

## ETHNIC EARNINGS INEQUALITY IN CANADA

ETHNIC EARNINGS INEQUALITY IN CANADA

by

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## **Abstract**

Evidence in the literature and from the 1991 Census indicates that there has been significant educational and occupational mobility among Canadian ethnic groups over the past decades. The extent of ethnic mobility in earnings, however, has been quite different from that in education and occupation. The present study re-examines the issue of ethnic and racial inequalities in earnings and evaluates two contending views, namely, the Vertical Mosaic thesis, which emphasizes ethnicity as a fundamental basis of social stratification in Canada, and the New Mosaic thesis, which stresses ethnic mobility in socioeconomic status.

Based on the Public Use Microdata File on Individuals drawn from the 1991 Census of Canada, it is found that, while earnings differences were not profound either among European groups or among visible minorities, substantial disparities existed between these two broad categories to the disadvantage of visible minorities. It is therefore argued that neither the Vertical Mosaic thesis nor the New Mosaic perspective is adequate in describing current Canadian society: the Canadian Mosaic is still vertical, but race has replaced ethnicity as a fundamental basis of stratification in earnings.

In a regression model estimating the extent of "direct" pay discrimination, or "unequal pay for equal work," ethnic differences in a number of earnings-related variables were statistically controlled. Substantial earnings differentials were again found, though

to a lesser extent, largely between European groups and visible minorities. Such discrimination was further demonstrated when ethnic earnings differentials were estimated within educational and occupational categories and within immigrant cohorts. It is evident that equal work was not paid equally and that racial discrimination was still a significant phenomenon in the Canadian labour market in the early 1990s.

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## DEDICATION

To my wife, Hong, and our daughter, Dana

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## **Introduction**

As a nation of immigrants and their descendants, Canada has experienced a continuous increase in ethnic diversity. In 1871, shortly after Confederation, 92% of the Canadian population was made up of the two charter groups, the British and the French. The German, Dutch, Native Peoples and Blacks were major components of the rest<sup>1</sup>.

After World War II, as a result of the new immigration wave, the ethnic composition of the country began to change and, by 1951, the proportion made up by the British and the French had dropped 13 percentage points to 79%. Meanwhile, as the proportion of Germans declined slightly, Ukrainians, Scandinavians, Dutch, Poles, Jews, Native Peoples, Italians, and Asians had significantly increased their representation in the population. All these larger non-charter groups, together with the minor ones, made up 21% of the population<sup>2</sup>.

By forty years later, in 1991, the picture had changed further. The proportion made up of the British and the French had decreased to 55%. In addition to sustained representation of the minority groups mentioned for 1951, Greeks, Portuguese, Arabs, East Indians, Chinese, Filipinos, and Blacks had dramatically increased their representation. All these groups, along with other minorities, made up 31% of the total population<sup>3</sup>. Canada has become more and more diverse in its population, with a greater variety of groups and increased membership of these groups compared to that of the charter ones.

With this increasing ethnic diversity comes an important question of the extent to which there is ethnic equality/inequality in socioeconomic status. The Royal Commission on Bilingualism and Biculturalism set up in the mid-1960s investigated comprehensively the relative positions of Canadians of British and French origins (Royal Commission, 1969) and those of other origins (Royal Commission, 1970). Some fifteen years later, the Royal Commission on Employment Equality inquired about issues of unequal opportunities in the work world between majority and minority groups, including those based on ethnic and racial lines (Abella, 1984). Whether socioeconomic status is associated with ethnicity has also attracted the attention of many Canadian scholars. The task of the present study is to use the 1991 Census of Canada to re-examine the issue of ethnic inequality in socioeconomic status with a special emphasis on ethnic differentials in earnings attainment.

### **The Vertical Mosaic Thesis and the New Mosaic Perspective**

In 1965, John Porter described Canadian society as a "Vertical Mosaic," maintaining that Canadian society was stratified along ethnic lines (Porter, 1965: 60-103). Porter argued that in any society which has to seek members from outside, there have to be judgments about the reservoirs of recruits that exist in the world. "In this process of evaluation the first ethnic group to come into previously unpopulated territory, as the effective possessor, has the most say. This group becomes the charter group of the society, and among the many privileges and prerogatives which it retains are decisions about what other groups are to be let in and what they will be permitted to do." So

Canada has two charter groups, the British and the French (Porter, 1965: 60).

At the same time, Porter contended, later immigrant groups, especially the "less preferred," tend to accept their inferior positions, and are trapped in an "entrance status" in the process of economic growth and immigration. Entrance status implies lower level occupational roles and subjection to conditions and rules laid down and judged by the charter group (Porter, 1965: 63-64, 68-73). Over time, a stratification along ethnic lines has occurred in Canada. As a result, "immigration and ethnic affiliation (or membership in a cultural group) have been important factors in the formation of social classes in Canada" (Porter, 1965: 73).

On the basis of these assumptions, Porter made several observations about Canada up to the 1960s. First, the dominance of the two charter groups had never been seriously challenged. In fact, the ethnic structure of Canadian society, in terms of the positions of the charter and non-charter groups, was determined early in the country's history and tended to be self-perpetuating. As a result, the charter groups retained their commanding power and privilege in social, economic and political fields, and the non-charter groups were trapped in their entrance status, sharing only marginally the fruits of the country's social and economic development. Second, although British and French are the charter groups of Canadian society, their socioeconomic positions are very different: the British are in much better positions than the French. Even though French Canadians have been able to exert a very powerful influence on the political processes not only in Quebec but also at the federal level, through the 1960s their position in the economic structure remained much weaker than the British. Overall the British, but not the French, run the



economic life of Canada and this has been traditionally the case, even within Quebec. Third, because of the predetermined differences among ethnic groups in immigration period, power and status, ethnicity has been an important factor in the formation of social classes in Canada, and the ethnic hierarchy of the occupational system has been remarkably rigid and consistent. Using data from the 1931, 1951 and 1961 Canadian censuses, Porter showed that those of Jewish and British origins were persistently over-represented in the professional and financial occupations, and under-represented in agricultural and unskilled ones. The French and those of other Europeans origins were under-represented in professional and financial occupations, and over-represented in agricultural and unskilled jobs. At the bottom of the occupational hierarchy were Aboriginal Peoples. The only exception was the Asian group which experienced significant upward mobility during the thirty-year period (Porter, 1965: 60-103).

Porter's argument has been supported by many subsequent researchers. These researchers maintained that differences in occupational status among Canadian ethnic groups continued to be substantial. They demonstrated that, for the two charter groups, the occupational status of the British remained significantly higher than that of the French (Royal Commission, 1969: 36-45; Breton and Roseborough, 1971; Boyd, et al, 1981). For other groups, Jews and North and West Europeans were in favourable positions, visible minorities and South Europeans were in disadvantaged positions, and Aboriginal Peoples were at the bottom of the Canadian occupational hierarchy (Porter, 1985; Li, 1988; Lautard and Guppy, 1990; Reitz, 1990). Second, some argued, ethnic disparities in occupational status had been largely persistent despite moderate decline in recent

decades. Thus, in 1984, Lautard and Loree could claim that "Occupational inequality is still substantial enough to justify the use of the concept 'vertical mosaic' to characterize this aspect of ethnic relations in Canada" (342). Third, they argued, ethnic inequality in occupational status was a result of a complex combination of past discrimination, current discrimination, and group differences in socioeconomic background and cultural orientation (Jabbra and Cosper, 1988). Intergroup disparities in education, differential treatment of immigrant groups by Canadian immigration policy, group differences in length of residence in Canada, cultural differences, and discrimination in the labour market are believed to be the most important factors for ethnic occupational inequality (Blishen, 1970; Breton and Roseborough, 1971; Li, 1978; 1987; Porter, 1985; Jabbra and Cosper, 1988; Reitz, 1990).

