

The Structure of British Columbia's External Trade, 1939 and 1963

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The chronic cry of economists engaged in empirical research is that: "the data are not adequate." This is hardly surprising, since it is only in comparatively recent times that governments have begun to collect and publish statistics explicitly designed to facilitate independent research into the structure and functioning of the economic system. Historically, most economic statistics have been a by-product of governmental administrative activities, such as taxation. Where administrative procedures did not produce or require statistics, no statistics were forthcoming; and such statistics as were produced conformed to administrative needs, not research needs. As a result, the availability and usefulness of official statistics for economic research has been largely accidental, and in many important areas statistics have been neglected or underdeveloped.

One category of statistics which has been almost completely neglected in Canada includes comprehensive social income and product accounts on a regional basis. While the Dominion Bureau of Statistics regularly publishes estimates of aggregate personal income by province, there are no official data on regional gross domestic product, input-output relations, financial flows or external trade and payments. The lack of such data has hampered quantitative analysis of regional economic problems and of the economic inter-relationships among the regions of Canada. Economists interested in such problems have had to make do with such partial in-

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formation as is available, or to construct their own *ad hoc* estimates of the relevant magnitudes. Needless to say, such estimates are sometimes of dubious reliability, but generally speaking they are the only data available.

An interesting example of some early *ad hoc* empirical work of this sort is provided by an effort of the Economic Council of British Columbia, a provincial government agency which had a short life during the mid-1930's. In connection with the Government of British Columbia's submission to the Rowell-Sirois Commission, the Research Department of the Economic Council produced estimates of British Columbia's external commodity trade for the years 1934-1936, including the province's trade with the rest of the world. The Council, and its successor agency, the Bureau of Economics and Statistics, continued to publish such estimates until 1939.²

In 1963 the Bureau of Economics and Statistics again produced estimates of British Columbia's external trade for a similar purpose — to support a submission of the Government of British Columbia to a Federal-Provincial Conference. Unfortunately the estimates, which related to the year 1962, were never published in detail. Only aggregate figures were released by the Premier in his submission to the conference.³ However, in connection with research into the potential impact on British Columbia of the establishment of a North Atlantic free trade area we have had occasion to make our own estimates of the province's external trade for the years 1961-1964, which are at least partially comparable to those provided by the Economic Council for the earlier period.⁴ Although it is difficult to assess the accuracy of either set of estimates, it is interesting to compare the patterns of trade which they reveal, and to consider what they tell us about the development of the provincial economy in the intervening period. Such is the purpose of this note.

² *British Columbia in the Canadian Confederation*, A Submission Presented to the Royal Commission on Dominion-Provincial Relations by the Government of the Province of British Columbia (Victoria: 1938), pp. 273-279; Economic Council of British Columbia, *The Trade of British Columbia with other Canadian Provinces and with Foreign Countries* (Victoria: annual, 1935-1939); Bureau of Economics and Statistics, *The Trade of British Columbia with other Canadian Provinces and with Foreign Countries, Calendar Year 1939* (Victoria: 1940).

³ *Brief Presented to the Plenary Session of the Federal-Provincial Conference, 1963*, re-printed as Appendix 2, Province of British Columbia, Minister of Finance, *Budget Speech* (Victoria: 1964), pp. 61-67.

⁴ R. A. Shearer, G. R. Munro and J. H. Young, *Trade Liberalization and a Regional Economy: Studies on the Impact of Trade Liberalization on the Economy of British Columbia* (Toronto: University of Toronto Press for the Private Planning Association of Canada, forthcoming).

Nature of the Estimates

Scope. It is important to note at the outset that both sets of estimates relate only to British Columbia's *commodity* trade. This is a serious limitation. The production of services as contrasted to tangible commodities is of increasing relative importance in British Columbia as in the rest of Canada. Moreover, services (travel, freight and shipping, business services, interest and dividends, etc.) account for 25-30 percent of the transactions recorded in the current account of Canada's balance of international payments, and there is reason to believe that they may be even more important in the external trade of a province such as British Columbia. Without estimates of the value of transactions in services, the present figures cannot be used to estimate the net balance on current account nor the net inflow of capital to British Columbia in the years in question.

