.32	3,306
1930						
New Glasgow-Trenton	49	381	270	7,767	.15	1,135
Sydney Mines[b]						
Sydney	72	865	468	11,979	.20	1,867
Hamilton	70	488	380	6,909	.31	1,657
Sault Ste. Marie	49	1,485	441	30,309	.11	3,196

Sources: Calculated from data in Canada, *Census of Canada, 1901-1931* and *Canada Yearbook 1922 and 1933.*
a Output equals net output (value of products less cost of labour and materials).
b Sydney Mines was no longer engaged in metals production in 1930.

Table 7

MANUFACTURING PRODUCTION COSTS IN SELECTED CANADIAN METAL-MAKING AND METAL-WORKING TOWNS AND CITIES, 1900-1930

	1900	1910	1920	1930
New Glasgow-Trenton				
Average size of establishments	20	68	35	49
Material costs/output	.45	.54	.64	.59
Labour costs/output	.36	.28	.16	.20
Total costs/output	.81	.83	.80	.79
Sydney Mines				
Average size of establishments		84	21	
Material costs/output		.65	.71	
Labour costs/output		.11	.08	
Total costs/output		.76	.79	
Sydney				
Average size of establishments	30	195	24	72
Material costs/output	.52	.18	.54	.44
Labour costs/output	.32	.23	.13	.19
Total costs/output	.84	.41	.67	.63
Hamilton				
Average size of establishments	44	58	40	70
Material costs/output	.52	.51	.49	.45
Labour costs/output	.23	.21	.24	.23
Total costs/output	.75	.72	.73	.68
Sault Ste. Marie				
Average size of establishments	50	22	28	49
Material costs/output	.24	.40	.54	.46
Labour costs/output	.40	.34	.16	.18
Total costs/output	.62	.74	.70	.64

Source: See Table 6.

economies, therefore, there was little initially to differentiate New Glasgow and Trenton from, say, Hamilton. Only in the 1920s did Hamilton move ahead in average plant size, which is helpful in explaining the decreasing ratios there of material costs/output and labour costs/output. In the Hamilton case, this process of reducing costs was aided by the nearby automobile industry's demand for metal products,[101] and by the Ontario government's assistance in acquiring access to cheaper coal and iron ore. [102] By contrast, the industrial market for steel in the Maritimes was quite limited, and the Nova Scotia government did little to compensate the provincial steel industry for the loss of federal bounties in 1911. In addition, the federal government's policy of granting rebates on coal imports after 1907 meant that Nova Scotia's metal manufacturers lost the cost advantage of native coal.[103] Thus, faced with rising costs as a result of the loss of incentives previously awarded under the aegis of the National Policy, the industrial economy of New Glasgow and Trenton needed to maintain an efficient and productive industry to compete successfully in national markets. This was partially accomplished which is indicated by advances in certain structural indices — capital/labour, output/capital, and output/labour — but relative to other places, notably Hamilton, the competitive position of the Pictou metals towns deteriorated considerably between 1910 and 1930. Indeed, by 1930 Hamilton's ratio of net output to capital investment — that is, its manufacturing productivity — was twice as great as that of the Pictou metals towns. In 1910 there was only a marginal difference.

To compensate for growing losses in comparative advantage, a favourable freight rate structure was essential. The Intercolonial Railway pursued such a policy from the early 1870s until it was merged into the Canadian National Railway. Thereafter, post-war inflation and the levelling of the Intercolonial's rates with other Canadian lines drove rates upwards by as much as 140 to 216 per cent.[104] This made it more costly for Pictou County's metal firms not only to reach distant markets, but also to purchase industrial materials, even from Cape Breton. The case of the J.W. Cumming Manufacturing Company illustrates well the predicament facing local industries.[105] With wartime profits and stock market financing, Cumming was the first metals company in the Maritimes to invest in the development of a steel foundry equipped with an electric melting furnace. Besides engaging in structural steel work for regional

101 T. Traves, "The Political Economy of the Steel Tariff", in *The State and Enterprise: Canadian Manufacturing and the Federal Government, 1917-1931* (Toronto, 1979), pp. 121-54.

