

Urban Working-Class Incomes and Real Incomes in 1921: A Comparative Analysis*

by Michael J. PIVA**

Using the aggregate tables for incomes in the 1921 census and reports on retail prices of consumer goods as published by the Labour Gazette, this paper compares average incomes and real incomes in fourteen Canadian cities. Although wages tended to increase slightly as one moves east to west, the analysis shows that differences in the level of income resulted primarily from the structure of the local economy. The cost of housing proved the other major variable determining real income. Thus, real incomes were highest in Ottawa, Edmonton, Montreal and Quebec because of the concentrations of high income groups and the relatively low unemployment in the first two cities and the relatively low housing costs in the latter two. Real incomes were lowest in Victoria, Vancouver, Halifax, Saint John and Toronto. In the first four cities the concentration of unskilled workers in relatively low-wage industries produced this result. In Toronto the relatively high cost of housing brought real incomes down.

L'auteur compare ici les revenus moyens et les revenus réels dans quatorze villes canadiennes, en s'appuyant pour cela sur les statistiques d'ensemble concernant les revenus publiées dans le recensement de 1921, d'une part, et sur les prix au détail des biens de consommation fournis par la Gazette du Travail, d'autre part. Il montre que bien que les salaires aient tendance à augmenter légèrement d'est en ouest, les différences de niveau de revenu proviennent principalement de la structure de l'économie locale. Le coût du logement constitue la seconde variable d'importance dans la détermination du revenu réel. C'est à Ottawa, Edmonton, Montréal et Québec où les revenus étaient les plus élevés, à cause de la concentration dans ces villes de groupes à haut revenu, du chômage relativement bas à Ottawa et Edmonton, et des coûts de logement relativement faibles à Montréal et à Québec. À Victoria, Vancouver, Halifax, Saint-Jean et Toronto, par contre, les revenus réels étaient les plus faibles. Dans les quatre premières de ces villes, ceci s'explique par la concentration d'ouvriers non-spécialisés dans des industries à bas salaires, tandis qu'à Toronto, c'est le coût relativement élevé du logement qui réduisait les revenus réels.

Unlike British and American historians, Canadians have shown little interest in trends in real income. Certainly there have been no studies comparable to those undertaken by Paul Douglas during the late 1920s or Albert Rees during the late 1950s.¹ Within the last decade, however, three

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¹ Paul DOUGLAS, *Real Wages in the United States, 1890-1926* (Boston and New York: Houghton, Mifflin Co., 1930) and Albert REES, *Real Wages in Manufacturing, 1890-1914* (Princeton, N.J.: Princeton University Press, 1961).

studies, all of which deal with the first third of this century, have been published. The first two, written by social historians, provide a detailed examination of the condition of the working class in Canada's two largest cities. The third, written by two economic historians, analyses real wage trends at the aggregate national level. All three studies produce similar results: working-class Canadians were very poor, and their real incomes declined during the first two decades of this century.²

Terry Copp and I both concluded our work by making a few rough comparisons between our two cities, Montreal and Toronto. The different data bases used in each study precluded simple comparisons between our estimates of real income. Copp, who published first, presented the more elaborate argument and suggested that workers in Montreal were worse off than in Toronto. I agreed with Copp's points and presented a shorter and more summary version of the same argument. I, too, argued that workers in Toronto were slightly better off than those in Montreal, although I suggested that the differences were much less than we have customarily been led to believe. We both discussed the higher income levels in Toronto, yet many other variables, such as Toronto's lower mortality rates, influenced these conclusions. Neither of us, however, made specific references to the cost of living in the two cities and its effect upon levels of real income.³

² Terry Copp made no definite statement about the trend in real income between 1897 and 1929. The closest he came was his conclusion that the "fundamental issue for the working class — subsistence wages — remained unresolved throughout the three decades." Terry COPP, *The Anatomy of Poverty: The Condition of the Working Class in Montreal, 1897-1929* (Toronto: McClelland and Stewart, 1974), p. 140. In an earlier article which dealt with the first two decades of this century, Copp had argued that there was an "overall pattern of decline in real income" but that this pattern "did not hold for all segments of the working class". Terry COPP, "The Condition of the Working Class in Montreal, 1897-1920", in *Studies in Canadian Social History*, ed.: Michael HORN and Ronald SABOURIN (Toronto: McClelland and Stewart, 1974), p. 203. I attempted to be more specific and argued that real income declined in Toronto after 1902-3, slowly at first and more rapidly during the second decade of the century. Michael J. PIVA, *The Condition of the Working Class in Toronto, 1900-1921* (Ottawa: The University of Ottawa Press, 1979), pp. 49-59. Gordon W. Bertram and Michael B. Percy come to slightly different conclusions in their analysis of aggregate national data. The differences, however, are more superficial than real and result primarily from methodological differences. They found that between 1901 and 1913 real wages increased "at an annual average rate of 0.90 per cent". Gordon W. BERTRAM and Michael B. PERCY, "Real Wage Trends in Canada, 1900-1926: Some Provisional Estimates", *Canadian Journal of Economics*, XII (1979): 200-12. They produce data for 1901, 1905, and then for each year from 1911 to 1926. I found the peak years to be 1902 and 1903. If one compared my data for Toronto for 1901 and 1911, very little difference would be found from the trend illustrated in the Bertram and Percy data. My data, meanwhile, showed a substantial drop in real income between 1912 and 1914. Bertram and Percy, on the other hand, found an increase in real wages in this period. The difference here results from methodological considerations: they analyse standard hourly wage rates which do not take into account the increase in unemployment in 1913. As I observed, without a calculation for unemployment, real wages increased during the depression. PIVA, *The Condition of the Working Class in Toronto, 1900-1921*, pp. 53-54. The decline which I noted in Toronto resulted from unemployment rather than a drop in real hourly wages. Finally, both our studies showed an increase in real income following the war. The increase in the Bertram and Percy data, however, is far greater than my calculations for Toronto. It is only on this last point, the significantly sharper increase in the Bertram and Percy data after 1918-1919, that a real difference exists between the national trend and the Toronto trend.

³ See COPP, *The Anatomy of Poverty*, pp. 140-48, and PIVA, *The Condition of the Working Class in Toronto*, pp. 171-74.

The comparative aspect of the question, then, remains to be explored not only between Montreal and Toronto but between these two and other cities outside central Canada.⁴ This paper hopes to contribute to a better understanding of the regional variations in both income and real income by taking one year — 1921 — and comparing wages, incomes, costs of living and real incomes in fourteen Canadian cities.

Information on wages is usually the most common type of data available to the historian, but its utility depends on the question being asked. If one is an economic historian investigating the importance of wage levels as a factor influencing the location of industries and individual companies, actual wages are sufficient. However, wages alone tell the social historian very little about the standard of living. The social historian is as concerned with income and the impact of unemployment as the cost of living. Moreover, one must consider the specific economic mix at a particular place and time: excellent data on the income of machinists, for example, will tell one very little about the standard of living in a city with relatively few machinists. Some of these problems will become clear if we first examine hourly wage rates for five groups of metal workers as reported by the federal Department of Labour (Graph 1).

