

# Working Paper



### PROVINCIAL INCOME DISPARITY IN CANADA, 1951 TO 1981

Ву

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## PROVINCIAL INCOME DISPARITY IN CANADA, 1951 TO 1981

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## Abstract

In the present paper, we have examined the pattern of the provincial income disparity in Canada in the benchmark years 1951, 1961, 1971 and 1981. The data reveal that the rankings of provinces have remained more or less the same though the extent of regional disparity in per capita GDP has considerably declined over the 30 year period. Contributions of four factors, viz., labour force participation rate, industrial structure, capital per worker and output-capital ratio in the observed disparity of provincial incomes in the four benchmark years are estimated. Capital per worker played a major role in accounting for the disparity in 1951, but its relative importance is declining over time. Of late, output-capital ratio seems to be more important in accounting for the regional disparity in income levels in Industrial structure did account for a substantial Canada. proportion of regional income inequality in some provinces in In 1981, however, its relative contribution has only been marginal in all the provinces in Canada.

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#### I. <u>Introduction</u>

Canada is the second largest country in the world in terms of area. It has distinct geographic barriers. The settlement pattern follows a narrow, uneven chain on the border of the USA. There exists a striking diversity of natural resources and economic structure among all the major regions in the country. (See, Clement, 1980; Robinson, 1972; and Nicholson, 1962). High degree of regional differentiation in both the level and rate of economic development is, therefore, expected. In this context, the regional problem is the one of relative poverty of economic opportunity in some regions which get manifest in terms of the following three circumstances:

(a) relatively low incomes, (b) relatively high unemployment, and (c) net out-migration. (See, ECC, 1977). Since these circumstances have a high degree of correlation, many a times they are found together.

Major regional problem in Canada after the II World War as it is perceived has been that the rankings of Canadian provinces in terms of the per capita income and other indicators have remained unchanged (See, ECC, 1975). It is, however, clearly recognized that there has been a marked decline in the index of regional inequality in relative terms during the post World War II period.

Table 1 below clearly shows that the Atlantic provinces have moved considerably closer to the national average and Ontario and British Columbia have slided down the scale relatively over the period 1951 to 1981. Looking to the sheer magnitude, the Canadian regional problem is almost non-existent as compared to the problem in India. The income differential between the richest and the poorest provinces in Canada is around 2.5 and is reducing over time. In India, on the contrary, the differen tial is around 3 and is increasing. Moreover, the poor regions in Canada are typically smaller provinces whereas the poor regions in India are larger states. The regional problem, however, is considered very serious in Canada. In India too, the regional problem has become very grave. In the present paper we propose to examine the trend in regional income disparity in post World War II period in Canada so as to gain some insights into the trends of some crucial economic factors operating in the economy.

For the present study we have chosen the province as the regional unit because the British North America Act of 1867 provides for high degree of autonomous control exerted by provinces over their own development. In terms of autonomy and control, a province in Canada is marginally better placed than a state in India. A province in Canada enjoys the exclusive control over direct taxation within the province, incorporation of companies with provincial objectives, education, and management and sale of public lands, timber and other resources thereof

Table 1

Per Capita GDP at 1971 prices in Canadian Provinces. 1951-81

Pre	vinces	1951	er Capita GDP : 1961	in Canadian \$	1981
1.	NFL	947 (0.4283)	1 <b>37</b> 0 (0,5312)	2268 (0.5970)	2687 (0.5438)
2.	PEI	1018 (0.4604)	1303 (0,5052)	1961 (0.5162)	2679 (0.5422)
3.	NS	1314 (0.5943)	1657 (0.6425)	2 <b>4</b> 64 (0,6486)	3201 (0,6 <b>478</b> )
4.	NB	1322 (0.5979)	1565 (0.6068)	2 <b>414</b> <b>(</b> 0.6354)	3299 (0.6677)
5.	Queb	1822 (0.8241)	2284 (0,8856)	3287 (0.8652)	4390 (0.8885)
6.	Ont.	2696 (1.2194)	3096 (1.2005)	<b>443</b> 6 <b>(</b> 1.16 <b>7</b> 7)	5271 (1.0668)
7.	Man.	2127 (0.9620)	2414 (0.9360)	3511 (0.9242)	4351 (0,8806)
8.	Skt.	2246 (1.0158)	2034 (0.7887)	3423 (0,9010)	4911 (0.9939)
9.	Alb.	2753 (1.2451)	2899 (1.1241)	4469 (1.1764)	7015 (1•4198)
10.	B.C.	2620 (1.1850)	2910 (1.1283)	4093 (1.0774)	5369 (1.0866)
<b>A</b> 13	Prov.	2211 (1.0000)	2579 (1.0000)	3799 (1.0000)	4941 (1.0000)

Note : i) GDP excludes military pay.