On the other hand, a number of other researchers re-examined Porter's thesis and argued that the influence of ethnicity in the process of social mobility was minimal in Canada, and that ethnic affiliation did not operate as a significant block to social mobility as Porter had suggested. They contended that the picture of social mobility in Canada was inconsistent with the argument of the Vertical Mosaic, and the association between ethnicity and occupational status was minimal and declining (Pineo, 1976; Darroch, 1979; Ornstein, 1981). Richmond (1971) noted that the initial disadvantage of immigrants from non-English speaking countries compared to those from the UK and US diminished over time as they became more acculturated. Tepperman (1975) argued that the contention of the Vertical Mosaic that the status of immigrant groups was rigidly preserved was "patently false" (156). Other researchers showed that the convergence process in

occupational status among ethnic groups in Canada had become more apparent since Porter's original analysis (Reitz, 1980: 150-153), that gains by non-charter groups had been significantly greater than those of the charter groups (Boyd, et al, 1981; Pineo and Porter, 1985: 382-384), and that the Vertical Mosaic may have been only a period in Canadian society, during the decades of great immigration (Pineo and Porter, 1985: 390). Thus, it was argued that Porter's hierarchy of the four strata (charter groups, North Europeans, South Europeans, and visible minorities) had changed dramatically: the British had dropped from the top to the middle, and Asians had moved to the top with the Jews (Herberg, 1990). Therefore, it was claimed, the Vertical Mosaic had "collapsed" (Pineo and Porter, 1985: 390), and ethnicity does not seem to be a drawback for social mobility in Canada any more (Isajiw, Sev'er and Driedger, 1993). Throughout the present study we will refer to this perspective as the "New Mosaic" thesis since it opposes the Vertical Mosaic thesis and emphasizes the socioeconomic mobility of Canadian ethnic groups.

Proponents of the ethnic inequality thesis argued that the Canadian educational system had been a mechanism to reproduce and create social inequality, since the culture of the school was controlled by the dominant group (Shamai, 1992: 44-45). Educational opportunity was not equally accessible to all groups; and the school system tended to sort out those who already had a better chance of succeeding in school (Li, 1988: 96). As a result, almost all ethnic groups, except the Asians, who had moved up, remained in the same relative positions over a long period of time (Shamai, 1992). Much the same as the occupational structure, the Canadian educational hierarchy was seen as ethnically stratified and stagnant: Jews and British were well educated, North and West Europeans were close

to the average, East and South European were below the average, and Aboriginal Peoples were at the bottom. Asians were the only group that had experienced substantial upward mobility in education (Li, 1988: 77-83; Shamai, 1992).

Alternatively, advocates of the New Mosaic thesis argued that the Canadian educational system had provided equal opportunity for all ethnic groups alike. Herberg (1990) contended that a "contest-achieved" system of status attainment was operating for the acquisition of education, and there was no evidence of ethnic inequality in education in Canada. Pineo and Porter (1985: 384) argued that non-charter groups had gained significantly in educational achievement compared to the British (see also Herberg, 1990), and the educational system, despite all the criticism of it, had worked effectively to help minority Canadians overcome the disadvantages of their background (Pineo and Porter, 1985: 391).

### **The Thesis of the Present Study**

While there are still ethnic differences in social status in Canada, evidence has shown that there has been considerable social mobility among Canadian ethnic groups in education and occupation. In fact, many researchers in support of the Vertical Mosaic thesis acknowledge that there has been a decline in the relationship between ethnicity and educational and occupational achievements in Canada, and that many traditionally low-status groups have moved up in the Canadian socioeconomic hierarchy (Lautard and Loree, 1984: 342; Li, 1988: 93; Lautard and Guppy, 1990: 203; Shamai, 1992: 47-49).

But does this suggest that ethnicity ceases to be a significant factor in status

attainment in Canada, and that racial and ethnic discrimination is no longer a substantial phenomenon in Canadian society? Mobility in education and occupation would, of course, have influenced the process of earnings attainment, and many Canadian ethnic groups might have benefited from this development. However, as a result of different degrees and manifestations of racial discrimination and other social, economic and cultural factors, the extent of ethnic mobility in earnings can be quite different from that in education and occupation. Although the validity of the Vertical Mosaic thesis in explaining ethnic stratification in education and occupation may have lessened, it may still provide a relevant explanation of earnings attainment. The central task of the present study is to test the Vertical Mosaic versus the New Mosaic thesis as regards to ethnic disparities in earnings, based on an estimate of the extent of racial (and ethnic) pay discrimination in the Canadian labour market.

Educational level, occupational achievement and earnings acquisition are three important dimensions of socioeconomic status. Earnings is a crucial indicator of an individual's socioeconomic status, and is a direct measure of one's material well-being. Without equality in earnings, there cannot be equality in socioeconomic status in general. Analyses of ethnic differences in earnings attainment will, therefore, provide important information for the understanding of the overall picture of ethnic equality/inequality.

In sum, the present study will examine the issue of ethnic inequality in the dimension of earnings attainment. After a comprehensive review of the literature on ethnic inequality in earnings, we will first evaluate the degree of ethnic inequality in earnings in present day Canada, using the Public Use Microdata File on Individuals drawn

from the 1991 Census of Canada. We will then adjust statistically for ethnic differences in a number of earnings-related characteristics and measure the "net" ethnic earnings disparities that are attributable to pay discrimination in the labour market. We will also analyze the interactive effects of ethnicity and several important factors, namely, education, occupation, and period of immigration to Canada. Finally, we will conclude our analysis by evaluating the significance of racial pay discrimination in the Canadian labour market and the Vertical Mosaic versus the New Mosaic thesis.

### Notes to Introduction

1. Calculated from Dominion Bureau of Statistics, 1953: 31-1, Table 31. Only Ontario, Quebec, New Brunswick, and Nova Scotia, the four original provinces of Canada, were included in the statistics for the 1871 Census.

2. Calculated from Dominion Bureau of Statistics, 1953: 31-1, Table 31.

3. Prior to the 1981 Census, only the respondent's paternal ancestry was reported. Since the 1981 Census, multiple responses to the question of ethnic origin have been accepted. In the 1991 Census, 28.9% of the total population reported multiple ethnic origins. There were a total of 14 combinations of multiple responses based on the presence of British, French, Canadian and other responses (See Statistics Canada, 1993: 7-9). Included in the proportion of the British and the French (54.9%) are British and French single responses (43.6%), multiple British and multiple French responses (7.4%), and those who reported "British and French" (4.0%). Included in the proportion of the minority groups (30.7%) are all single responses other than British and French (27.6%) and "Other multiple origins" (3.1%), *i.e.*, multiple responses without the presence of British, French, or Canadian response. Notice that the proportion of the British and French (55%) and that of the minority groups (31%) add up to only 86%. The rest (14%) are multiple responses with the presence of British, French, or Canadian response. A significant proportion of the respondents who provided these responses would have been categorized in British or French origin if the restriction of one ethnic origin per respondent was not removed, although some would, at the same time, have been

categorized in origins other than British and French. For this reason, the drop in the proportion of the charter groups in the Canadian population from 79% in 1951 to 55% in 1991 should be considered partly due to the change in the collection and processing of ethnic origin data between the Censuses. Nevertheless, there is a substantial increase of the proportion of non-charter groups in the population, from 21% to 31%, during this period (All figures calculated from Statistics Canada, 1993: 12-27, Table 1A).

## Chapter 1

### **Ethnic Inequality in Earnings: Claims and Evidence**

Some thirty-five years ago, Lipset and Bendix contended that, as societies industrialize, they require, among other features of social institutions, a high degree of social mobility based on meritocratic lines, and that social mobility would be high when industrialization and economic expansion reached a certain level (Lipset and Bendix, 1959). Many subsequent researchers of social mobility assume an association between the growth of industrialization and an improvement in the quality of the labour force because technological development requires and creates more highly qualified workers. In other words, industrialization brings with it a unique "opportunity structure." They also assume that in industrialized societies, universalism replaces particularism: the allocation of individuals to societal roles is more rational than in earlier periods. Ability, trained capacity and experience become the most important criteria in the acquisition of socioeconomic status, and non-rational attributes such as the social status of the family of origin, religion, ethnicity, race, and sex were no longer used as the major recruiting and excluding devices (Boyd, *et al*, 1985: 5).