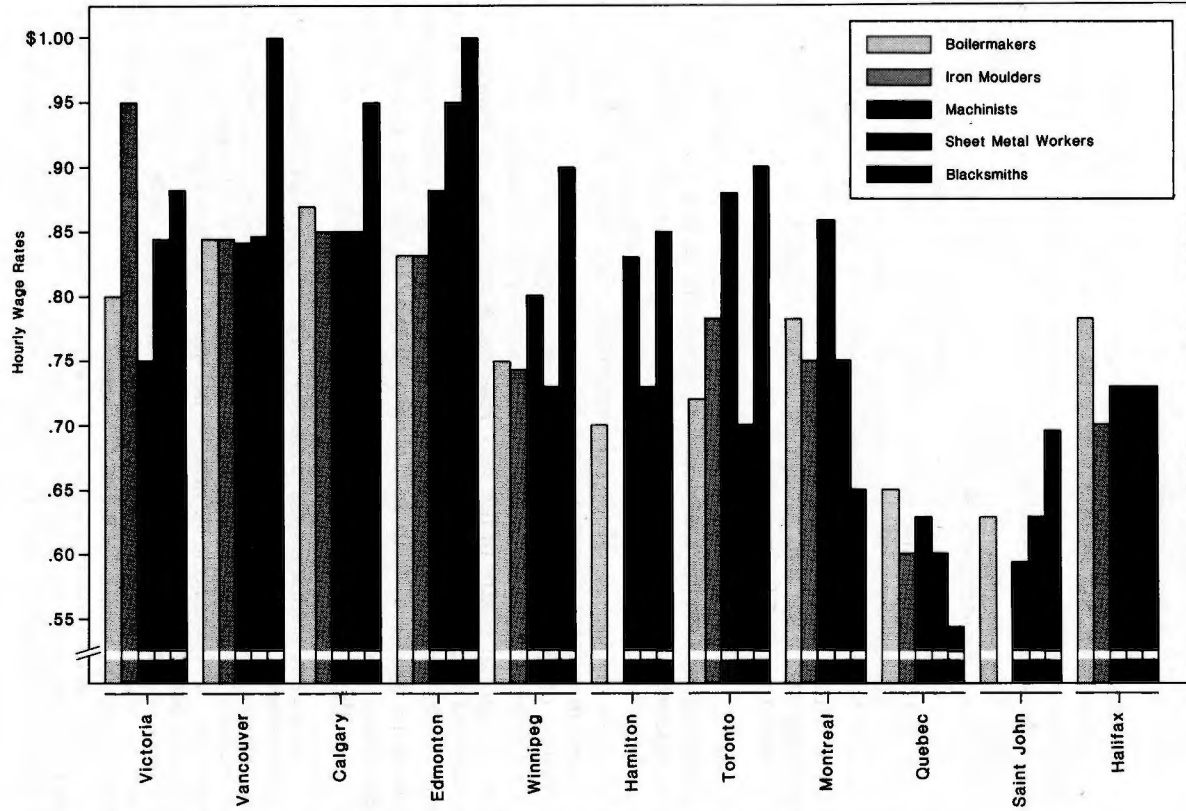
Generally wages increase as one moves east to west. The most important qualification is on the east coast. Halifax, the largest and economically most developed of Maritime cities, shows wage levels higher than Saint John and Quebec,⁵ where wages are comparable, although they tend to be slightly lower in Quebec. Montreal, meanwhile, has wage levels comparable to those in cities in Ontario. This illustrates the problem of dealing with the province of Quebec as a single economic region. Montreal geographically lies within the province, but economically it is a national metropolis. It is not a regional centre in the way Halifax, Vancouver, or Winnipeg can be considered as primarily regional centres. It is also clear that the simple assumption that wages were lower in Montreal is open to question. Wages are higher in Montreal than in Toronto in two of the five groups under consideration, including the largest and most important occupational category within the iron and steel industry, machinists.⁶ Wages in

⁴ Statements which attempted to establish a regional comparative framework can be found in the literature, but they tend to be general and impressionistic. David J. Bercuson, for example, observes that "western urban workers were, for the most part, no worse off than their counterparts in Toronto and Montreal, but they were no better off either". He accepts that wages were "always higher in the west, but this was due largely to higher living costs and the constant demand for labour". See David J. BERCUSON, *Fools and Wise Men: The Rise and Fall of the One Big Union* (Toronto: McGraw-Hill Ryerson, 1978), pp. 21, 32. There were, however, substantial differences, as we shall see, between skilled and unskilled workers as well as between the prairies and British Columbia.

⁵ This study is based upon an analysis of wages and incomes in *cities*; all references to Quebec, then, are to the city of Quebec rather than the province. To avoid confusion I will use "province of Quebec" on those few occasions when I am referring to the region as a whole.

⁶ In Windsor, Montreal, Toronto and Hamilton machinists accounted for 42.8, 41.2, 35.4 and 23.9 percent of all male manual/wage workers aged twenty to forty-five who were employed in the iron and steel industry in 1921. CANADA, *Sixth Census of Canada, 1921*, Vol. III, *Population*, Part II, *Wage Earners* (Ottawa: King's Printer, 1927), Table 40. All calculations are my own.

Graph 1. — HOURLY WAGE RATES FOR FIVE GROUPS OF METAL WORKERS, 1920



Source: CANADA, DEPARTMENT OF LABOUR, *Wages and Hours of Labour in Canada, 1901-1920* (Ottawa, 1921), published as a Supplement to the *Labour Gazette*, 21 (1921): 11-15.

Montreal are also higher than in Hamilton in three of four cases, and higher than in Winnipeg in four of five cases.

Wage data also present serious disadvantages. An examination of Graph 1 would lead to at least three observations which we will find misleading upon further analysis. First, one might observe that wage levels in Winnipeg are comparable to those in Ontario, but substantially below the levels in two other prairie cities, Calgary and Edmonton. Secondly, wage levels in Vancouver are comparable to those in Alberta and substantially higher than in Winnipeg and central Canadian cities. Finally, Victoria, although below Vancouver, enjoys wage levels comparable to wage levels in the best-off cities of central Canada, and substantially higher than wage levels in the Maritimes. When we examine incomes rather than wages we find all of those generalizations to be misleading (Graph 2). Winnipeg's manual workers enjoy incomes comparable to those of workers in other prairie cities. Although incomes are slightly higher in Vancouver than in Victoria, both have income levels comparable to the levels in Maritime cities. Average incomes in Victoria and Saint John are exactly the same; average incomes in Vancouver are lower than in Halifax.

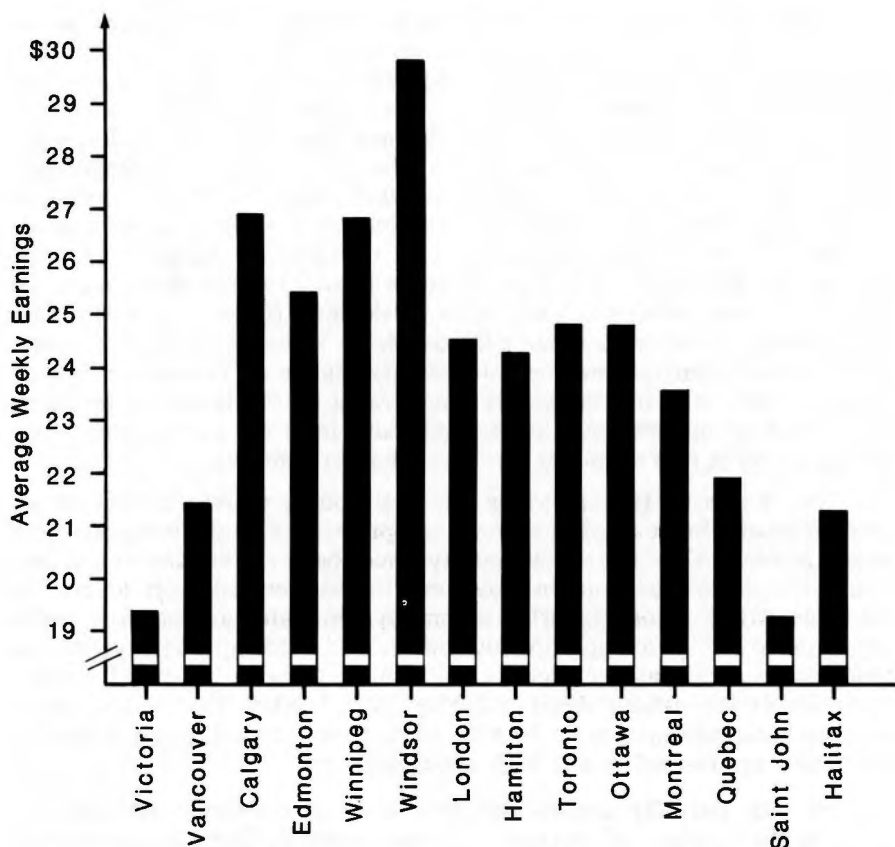
The census of 1921 provides our best source of information on incomes. Canada, however, had entered a depression after the business cycle peaked in June 1920.⁷ Retail commodity prices began to decline by the fall; unemployment rose as usual in November but to unusually high levels. By mid-winter trade unions reported unemployment rates among their members as twice as high as the previous winter. And unlike previous years, the unemployment rate as reported in the *Labour Gazette* remained at mid-winter levels throughout April and May 1921.⁸ When the census takers collected their information on 30 May 1921, they did so during a period of price and wage instability and high unemployment.