Source: Statistics Canada.

ii) Figures in parantheses represent the ratio of the provincial income to the average for all provinces in each year.

A comparison of domestic product among provinces would, therefore, be very meaningful in assessing the regional problem in Canada.

## II. The Framework

Different studies made in the field of regional disparities have identified several factors as important sources of interregional variation of per capita income at a point of time and over a period of time (For details, see Dholakia, 1985). Included in these factors are the labour force participation rates in different regions, industrial structure as reflected in the sectoral employment pattern and labour productivity in different sectors. As shown in Dholakia (1985), these factors can be expressed as components of per capita income of any region:

$$Y = \frac{W}{P} \cdot \left( \sum_{i=1}^{n} \frac{W_{i}}{W} \cdot \frac{Y_{i}}{W_{i}} \right) \qquad \dots (1)$$

where Y is the percapita income of the region

W is the total workers in the region

P is the total population in the region

Wi is the workers in the i<sup>th</sup> sector in the region

Yi is the GDP in i<sup>th</sup> sector in the region

and n is the total number of sectors considered.

Moreover, sectoral labour productivities can be further decomposed into factor proportions and the technological factors

by using capital intensity (i.e. capital per worker) and capital productivity (i.e. output-capital ratio) as proxies for the former and the latter respectively. It should be noted here that the capital intensity incorporates some influence of the technological factors while the output-capital ratio is also not free from the factor proportions. Still we are using capital intensity and output-capital ratio to decompose productivity per worker because the capital intensity indicates broadly the overall investment effort undertaken in the economy and the capital-output ratio reflects broadly the effort on technological improvements. The extension of (1) to incorporate these two additional factors is simple:

$$Y = \frac{W}{P} \cdot \sum_{i=1}^{n} \frac{W_{i}}{W} \cdot \frac{K_{i}}{W_{i}} \cdot \frac{Y_{i}}{K_{i}} \dots (2)$$

where  $K_i$  is the gross fixed capital stock in  $i^{th}$  sector of the regional economy.

It should be clear that both (1) and (2) are identities. They are representing the traditionally identified forces of growth in any economy. Since it is possible to hypothesize time-trend behaviour of each of these component factors in different stages of economic development, these identities can serve as a useful point of reference for empirical exercise. If we restrict ourselves to the wellknown three sector classification of the economy, the time trends of the components can be more meaningfully hypothesized. As is argued in Dholakia (1985) plausible shapes of the time-trends of these component factors

result in the expectation of an inverted U shape of the regional disparity curve with respect to the level of development of the nation. Our framework can, thus, provide definite perspective on international comparisons of experiences about the regional disparity and its behaviour over time.

#### III. Methodology and Data Sources

The method followed here is to obtain the contributions of different factors included in (2) above in the observed provincial per capita GDP differentials. As Fuchs (1962) points out, these contributions measure only the direct effect of the variables. They do not measure the indirect effect on the morale, the business climate and the like.

Inserting subscript j for the province we can analyse the provincial income inequalities through (2) above. The difference between  $y_j$ — the provincial per capita GDP and y— the average per capita GDP for all provinces taken together, can be explained in terms of the four factors identified in (2). As recognized by Denison (1957), Brown (1973), etc., there are two possible ways in which we can find out the individual contribution of each of the factors to the observed deviation of  $y_j$  from y. One can be designated as the partial contribution approach and the other could be termed as the total contribution approach. The logic for the two approaches stems from the concept of total differential in Calculus. If differences between the regional

values and the average (national) values of these factors are insignificantly small as required for the application of the concept of total differential, we would invariably find the partial and the total contributions of a factor coinciding. However, in reality such differences are hardly small as a result of which interaction among them becomes significant and appears as a residual in both these approaches. In order to solve this problem and allocate the residuals to individual factors, the method suggested in Dholakia (1986) is followed here.

The data used in the present study are all collected from Statistics Canada, Ottawa. Data on GDP, employment and population for provinces in Canada are regularly published in catalogue numbers 61-202, 71-001, and 91-201 respectively.