Following this line of argument, many researchers in the U.S.A. and Canada argue that there has been a decline in status ascription and an increase in universalistic status



allocation in North American societies. They claim that the acquisition of social status has become less constrained by one's racial or ethnic origin, and that, while achieved characteristics become more effective in allocating individuals in the socioeconomic hierarchy, the role of race is diminishing (for example, Featherman and Hauser, 1978: 313-384). While acknowledging the differences in socioeconomic status between whites and non-whites, these researchers stress the "declining significance of race" (Wilson, 1978, 1980) in social stratification. Some argue that "the notion of equal opportunity irrespective of national origin is a near reality" (Duncan and Duncan, 1968: 356). Others emphasize that there has been a convergence of socioeconomic status among different ethnic groups (Hauser and Featherman, 1974; Featherman, Jones and Hauser, 1975; Featherman, 1979; Hout, 1984, 1988; Jaynes and Williams, 1989).

Alternatively, other researchers emphasize the social inequality among the ethnic groups in American societies. They contend that the influence of race on status attainment persists, even though principles of universalism have replaced particularism in most of the other dimensions of ascription (Blau and Duncan, 1967: 441). They argue that blacks and other non-whites do not have the same opportunities as whites due to historical as well as current factors. They note that social mobility has been less extensive for non-whites than for whites (Rosenberg, 1980; Pomer, 1984, 1985), and that non-whites are more restricted to short-range mobility (Pomer, 1986). It is argued by such researchers that, although there has been some indication that discrimination against non-whites has declined since the turn of the century, the trend is not consistent and that inequalities in education, occupation, employment and earnings are still substantial among

ethnic groups, at least in the United States (Jencks et al, 1972; Willhelm, 1979; Braddock et al, 1986; Jaret, 1991; Thomas, 1993).

### **Racial and Ethnic Earnings Inequality in the U.S.**

Since the issue of racial and ethnic earnings inequality has been studied most extensively in the United States, it would be helpful to review the U.S. literature in the area before we examine Canadian studies. A number of American researchers in support of the ethnic mobility and ethnic convergence model maintain that, although differences remain, earnings disparities between whites and non-whites in the U.S. have narrowed significantly in the past decades (Fox and Faine, 1973; Farley, 1984). Featherman and Hauser (1978: 313-384) note that the reduction in racial gaps in earnings between blacks and whites has been greatest for younger cohorts indicating a general trend of racial equalization. Goza (1990) also demonstrates that Asian Americans have narrowed their earnings gaps relative to whites.

To explain the evidence of earnings convergence between whites and non-whites in the U.S., Vroman (1990) suggests that improvement in employment opportunities is partly responsible for the relative gains of black wages. Similarly, Cunningham and Zalokar (1992) argue that the increased relative earnings of blacks since the 1960s was due more to decreased racial discrimination than to convergence in the labour market characteristics of blacks and whites. Villemez and Wiswell (1978) note that the decrease in black-white earnings inequality has been accompanied by increasing inequality among blacks, and that most black economic gains have been at the upper layers.

In contrast to those who see a narrowing of the earnings gaps, a large number of empirical studies show that the relative earnings positions of non-white groups in the U.S. have improved relatively little over the decades, and that significant differences remain between whites and non-whites. Since the 1950s, mean black family income has remained at about 55-60% of white family income (Feagin and Feagin, 1993: 234; Ransford, 1994: 74). The family income for non-whites as a whole (including blacks and other non-white groups), while showing some improvement, still remains far below that of whites. The median income of non-white families expressed as percent of that of white families was 51% in 1947, 54% in 1957, 62% in 1967, 61% in 1977, and 63% in 1987 (Hurst, 1992: 77). Hence, only marginal progress was made during the 1960s through 1980s. In the 1980s, the position of non-whites has even worsened. Thus, Fasenfest and Perrucci (1994) show that the economic restructuring in the U.S. during the 1980s has resulted in a worsening of blacks' relative and absolute positions compared to whites'. Haberfeld and Shenhav (1990) report that, while black scientists had the same salaries as white scientists in 1972, they earned 6% less in 1982. There have also been reports that other non-white groups in the U.S. such as Hispanics (Beeghley, 1989: 272-275; Rodriguez, 1992; Ransford, 1994: 85-86) and Asians (Zhou and Kamo, 1994) are in similarly disadvantaged earnings positions.

Racial differentials in human capital, which are considered results of a combination of past discrimination, current premarket discrimination, and current labour market discrimination in certain dimensions (such as differential opportunities for training), are often considered the most important factor for the earnings disparity between

whites and non-whites in the US. Based on newly available microdata samples from the 1950 U.S. Census, Hirschman and Kraly (1988) analyze the educational levels and earnings of 36 ethnic groups and show that educational attainment was the most important explanatory variable for ethnic earnings inequality. In a study of racial and ethnic inequality in income and education among whites, American Indians, Asians, Blacks, and Hispanics based on 1960, 1970 and 1980 Public Use Microdata Samples, Sandefur and Pahari (1989) suggest that higher education tends to mitigate the effects of racial inequality in earnings. Kim and Perrucci (1994) demonstrate that the levels of education and work experience are higher among whites than non-whites, and that these differentials in human capital are partly responsible for the earnings disparities between whites and non-whites. Poston (1994) finds that educational attainment and labour market experience are important for most foreign-born populations (Anglos, Afro-Americans, Hispanics, Asian Americans and American Indians) in explaining their variation in earnings.

In examining the influence of education, some studies suggest that not only the quantity but also the quality of schooling is responsible for ethnic earnings inequality in the U.S.A. Maxwell (1994) demonstrates that closing the black-white gap in the basic skills learned in school would reduce their wage differentials by 66%. He argues that the main source of the black-white wage differential is the racial difference in the quality rather than quantity of schooling. Duncan (1994) shows that the role of education in influencing continued on-the-job wage growth differs between blacks and whites, and that more educated whites hold occupations with steeper experience-earnings profiles. He suggests that either labour market discrimination limits the earnings potential of black

human capital, or residual differences in school quality persist such that the education received by blacks does not have the same effect over the life cycle as the higher quality education received by whites.

Another important factor is the differential distribution of whites and non-whites across occupations and industrial sectors. In an analysis of the Public Use Samples of the 1970 U.S. Census, Kaufman (1983) shows that the differential distribution of blacks and whites across labour market divisions accounted for a large percentage of the black-white earnings gap. Kim and Perrucci (1994) find that core sector employment, which is positively correlated with income, is higher among whites than non-whites. Its influence on income persists even when human capital variations are controlled. Some researchers show that, due to the white-nonwhite differences in occupational and industrial distributions, the economic restructuring in the U.S. during the 1980s increased racial income inequality. Fasenfest and Perrucci (1994) argue that occupational changes and the location of declining industries during the economic restructuring in the 1980s impact people of different races unequally: while whites benefited from such changes, blacks were hurt, resulting in the worsening of their relative and absolute income position. According to Jaret (1991), other non-whites, especially Hispanics such as Puerto Ricans, were also hurt by the economic restructuring during the 1980s.

The earnings position of the non-whites in the U.S. has also been found to be related to the degree of their political participation. Using census data, Jackson and Marhewka (1986) examine the relationship between black political participation and racial earnings inequality in a sample of 85 non-southern U.S. cities. Data show that the white-

black income differential was lower in cities with a larger percentage of blacks in 1970. Jackson and Marhewka argue that this was partly because black political victories had occurred earlier in these cities and the blacks had been able to use their political influence to reduce economic discrimination.

Although a number of factors have been identified as causes of racial differences in earnings in the U.S., a substantial proportion of such differences remains even when these factors have been taken into account, indicating the existence of direct pay discrimination along racial lines in the US labour market. Thomas (1993) shows that the mean income of blacks was 59% of that of whites in 1968 and 66% in 1988. After adjusting for a number of variables such as occupation, education, employment status, age, sex, marital status, and region, mean incomes of blacks were still substantially less than those of whites. The adjusted mean income for blacks was 85% of that of whites in 1968 and 91% in 1988. Thomas contends that, since a significant racial gap remained after controls were added, there was a substantial "cost of being black," and racial discrimination in the US labour market was still significant. Based on the same data, Thomas and Horton (1992) note that the direct effect of race on earnings declined only by a very modest amount from 1968 to 1988. Similar findings have been reported for Hispanics (Rodriguez, 1992; Torres, 1992) and Asians (Zhou and Kamo, 1994). Poston, Alvarez and Tienda (1976) measure the portion of the earnings difference between Anglo and Mexican American males in 1960 and 1970 which was not due to such compositional factors as educational attainment, and hence might likely be due to discrimination. They find that this residual earnings difference actually increased during the 1960s, indicating

an increase in the "cost" of being Mexican-American. Based on the 1976 Survey of Income and Education by the U.S. Census Bureau, Sandefur and Scott (1983) find that, when individual characteristics (such as marital status) and job qualifications are controlled, blacks still earned less than whites and their returns to education and experience were lower, suggesting the negative earnings effect of minority status. Lower rates of returns to educational and occupational attainments in relation to whites have also been reported for Asians (Barringer and Kassebaum, 1989).