We can partially control for this unusual economic situation by analysing the earnings of workers per week worked. The manuscript census for 1921 is not available; we must content ourselves with the aggregate tables for cities of 30,000 population or more. The aggregate tables divide information according to economic sector, industry, job description (although there are some problems with this classification), sex, and age group. Within each category the census tables provide the total number of people gainfully employed during the previous twelve months, the total income of all workers in each category, and the total number of weeks worked for all workers in each category. Thus, we are able to calculate average annual earnings, average number of weeks worked, and average earnings per week worked.

⁷ Derek H. WHITE, *Business Cycles in Canada*, Economic Council of Canada Staff Study No. 17, revised ed. (Ottawa: Queen's Printer, 1970), Appendix 1, Table A 1.1, p. 236. Also see K. A. J. HAY, "Early Twentieth-Century Business Cycles in Canada", *Canadian Journal of Economics and Political Science*, XXXII (1966): 354-63.

⁸ See CANADA, DEPARTMENT OF LABOUR, *The Labour Gazette*, XXI (June 1921): 815. Similarly, reports on employment levels submitted to the Department of Labour illustrated the same high levels of unemployment during the winter and spring. See *ibid.*: 813.

Graph 2. — AVERAGE EARNINGS PER WEEK WORKED, 1920-1921,
MALE MANUAL WORKERS AGED 20-45 YEARS.



Source: CANADA, *Sixth Census of Canada, 1921*, Vol. III, *Population*, Part II, *Wage Earners* (Ottawa: King's Printer, 1927), Table 40. All calculations are my own.

The aggregate tables, meanwhile, present some problems for analysis within a particular industrial group as can be seen by examining the case of iron and steel industries. Within the broad category of "iron and steel" the tables subdivide workers by industry in some cases but by job description in others. The tables include categories for "agricultural implement workers not otherwise specified", and "automobile workers not otherwise specified". In addition, the tables include categories for "machinists", "millwrights", "labourers", "managers", "superintendents", "foremen", etc. It is possible, then, to distinguish skill level and class within the aggregate data, but an analysis of industries must confine itself to the broad categories provided in the census tables.

For brevity, the following analysis examines only the earnings of male manual/wage workers between the ages of twenty and forty-five. Excluded are all gainfully employed males in this age category who are listed

as managers, superintendents, foremen, salesmen, clerical workers, and agents — although ticket agents for steam railways are retained in the sample. Also excluded are all professionals, all workers employed in "finance", and all workers employed in "trade" except deliverymen and labourers. Since the term "male manual/wage workers aged 20 to 45 years" is rather awkward, this paper will substitute on occasion the word "worker". But in all cases we will be referring to this more restrictive group of males aged twenty to forty-five.

Our selection of cities includes large metropolitan centres with highly diversified industrial economies as well as cities which are little more than manufacturing villages. Among the former are Montreal and Toronto with populations of 618,506 and 521,893 respectively. Winnipeg is the next largest city with 179,087. A regional metropolitan centre built around the railway, it had already diversified its economy and possessed a well-developed manufacturing sector. Only Montreal, Toronto and Hamilton employed more manufacturing workers than Winnipeg (Table 1).

Following these three largest cities are four centres with populations between 95,000 and 117,000: Vancouver, Hamilton, Ottawa and Quebec. All four are unusual for one reason or another. In most cities, gainfully employed male manual workers between twenty and forty-five account for slightly more than eleven percent of the total population. The mean for the

Table 1. — CITY POPULATION AND GAINFULLY EMPLOYED MALE MANUAL WORKERS, 20-45 YEARS OF AGE, 1921

City	Total Population	Total Male Manual Workers, 20-45 Years	Male Manual Workers, 20-45 Years, Employed in Manufacturing		
			As % of Total Population	Number	As % of Total Male Manual Workers
Montreal	618,506	71,074	11.5	27,059	38.1
Toronto	521,893	59,571	11.4	26,174	44.2
Winnipeg	179,087	21,286	11.9	5,556	26.1
Vancouver	117,217	17,100	14.6	4,566	26.7
Hamilton	114,151	16,607	14.5	10,039	60.5
Ottawa	107,843	8,360	7.8	2,109	25.2
Quebec	95,193	7,829	8.2	2,547	32.5
Calgary	63,305	7,100	11.2	1,679	23.6
London	60,959	6,737	11.1	3,034	45.0
Edmonton	58,821	6,081	10.3	1,080	17.8
Halifax	58,372	6,737	11.1	1,002	15.4
Saint John	47,166	4,984	10.6	1,499	30.1
Victoria	38,727	4,941	12.8	1,090	22.1
Windsor	38,591	5,852	15.2	3,034	51.8
	\bar{X}		11.59		32.79
	S		2.17		13.33

Source: See Graph 2.

fourteen cities is 11.59 percent with a standard deviation of 2.17. In Vancouver and Hamilton the proportions are 14.6 and 14.5 percent respectively, significantly above the mean. Only Windsor has a higher proportion of its population — 15.2 percent — falling into our sample of workers. Ottawa and Quebec, on the other hand, have exceptionally low proportions of their populations falling within our sample of workers, 7.8 and 8.2 percent respectively. The third lowest proportion is in Edmonton — 10.6 percent — but this does not deviate significantly from the mean. Hamilton, meanwhile, is unusual on a second count: manufacturing employed 60.5 percent of all workers in the city. The mean in our fourteen cities is 32.79 percent with a standard deviation of 13.33. Only Windsor is close as a manufacturing centre: 51.8 percent of its gainfully employed workers toiled in manufacturing industries.

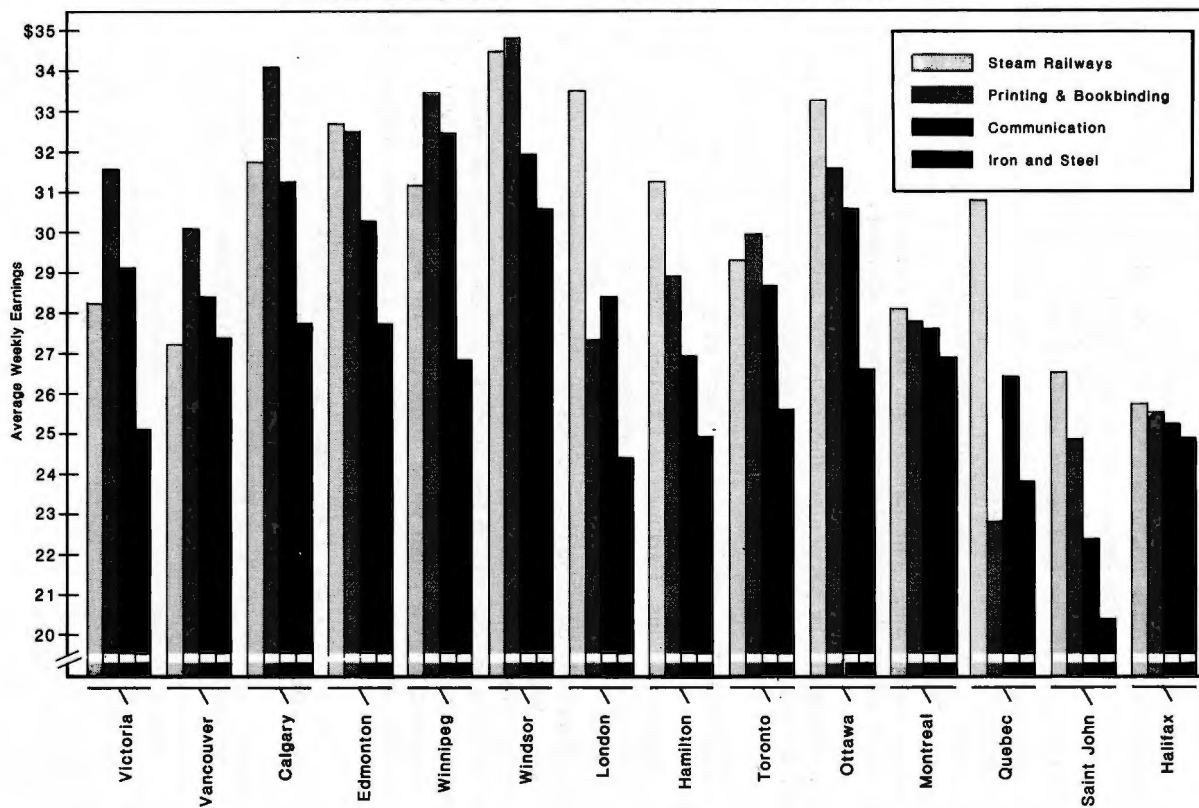
Considerably smaller than Quebec are four cities with populations between 58,000 and 63,000: Calgary, London, Edmonton and Halifax. Edmonton has the third lowest percentage of workers in its population — 10.3 percent — and, more significantly, only Halifax employed fewer manufacturing workers. However, Halifax's low percentage of workers employed in manufacturing resulted from the census's decision to list shipbuilding, which employed 12.4 percent of all workers in the city, under "construction" rather than manufacturing.