Data on provincial gross fixed capital stock by sectors are, however, not published but made available on request. Although the data on all our required aggregates are available for the recent period, the same are not available on comparable basis for earlier period. As is usually done in such cases, the temporal behavioural pattern of similar aggregate based on somewhat different concept or definition is assumed to apply to our relevant aggregate for generating a reasonably comparable estimate for earlier periods (for details, see Dholakia, 1988). Provincial gross domestic product at 1971 prices excluding military wages and salaries is used for measuring income.

Civilian employment is measured in number of persons as per the labour force concept. The provincial capital stock excluding defence is measured as gross fixed capital stock at 1971 prices. The sectors considered here are (i) primary sector including agriculture and allied activities, forestry, fishing and mining & quarrying; (ii) secondary sector including manufacturing and construction; and (iii) tertiary sector consisting of the services and utilities. On the basis of these basic estimates for the benchmark years 1951, 1961, 1971 and 1981, all the factors defined in (2) above have been calculated for each province in Canada. Appendix Tables 1 to 4 below present the estimates of the component factors for the selected benchmark years.

## II. Results

As can be seen from <u>Table 1</u>, the nature of the regional problem in Canada is the stability of rankings of the provinces over time. The relative position of the poor regions is constantly improving over time and the gap between the poor and the rich is narrowing. However, the interprovincial variation in the level of per capita GDP existing at different points of time does not show substantial differences. The per capita GDP in 1951, 1961, 1971 and 1981 are very highly and positively correlated as can be seen from the following tabular presentation:

Provincial Per Capita	<u>Coeff</u> :	icient of
GDP in the years	Correlation	Determination
1951 and 1961	0.9617	0.9249
1961 and 1971	0.9827	0.9658
1971 and 1981	0,9453	0.8935
1951 and 1971	0.9845	0.9693
1951 and 1981	0.9461	0.8951
1961 and 1981	0.8944	0.7999

Source : Table 1 above.

Since the provincial relatives (as given in parentheses in <u>Table 1</u>) represent only the scale adjustment, the above figures imply that even provincial relatives are highly correlated over time. On the other hand, the index of regional inequality of income as measured by the weighted coefficient of variation shows that regional inequalities in Canada are sharply declining over the period 1951 to 1971 and have marginally increased during 1971 and 1981 as can be seen from the following figures:

Year :	<b>195</b> 1	1961	1971	1981
<pre>Index of regional inequality :</pre>	23.63%	19.95%	18,00%	18.87%

From these two sets of figures it is clear that changes in provincial income profile in Canada are taking place very systematically over the period 1951 to 1981. We may now turn to examine the contributions of the component factors in provincial income inequality in each of the selected benchmark

years in Canada. <u>Tables 2. 3. 4 and 5</u> present the average contribution of the component factors for the years 1951, 1961, 1971 and 1981 respectively.

Considering the four tables together, we find that the sign of the difference between the provincial per capita GDP and national (average) per capita GDP remains the same for all provinces except Saskat chewan during 1951, 1961, 1971 and 1981. Saskat chewan is the only province whose relative position deteriorated from the above average province in 1951 to the below average province thereafter. In terms of the four factors we identified earlier, viz., the worker rate, the capital productivity (technology), the capital intensity (factor proportion) and sectoral employment pattern (industrial structure), we find that provinces are differently placed as compared to the national average. Prince Edward Island (PEI) and Nova Scotia (NS) had negative contribution of all the factors in all the four years except the case of Nova Scotia which had marginally favourable industrial structure as compared to the in 1951. After 1951, the industrial structure in Nova Scotia has become unfavourable as compared to the national average. The employment pattern in Canada over the 30 years period from 1951 to 1981 has substantially changed in favour of high productivity sectors and away from the relatively low productivity sectors. In Nova Scotia, the shift in the employment pattern has not kept pace with the rest of the