102 O.J. McDiarmid, *Commercial Policy in the Canadian Economy* (Cambridge, 1946), p. 220; H.V. Nelles, *The Politics of Development* (Toronto, 1974), pp. 125-31.

103 *Report of the Royal Commission on Coal, 1946* (Ottawa, 1947), pp. 575-7.

104 Forbes, "Misguided Symmetry", p. 67.

105 The case of the Cumming Manufacturing Company has been developed from Evidence, Board of Railway Commissioners, 1926, vol. 483, pp. 397-8, typescript, Provincial Archives of New Brunswick; Parker, *Who's Who*, p. 244.

construction projects, the firm had become the major Canadian producer of wheels and axles for mining cars. It even maintained an office and warehouse in Lethbridge, Alberta to service its western Canadian customers. By 1922, however, control of this nation-wide market was severely threatened by the change in freight rates. In fact, Cumming's chief competitor, a firm in Liverpool, England, could enter the Kootenay mining district over the Canadian Pacific rail line at a more competitive rate. Moreover, the firm's production costs had risen because the Trenton steel works could no longer supply Cumming with all of its required materials. These came instead from the Dominion Steel plant in Sydney, which itself had been forced to increase prices to accommodate the changing structure of intra-regional freight rates. Less than carload lots were particularly expensive. Clearly, the increase in transportation costs was a major liability to sustained economic growth in Pictou County.

The 1920s thus appears as the critical decade in the devolution of the metals industry. Freight rate increases stole business elsewhere when Hamilton was emerging as the most productive and cost efficient steel centre in Canada. Nonetheless, several firms such as Cumming Manufacturing pursued new corporate strategies and technologies to maintain a competitive edge. The prevailing Canadian tariff structure provided generally adequate protection for these specialized firms and even for Scotia's forge and steel fabricating operations.[106] But other adaptations created negative consequences. On 21 March 1921, the Nova Scotia Steel and Coal Company was merged into the realm of the British Empire Steel Corporation (Besco). The entrepreneurs who originally developed Scotia had previously either retired or assumed less responsibility in company management: tradesmen G.F. MacKay in 1889 and Graham Fraser in 1903; mercantile backers J.M. Carmichael in 1894 and J.D. McGregor in 1914.[107] The New Glasgow dominated board had withstood a Montreal-based takeover attempt in 1910, but control was eventually relinquished in 1917 to the American investment firm of Hayden, Stone and Company which had supplied Scotia with considerable amounts of working capital. Scotia's President, Thomas Cantley, was replaced by an American steelmaker, F.H. Crockard. Although "one of the bright stars of the United States Steel Corporation's galaxy of subsidiary corporations", Crockard possessed only limited experience in managing a fully integrated company. Subsequently, in an attempt to effect greater economies of scale and efficiency in coal mining and steel manufacturing along the lines practised by U.S. Steel, Scotia was merged into the Besco

106 Traves, "The Political Economy of the Steel Tariff", pp. 139-47.

107 Fraser and Carmichael both left Scotia over disputes concerning financial matters. MacKay, who quit plant supervision in 1889, and McGregor both remained as directors until World War I, but their initial leadership role had been relinquished earlier to Robert Harris, the Halifax financier, and Thomas Cantley. See J.M. Carmichael to J.F. Stairs, 9 October 1894, MG 2, no. 330, PANS; Cameron, *Industrial History*, ch. IV; Nova Scotia Steel and Coal Company, *Annual Reports, 1882-1915*.

conglomerate along with the Dominion Steel Corporation and the Halifax Shipyards Limited.[108]

The consequences of this merger proved disastrous for the metals industry in New Glasgow and Trenton. The cogging mill was dismantled in favour of the Sydney facilities, and although the rolling mills, forge, and axle and car plants remained in operation, they were neither expanded nor improved after 1917.[109] The primary iron and steel facilities at Sydney Mines were also closed, thereby ending the specialized material exchange between Scotia's operations in Cape Breton and Pictou County, and within the New Glasgow and Trenton metal-working complex itself. This ultimately affected efficiency and productivity as the analysis of the structural indices revealed (see Table 6). Of equal importance, the merger also dismantled the economies of vertical integration so carefully worked out by Scotia prior to World War I. It further destroyed the network of social connections in Pictou County — the initial organizing force of the metals industry — as a factor of development. Although a few of the sons of the founders of Scotia had followed their fathers into the company,[110] such relationships would play little part and were of limited importance within an international corporate structure. Besco subsequently experienced financial difficulties, and in 1926 it was placed in receivership; by 1928, the Dominion Steel and Coal Corporation had been formed to take over the company.[111] Circumstances of external control and financial difficulties obviously contributed to Scotia's diminished role and forced Pictou County's metals industry to assume a more peripheral position within the Canadian economy.