Economic Council Estimates. The Economic Council used great ingenuity in assembling information from a variety of sources to form a reasonably comprehensive picture of British Columbia's commodity trade flows. Predictably, the estimates of trade with foreign countries appear to be more firmly based than the estimates of trade with the rest of Canada.

For the years 1934-1938, the estimates of trade with foreign countries were based primarily on data provided by the Vancouver and New Westminster Harbour Commissions, supplemented by information on specific products provided by specialized government agencies and private organizations. In 1939 the Dominion Bureau of Statistics began to provide statistics on exports and imports through British Columbia customs ports. These data, adjusted for estimated exports of other provinces' products and imports of goods for consumption in other provinces through British Columbia ports, provided the basis for the estimates of trade with foreign countries in 1939. The agreement with the Dominion Bureau of Statistics was heralded as making possible a "... substantial improvement in the statistics of external trade,"⁵ but in subsequent years the Bureau of Economics and Statistics ceased to publish comprehensive estimates of British Columbia's external trade, and instead began to simply publish the D.B.S. customs ports data, annotated to indicate those categories of exports which were largely of British Columbia origin.⁶

The Council's estimates of inter-provincial trade are undoubtedly less reliable. Unfortunately, the information provided in the various publica-

⁵ *Trade of British Columbia, 1939*, p. 11.

⁶ Bureau of Economics and Statistics, *Preliminary Statement of External Trade Through British Columbia Customs Ports* (Victoria: annual).

tions of the Council does not permit a careful assessment of either their methods or their final estimates. However, statistics on the net movement of railway freight across provincial boundaries, by broad commodity groups, appear to have been of major importance in the construction of the estimates.⁷ Such data were available only by weight, and hence had to be converted to value terms using price data from various sources. This approach has serious limitations, partly because the freight data relate to net movements across the border (inward freight-outward freight), including goods for export abroad, and partly because of the problem of converting the data to value terms. The latter problem is particularly severe for manufactured goods (what is the value of 490 tons of machinery?).

Where it was available, information gathered by other specialized agencies of the government was also employed. This was particularly important for movements of agricultural goods. For a broad category of consumer goods, the Council based its estimates on a special survey of retail establishments on the origins of the merchandise sold by them. From the available information it seems likely that the Council did not make adequate allowance for the value of imports of machinery and equipment from eastern Canada.

New Estimates. Our estimating techniques have been described in detail elsewhere.⁸ We will not attempt to repeat that discussion here. However, a brief summary of the essential features of our approach is in order.

Our estimates of exports to the rest of the world rely heavily on the fact that within Canada the production of certain products is unique, or almost unique, to British Columbia. This made it possible for us to identify certain important British Columbia exports in the national export statistics (e.g. Pacific salmon, Douglas fir lumber). Data available in this way were supplemented by information drawn from the customs port statistics, departmental reports, railway freight statistics and in one case a company report.

Exports to the rest of Canada were estimated as a residual, deducting exports to the rest of the world and estimated British Columbia consumption from reported production in British Columbia. The plausibility of the results for each commodity group were checked against the railway freight statistics.

⁷ Canada, Dominion Bureau of Statistics, *Railway Freight Traffic* (Ottawa: annual).

⁸ J. E. Peters, *Commodity Trade Flows of British Columbia, 1961-1964* (Unpublished M.A. Thesis, Library, The University of British Columbia, 1969).