Table 2

Average Contribution of Factors in Provincial Income Disparity
in Canada, 1951

Provinces		Average Co	ntribution		VV
_	W/P	Y/K	K/W	W <sub>i/W</sub>	y <sub>j</sub> -y
1	2	3	4	5	6
•	(a) /	Absolute Cor	tribution in	Can. \$	
1. NFL	-203	426	-1169	<b>-</b> 318	-1264
2. PEI	<b>-</b> 46	-322	<b>-48</b> 8	<b>-</b> 337	<b>-119</b> 3
3. WS	-248	<b>-</b> 307	<b>-</b> 348	6	-897
4. NB	<b>-26</b> 0	<b>-</b> 653	67	<b>-4</b> 3	-889
5. Queb.	-140	<b>7</b> 5	<b>-3</b> 66	42	<b>-</b> 389
6. Ont.	218	176	0	91	485
7. Man.	45	-25	<b>-</b> 132	28	-84
8. Skt.	130	-181	432	<b>-34</b> 6	35
9. Alb.	113	<b>-15</b> 5	822	<b>-</b> 238	542
10. B.C.	-112	-174	594	101	409
	(b)	Relative Co	ontribution in	% of y	
1. NFL	<b>-9.18</b>	19.27	-52,87	-14.38	<b>-</b> 57.17
2. PEI	-2.08	-14.56	-22.07	-15.24	<b>-</b> 53 <b>.</b> 96
3. NS	-11.22	-13.89	-15.74	0.27	-40.57
4. NB	-11.76	-29.53	3,03	-1.94	-40.2]
5. Queb.	<b>-6.33</b>	3,39	<b>-16.5</b> 5	1.90	-17.59
6. Ont.	9.86	7.96	0	4.12	21.94
7. Man.	+2.04	-1.13	-5.97	1.27	<b>-3.8</b> 0
8. Skt.	5.88	<b>-8.19</b>	19.54	-15.65	1.58
9. Alb.	5.11	-7.01	37.18	-10.76	24.51
10.B.C.	-5.07	<b>-7.</b> 87	26.87	4.57	18.50

Source: Appendix Table 1.

Table 3

Average Contribution of Factors in Provincial Income Disparity
in Canada, 1961

Provinces		Average Con	tribution		у <sub>1</sub> -у
	W/P	Y/K	K/W	W <sub>i/W</sub>	13 1
1	2	3	4	5	6
	<u>(a) Ab</u>	solute Contri	bution in Ca	an. \$	
1. NFL	-809	248	<b>-</b> 521	-127	-1209
2. PEI	-161	<b>-4</b> 84	<b>-</b> 355	<b>-27</b> 6	-1276
3. NS	-202	-194	<b>-</b> 517	<b>-</b> 9	<b>-</b> 922
4. NB	-324	<b>-</b> 686	<b>4</b> 6	<b>-5</b> 0	-1014
5. Queb.	<b>-19</b> 5	<b>18</b> 8	<b>-31</b> 0	22	<b>-2</b> 95
6. Ont.	253	294	<b>-</b> 79	49	517
7. Man.	140	-140	<b>-1</b> 62	<b>-</b> 3	-165
8. Skt.	101	<b>-7</b> 01	<b>54</b> 0	<b>-4</b> 85	-545
9. Alb	253	<b>-</b> 339	614	<b>-</b> 208	<b>32</b> 0
10. B.C.	-116	-301	713	35	331
	(b) Re	lat <b>ive</b> Contrib	oution in %	of y	
. NFL	<b>-</b> 31 <b>.</b> 37	9.62	-20,20	-4.92	-46.88
2. PEI	-6.24	-18.77	<b>-</b> 13.77	-10.70	-49.48
. NS	<b>-7.8</b> 3	<b>-7.</b> 52	-20.05	-0.34	-35.75
4. NB	-12.56	<b>-</b> 26.60	1.78	-1.94	-39.32
. Queb.	<b>-7.</b> 56	7.29	-12.02	0,85	-11.44
ont.	9.81	11.40	<b>-</b> 3 <b>,06</b>	1.90	20,05
7. Man.	5.43	<b>-5.43</b>	<b>-6.2</b> 8	-0.12	-6.40
S. Skt.	3 <b>.9</b> 2	-27.18	20.94	-18.81	-21.13
. Alb.	9.81	-13.14	23.81	- 8.07	12,41
O. B.C.	<b>-4.5</b> 0	-11.67	27.65	1.36	12.83