"Increase of population is rather the result of mercantile prosperity than the cause of it . . . *and in accordance with this law of city growth*, neither Halifax nor any other town in the Province can become a great commercial emporium, unless as a pre-requisite it becomes a seat of manufacturing activity".[112] This statement, written in 1874 by Duncan Campbell, author and industrial promoter, emphasized forceably that for towns and cities of the Maritimes to grow and prosper, they had, of necessity, to develop a manufacturing base. Certainly this was the path to importance followed by the large cities of the North American seaboard. Many Maritime communities did, of course, make the transition from mercantile to industrial capitalism. Against the background of regional economic transformation, this transition was particularly evident in the metals towns of Pictou County. Building on entrepreneurial initiative and

108 This takeover is assessed succinctly by D. Frank, "The Cape Breton Coal Industry", pp. 13-7. Crockard had undertaken a similar task for United States Steel when the giant conglomerate took over steel-making operations in Birmingham, Alabama. I am indebted to Professor Alfred Chandler for this information, personal communication, 5 November 1980.

109 Hawker Siddeley Papers, MS 4-106, DUA.

110 Ritchie, "Geneological Records".

111 Traves, "The Political Economy of the Steel Tariff", pp. 132-7.

112 Campbell, *A History of Nova Scotia*, p. 508.

certain initial comparative advantages, including a relatively rich resource base of coal and iron ore, experience in marketing and distributing products abroad, and cheaper industrial materials and labour, local tradesmen and merchants joined together to develop one of Canada's first and largest vertically integrated corporations, the Nova Scotia Steel and Coal Company. But entrepreneurs in Nova Scotia were obliged to work within the necessary framework of government support. Freight rate concessions and tariff protection were essential to compensate for the long haul to distant markets and the existence of strong external competition. These measures became increasingly more important and essential as Pictou County's comparative advantages in manufacturing diminished in favour of Ontario's emerging heartland economy. With mounting political pressure, chiefly from western Canada but also from central Canadian steel makers, these devices of regional integration were pared away and the metals industry in Pictou County suffered steady decline, forcing population losses upon New Glasgow and Trenton.

As communities of a hinterland region, the towns and cities of the Maritimes could only grow in size mainly by trading goods with external markets. Usually the goods sent from a hinterland region are staple commodities rather than manufactured products. This is so because, theoretically, heartland cities possess advantages which render the production of secondary manufacturing cheaper and more productive and efficient than in their hinterland counterparts.[113] *According to this particular law of city growth*, it can be argued that without government assistance which compensates hinterland manufacturing cities for their comparative disadvantages in producing secondary products, it was inevitable that an urban-industrial collapse would take place in the Maritimes. The mercantile-industrial transition could not be sustained. Efforts to stave off decline during the 1920s, such as the attempt by Besco to rationalize its internal economies of scale by concentrating iron and steel production solely in Sydney, might have worked, but only if government policies continued to facilitate the export of regional products. Pictou County's metals industry suffered, therefore, not only from its growing inability to remain competitive within an integrated national market, but also from its inability to remain an essential link in the metals economy of Nova Scotia. In Besco's scheme of corporate reorganization and concentration, the industrial complex of New Glasgow and Trenton was assigned secondary status. The innovative role of Pictou County's community minded entrepreneurs was banished, to be replaced by an external agent of management. Thus, the bases of effective and sustained growth had been stripped, one by one and gradually over time, from the County. By the close of the 1920s, the accumulated disadvantages of a peripheral location were clearly apparent as factories closed, unemployment increased, and people moved away from New Glasgow and Trenton.

113 McCann, "Staples and the New Industrialism", pp. 48-52.