Finally we come to three small cities: Saint John, Victoria and Windsor. Windsor is the most interesting case; it was a small but highly industrialized city. It is the city with the highest proportion of its population falling within our sample of workers, and, with 51.8 percent of all workers employed in manufacturing, Windsor, in absolute numbers, was the sixth largest manufacturing centre in the country. Victoria has a relatively high proportion of its population falling within our sample of workers — the fourth highest among our fourteen cities — but a relatively small proportion are employed in manufacturing. Saint John is in no way exceptional and is very close to the mean in both the percentage of its population in our sample of workers and in the proportion employed in manufacturing.

Graph 2 presents average earnings for all male manual/wage workers aged twenty to forty-five. This graph also illustrates the general tendency for average earnings to increase as one moves west to the Rockies, but then to fall dramatically in British Columbia. As was the case in Graph 1, Quebec, although higher than Halifax, appears to exhibit a Maritime level of earnings. Montreal seems a kind of halfway house between Quebec and the Maritimes on the one hand and Ontario on the other. Cities in Ontario seem comparable with the dramatic exception of Windsor. As we proceed with the analysis we will discover that Windsor is the exception to the rule in nearly all cases. Incomes in the prairies, meanwhile, are, with the exception of Windsor, the highest in the country. Incomes in Vancouver and Victoria are at Maritime levels.

Aggregate data can sometimes exaggerate trends as well as mislead the researcher. In this case the most important consideration is the structural mix in a particular city's economy which might warp the overall aver-

Graph 3. — AVERAGE EARNINGS PER WEEK WORKED, 1920-21, IN SELECTED INDUSTRIES, MALE MANUAL WORKERS AGED 20-45 YEARS



Source: See Graph 2.

age in a particular direction. If a city had a relatively high concentration of skilled as opposed to unskilled workers in the workforce, we would find high average earnings in that city. This does not necessarily mean that earnings were higher for all workers. We can test the accuracy of the conclusions based upon average income by city if we break the data down and compare the situation in different economic sectors and different industries. Such an exercise requires a selection of industries which are present in each city and which employ sufficient numbers in each city to warrant comparison. For purposes of analysis we shall examine two groups of four industries each. In the first group are four industries noted for their relatively high income levels; in the second group are four industries noted for their relatively low income levels.

Graph 3 illustrates the income pattern in four high-wage industries, two in manufacturing, printing and bookbinding and iron and steel, and two in transportation and communication, steam railway and telephone and telegraph workers. In general a pattern similar to Graph 2 can be observed, but these industries also show considerable variation. Moreover, the case of steam railways in particular illustrates the necessity of considering the economic structure of the individual city not only between and among industries and sectors, but also within a particular industry.

In general the earnings of workers employed by steam railways increase as one moves east to west. But the peaks and troughs illustrate substantial variations. Earnings in Quebec, Ottawa, London and Windsor are relatively high compared to earnings in Montreal, Toronto, Hamilton and Winnipeg, yet the latter four cities were the more important railway centres. Precisely because these cities were major centres, *average* earnings are lower. Workers employed in the running trades — locomotive engineers and firemen, brakemen, trainmen and conductors — were among the highest paid wage-earners in the country, and they enjoyed middle-class incomes substantially above those of clerical workers and foremen.⁹ Maintenance workers on the other hand, although still well paid relative to workers in other industries, earned less than in the running trades. Thus in

⁹ This becomes clear if we compare earnings per week worked for running trades workers in Montreal and Toronto to the earnings of foremen and clerical workers in these cities.

AVERAGE EARNINGS PER WEEK WORKED FOR MALE CLERICAL WORKERS, FOREMEN AND SELECTED RAILWAY WORKERS, AGED 20-45 YEARS, 1921 (in dollars)

<i>Type of Workers</i>	<i>Montreal</i>	<i>Toronto</i>
Locomotive Engineers	38.27	41.05
Conductors	36.84	34.46
Brakemen and Trainmen	30.78	31.07
Locomotive Firemen	29.39	30.82
Foremen	32.35	32.26
Clerical	26.08	27.22

Source: CANADA, *Sixth Census of Canada, 1921*, Vol. III, *Population*, Part II, Wage Earners Table 40. All calculations are my own.

Quebec, Ottawa, London and Windsor the high average earnings reflect the concentration of running trades workers as opposed to maintenance workers. In Winnipeg, Toronto, Montreal and to a lesser extent Hamilton, the relatively lower average earnings reflect the higher concentration of maintenance workers.¹⁰

The high-wage industry which least fits the general pattern is iron and steel. As an employer of adult male labour, iron and steel was by far the single most important industry within the manufacturing sector. It was the largest employer of labour in manufacturing in all cities except Quebec, Vancouver and Victoria. In Quebec iron and steel was second to leather and fur manufacturing — primarily boot and shoes — while in Vancouver and Victoria iron and steel was second to wood products. Average earnings among Quebec iron and steel workers are comparable to those in the Maritimes, but earnings in Montreal are higher than in most Ontario cities. Earnings in Vancouver are higher than in Ontario cities except Windsor, and in Victoria they are higher than in the Maritimes, Quebec, Hamilton and London. As was the case with steam railways these variations in patterns can be explained by the structural differences in the workforce. An examination of two cities in which iron and steel dominated the local economy, Hamilton and Windsor, will illustrate this point.

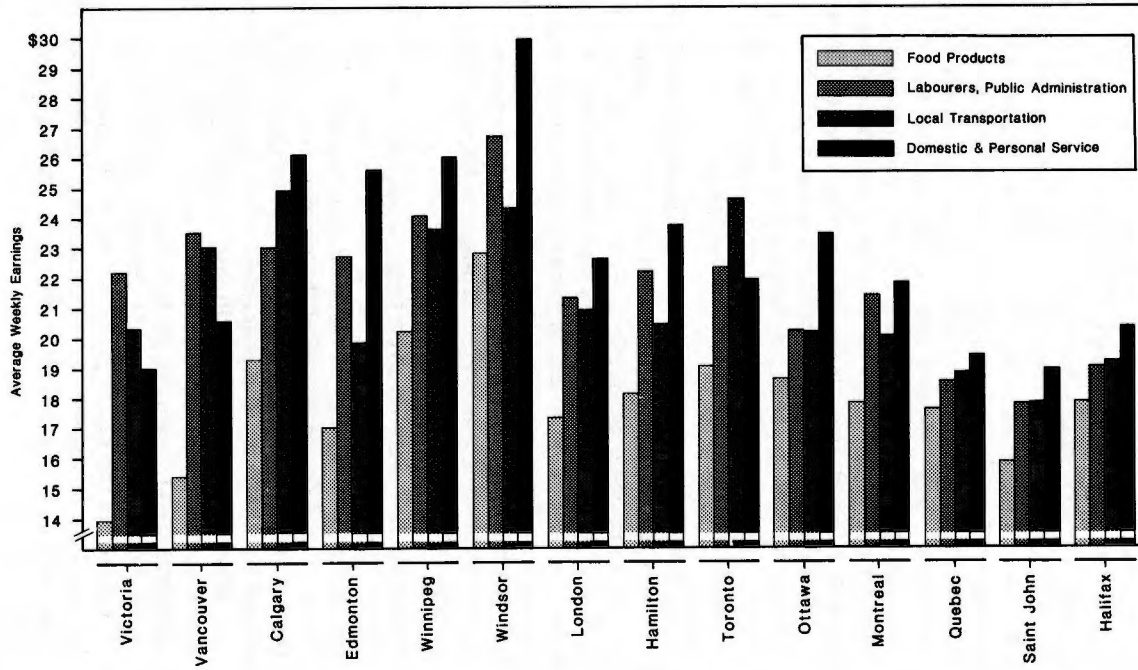
One-third of all male manual/wage workers in Hamilton, the home of the Steel Company of Canada, toiled in the iron and steel industry. As a centre for primary iron and steel production, Hamilton left its two rivals, Algoma in the Sault and the recently merged British Empire Steel Corporation in Cape Breton, far behind. Workers in primary production, however, tended to earn less than workers in secondary production. Hamilton had its share of secondary production jobs, for example at the International Harvester works, yet the relative low-average earnings in the city reflect the concentration of workers in primary steel production.