Source: Appendix Table 2

Prov	rinces		Average Con	tribution		y <sub>i</sub> -y
		W/P	Y/K	K/W	W <sub>i</sub> /W	, j
_	1	2	3	4	5	6
•	<u>.</u>	(a) Abs	olute Contri	oution in Ca	n <b>. \$</b>	
1.	NFL	-1037	-640	265	-119	<b>-</b> 1531
2.	PEI	-328	<b>-</b> 346	<b>-84</b> 0	-324	-1838
3.	NS	<b>-448</b>	<b>-</b> 727	-148	-12	-1335
4.	NB	-804	-1176	617	-22	-1385
5.	Queb.	-164	135	<b>-</b> 513	30	-512
6.	Ont.	286	457	<b>-15</b> 5	49	6 <b>37</b>
7.	Man.	57	<b>-3</b> 51	<b>2</b> 2	<b>-1</b> 6	<b>-28</b> 8
8.	Skt.	<del>-</del> 91	-898	802	-189	<b>-</b> 376
9.	Alb.	238	-110	647	-105	670
10.	B.C.	24	<b>-</b> 398	689	-21	294
		(b) Re	lative Contrib	oution in %	of y	
1.	NFL	-27.30	-16.85	6.98	<b>-3.</b> 13	-40.30
2.	PEI	-8.63	-9.11	-22.11	<b>-8.</b> 53	<b>-4</b> 8 <b>.38</b>
3.	NS	<b>-11.7</b> 9	-19.14	<b>-3.9</b> 0	<b>-</b> 0.32	-35.14
4.	NB	<b>-</b> 21.16	-30,96	16.24	<b>-</b> 0.58	<b>-</b> 36 <b>.4</b> 6
5.	Queb.	-4.32	<b>3.5</b> 5	-13.50	0.79	-13.48
6.	Ont.	7.53	12,03	-4.08	1.29	16 <b>.7</b> 7
7.	Man.	1.50	-9.24	0,58	-0.42	<b>-7.5</b> 8
8.	Skt.	-2.40	-24.64	21.11	-4.97	<b>-9.9</b> 0
9.	Alb.	6.26	<b>-2.9</b> 0	17,03	-2.76	17.64
10.	B.C.	0.63	-10.48	18.14	<b>-</b> 0.55	7.74

Source : Appendix Table 3

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<u>Table 5</u>

<u>Average Contribution of Factors in Provincial Disparity in Canada, 1981</u>

Pro	vinces		Average Co	ntribution		vv
		W/P	Y/K	K/W	W <sub>i</sub> /W	у <sub>ј</sub> -у
	1	2	3	4	5	6
		<u>(a) <b>A</b>b</u>	solute Contri	bution in Car	n. \$	
1.	NFL	-1927	-1997	1809	<b>-13</b> 9	-2254
2.	PEI	<b>-49</b> 0	-410	-1204	-158	-2262
3.	NS	<del>-</del> 721	<del>-9</del> 95	<b>-</b> 3	<del>-</del> 21	-1740
4.	NB	<b>-87</b> 8	-1514	768	-18	-1642
5.	Queb.	<b>-</b> 319	21	-301	<b>4</b> 8	<b>-5</b> 51
6.	Ont.	329	187	<b>-25</b> 0	64	<b>3</b> 30
7.	Man.	<b>-4</b> 3	<b>-4</b> 58	-12	<b>-7</b> 7	<b>-59</b> 0
8.	Skt.	-160	-179	525	<b>-2</b> 16	<b>-3</b> 0
9.	Alb.	865	830	379	0	2074
10.	B.C.	106	14	<b>32</b> 5	-17	428
		(b) Rela	ative Contrib	ution in % of	<u></u>	
1.	NFL	-39.00	-40.42	36.61	-2.81	-45.62
2.	PEI	<b>-9.92</b>	-8.30	<b>-24.</b> 37	<b>-3.2</b> 0	<b>-45.7</b> 8
3.	NS	-14.59	-20.14	-0.06	<b>-</b> 0 <b>,4</b> 3	-35.22
4.	NB	<b>-17.7</b> 7	<b>-</b> 30 <b>.64</b>	15.54	-0.36	-33.23
5.	Queb.	-6.46	0.43	-6.09	0.97	-11.15
6.	Ont.	6.56	3.78	-5.06	1.30	6.68
7.	Man.	-0.87	-9.27	-0.24	-1.56	-11.94
8.	Skt.	-3,24	-3.62	10.63	<b>-4.</b> 37	-0.61
9.	Alb.	17.51	16.80	7.67	0	41.98
10.	B.C.	2.15	0,28	6.58	-0.34	8 <b>.6</b> 6

Source: Appendix Table 4

nation. The PEI and NS represent the cases of genuine neglect and serious problems on all fronts. The technology as well as factor proportions are unfavourable in these provinces unfavourable besides the verall worker rate reflecting employment opportunities.