Finally, it is worth noting that, in their analysis of the 36 ethnic groups included in the microdata file from the 1950 U.S. Census, Hirschman and Kraly (1988) demonstrate that earnings inequality was modest among white ethnic groups but severe between whites and racial minorities, especially blacks. The very disadvantaged position of black men is not improved even with above-average levels of education in northern industrial cities. They conclude that the assimilation model of socioeconomic progress works reasonably well for white ethnic groups, but not for racial minorities. This is strong evidence that racial discrimination was substantial in the U.S. labour market and was at least partly responsible for the earnings inequality between whites and non-whites.

### **Claims of Ethnic Equalization in Earnings in Canada**

Parallel to the research in the U.S., a number of Canadian studies have been carried out investigating the issue of racial and ethnic inequality in earnings. Much the same as in the U.S., the Canadian researchers can be grouped into two camps: one that stresses ethnic mobility in earnings attainment and supports the New Mosaic thesis, and

the other that emphasizes the persistence of ethnic inequality in earnings and supports the Vertical Mosaic thesis.

Advocates of the New Mosaic thesis contend that either ethnic inequality in earnings is minimal in Canada or it is in the process of disappearing. According to them, ethnicity contributed only minimally to the overall determination of earnings, members of various ethnic groups had experienced significant mobility in terms of earnings attainment, and the long-established ethnic hierarchy in earnings was no longer characteristic of the Canadian labour market. Based on these arguments, they claim that racial discrimination is no longer a significant phenomenon in the Canadian labour market.

In an analysis of a sample of 3,101 respondents (mainly members of white ethnic groups) collected in Ontario by Porter and Blishen in the early 1970s, Ornstein (1981) noted that ethnicity explained only 3.4% of the variance in income and much of the ethnic differences can be attributed to the effects of birthplace, place of education and mother tongue, rather than ethnic origin *per se*. He claimed that the impact of ethnicity on income and on the overall stratification process was small, and the arguments of the vertical mosaic thesis had no basis in empirical evidence. Similarly, Rosenbluth (1984), based on an analysis of the 1% Public Use Microdata of the 1971 Canadian Census, contends that ethnic background had little total or direct effect on earnings. He notes that some groups, such as Jews and Native Peoples, had earnings substantially different from others; non-white ethnic groups tended to do more poorly, even taking into account their relative educational and occupational assets; and lower earnings for racial minorities were



particularly evident for males. But, he argues, ethnic background appeared significant only for a few groups and ethnicity added little to the explained variation in earnings either at the national level or at the regional level. Gender, marital status, education and occupation contributed most to explaining variation in earnings. In general, ethnicity did not play a significant role in income distribution in the Canadian labour market (Rosenbluth, 1984: 116-31, 161-6, 240-1).

Recognizing that visible minorities still suffered from income inequality, Weinfeld (1988) stresses that the general trend had been one towards ethnic equality. Based on the 1971 and 1981 censuses, Weinfeld shows that there was a reduction during this ten year period in the proportional disparities from the national mean income for various minority groups. For white ethnic groups, income inequality had in effect disappeared. This is more apparent when sex, nativity, occupation, age, number of weeks worked, and education have been statistically controlled. For visible minority groups, the gaps were narrowing. In addition, as there were substantial variations in the rates of progress among visible minorities, the resulting inequality in income cannot simply be attributed to racism. Factors such as immigrant proportion in these groups, and the amount and type of educational attainment might be partly responsible (Weinfeld, 1988: 603-5).

Again using the 1971 and 1981 censuses and ranking the ethnic groups according to their average incomes, Winn (1988) demonstrates that the incomes of non-white groups or low-prestige<sup>1</sup> white groups were not necessarily at the bottom, and those of prestigious white groups were not necessarily at the top. In 1971 Asians were the second-highest earners among the 18 ethnic groups included in the data; in 1981 the Japanese were the

third-highest among the 16 ethnic groups included. On the other hand, among the white groups, those with high prestige were often found in positions lower than those with low prestige. In 1971 the British earned less than four low-status ethnic groups -- Jews, Italians, "Other Eastern Europeans," and "Other Southern Europeans." Scandinavians, Germans, and Netherlanders -- all high-prestige Northern Europeans -- had incomes around or below the national average (Winn, 1988: 196-8).

Winn argues that Canada had experienced a considerable degree of ethnic mobility in earnings and especially a considerable rise in the relative positions of non-white and low-status white groups. He measures a group's mobility with its income rank among the foreign-born minus its income rank among the Canadian-born. A positive score indicates upward mobility and a negative score indicates a relative decline in rank. He finds that for the 1971 data 15 out of 18 groups changed ranks. All the upwardly mobile groups were low-prestige white groups or Asians and all the high-prestige white groups experienced downward mobility. Similar patterns are found in the 1981 data -- there was a high degree of mobility among the groups and a high degree of upward mobility among low-prestige groups. Twelve out of the 16 groups changed ranks. Of the five groups which experienced upward mobility, four were non-white, while six of the seven downwardly mobile groups were white. He argued that Canadian society was indeed mobile and non-white and low-prestige white groups were making significant economic progress (Winn, 1988: 198-200).

Winn also examines the rates of return to higher education among the ethnic groups with data from the 1981 Census, comparing the income rank of the ethnic groups

with their "college propensity" (percent ever attended college) rank. It is found that the non-white ethnic groups, especially the foreign-born, had difficulty transforming educational investment into earning power. Most non-white groups, either Canadian-born or foreign-born, were ranked much lower in terms of income than with respect to their achievements in higher education. Six of seven non-white groups were ranked in the top half in terms of higher education, but none of them was ranked in the top half with respect to income. Winn agrees that this discrepancy suggests the possibility of racism or ethnocentrism at work. But he argues that other factors, such as language abilities, job skills, and the suitability and compatibility of foreign-earned credentials in the Canadian context, might also be responsible, and a conclusive interpretation is premature in the absence of sufficient evidence (Winn, 1988: 200-5).

Finally, Winn disagrees with the idea that ethnic inequality is the result of current discrimination. He argues that cultural and psychological traits of a group are important factors in affecting its members' educational, occupational and economic achievements. Already successful ethnic groups tend to transmit their positive cultures and values to their younger generations, inspiring them to follow the successful paths. They encourage their young to delay marriage, to plan parenthood, and to make other personal and family sacrifices for educational and economic advancement (Winn, 1988: 205).

As we have seen, advocates of the New Mosaic thesis do not totally deny the earnings disadvantage of visible minorities and Southern Europeans, and there are merits in their arguments against the simple attribution of ethnic inequality to discrimination. However, they tend to down play the significance of existing ethnic earnings disparities

and the disadvantage from which visible minorities and Southern Europeans still suffer. Their arguments in general can be quite misleading for several reasons.

First, the relatively small contribution of ethnicity in the determination of earnings cannot be used as a basis of the argument that ethnic inequality in earnings was no longer significant in the Canadian labour market. Although many other factors, such as gender, education and occupation, explained larger amounts of the variation in earnings of Canadians, and the variance attributable to ethnicity was relatively small (Ornstein, 1981; Rosenbluth, 1984), this was largely a result of the uneven ethnic composition of the labour force and thus unbalanced weights of the ethnic categories in the statistical analyses. Not only the magnitude of variations among the categories affect the contribution of the categorical variable to the explained variance of the dependent variable in a model, the relative sizes of the categories also have an important impact. If the sizes of the categories are similar, the contribution of the variable would be greater, other things being equal; if the sizes of the categories are uneven, the contribution would be smaller. Since individuals of British, French, other Western European, and Eastern European origins composed a large majority of the Canadian labour force, and visible minorities and Southern Europeans made up only a small proportion (less than 7% in 1981; Li, 1988: 110), we would not see a significant reduction of residual variation in the model of earnings determination with the introduction of the variable of ethnicity, even when there were substantial earnings disparities between these two blocks. Therefore, when examining the significance of ethnic inequality in earnings, we cannot simply rely on the index of explained earnings variance by ethnicity, but have to look into the actual

earnings differences among the ethnic groups.