The estimation of imports proved more difficult, and our results are less detailed and less reliable than for exports. Our specific methods varied among types of commodities, but in general they were all based on a preliminary estimate of consumption of the goods in question in British Columbia in each year. For machinery and equipment and construction materials relevant official estimates of consumption in British Columbia were available.⁹ For industrial materials and consumer goods we had to construct our own estimates. From estimated consumption we deducted reported production in British Columbia and imports from the rest of the world, in most cases as recorded in the customs port data. The residual we assumed to have been imported from the rest of Canada. In the case of most consumer goods we depended on other information, including information provided confidentially by two major department stores. Again, railway freight statistics provided a crude check on the plausibility of our estimates.

Comparison with 1962 Government Estimates. It may be of interest to compare our estimates of aggregate trade flows in 1962 with those produced by the provincial Bureau of Economics and Statistics. This is done in Table 1.

In general, our estimates of British Columbia's exports and imports in 1962 exceed those of the Bureau of Economics and Statistics. However, the major discrepancies are in trade with the rest of Canada, and the Bureau's estimates relate only to trade with Ontario and Quebec. This may account for much of the difference.¹⁰ The other major discrepancy is that we have estimated a significantly smaller value of imports from the rest of the world. Unfortunately, the Bureau has not provided information on their estimating techniques or further details of their estimates so we are unable to provide fuller reconciliation of the two sets of data.

The Aggregate Importance of British Columbia's External Trade

It would be interesting to relate the estimated values of exports and imports to the province's gross domestic product in each period, to see if there is any evidence of a change in the aggregate importance of external trade in the economic life of the province. Unfortunately, as we have

⁹ Canada, Dominion Bureau of Statistics, *Construction in Canada* (Ottawa: annual); *Private and Public Investment in Canada* (Ottawa: annual).

¹⁰ We did not attempt to distinguish between the various regions of Canada in estimating British Columbia's trade with the rest of Canada. However, in 1939 the Bureau of Economics and Statistics estimated that 21 percent of British Columbia's imports from the rest of Canada came from the prairie provinces, and 34 percent of the exports to the rest of Canada went to the prairies.

TABLE 1
Comparison of Estimates of British Columbia's External Trade, 1962
(millions of dollars)

	<i>Our Estimates</i> (1)	<i>Bureau of Economics and Statistics</i> (2)	<i>Difference (1) - (2)</i> (3)
EXPORTS			
To Rest of World	912	937	—25
To Rest of Canada	380	130 ^a	250
Total	1292	1067	225
IMPORTS			
From Rest of World	365	477	—112
From Rest of Canada	752	600 ^a	152
Total	1117	1077	40

a. Ontario and Quebec only.

Sources: British Columbia, Minister of Finance, *Budget Speech*, 1963 (Victoria: 1964), pp. 61-67; J. E. Peters, *Commodity Trade Flows of British Columbia, 1961-1964* (Unpublished M.A. Thesis, University of British Columbia Library, 1969).

already noted, official statistics of provincial gross domestic product are not produced in Canada, and such ad hoc estimates as are available are of dubious reliability. In the submission to the Rowell-Sirois Commission, the Economic Council reported two estimates of gross provincial income for 1934 and 1935. For the later period, the British Columbia Department of Finance has reported estimates of gross provincial product for a number of years. For 1961 we also have an independent estimate of the provincial gross domestic product by Mr. T. Ohki. Unfortunately, the observations for different years are not consistent. The only consistent aggregate income series for the whole period is personal income, which is not a fully appropriate statistic for our purposes.

For what they are worth, ratios of exports to the various estimates of the value of aggregate output in 1934-39 and 1961-64 are presented in Table 2. Since the denominators are conceptually different, and since the numerators and denominators are both subject to errors of unknown magnitude and direction, we cannot pay too much attention to small differences in the ratios from year to year. To provide one consistent base for comparison throughout the period, we have also reported the ratio of exports to personal income.