The other two provinces in the Atlantic region, viz., Newfoundland (NFL) and New Brunswick (NB) have also been below the average income all along the period under consideration. It is natural therefore to expect that most of the four factors would have negative contributions in these two provinces. In New Brunswick, all factors except factor proportions are unfavourable as compared to the average for Canada in all the four benchmark years. Thus, capital productivity or technology is a major bottleneck in the province. If it improves fast, employment opportunities would improve leading to favourable shifts in the employment pattern. Thus, the advantage of NB in terms of higher capital per worker has been counterbalanced by high capital-output ratios and hence the potential income gains are not coming forth.

In Newfoundland, during 1951 and 1961 the capital productivity was favourable but the factor proportions were unfavourable. During 1971 and 1981, on the other hand, the factor proportion became favourable but only by raising the capital—output ratio to make it unfavourable. Capital

intensive technology changes in NFL have also not produced enough employment opportunities nor have they made employment structure in the province favourable as compared to the national average.

Quebeck has a distinct pattern of the contributions of the factors over the years. The factor proportions in Quebeck are constantly unfavourable whereas the capital productivity (technology) is constantly favourable. As a result of these two sets of factors, Quebeck has reasonably favourable industrial structure as compared to the national average, though employment opportunities have not been above average in any of the benchmark years considered here. The nature of the contributions of these four factors in the shortfall of Quebeck's per capita income from the national average has, thus, remained the same. More capital investments in labour intensive techniques of production in the Quebeck's economy would favourably affect its relative position

Ontario is another big province very peculiar nature of the contributions of factors. The same has, moreover, remained stable in different years. Like Quebeck, Ontario also has favourable technology and unfavourable factor proportions. However, the magnitude of unfavourableness of factor propositions in Ontario is relatively lower as compared to Quebeck. As a result, Ontario has both industrial structure and employment opportunities favourable as compared to the

national average. Of late, however, the gap between the absolute negative contribution of factor proportions in Ontario and Quebeck is narrowing and, as a consequence, the gap between their per capita GDP is also narrowing. Government policies can make a direct impact on factor proportions which in this case seems to be governing the extent of regional inequality. The extent of unfavourableness of factor proportions in Ontario is increasing over time and the same in Quebeck is decreasing over time.

British Columbia has relatively changing pattern of the contributions of factors in different years. Only capital per worker in B.C. has remained favourable throughout for the selecte benchmark years. The capital productivity (technology) was unfavourable but factor proportions were favourable during 1951. 1961 and 1971. However, in 1981, capital productivity was almost the same as national average while the factor proportions still continued to be favourable. Difference in the industrial structure of B.C. and the national average was only marginal in all the benchmark years. In 1981, B.C. has all the factors favourable except industrial structure which also is only marginally unfavourable. Favourable factor proportions in B.C. also reflects the government's preference for policies favouring the province. It must, however, be pointed out that the extent of favourableness of the factor proportions in BC particularly after 1961 has been considerably declining.

The Prairie region provinces have basic problem of unfavourable capital productivity (technology) and industrial structure with preponderence of low productivity sectors (mainly agriculture). However, in terms of employment opportunities, during 1951 and 1961 all the three provinces in Prairie region had favourable position as compared to the national average. The relative contribution of worker rate is declining in Manitoba and Saskatschewan while it is rising in Alberta over In 1981, both Manitoba and Saskat chewan have negative contribution of worker rate. This is as per the expectation in any developing region particularly the region with preponderance of primary sector. Alberta is, however, a distinctly different province in the Prairie region standing out with all factors being favourable than the national average in 1981. position as the richest Canadian province is firmly established in 1981. Upto 1981, Ontario was very close in the race.