Iron and steel industries were an even larger component in the local economy of Windsor; nearly forty percent of all male manual/wage workers were employed in iron and steel production. But unlike Hamilton, secondary production accounted for nearly all of the employment in the industry, and this in turn results in relatively high *average* earnings in the city. This can be illustrated by observing the proportion of skilled machinists in the workforce. In Windsor machinists, millwrights and machinist and millwright apprentices account for 42.8 percent of the workforce in iron and steel. This compares to 41.2 percent in Montreal, 35.4 percent in Toronto, and only 23.9 percent in Hamilton.¹¹ Indeed, here is part of the answer as to why Windsor is the exception in so many instances including the overall average earnings which we noted in Graph 2. In Windsor manufacturing industries which concentrated workers in skill/high-wage job

¹⁰ In Ottawa and Quebec, for example, the running trades accounted for 49.9 percent and 43.4 percent of all workers employed by steam railways respectively. This compared to only 33.7 and 30.6 percent in Toronto and Montreal respectively.

¹¹ These figures also help explain the higher average earnings in Montreal compared to Toronto.

Graph 4. — AVERAGE EARNINGS PER WEEK WORKED, 1920-21, IN SELECTED INDUSTRIES, MALE MANUAL WORKERS AGED 20-45 YEARS



Source: See Graph 2.

categories employed an exceptionally large proportion of the population. Moreover, it might be suggested that the close proximity to Detroit helped keep wage levels in Windsor's most important industry relatively high,¹² and this in turn would have influenced wage levels in other sectors of the local economy.

Graph 4 illustrates that in the case of low-wage industries the patterns are, as was the case with high-wage industries, consistent with the general trend, although they exhibit greater variations. The restricted choice of industries used here results from the need to find examples which allow comparison from city to city. There are industries where earnings were lower than, for example, in the food products industry, but which employed sufficient numbers in only one or two cities. Such would be the case with water transportation which was critically important for Halifax, Saint John and Victoria, but non-existent in Winnipeg, Calgary and Edmonton. The need for comparability dictates the choice of food products, both animal and vegetable, labourers employed by local, provincial and federal governments, local transportation, and domestic and personal service.

Earnings of domestic and personal service workers conform least to the general pattern noted in Graph 2. One might observe that this is an industry particularly sensitive to bourgeois prosperity; high demand might partially explain the relatively higher earnings of domestic and personal service workers in Toronto and Ottawa. Alternatively, this industry employed large numbers of immigrants; the exceptionally low wages paid domestic and personal service workers in British Columbia might reflect racist wage discrimination against Canada's most victimized minority, Asian immigrants and their children. Wages paid labourers employed by governments, meanwhile, could be influenced by political considerations. In Toronto, for example, there was considerable pressure exerted on the municipal government to pay its employees "fair wages". This might partially explain why labourers in that city earned more than similar workers elsewhere. Such considerations do not, however, explain why Edmonton paid its labourers such extraordinarily low wages, or why in this category alone wages in Windsor are not the highest in the country.

These variations in patterns among high-wage and low-wage industries illustrate the need to consider not only average income but the structure of the local economy. There are two additional cases which, because of our limited selection of industries, have not been discussed but which demand attention, Halifax and Vancouver.

Graph 2 shows that average earnings in Halifax are very low as compared to central Canada including Quebec. Yet among our four high-wage industries, average earnings in Halifax are higher than in Quebec in two cases, iron and steel and printing and bookbinding. Among our low-wage industries, average earnings in Halifax are higher than in Quebec in

¹² As Robert Babcock suggested to me, these high average earnings in Windsor might also be influenced by the close proximity of the city to Detroit. The influence of American wage rates would be felt throughout southern Ontario, although they would be particularly strong in the case of Windsor where many residents worked on the other side of the river.

all four cases. What, then, explains the lower average earnings in the city as a whole?

The answer lies in the role played by the port within Halifax's economy. Nine percent of all male manual/wage workers toiled in water transportation industries, primarily as dock-side labourers. The only workers in the city earning less than these workers were domestic and personal service workers and deliverymen and labourers employed in "trade". Shipbuilding employed another 12.4 percent of male manual/wage workers, although here earnings were slightly above the average in the city generally. Compounding the problem for local workers, only construction workers had a higher rate of unemployment than water-transportation workers. Similarly water transport employed 9.3 percent of all male manual/wage workers in Saint John, second only to construction as an employer of labour. Again for these workers earnings were among the lowest in the city and unemployment the highest. In Quebec, a port city in its own right, water transport employed only 2.9 percent of the male manual/wage workers in the city. In Montreal, an even larger port, water transport employed only 2.3 percent of the workforce. At the opposite end of the spectrum we find the prairie cities. Water transport employed less than 0.1 percent of the workforce in Winnipeg, Edmonton and Calgary. These were railway centres; steam railways employed respectively 17.4, 19.1 and 16.3 percent of the male manual/wage workers. If water transport was a low-wage industry, steam railways was its exact opposite. This more than any other single factor explains the marked differences in average earnings in the Maritimes and in the prairies as seen in Graph 2.

Vancouver presents a similar problem. Graph 2 shows average earnings in the city to be even lower than in Halifax. Yet Graph 3 shows earnings in three of these four high-wage industries comparable to if not higher than earnings in a number of cities in central Canada. Similarly Graph 4 shows earnings comparable to if not higher than those in central Canada in two of the four cases. Vancouver, too, was a port city, although water transportation played a much smaller role than in Halifax. The same cannot be said of Victoria where water transport employed 10.3 percent of the male manual/wage workers, a higher proportion than in either Halifax or Saint John. But in Vancouver, and to a lesser extent Victoria, it was the local economy's most important manufacturing industry which brought the general average down. Vancouver's wood products industry was the largest employer of labour in the manufacturing sector with 11.7 percent of the male manual/wage workers in the city. Only domestic and personal service employed more — 15.3 percent. More importantly, unskilled labourers accounted for 66.4 percent of the work-force in wood products.

Victoria had a similar structure but on a considerably smaller scale. Again wood products was the major employer in manufacturing, and sixty-eight percent of the workers employed were unskilled labourers. The only industries which employed more workers in Victoria were domestic and personal service, construction and water transportation; two of these were characterized by earnings even lower than those of workers employed in wood products.

There remains the additional problem of limiting our sample to cities of 30,000 population. Saw milling and wood products industries were major employers of labour in eastern Canada, yet the effect of low wages is disguised in our analysis since in most cases production was concentrated in smaller centres. In Ottawa, to cite but one example, wood products was critically important to the local economy, but this is not reflected in the average income figures because most of the production was concentrated on the other side of the river in Hull.

Relatively high or low average earnings do not necessarily tell us what we want to know about standards of living for workers. Earnings must be balanced against retail prices of commodities necessary to maintain a decent standard of living, and retail prices vary over time and from place to place. Indeed, retail prices might vary as much or more than earnings. For purposes of analysis this paper will employ the family budget constructed by the federal Department of Labour during the second decade of this century. This is the same budget previously employed by Copp and myself for our studies of Montreal and Toronto and modified somewhat by Bertram and Percy in their study of national real-wage trends.

The Department of Labour collected retail price information for a wide range of commodities and from an equally large number of communities. It published this information monthly in the *Labour Gazette*. The Department's local correspondents gathered retail price information each month, and real estate agents supplied estimates on the cost of renting a six-room house with and without sanitary conveniences. This paper uses only the estimate for sanitary houses. Not included in the budget are clothing, entertainment, furniture, medical costs, transportation, liquor, and a wide range of other costs. The Department suggested that its budget represented from sixty to eighty percent of the total expenditure of a family of five depending on income. The lower figure is closer to the one used by the United States Bureau of Labor Statistics as well as the Dominion Bureau of Statistics in later estimates of the cost of living. However, a figure of seventy percent is probably closer to reality, as the proportion of expenditure spent on these items — food, fuel and light, and rent — increases as income declines.¹³ Copp used an estimate of seventy percent in his study; I was more conservative and used an estimate of eighty percent. For purposes of this paper we shall consider only those items in the Department's budget since our concern is with comparing cities rather than establishing the degree of poverty in each.