TABLE 2

Exports in Relation to the Value of Aggregate Output and Personal Income, British Columbia, 1934-39 and 1961-64

<i>Index of Output</i>	<i>Value of Output (million of dollars)</i>	<i>Ratio of Exports to: Output</i>	<i>Personal Income</i>
1934: Economic Council, "Gross Provincial Income."			
Estimate based on retail sales	303	.30	.33
Estimate based on production	317	.29	—
1935: Economic Council, "Gross Provincial Income."			
Estimate based on retail sales	326	.34	.37
1939: None available	n.a.	n.a.	.39
—————			
1961: T. Ohki, "Gross Domestic Product"	3,300	.33	.37
1962: Finance, "Gross Provincial Product"	4,190	.31	.41
1963: Finance, "Gross Provincial Product"	4,540	.30	.41
1964: Finance, "Gross Provincial Product"	4,940	.30	.41

Sources: *British Columbia in the Canadian Confederation*, (Victoria: 1938), pp. 80. 277; T. Ohki, *An Estimate of the Provincial Gross Domestic Product at Factor Cost by Industry of Origin for British Columbia, 1961* (unpublished M.A. Thesis, Library, the University of British Columbia, 1966); *British Columbia Financial and Economic Review*, 1964-1965.

The only conclusion which can reasonably be drawn from these imperfect data is that there is no evidence of a significant decline in the relative importance of external trade in the provincial economy.

The Pattern of British Columbia's External Trade

We have chosen the years 1939 and 1963 for the purpose of comparing the two sets of estimates of British Columbia's external trade. We suspect that the estimates for 1939 were the best produced for the early period, and 1963 is the last year for which we have estimates of both imports and exports.¹¹

The Direction of Trade. First consider the evidence which these studies

¹¹ We estimated exports for 1961-1964 but imports only for 1961-1963. A major change in the classification system for imports in the Trade of Canada statistics effective in 1964 meant that we would have had to substantially revise our methods to estimate imports for that year.

provide on changes in the direction of British Columbia's aggregate trade flows. The relevant data are presented in Table 3.

What is striking about these data on the direction of trade, is that the classic triangular pattern, of which so much was made in the Rowell-Sirois submission, is still very much in evidence. Large net exports to the rest of the world are accompanied by slightly smaller net imports from the rest of Canada, producing an overall surplus on account of commodity trade. Indeed, the 1963 data suggest an *accentuation* of this

TABLE 3
The Direction of British Columbia's
External Trade, 1939 and 1963

	1939		1963	
	millions of dollars	percent	millions of dollars	percent
EXPORTS				
To Rest of World	112	74	1048	76
To Rest of Canada	39	26	322	24
Total	151	100	1370	100
IMPORTS				
From Rest of World	57	44	373	31
From Rest of Canada	71	56	831	69
Total	128	100	1204	100
BALANCE OF COMMODITY TRADE (Exports — Imports)				
With Rest of World	+55		+675	
With Rest of Canada	—32		—509	
Total	+23		+166	

Detail may not sum to totals because of rounding

Sources: British Columbia, Bureau of Economics and Statistics, *Trade of British Columbia, 1939*; J. E. Peters, *Commodity Trade Flows of British Columbia, 1961-1964*.

pattern. Thus, while the division of exports between the two groups of markets remains unchanged, British Columbia's dependence on eastern Canada as a source of imports appears to have increased substantially. As a result, British Columbia's deficit with the rest of Canada increased from 21 percent to 37 percent of total exports, and the surplus with the rest of

TABLE 4
The Commodity Composition of British Columbia's Exports,
1939 and 1963

	1939			1963		
	Foreign	Canada	Total (millions of dollars)	Foreign	Canada	Total
Forest Products	58	10	68	680	168	847
Mineral Products	28	16	44	238	75	312
Fish Products	13	5	18	45	25	70
Agricultural Products	8	7	15	21	17	38
Miscellaneous	5	1	5	65	38	102
Total	112	39	151	1048	322	1370
	(percent)					
Forest Products	52	27	45	65	52	62
Mineral Products	25	41	29	23	23	23
Fish Products	12	12	12	4	8	5
Agricultural Products	7	19	10	2	5	3
Miscellaneous	4	1	4	6	12	7
Total	100	100	100	100	100	100

Detail may not add to totals because of rounding

Sources: As for Table 3.

the world from 36 percent to 49 percent of total exports (Remember: these figures relate to commodity exports only. Services are excluded).