Second, contrary to what advocates of the New Mosaic thesis claim, opportunities for social mobility in Canada were not equal for members of different ethnic groups, and significant earnings disparities were still found among a large number of ethnic groups, even with data used by this group of researchers. Examining national data presented by Weinfeld (1988: 604), we see that in 1971, twelve of the twenty-one ethnic groups had earnings over 5% different from the Canadian average, and eight of them were over 10% different from the average. Ten years later, in 1981, although the magnitude of the earnings differences for some groups decreased, the number of ethnic groups with earnings substantially different from the Canadian average actually increased proportionally. Of the seventeen groups listed for 1981, eleven had earnings over 5% different from the Canadian average, and seven of them were over 10% different from the average. Canada, just as any other industrial society, is, to certain extent, socially mobile. But to what extent this social mobility had freed Canadians from the trap of ethnic stratification is still questionable. From the evidence provided by either supporters or opponents of the ethnic income inequality thesis, the contention that ethnic earnings inequality in Canada was already minimal or limited only to a few groups is in question.

Third, a high degree of persistence of the long-established ethnic hierarchy in earnings was still characteristic of the Canadian labour market. On the one hand, at the top were the Jews and North, West and Eastern Europeans; most visible minorities and Southern Europeans were still at the bottom. Again from the 1981 data that Weinfeld (1988: 604) presents, Jews, Czechs and Slovaks, Hungarians and Scandinavians stood

high above other groups, ranging from +13% to +45% above the grand mean. All of the other above-average groups were from North, West and Eastern Europe. On the other hand, six of the seven below-average groups were visible minorities or Southern Europeans. The only two visible minorities included in the data, Chinese and Blacks, were third and fourth from the bottom, earning 9% and 11%, respectively, less than the average. All three Southern European groups included in the analysis had below-average earnings; two of them, Greeks and Portuguese, were the most disadvantaged of all, earning 14% less than the average. Disparities between the top groups, except the Jews, and the bottom ones were about 25 percentage points. Those between Jews and the bottom groups were as large as 55-60 percentage points.

From the 1981 census that Winn (1988: 197) uses, a general pattern of income rank to the disadvantage of visible minorities and Southern Europeans can also be observed clearly. Included in the data are sixteen ethnic groups: six from North, West and Eastern Europe, three from Southern Europe, and seven visible minority groups. These groups are arranged in quarters according to their ranks in earnings in 1981. Among the six groups from North, West and Eastern Europe, three were in the top quarter and two in the second quarter; only one was in the third. Among the seven visible minority groups, one was in the first, two in the second, two in the third, and two in the fourth quarter. Among the three Southern European groups, one was in the third and two in the fourth quarter. Evidently, most of the visible minority and Southern European groups were still in handicapped positions, although some of them had moved up from the bottom and a few were already in the top bracket.

## **Evidence of Persisting Ethnic Earnings Inequality in Canada**

While proponents of the New Mosaic thesis claimed that there was little earnings inequality among Canadian ethnic groups, a large number of empirical studies have been done showing that ethnic inequality was still substantial in earnings acquisition in Canada. These studies have largely focused on the inequalities between the two charter groups, and those faced by visible minorities. There are also some studies that depict the overall picture of inequality in the Canadian ethnic mosaic.

### **Earnings Inequality between the Two Charter Groups**

In 1969, the Royal Commission on Bilingualism and Biculturalism reported that there had been a very noticeable income disparity between the French and the British in 1961. If the average total income (\$4,414) of the non-agricultural male labour force in Canada in 1961 was expressed as 100, then that of males of British origin was 110, while that of males of French origin was 88. The difference was 22 percentage points. When the comparison was made for the total male labour force, the index was 110 for males of British origin and 86 for males of French origin, a difference of 24 percentage points (Royal Commission, 1969: 16).

During the 1960s, the disparity between the two groups declined considerably (Lanphier and Morris, 1974), and an analysis of the earnings of different age groups by Ram and Verma (1980) indicates that the gap between the British and the French in earnings was narrowing. For the age groups 25-34, 35-44 and 45-64, Francophones earned 88%, 86% and 83%, respectively, of what Anglophones earned. Nevertheless,

French Canadians still earned significantly less than British Canadians. Based on data from the Public Use Sample of the 1971 Canadian Census, the French earned 89% of what the British earned in 1970 (Li, 1980: 365).

Earnings disparity between the British and the French appeared much the same in most provinces (Royal Commission, 1969: 17). However in Quebec, where the French constitute a majority of the labour force, the English-French disparity was much greater. While those of British origin earned 40% more than the average male in Quebec in 1961, those of French origin earned 8% less than the average. The difference was 48 percentage points (Royal Commission, 1969: 17-18). Ram and Verma find a similar pattern with 1971 data. In non-Quebec regions, Francophones at the ages of 15-34, 35-44 and 45-64 earned 92%, 88% and 84%, respectively, of what Anglophones of the corresponding age groups earned. In Quebec, the Francophone/Anglophone ratio of earnings were much lower; the indices were 81%, 75% and 69% (Ram and Verma, 1980).

The Royal Commission (1969) argued that several factors contributed to the British-French income disparity. First, differentials between the two groups in schooling and occupation were the two most important factors leading to the disparity. Second, differences between the two groups in distributions of age, industry and region, and in rates of underemployment, also contributed to the disparities. Third, the factors of language, period of immigration, and ethnicity<sup>2</sup> had a secondary although still significant influence. The Royal Commission found that the average labour income of salaried males in the Montreal metropolitan area in 1961 was \$4,443. The English-Scottish group was \$1,319 above the mean and the French \$330 below it. The disparity was thus \$1,649



between the two groups. When all the other factors have been taken into account and the net effect of ethnicity measured, the disparity of \$1,649 was reduced to \$873 (Royal Commission, 1969: 61-78).

The Royal Commission further argues that the English-French disparities were rooted in the social-historical fabric of Canada. First, due to historical reasons, the French tended to have lower socioeconomic positions, and as a result, children from families of French origin tended to have lower ambitions and aspirations and thus lower educational and occupational levels. Second, the economic development in Canada in the first half of this century had benefited the British more than the French. In Quebec in particular, the Francophone and Anglophone communities had very different characteristics, socially and culturally: Anglophones were better prepared, psychologically and intellectually, to participate in, and to reap the fruits of, the industrial expansion. Third, the French were affected more severely by "poverty cycles." Usually children from poor families were negatively affected physically and psychologically, and they often did not perform as well in school and subsequently in the work world. Closely related to the first two factors, poverty, as measured in terms of an annual income below \$3,000, was more frequently found among Francophones than Anglophones. In Montreal, 29% of the French and 17% of the British in the male labour force earned less than \$3,000 in 1961; in Ottawa, these figures were 30% and 16%; and in Toronto, 27% and 17%. Finally, the policies and practices of the institutions of the work world had some negative effects on the French. Language and culture had different implications for members of the two groups when they entered the institutions of the work world (Royal Commission, 1969: 78-86).

Other researchers argued that the lower incomes of the Francophones should be attributed, to a certain extent, to their classical education. For the better educated French, their education had been of the classical type placing greater emphasis on humanistic subjects and less on skills related to industrial and commercial activities (Tepperman, 1975: 135-41; Porter, 1985: 54). These factors, the effects of the French subculture and the French educational philosophy and system, may be exacerbated in Quebec because of the lack of exposure to a non-French environment, resulting in substantially larger differences in earnings attainments between Francophones and Anglophones in Quebec than in non-Quebec regions (Ram and Verma, 1980: 62). Nevertheless, it is argued that labour market discrimination is still partly responsible for the lower income of Francophones (Ram and Verma, 1980: 62).