## V. Concluding Observations

In the present paper, we have examined the pattern of the provincial income inequality in Canada in the benchmark years 1951, 1961, 1971 and 1981. The data reveal that the rankings of provinces have remained more or less the same though the extent of regional disparity in per capita GDP has considerably

declined over the 30 year period. The relatively worse off provinces (PEI and NS) have all the component factors unfavourable implying that their problem is the one of relative backwardness on all fronts. Their position could be improved on the relative scale only by properly managing capital productivit increases to begin with and then to encourage capital intensity to grow above the national average. Newfoundland and New Brunswick again fall in the similar category where capital productivity gains have to be managed. The difference between Quebeck and Ontario represents the case of the role that capital intensity (factor proportions) would play in determining the level of regional income differentials. Prairie region, although Manitoba and Saskat chewan show the sign of transformation. Alberta has clearly established its lead over the rest of the provinces in Canada. British Columbia has shown signs of unstable growth over the period though, of late, it seems to stabilize at higher level. The regional problem in Canada has, thus, totally shifted in its emphasis from Ontario v/s. Quebeck to Alberta v/s. the Atlantic Provinces during the recent years.

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Appendix Table 1: Estimates of the Component Factors in Canadian Provinces, 1951

Pro	vinces	W/P	Үр/Кр	Kp/Wp	Wp/W	Ys/Ks	Ks/\s	Ws/W	Yt/Kt	Kt/Wt	Wt/W	
	1	2	3	4	5	6	7	8	9	10	11	
1.	NFL	0.3210	0.4206	2461	0.4828	1.4891	3206	0.1379	0.2253	20976	0,3793	
2.	PEI	0.3659	0.1774	6012	0.4722	0.6661	3 <b>54</b> 0	0.1389	0.1772	28321	0.3889	
3.	NS	0.3221	0.2383	7282	0.2464	0.4190	8248	0.2319	0.2376	2 <b>29</b> 95	0.5217	
4.	NB	0.3199	0.3425	5622	0.2727	0 <b>.399</b> 3	9934	0,2485	0.1630	33596	0.4788	
5.	Queb.	0.3467	0.3209	8063	0.1650	0.5959	8945	0,3734	0.2701	<b>227</b> 77	0.4616	
6.	Ont.	0.4067	0.2413	14562	0.1315	0-5249	12111	0.3882	0.3251	23689	0.4802	
7.	Man.	0.3799	0.2824	15596	0.2441	0.5429	6629	0.2441	0.2687	26511	0.5119	21
8.	Skt.	0.3944	0.3090	12396	0.5610	0.4076	10715	0,0823	0.2479	36044	0.3567	
9.	Alb.	0.3896	0.1565	20941	0.4126	0.3552	15874	0.1557	0.3324	33718	0.4317	
10.	B.C.	0.3553	0.2938	183 <del>6</del> 6	0.1353	0.4317	16702	0.3019	0.2712	29288	0.5628	
All Pro	vinces	0.3721	0.2541	12533	0.2133	0.5204	11035	0.3156	0.2854	25656	0.4711	

Basic Source : Statistics Canada.

Note: Symbols are as per equation (2) in the text. Subscripts p, s and t represent primary, secondary and tertiary sectors. Cols. (4), (7) & (10) are in \$.

Appendix Table 2: Estimates of the Component Factors in Canadian Provinces, 1961

Prov	rinces	W/P	Yp/Kp	Kp/Wp	Wp/W	Ys/Ks	Ks/Ws	Ws/W	Yt/Kt	Kt/Wt	Wt/W
		2	3	4	5	6	7	8	9	10	11
1.	NFL	0.2184	0.3347	10030	0.2700	0.7711	10578	0.1800	0.2380	29782	0,5500
2.	PEI	0.3059	0.1281	11842	0.3750	0.78 <b>9</b> 9	6925	0.1250	0.1649	36450	0.5000
3.	NS	0.3080	0.2190	12012	0.1806	0.4290	11948	0.2115	0.2330	26988	0,6079
4.	NB	0.2843	0.1981	11250	0,2000	0.3425	17278	0.2176	0.1759	36822	0.5824
5.	Queb.	0.3132	0.2140	19768	0.1056	0.5289	12640	0.3758	0.2774	30119	0,5185
6.	Ont.	0.3714	0.2238	29212	0.0851	0.4598	17434	0.3618	0.3111	28361	0.5531
7.	Man.	0.3591	0.1333	28563	0.1782	0.4953	10977	0.2447	0.2513	32511	0.5771
8.	skt.	0.3545	0.1346	23181	0.4665	0.4614	19383	0.0914	0.1776	44099	0.4421
9.	Alb.	0.3724	0.1295	38003	0.3125	0.4214	21693	0.1693	0.2465	36794	0,5181
10.	B.C.	0.3253	0,2810	34696	0.0849	0.3578	24792	0.2811	0.2374	37345	0,6339
All Provinces		0.3394	0.1822	<b>25</b> 826	0.1452	0,4631	16170	0.3089	0.2677	31510	0.5460

Basic Source : Statistics Canada.