While the classic pattern of trade flows thus appears to have been accentuated in this period, what happened to the commodity composition of trade?

The Composition of Exports. In Table 4, British Columbia's commodity exports in 1939 and 1963 are classified into broad commodity groups. If we compare the data for the two dates, the picture which emerges is again an accentuation of the classic patterns. In 1939, three quarters of British Columbia's exports were forest and mineral products. By 1963 this percentage had increased to 85 percent.¹² Some further details on the

¹² The 1963 estimates of exports of miscellaneous products, particularly to the rest of Canada, are probably much less accurate than for other categories of exports. We suspect that we have underestimated exports in this category, but not enough to seriously alter the indicated composition of trade. In any case, the error in this category was probably at least equally great in the 1939 estimates. As a result, the comparisons of the two estimates are probably little affected by the errors.

composition of exports of forest and mineral products in 1963 are presented in Table 5. As is evident, these exports were almost exclusively raw resources or products at low levels of processing.

In spite of the remarkable economic growth of the province in the intervening years, there is no evidence of substantial diversification of the economic base of the province. While some important new export products have been introduced (e.g., aluminum, petroleum and natural gas, iron ore), the basic export activity of the province, upon which the entire structure of the provincial economy ultimately depends, remains what it was in the 1930's — the provision of construction materials and industrial raw materials for Canada and the rest of the world.

The Composition of Imports. When we turn to consider the composition of imports, the direct comparability of the two studies breaks down. The Economic Council attempted to follow the same scheme of classification employed for exports, i.e., by chief component material. This was quite suitable for imports from the rest of the world since this was the classification used in the national trade statistics and the B.C. estimates

TABLE 5
The Composition of British Columbia's Exports
of Forest and Mineral Products, 1963

	<i>Foreign</i>	<i>Canada</i> <i>(millions of dollars)</i>	<i>Total</i>	<i>Percent</i>
FOREST PRODUCTS				
Lumber	375	41	416	49
Newsprint	123	3	126	15
Pulp and Pulpwood	124	51	175	21
Other (Plywood, Shakes, etc.)	58	73	130	15
Total	680	168	847	100
MINERAL PRODUCTS				
Lead and Zinc	65	26	91	29
Copper	33	3	36	12
Iron	24	—	25	8
Aluminum	64	31	94	30
Other	51	14	65	21
Total	238	75	312	100

Detail may not sum to totals because of rounding.

Source: As for Table 3.

were derived directly from the customs ports reports. However, for imports from the rest of Canada, the system broke down since the railway freight statistics, on which the estimates were primarily based, were classified on a different basis. Thus, 65 percent of the imports from the rest of Canada in 1939 were "not classified." These were primarily manufactured goods of one type or another, although some manufactured goods (e.g., automobiles, radio sets) were included in the other categories as well. Our method of estimation produced an entirely different, and for most purposes, more interesting classification of imports by end-use. The relevant data from the two studies are presented in Table 6.

The composition of imports in 1963 also conforms to the classic pattern discussed in the submission to the Rowell-Sirois Commission. British Columbia's imports are mainly of highly manufactured goods, both for consumption and for investment, and on balance these goods come from eastern Canada. We know from the evidence of Table 3 that an increased proportion of British Columbia's exports came from eastern Canada in 1963 as compared to 1939, but because of the extreme differences in classification we cannot tell from Table 6 whether there have been any notable changes in the composition of imports from the two sources.