During the 1970s, however, earnings inequality between Canadians of British and French origins continued to decline. Based on the 1981 Census of Canada, in 1980, French Canadians earned, on average, 96% of what British Canadians earned (calculated from Li, 1988: 84). When nativity, gender, age, schooling, social class, industrial sector and weeks worked have been taken into account, the earnings of the French were almost the same (99%) as those of the British (calculated from Li, 1988: 116). A recent study by Nakhaic (1993), using data from the 1973 Canadian Mobility Study and the 1984 Canadian National Election Study, confirms this trend of earnings equalization between the two groups. Nakhaic finds that, although earnings were still slightly higher for Anglophones than for Francophones in 1984, the rate of return to education for the two groups had virtually converged by 1984. This suggests that differences between the two

groups in cultural and individual characteristics as factors of earnings differentials have disappeared, and that labour market discrimination against French Canadians in terms of earnings acquisition has been largely eliminated. In our analysis of the data from the 1991 Census, we will re-examine the relative earnings positions of the two groups, and evaluate if this trend extends to the 1990s.

### Earnings Inequality Faced by Visible Minorities

Income inequality faced by members of visible minority groups is generally considered a serious problem of ethnic inequality in Canada. Based on the 1981 Canadian Census, the Royal Commission on Equality in Employment reports that among males, Native Peoples, Indo-Chinese, Central and South Americans, and Blacks had the lowest incomes in 1980; and among females, Native Peoples, Central and South Americans, Indo-Chinese, and Koreans had the lowest incomes (Abella, 1984: 84-5). The Commission argues that visible minorities encountered a variety of systemic –discriminatory practices in the workplace. They were often denied access to employment by certain unfair recruitment and selection procedures, had more difficulties securing employment, and experienced higher unemployment rates. They found it difficult to find employment in areas in which they were qualified and experienced. Foreign-earned educational and professional credentials were not recognized or were under-recognized in the labour market, sometimes even by government agencies. "Canadian experience" was often unrealistically required. Even if they were hired, many found that after a certain point they were unable to move up with the same ease as were whites. According

to the Commission, these situations should be attributed to racial discrimination and inadequate services and facilities helping the visible minorities integrate into Canadian life (Abella, 1984: 46-51).

During 1969-1974, the then Department of Manpower and Immigration undertook a longitudinal study of immigrants who had arrived in Canada in 1969, 1970 or 1971. The working sample, which contains 4,584 cases, includes immigrants from both traditional and non-traditional source countries which are grouped into 16 categories. Using this sample Satzewich and Li (1987) examine the effects of ethnic origin on occupational mobility and income of immigrants. They find that the gross effect of ethnic origin on occupational status (measured by the Blishen Scale), in terms of explained variance, declined slightly over a three-year period. However the gross effect of ethnic origin on income for the same period remained consistent: the groups with lowest incomes were all from Asia, the Caribbean, and South Europe. After variations in gender, age, English proficiency, level of schooling, and occupational status had been adjusted, all five non-white groups had the lowest income levels, while all immigrants from Europe, with the exception of those from Greece, had incomes above the mean. The authors suggest that the income rankings were clearly segregated according to traditional and non-traditional source countries (which were respectively predominantly white and non-white), and that there existed income discrimination against immigrants who belonged to racial minorities.

Some studies have focused on income inequalities faced by Asian-Canadians. For instance, based on the 1981 Census, Peter S. Li (1987) demonstrates that the Chinese

earned \$1,295 or 9% below the national average of \$14,045 in 1980. When nativity, age, gender, schooling, social class, industrial sector and the number of weeks worked in 1980 had been statistically controlled, they still earned \$821 less than the average. Li argues that, despite the removal of statutory discrimination against the Chinese in the post-war years and the subsequent educational and occupational mobility of more recent Chinese immigrants, they had not attained income equality relative to other ethnic groups. The Chinese were still paying an economic price for racism. Similarly, Indhu Rajagopal (1990) used data from the 1986 Census to show that Ontario's Indo-Canadians were paid less than the average for their educational level even though they were better educated than the general population in Ontario. More than 40% of Indo-Ontarians had some university-level education compared to 20% of Ontarians overall. Yet the average annual income of Indo-Ontarians (\$19,170) was even slightly lower than the average for all Ontarians (\$19,462). Rajagopal argues that an "invisible ceiling" rooted in their ethnicity had blocked Indo-Canadians' access to social and economic mobility. He contends that a major factor here was that Indian educational and professional credentials were highly discounted in Canadian society. He claims that the reality contradicted the expectation of consonance between qualifications and rewards in an avowedly merit-based society (Rajagopal, 1990: 98).

As for Blacks, Bolaria and Li (1988) demonstrate with data from the 1981 Census that their earnings were not consistent with their occupational and educational status. Compared to the national average of \$14,045 in 1980 (Li, 1988: 84), 70% of Blacks earned less than \$16,000; half of them earned less than \$8,000 (Bolaria and Li, 1988:

195). Only about 1.3% of the Blacks were in the upper income (\$40,000 and over) categories. Despite Black-Canadians' higher educational and occupational achievements as compared to the Canadian average, their income levels remained low, 11% lower than an average Canadian in 1980 (calculated from Li, 1988: 84). The earnings disadvantage of Black Canadians was more serious in less developed regions of Canada such as Nova Scotia (Shadd, 1987). Bolaria and Li argued that, although opportunities for the Blacks in Canada had been improved due to post-war changes in immigration regulations and the subsequent demand for skilled labour during the economic expansion of the 1960s and 1970s, their low earnings suggested that they still faced discrimination in the job market in terms of monetary reward (Bolaria and Li, 1988: 193-6).

Among the visible minorities, Aboriginal Peoples were in the most disadvantaged positions. In 1980, the average employment income of Native men was 60% of that of non-Native men; and the average income of Native women was 72% of that of non-Native women (Abella, 1984: 33). In 1985, the employment income for Metis, Inuit and Native Indian males were 81%, 77% and 77%, respectively, of an average male Canadian; and the employment income for Metis, Inuit and Native Indian females were 87%, 89% and 86%, respectively, of an average female Canadian (calculated from Gerber, 1990: 79).

A number of factors contributed to the earnings disadvantage of Aboriginal Peoples. The educational attainment levels of Native Peoples were very low (Frideres, 1988: 78-9); the education system was unaccountable to them and training programmes were inadequate (Abella, 1984: 34-5). The problem of unemployment and underemployment was also extremely serious for Native Peoples. In 1980, the

employment rate for the working-age Native population was 32% while that for the working-age national population was 56% (Frideres, 1988: 80). In 1986, among males 15 years of age and above, the employment rate was 60% for Native Indians, 66% for Metis and 60% for Inuit, compared to the national average of 78%; among females, the employment rate was 39% for Indians, 45% for Metis and 44% for Inuit, compared to the national average of 56% (Gerber, 1990: 77). Furthermore, employed Natives mostly worked in part-time or seasonal jobs; they were under-represented in high-status occupations and over-represented in low-status occupations; and the jobs they occupied were usually marginal to the national economic system (Frideres, 1988: 80). Their labour source was underutilized in the North to which southern, non-Native workers were transported. In addition, Natives were more likely to be denied promotions once they had been hired (Abella, 1984: 37). All this was responsible for the serious income inequality experienced by Native Peoples.

#### Earnings Inequality in the Ethnic Mosaic

A number of researchers have taken steps towards depicting a general and comprehensive picture of earnings inequality in the Canadian ethnic mosaic, and analyzing its causal factors. In Volume 4 of its report, the Royal Commission on Bilingualism and Biculturalism provides average incomes of a number of ethnic groups based on a 1% sample of the 1961 Census. In 1960, relative to the average income of the total male labour force, which is indexed as 100, Jews stood very high at 167 points, the British (110) earned more than the average, Germans (103) and Others (98) were

around the mean, and Ukrainians (87), French (86), and Italians (81) earned the least. The Commission notes that ethnic origin affects the individual's position in the economic structure, not only for those of British or French origin but for all the people of Canada. A number of factors, such as patterns of settlement, time of arrival, immigrant and ethnic occupations, ethnic values, discrimination and exploitation, and language barriers, are identified as causes of these differences (Royal Commission, 1970: 40-66).