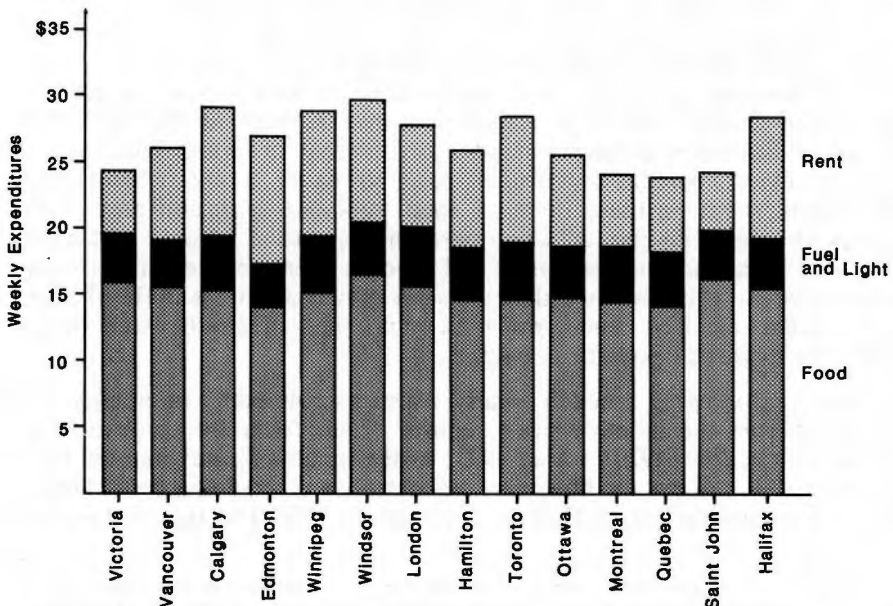
In the following analysis yearly averages for each commodity are computed from the monthly price reports which cover the same twelve-month period, June 1920 to May 1921, as the income figures derived from the census. Retail prices, however, are not always available each month; the local correspondent in Halifax, for example, failed to report the retail

¹³ A 1937-38 Dominion Bureau of Statistics study of actual family expenditure found that English-Canadian families at the lowest income level spent about 70 per cent of their total expenditure on these items. CANADA, DOMINION BUREAU OF STATISTICS, *Family Income and Expenditure in Canada, 1937-1938* (Ottawa: King's Printer, 1941), p. 170.

price of green tea from July through November 1920, and again in February and May 1921. The estimate for green tea in this case is based upon the five months for which the retail price is known. In all cases where information is incomplete, the pattern for the particular commodity in question was compared to the same commodity in other cities as well as similar commodities in the same city — in this case black tea — to see if the average used in the analysis is representative. In all cases the average seemed reasonable and quite comparable to the pattern in other cities and for other similar commodities.

There is, however, one major methodological problem which must be discussed. Fuel and light costs include retail prices for both anthracite and bituminous coal and for both hard and soft wood. In several cases no retail price is reported for one or more of these commodities. Missing in the *Labour Gazette* reports are retail prices for bituminous coal in Toronto, for both forms of wood in Windsor, for anthracite coal and hard wood in Edmonton, Calgary and Victoria, and for hard wood in Vancouver. In these cases I have estimated the cost of the missing items on the basis of the national average. For example, the national average retail price for anthracite is forty-four percent higher than for bituminous. I have estimated the local retail price of anthracite in Calgary as forty-four percent higher than the actual retail price of bituminous in Calgary as reported monthly.

Graph 5. — WEEKLY EXPENDITURE OF A FAMILY OF FIVE ON FOOD, SHELTER, AND FUEL AND LIGHT, JUNE 1920 — MAY 1921



Source: CANADA, DEPARTMENT OF LABOUR, *The Labour Gazette*, Vol. XX-XXI (July 1920 — June 1921), published monthly. All calculations are my own.

Graph 5 illustrates the cost of the Department of Labour's budget for the fourteen cities under consideration. The pattern is for increasing costs as one moves east to west through Ontario, the exception being Halifax. Costs then begin to decline as one moves through the prairies and into British Columbia, the exception being either, depending on your interpretation, Calgary for being too high or Edmonton for being too low. This graph also illustrates the critical role played by rent in determining regional variations in the cost of living. Food prices in Saint John, for example, are higher than in Halifax while fuel and light costs are comparable. The cost of shelter in Halifax, however, is more than double that in Saint John. These high rents were undoubtedly influenced by the *Mont Blanc* disaster which destroyed so much housing in the primarily working-class north end along the Narrows toward Bedford Basin.¹⁴ Similarly food and fuel and light costs do not vary substantially in Montreal, Ottawa, Toronto and Hamilton. But rent in Toronto is substantially higher than in these other cities, particularly Montreal. The cost of housing explains much of the variation in the cost of living from city to city.

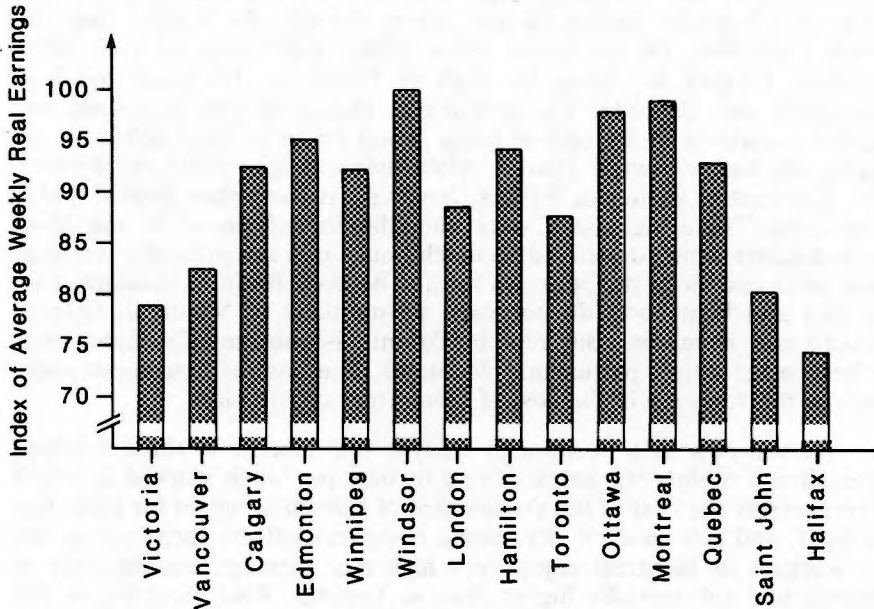
We are now in a position to analyse real income in these fourteen cities. Graph 6 plots the index of real income per week worked in which 100 represents the cost of the Department of Labour's budget for food, fuel and light, and rent in each city. Some observers will be surprised to find that workers in Montreal enjoy very high real earnings, second only to Windsor and substantially higher than in Toronto. Real incomes, on the other hand, are lowest in Halifax, Saint John, Vancouver and Victoria; and there exists also a substantial gap between these four cities and Toronto, the city with the lowest real earnings in central Canada.

These findings require additional refinement since unemployment varied from city to city. As we have already seen the structure of the local economy, the relative concentration of industries which employed skilled or unskilled workers, creates important differences in average earnings. Equally, unemployment, particularly seasonal unemployment, varied from industry to industry as well as from region to region. Unfortunately, it is on this point that the 1921 census proves most problematic. Yet, bearing in mind that unemployment levels reported in the census reflect the impact of the depression, that census can still be used for comparative purposes.