External Trade, Industrial Development and the "Costs of Nationhood"

The prodigious growth of the British Columbia economy since World War II, paced by the expansion of its external trade, has not altered the economy's basic character or its position in the world economy. Given the nature of world markets (including foreign and domestic tariff policies), a region exports those products which it can produce relatively most effectively, and imports those products for the production of which it is comparatively worst suited. The estimates of exports and imports which we have examined suggest that British Columbia's comparative advantage is still overwhelmingly in the extraction of timber and mineral resources for the production of construction materials and industrial raw materials. In spite of continuing high levels of Canadian protective tariffs, there is no evidence that British Columbia has become a substantially more appropriate location for secondary manufacturing activities, a view which is re-inforced by consideration of other dimensions of the region's economic development in recent years.¹³ The base of the British Columbia economy remains in extractive activities.

¹³ Cf., Shearer, Munro and Young, *Op. Cit.*, Study 1; R. Shearer, ed., *Exploiting our Economic Potential: Public Policy and the B.C. Economy* (Toronto: Holt, Rinehart and Winston, 1968).

TABLE 6
The Commodity Composition of British Columbia's Imports
1939 and 1963

	Foreign	Canada (millions of dollars) 1939	Total	
Forest Products	3		3	
Mineral Products	26	9 ^a	35	
Agricultural Products	15	15	30	
Miscellaneous and not Classified	13	47	60	
Total	57	71	128	
		1963		Percent
Durables (incl. autos)	39	125	164	
Clothing	9	130	139	
Other	108	217	325	
Total	156	472	628	52
Machinery and Equipment	94	150	244	22
Construction Materials	34	197	231	19
Industrial Materials	90	11	101	9
Total	374	831	1204	100

a. Includes automobiles and radio sets.

Detail may not sum to totals because of rounding.

Sources: As for Table 2.

The basic economic argument advanced in the submission to the Rowell-Sirois Commission was that the pattern of British Columbia's external trade, and particularly the heavy dependence on eastern Canada for manufactured goods, was a direct product of Canadian tariff policy, and that this policy imposed a differential economic cost on British Columbia. Manufactured goods purchased from Eastern Canada were substantially more expensive than corresponding goods available in world markets. This theme has recurred in British Columbia's Submissions on the economics of the Canadian federation,¹⁴ and from time to time British

¹⁴ Cf., *Brief Presented to the Plenary Session of the Federal-Provincial Conference, 1963.*

Columbia politicians have been highly vocal advocates of a free trade policy.

The pattern of trade flows indicated in Tables 3 and 5 suggest that the "costs of nationhood" are still with us. In another study we have attempted to quantify these costs, and to assess the overall impact on British Columbia of the establishment of free trade in the North Atlantic, community.¹⁵ We estimate that there would be a direct gain to British Columbia of about 5.5 percent of personal income, a once over gain which is significantly less than that which some of the most vocal advocates of free trade seem to have in mind. Nonetheless, since it can be obtained without severe economic dislocations, it is substantial enough to make free trade an attractive policy to British Columbians.

In contemplating the possibility of free trade, however, another relevant question must be considered. It is true that free trade would result in a rationalization and increase of efficiency in manufacturing enterprises in eastern Canada.¹⁶ However, it is highly likely that free trade would produce a substantial re-orientation of British Columbia's import trade. The pattern of imports in Table 3 would move more in the direction of the pattern of exports.

We must then ask if three-quarters of British Columbia's import trade, like its export trade, was conducted with foreign countries rather than the rest of Canada, would British Columbia's economic association with the rest of Canada be so slight as to imperil its involvement in the social and political life of the nation? Would free trade set up overwhelming centrifugal forces in the Canadian confederation?

We do not know the answer. In any case, perhaps this is the sort of question which comparative advantages dictates we had best leave to our Political Science colleagues.

¹⁵ Shearer, Munro and Young, *Op. Cit.*

¹⁶ Ronald J. Wonnacott and Paul Wonnacott, *Free Trade Between Canada and the United States: The Potential Economic Effects* (Cambridge, Mass.: Harvard University Press, 1967).