Hunter (1986) reports similar pattern of ethnic income inequality using the 1971 Census of Canada. Jews earned far more than other ethnic groups, at 152% of the Canadian average; Italians (104%), the British (103%), and Germans (101%) were slightly above the average; the French (94%) and Ukrainians (92%) were below the average; and Native Peoples earned only 59% of the Canadian average. Hunter suggests that income inequality can largely be explained by ethnic differences in educational levels and occupational distributions. But he also points out that, even when these two factors have been taken into account, some ethnic differences in income may still remain (Hunter, 1986: 154-5).

In explaining income inequality as well as educational and occupational inequalities among Canadian ethnic groups, Hunter identifies four factors. First, different regional distributions of the ethnic groups contributed to the ethnic inequalities. Regional inequalities in Canada were substantial. They were the result of the uneven development between the metropolitan regions as loci of economic development and power, and the hinterland regions as sources of raw materials, labour, and markets for manufactured goods. Different ethnic distributions across the regions thus led to ethnic inequalities



corresponding to the regional inequalities. For instance, Jews were the most highly concentrated in urban areas, especially the major urban centres of central Canada; the British were evenly distributed among the regions and were neither especially urban nor especially rural in residence; Germans and Ukrainians were disproportionately rural, engaging in agriculture; and the Indians and Inuit were located overwhelmingly in rural, nonfarm areas in the underdeveloped northern and western areas of Canada.

Second, ethnic differences in attitudes and values towards education were responsible, to a large extent, for differences in educational levels and related socioeconomic achievements. Hunter argued that Jews placed an especially high value on education, while the Native Peoples did not, and that the French suffered from their traditional emphasis on classical education which failed to equip them for the modern, industrial economy.

Third, the immigration policies and practices in Canadian history were partly responsible for ethnic inequalities. Post-war immigrants to this country were generally better educated than both the pre-war immigrants and the Canadian-born.

Finally, ethnic prejudices and corresponding practices brought about different returns to schooling for members of different ethnic groups. Some groups were favoured, while others, such as the Native Indians, Blacks and South Asians, tended to be discriminated against in employment and promotion (Hunter, 1986: 176-81).

Using special tabulations provided by Statistics Canada for earnings of males in the labour force in 1970, Richmond and Verma (1978) considered three explanatory models for ethnic income stratification: an assimilation model in which period of

immigration and generation are the most important determinants of earnings; an ethnic stratification model in which ethnic group is the major determinant; and an education model in which the mean years of education for each group is used as a predictor. After examining the distributions of age-adjusted median earnings of males, the authors claim that the ethnic stratification model is best supported, with a Spearman rank order correlation of 0.46, while that for the assimilation model is 0.22 and that for the education model is 0.26 (Richmond and Verma, 1978: 29).

Using the rank order of median earnings among the ethnic groups, the percentages of the ethnic populations below the low income line, and the indices of relative concentration of affluent householders among the groups, Richmond and Verma (1978: 34) argue that there was a substantial degree of ethnic stratification. At the top were Jewish and British immigrants and their Canadian-born children. Next were second-generation Asians and Southern Europeans. Western and Northern Europeans other than the British and French, and Central and Eastern Europeans, were in the middle. At the lower end were the Native peoples, Blacks, those of mixed racial origins, the French and the most recently arrived foreign-born of other than British origin.

In explaining the outstanding achievement of the second generation of some low-entrance-status ethnic groups and the poor performance of others, Richmond and Verma suggested that prejudice and discrimination can produce very different results depending on the groups' educational levels. Members of minority groups with high levels of education would react against prejudice and discrimination, spurring to greater efforts, and over-achieving compared to others. This fit the case of Jews, Asians, and Southern

Europeans. Those with low levels of education would respond negatively to discrimination and exhibit poor achievement. The French Canadians and the Native Peoples were examples (Richmond and Verma, 1978: 34).

Based on a survey of 2,338 respondents in Toronto, Reitz (1990) also examines, among other things, ethnic income inequality. The survey was conducted in 1978-79 and included eight ethnic groups: British, German, Italian, Jewish, Portuguese, Ukrainian, Chinese, and West Indian (Breton, Isajiw, Kalbach and Reitz, 1990: 20-33). For males, according to the survey, the British earned \$18,546, on average, in 1978. The Jews earned about 8% more, while the Germans, Ukrainians, Chinese, and Italians earned 5-15% less. The Portuguese and the West Indians were in the most disadvantaged positions, earning about 23% less than the British. For females, the British earned \$10,686 on average. The Ukrainians, the Chinese and the Germans had similar income levels (102%, 98%, and 92% of that of the British, respectively). The West Indian, Jewish, Italian, and Portuguese had much lower incomes, ranging from about 20 to 30% less than the British. After education, job qualifications, work experience and employment status (full/part-time) have been taken into account, ethnic income inequality among women almost disappears. This is also the case for males, except for the two visible minority groups included in the study. Chinese and West Indian men had incomes substantially less than that of the average male (\$2,067 and \$2,362 below the average of \$17,299, respectively) after such adjustments. Reitz thus suggests that there is evidence that the visible minorities suffered from racial discrimination (Reitz, 1990: 150-63).

While advocating the "New Vertical Mosaic" thesis, stressing the upward mobility

of many disadvantaged ethnic groups in educational and occupational status, Herberg (1990) agrees that substantial income inequality still exists in the Canadian ethnic mosaic. He notes that, while Canadians had on average achieved more than a ten-fold increment in income between 1940 and 1980, several groups, including Scandinavians, Asians, French, Italians, Jews and Ukrainians, had enjoyed even greater advances, from 30% to 60% more. In 1980, the Jews, Czechoslovaks, Scandinavians and Ukrainians had the highest incomes, followed by Germans, Poles and Dutch. He also notes that in 1940, the British were the highest in income; in 1960, the second; in 1970, the third; and in 1980, with more groups compared, eighth, in the middle rank. Nevertheless, Herberg points out, in 1980, the Native Peoples were at the lower end of the income range, with the Indochinese, Portuguese, Greeks, Blacks and Filipinos close by.

Herberg also notes, that while the Jews retained their preeminent standing in earnings, comparable to their outstanding educational and occupational achievements, those visible minority groups that had good standing in educational and occupational status did not have comparable levels of earnings. The Jews were accompanied not by visible minorities but by other white ethnicities whose educational and occupational status were not as high as some visible minorities. The Japanese were the only one of the seven visible minorities included in the analysis to be in the higher half of the income ranking. Herberg suggests that the "Contest-Meritocracy" mechanism that seemed so powerful in securing educational capital and occupational status had not affected the monetary standings of ethnic groups in Canada. The meritocracy in earning power could scarcely be said to be apparent, with the only exception that the British had been displaced by

other white ethnic groups at the top (Herberg, 1990: 215-6).

Herberg thus concludes that, although a contest system is operating for educational and occupational attainments, it is not for income allocation, at least not yet. The visible minorities suffer from brutal income inequality, likely because of racial discrimination, that prevents awarding wages equivalent to credentials. This remains a vestige of the "Elitist Sponsorship" that once drove Canadian society in all socioeconomic arenas. Herberg argues that the allocation of income in 1980 was similar in ethno-racial patterns to that of education nearly three generations ago, and to that of occupations two generations ago. But the racist underpinnings of income possession may be only a vestige, weakening with each decade, as did educational and occupational discrimination (Herberg, 1990: 216-9).

Peter S. Li has conducted the most comprehensive study to date of ethnic disparities in earnings in Canada. In his book Ethnic Inequality in a Class Society (1988), Li compares the incomes of the major ethnic groups in 1980. Based on the Public Use Microdata drawn from the 1981 Census of Canada, Li contends that there were significant income disparities among the 17 ethnic groups studied. Compared with the average income of an individual in the Canadian labour force in 1980, \$14,045, and without taking into account other factors, Jews ranked the highest, \$6,262 above the mean. Those of West and East European origins, except the French (-\$501), had an income above the national average, ranging from +\$311 for the Dutch to +\$2,137 for the Czechs and Slovaks. South Europeans, Blacks and the Chinese had incomes far below the mean, ranging from -\$509 to -\$2,002 (Li, 1988: 85-9).