Graph 7 shows the average number of weeks worked in our fourteen cities. The mean for our cities is 44.7 weeks. The range of only 4.5 weeks with a standard deviation of 1.46 illustrates that the differences from city to city are not substantial, but they are nonetheless important. Windsor is again the extreme case, but this time the differences between it and other

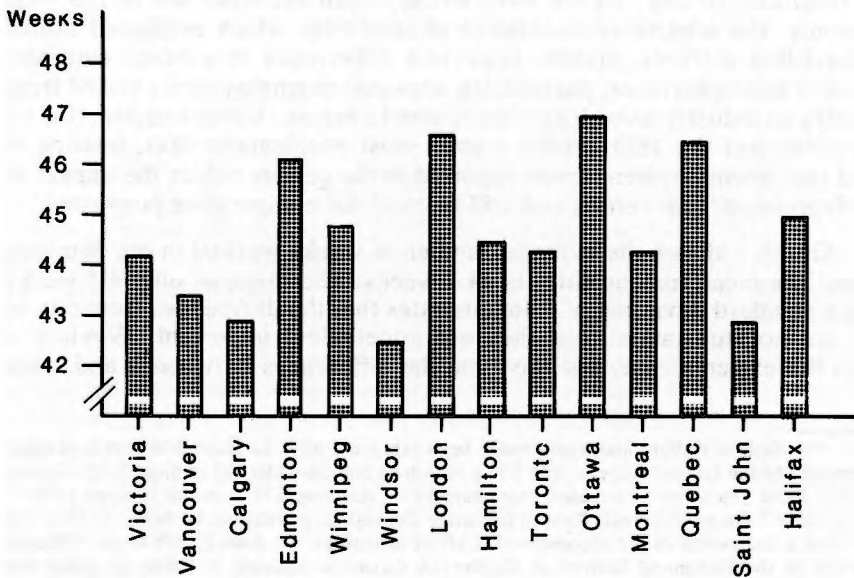
¹⁴ Rent in Halifax had traditionally been relatively high. In June 1916 rent in Halifax as reported to the *Labour Gazette* was \$20 a month as compared to \$12 in Saint John. During the next three years rents increased more rapidly — reaching \$30 a month in June 1919 — than in Saint John or Montreal. Rent in the latter showed no increase at all between 1916 and 1919. For a discussion of the reconstruction effort in Halifax see John C. WEAVER, "Reconstruction of the Richmond District in Halifax: A Canadian Episode in Public Housing and Town Planning, 1918-1921", *Plan Canada*, XVI (1976): 36-47.

Graph 6. — INDEX OF AVERAGE REAL EARNINGS PER WEEK WORKED, 1920-21,
MALE MANUAL WORKERS, AGED 20-45 YEARS
(DEPARTMENT OF LABOUR'S FAMILY BUDGET = 100)



Source: See Graph 2 and Graph 5. All calculations are my own.

Graph 7. — AVERAGE NUMBER OF WEEKS WORKED, 1920-21,
MALE MANUAL WORKERS AGED 20-45 YEARS



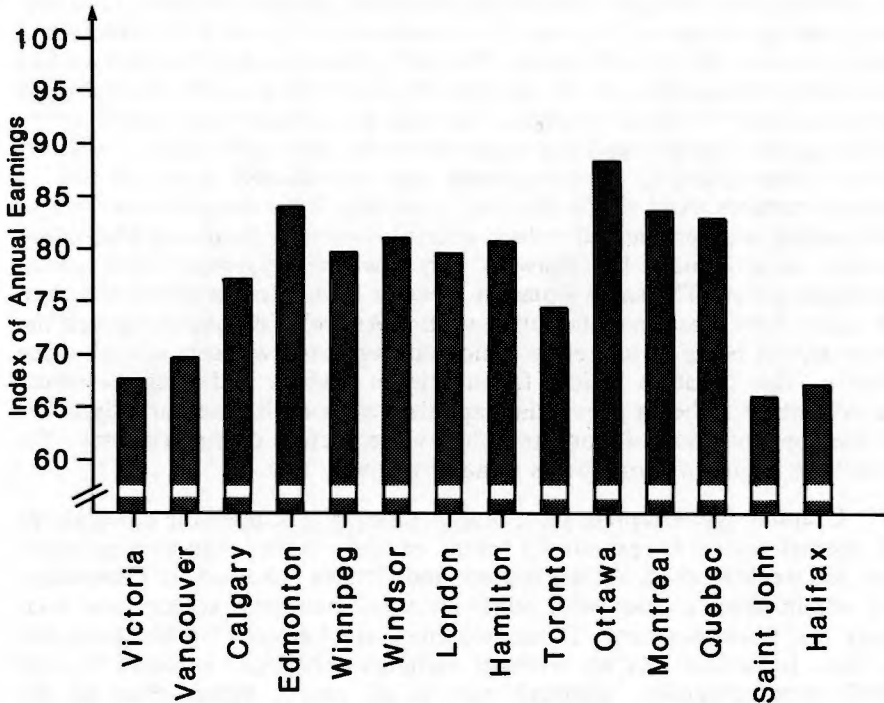
Source: See Graph 2.

cities prove less beneficial to workers. The high unemployment reflects the greater sensitivity of consumer durable industries to cyclical depressions. With the exception of London, the cities with the lowest unemployment — Halifax, Quebec, Ottawa, Edmonton and Victoria — are administrative centres with relatively weak manufacturing sectors, where public sector spending cushioned the impact of depression. The clearest example of this is Ottawa, the federal capital. We have already noted that Ottawa had the smallest proportion of its population employed as male manual/wage workers of any city in our sample. This was an economy dominated by the public sector which employed large numbers of "white-collar" workers whose vulnerability to unemployment was considerably less than that of manual workers. And within the local economy low unemployment among white-collar workers helped reduce unemployment even among blue-collar workers as evidenced by Ottawa's very low unemployment level among this latter group. The same situation arose in Edmonton, a provincial capital with a very weak manufacturing sector. As well Edmonton enjoyed the advantage of being a rail centre which concentrated workers in high-wage sectors. The situation is less favourable in Halifax and Victoria where the advantage of being provincial capitals was in each case partially offset by the concentration of workers in low-wage sectors of the economy. Yet even here unemployment levels remain relatively low.

Graph 8, like Graph 6, plots real income, but includes the calculations for unemployment by examining annual earnings rather than average earnings per week worked. At the top we find Ottawa followed by Edmonton, two administrative cities with relatively weak industrial sectors and relatively low unemployment. These two cities are followed by Montreal and Quebec. In neither city are average earnings very high; incomes we will recall were generally, although not in all cases, higher than in the Maritimes but lower than in Ontario and the west. The advantage enjoyed by workers in these two cities was the low cost of living. At the opposite end of the scale are Saint John and Halifax. Both had the advantage of relatively low food and fuel costs, although rent in Halifax was very high. However, relatively low earnings in all sectors characterized both cities. The local economic mix also contributed to these low real earnings by concentrating workers in low-wage industries with high seasonal unemployment rates. Few would deny that the Maritimes were the most economically disadvantaged part of the country, and in the 1920s the situation would grow worse. The lowest real incomes in the country reflect the economic disadvantages of the region.

British Columbia, on the other hand, is rarely seen as an economic backwater, yet real incomes in Vancouver and Victoria are only marginally better than in the Maritimes. Unlike the Maritimes, this is not because the *region* is a low-wage area. As we saw in Graphs 1, 3 and 4, wages and incomes in the metal trades, on steam railways and in other industries were higher than in central Canada. However, these industries employed relatively few workers in British Columbia. In this region the dominant economic activities concentrated workers in low-wage unskilled jobs. In Vancouver the largest group of workers were employed in domestic and

Graph 8. — INDEX OF AVERAGE REAL ANNUAL EARNINGS, 1920-21,
 MALE MANUAL WORKERS, AGED 20-45 YEARS
 (DEPARTMENT OF LABOUR'S FAMILY BUDGET = 100)