Note: The same as in Appendix Table 1

Appendix Table 3: Estimates of the Component Factors in Canadian Provinces, 1971

Prov	inces	W/P	Yp/Kp	Kp/Wp	Wp/W	Ys/Ks	Ks/ <b>W</b> s	Ws/W	Yt/Kt	Kt/Wt	Wt/W	
	1	2	3	4	5	6	7	8	9	10	11	
1.	NFL	0.2624	0.1902	62300	0.1168	0.6394	21804	0.1825	0.1777	37880	0.7007	
2.	PEI	0.3315	0.1440	14309	0.2973	1.0597	7600	0.1351	0.1890	39267	0.5676	
3.	NS	0.3270	0.2055	<b>2</b> 6872	0.0969	0.3062	24091	0,2209	0.2469	31889	0.6822	
4.	NB	0.3089	0.1839	32859	0.0867	0.3101	24590	0.2500	0.2072	39201	0.6633	
5.	Queb.	0.3607	0.1802	39052	0.0566	0.5498	17716	0.3082	0.2991	30074	0.6352	
6.	Ont.	0.4049	0.1924	40780	0.0587	0.5241	22941	0.3273	0.3435	31107	0.6140	
7.	Man.	0.3835	0.1712	50167	0.1187	0.4959	17561	0.2032	0.2581	36375	0.6781	
8.	Skt.	0.3682	0,1960	43475	0.3548	0.4258	25600	0.0938	0.1997	47689	0.5513	23
9.	Alb.	0.4011	0.1477	75178	0.2128	0.5267	25082	0.1531	0.2817	37826	0.6340	
10.	B.C.	0.3799	0.2029	63853	0.0687	0.3803	30445	0.2458	0.2808	36558	0.6855	
All Prov	rinces	0 <b>.37</b> 76	0.1779	49197	0.0907	0.5003	22029	0.2757	0.2957	33232	0.6336	

Basic Source : Statistics Canada.

Note: The same as in Appendix Table 1.

Table
Appendix/4: Estimates of the Component Factors in Canadian Provinces, 1981

Prov	rinces	W/P	Yp/Kp	Kp/Wp	Wp/W	Ys/Ks	Ks/ <b>Ws</b>	Ws/W	Yt/Kt	Kt/ <b>W</b> t	Wt/W	
		2	3	4	5	6	7	8	9	10	11	
1.	NFL	0,3153	0.0910	<b>7</b> 71 <b>9</b> 5	0.1173	0.3328	25828	0.2011	0.1758	49803	0.6816	
2.	PEI	0.3837	0.1288	25000	0.1702	0.7464	10167	0.1277	0.2232	34812	0.7021	
3.	NS	0.3799	0.0811	59441	0.0683	0.2885	<b>3</b> 31 <b>95</b>	0.2019	0.2425	34815	0.7298	
4.	NB	0,3633	0.1029	50279	0.0751	0.2618	37402	0.2055	0.2052	<b>4</b> 5 <b>2</b> 54	0,7194	
5.	Queb.	0.4234	0.0854	57524	0,4878	0,5039	23601	0.2634	0.2795	36 <b>3</b> 94	0.6878	
6.	Ont.	0.4836	0.1127	53027	0.0491	0.4284	27995	0,3002	0.3101	34721	0,6507	
7.	Man.	0.4492	0.0917	67694	0.1085	0.5534	19310	0.1887	0 <b>.2</b> 356	4224	0.7028	
8.	Skt.	0.4389	0.1143	<b>789</b> 90	0.2329	0.5459	21983	0.1223	0.2551	46312	0.6447	24
9.	Alb.	0.5255	0.1224	140509	0.1406	0.6152	23 <b>45</b> 9	0.1979	0.3109	39258	0.6615	
10.	B.C.	0.4628	0.1025	80732	0.0693	0.4235	30733	0.2181	0.2966	38739	0.7126	
Áll Prov	rinces	0,4534	0,1096	78911	0 <b>.</b> 0 <b>73</b> 3	0.4539	26604	0,2519	0,2864	37364	0.6747	

Basic Source: Statistics Canada

Note: The same as in Appendix Table 1.