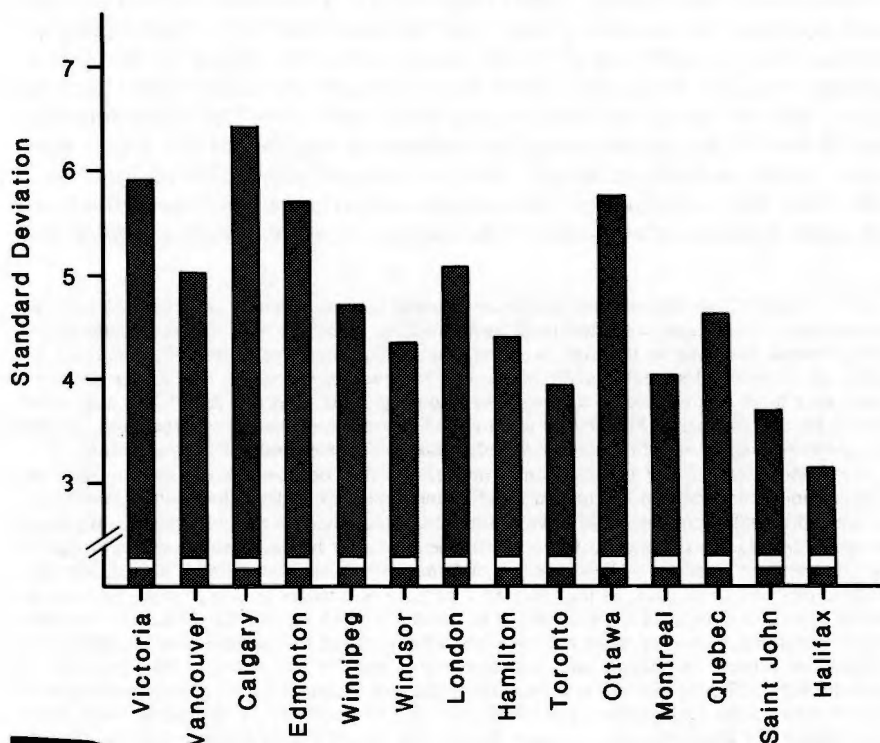


Source: See Graph 2, Graph 5 and Graph 7. All calculations are my own.

personal service, among the lowest paid workers in any city, and particularly in British Columbia. In manufacturing, Vancouver's most important employer were the wood products industries where two-thirds of the workforce consisted of unskilled labourers who earned incomes only marginally higher than domestic and personal service workers. The key factor in explaining the low real earnings in Vancouver and Victoria, then, was the nature of the local economy. The point is even clearer if the situation in both cities is contrasted with that in Windsor, a city dominated by secondary iron and steel which in turn concentrated workers in high-wage skilled occupations. And workers in Windsor enjoyed substantially higher average annual real earnings despite the greater vulnerability to unemployment among workers who toiled in durable consumer-goods industries.

Toronto, central Canada's most important manufacturing centre, meanwhile, has the fifth lowest level of real annual earnings. Rent explains this result. Incomes in Toronto were not low relative to most other centres, but the cost of living was very high. Thus, in general workers in Montreal earned less than their counterparts in Toronto yet enjoyed higher real incomes because of the substantially lower cost of living.

Graph 9. — STANDARD DEVIATION IN AVERAGE EARNINGS
PER WEEK WORKED IN SELECTED INDUSTRIES



Source: See Graph 3 and Graph 4.

There remains one final observation to be made about our data. The tendency for wages to increase east to west is far stronger in the case of skilled workers in high-wage industries than for unskilled workers in low-wage industries. Graphs 3 and 4 show this, as does Graph 9 which plots the standard deviation from the mean for these eight industries in each city. This observation helps qualify our general conclusions about regional variations in real income. Generally, real income is lowest in the Maritimes and in British Columbia. In the Maritimes this would be true for all workers, skilled and unskilled, relative to similar workers with similar jobs elsewhere. In British Columbia, however, highly skilled workers enjoyed real incomes comparable to those in Ontario and the prairies. But there were relatively few jobs for skilled workers in Vancouver and Victoria. The economies of those west-coast cities concentrated workers in unskilled poorly paid jobs. And the gap between the incomes of the best paid and poorest paid workers is far greater in the west than in the east.

Real income is but one measure of standards of living; it cannot answer all the questions which might be asked concerning the regional variations in the standard of living of Canadian workers. The limitation of this

study to cities with a population of 30,000 eliminates smaller one-industry resource towns such as Sydney, Shawinigan, Kamloops, or the hundreds of others across the country. More importantly, an analysis of real income cannot measure the quality of life. Real incomes may have been higher in Montreal than in many other cities, but so were the mortality and infant mortality rates.¹⁵ Rent may have been cheaper in Saint John than in Halifax, but the quality of the housing stock may have been substantially lower.¹⁶ Nor is the picture complete without an analysis of the wages paid women. Such an analysis would have to proceed along altered lines as a result of the life cycle and job ghettoization experience of women which set them apart from male workers.¹⁷ This paper, however, does establish the

¹⁵ Terry Copp argued that Montreal's poorer record in social programmes such as education and public health resulted from underfunding, which in turn was the product of a relatively weak tax base in the city as compared to Toronto. See COPP, *The Anatomy of Poverty*, pp. 144-48. Montreal's larger amount of tax-exempt properties and lower property tax rate may have contributed in turn to lower housing costs. Thus, a direct link may exist between, on the one hand, higher real incomes which resulted from lower rent and, on the other, lower standards in public health and education which resulted from lower taxes.

¹⁶ Measures of real income define the relationship between actual income and the cost of commodities; they do not measure individual decisions on the allocation of resources. Yet such individual decisions could have dramatic consequences for an individual's standard of living. A decision by a renter to buy a home does not alter his/her real income, although it might alter his/her standard of living. Rates of home ownership, meanwhile, varied substantially from city to city in 1921. In that year 85.2 percent of families of two or more persons in Montreal rented as compared to 44.2 percent in London and 45.5 percent in Windsor. The rate of home ownership, however, does not correlate with levels of real income. For example, the percentage of renters in Ottawa and Vancouver was exactly the same — 66.8 percent — despite the very different average real incomes in the two cities. Similarly, the percentages of renters in Saint John and Quebec were 76.6 and 73.2 respectively — the second and third highest among our fourteen cities — again despite the very different average real incomes in these cities. See CANADA, *Sixth Census of Canada, 1921*, Vol. III, *Population*, Table 17, pp. 57-59. All calculations are my own. Nor should we expect such a correlation to exist: the assumption that the rate of ownership will increase with income is open to serious doubt. In the United States, for example, the rate of home-ownership is higher among skilled blue-collar workers than among many white-collar groups. See Richard F. HAMILTON, "The Behaviour and Values of Skilled Workers", in *Blue-Collar World: Studies of the American Worker*, ed.: Arthur B. SHOSTAK and William GOMBERG (Englewood Cliffs, N.J.: Prentice-Hall, 1964), p. 54. Similarly, in nineteenth-century Newburyport, Mass., Stephen Thernstrom found the highest rates of home ownership among unskilled immigrant workers. Michael J. Doucet also found a very high rate of ownership among Hamilton's unskilled labourers between 1852 and 1881. See Stephen THERNSTROM, *Poverty and Progress: Social Mobility in a Nineteenth-Century City* (Cambridge, Mass.: Harvard University Press, 1964), pp. 137, 155-56, and Michael J. DOUCET, "Working Class Housing in a Small Nineteenth Century Canadian City: Hamilton, Ontario, 1852-1881", in *Essays in Canadian Working Class History*, ed.: Gregory S. KEALEY and Peter WARRIAN (Toronto: McClelland and Stewart, 1976), pp. 90-93. Thernstrom goes on to argue that ownership for the unskilled required "sacrifices so great as almost to blur the dichotomy between 'property' and 'poverty'", including reducing the chances for intergenerational social mobility. There is, then, no a priori reason to assume that a correlation exists between home-ownership and income nor to assume that ownership itself reflects a higher standard of living. The question, however, merits more scholarly attention than it has hitherto received.

¹⁷ As Gerda Lerner observes: "Women are members of families, citizens of different regions, economic producers, just as men are, but their emphasis on these various roles is different. The economic role of men predominates in their lives, but women shift readily from one role to another at different periods in their lives. It is in this that their function is different from men, and it is this which must form the basis for any conceptual framework." Gerda

regional pattern in real income in 1921 and demonstrates the critical roles played by the economic structure in determining differences in income levels and by housing in determining differences in the cost of living not only among but within regions.

LERNER, "New Approaches to the Study of Women in American History", in *Liberating Women's History: Theoretical and Critical Essays*, ed.: Bernice A. CARROLL (Urbana, Chicago, London: University of Illinois Press, 1976), p. 353. Gail Cuthbert Brandt, who begins by citing Lerner, demonstrates the importance of adopting new conceptual frameworks in her analysis of Quebec cotton workers. See Gail Cuthbert BRANDT, "'Weaving It Together': Life Cycle and the Industrial Experience of Female Cotton Workers in Quebec, 1910-1950", *Labour/Le Travailleur*, VII (1981): 113-26.