When a series of intervening variables including nativity, gender, age, schooling, social class, industrial sectors, and number of weeks worked in 1980 are statistically controlled and the "net effect" of ethnicity on earnings measured, the Jews were still the most advantaged (+\$3,231), followed by the Portuguese (+\$1,421). Scandinavians (+\$787), Italians (+\$542), Croatians (+\$491) and Germans (+\$185) were above the average. The British (-\$20), Dutch (+\$24), Czechs and Slovaks (+\$7), and Ukrainians (+\$56) were around the mean. Slightly below the average were the French (-\$113), Hungarians (-\$122), Poles (-\$252), and "Others" (-\$226). Greeks (-\$661), the Chinese (-\$821), and Blacks (-\$1,627) were the most disadvantaged (Li, 1988: 114-20).

Based on these comparisons, Li suggests that when ethnicity is treated as a social feature that measures characteristics of people in the Canadian labour market, there were substantial income differences among ethnic groups. But when ethnicity is treated as an individual attribute that affects the chances of an individual to earn, its ability to predict income was limited. In a Multiple Classification Analysis that explains 45% of the variance in income, social class and schooling contribute most. Ethnicity adds only marginally to the model in explaining variance in income (Li, 1988: 114, 122). Nevertheless, Li maintains, the net ethnic variations in earnings show that there were still substantial income differences remaining that could be attributed directly to ethnic origin. Ethnicity *per se* carried a definite market value, with some groups, such as the Jews and West Europeans (except the French), enjoying an income advantage, and others, such as Greeks, the Chinese and Blacks, suffering from a disadvantage. Li argues that the persistence of ethnic income disparities after the intervening variables have been

statistically controlled suggests that racial/ethnic discrimination in the Canadian labour market was still a pervasive problem, and the efficacy of the measures taken by the Canadian governments against racism and discrimination in the job market was questionable (Li, 1988: 127, 135-8).

Based on Li's analysis (1988) of the data from the 1981 Census, Satzewich (1991) argues that there existed a considerable degree of racial discrimination in the Canadian labour market. Non-whites tended to receive fewer rewards for the same qualifications and talent than did white workers. He suggests that this discrimination against visible minorities could take two forms. One was that the labour market was split where white workers had been able to impose differential pay scales for the employment of recent immigrants and non-whites. The other was that employers refused to accept foreign-earned employment credentials, especially those of non-whites, in the belief that such experience and qualifications were not so relevant to the Canadian context or were not comparable to Canadian training (Satzewich, 1991: 102-4).

To sum up, several points can be drawn from the evidence provided in the literature. First, there were substantial earnings disparities among the ethnic groups in Canada. Some groups, such as Jews, earned substantially more than the Canadian average, while some others, especially visible minority groups and some Southern European groups, earned substantially less than the average. Although ethnicity contributed only minimally to the total variation of earnings, this is largely due to the fact that the ethnic groups facing earnings discrimination in the labour market comprised only of a small percentage of the total population.

Second, the structure of ethnic stratification in terms of earnings attainment in Canada underwent substantial changes in the two decades between 1960 and 1980. The ethnic hierarchy of economic status in 1980 was quite different from the vertical mosaic described by Porter (1965). Earnings inequalities among white ethnic groups had diminished: the disparity between the two charter groups were substantially reduced during the two decades from 1960 to 1980; the British were no longer in apparently advantaged positions in relation to other white ethnic groups in average earnings; and Eastern and some Southern European groups had caught up with Western European groups. It appears that the significance of ethnicity in the process of earnings attainment had declined for these groups. In addition, earnings disparities experienced by white ethnic groups could largely be attributed to differences in their educational and occupational attainments which, in turn, were results of different values and aspirations and were consequences of immigration policies and practices in Canadian history. After education, occupation and other intervening variables have been taken into account, earnings disparities among whites largely disappeared, indicating that direct labour market discrimination in terms of monetary rewards was minimal among these groups.

Third, for visible minority and some South European groups, earnings inequality was still a serious and consistent phenomenon. These groups, especially visible minorities, still suffered from earnings inequality despite their upward mobility in educational and occupational status.. Member of these groups earned substantially less than an average Canadian, and their earning disadvantages persisted after various intervening variables have been taken into account. This indicates that racial and ethnic



discrimination in the Canadian labour market was still a significant factor detrimental to the status mobility of members of these ethnic groups in terms of earnings attainment. Even though most white ethnic groups were not significantly different from each other in earnings, most non-white groups and some Southern European groups were differentiated from them. The multi-level hierarchy that Porter described had largely become a two-plane structure where most white groups were at the upper level and the non-white and some Southern European groups were at the lower level. The Canadian mosaic was still vertical in the sense that ethnicity and race were still important factors in the process of earnings attainment.

Fourth, ethnic or racial discrimination in the Canadian labour market in terms of economic rewards was exercised in several ways. Members of minority groups often had greater difficulty getting promotions than their white counterparts with similar qualifications. Some employers did not accept foreign-earned educational and professional credentials, especially those earned in less developed countries where most immigrants of visible minority groups had come from. The issue of pay equity was still valid; members of ethnic minorities were often paid less than their white counterparts for the same job.

### **Economic Studies of Racial Inequality in Earnings**

The issue of ethnic, and particularly racial, inequality in earnings has also attracted the attentions of many economists. Following the human capital model developed by Becker (1957, 1964) and Mincer (1974), most empirical economic studies of racial (and

gender) earnings inequality have typically attempted to decompose, using multiple regression, the observed earnings differential into a portion due to group differences in human capital and other socioeconomic characteristics and a portion that cannot be accounted for by these factors. The first portion is intended to include as complete as possible a list of all factors that are believed to affect productivity and wages but not reflect the process of racial discrimination in the labour market. Once these exogenous (as to the process of racial discrimination) factors have been taken into account, the residual differential is believed to be an estimate of racial discrimination in earnings (Cain, 1986).

Employing this approach, most economic studies in the U.S. suggest that a considerable proportion of the racial earnings inequality is attributable to racial differences in productivity characteristics. At the same time, they confirm the existence of racial discrimination in the labour market by estimating the residual earnings differentials. For example, it is estimated that, while the unadjusted (observed) black/white earnings ratios are about 50-70%, the adjusted ratios, representing the effect of discrimination, are about 60-85%, depending on the source of data and the types of variables controlled. Masters (1975) finds that blacks aged 17-64 earned 50% of what their white counterparts earned in 1959 (from a 1/1000 sample of the 1960 Census of the U.S.) and 55% in 1966 (from the Survey of Economic Opportunity). After age, education, size of city of residence, region of residence, and class of worker (self-employed, government or private) have been statistically controlled, the black/white wage ratio increased, but blacks still fell far behind whites: 59% in 1959 and 66% in 1966. Blinder (1973), using the U.S. Panel Study of

Income Dynamics, finds that black working household heads earned 49% of what their white counterparts earned in 1969. After age, health conditions, size of city of residence, region of residence, socioeconomic status, local labour market conditions, and veteran status have been controlled, the adjusted earnings of blacks were still only 64% of those of whites. Based on the U.S. National Longitudinal Survey, Flanagan (1974) finds that, among men aged 46-60, blacks earned 58% of what whites earned in 1967; and after education, formal training, labour market experience, marital status, health, tenure, region of residence, industry and migration status have been taken into account, the ratio increased to 84%. Relative earnings of other non-whites such as Hispanics tend to be somewhat higher, but they still lag behind whites (Reimers, 1983; Killingsworth, 1982; Grenier, 1984).

Black-white earnings ratios estimated from more recent data sets tend to be higher, but differentials in observed and adjusted earnings were still substantial. For example, using the 1984 Survey of Income and Program Participation, Baldwin and Bishop (1991) report that black men earned 77% of what white men earned; when a number of human capital variables such as education, experience and health conditions are controlled, the wages of black men were 87% of those of their white counterparts with comparable characteristics. Using data from the 1987 U.S. National Longitudinal Survey of Youth, Schmitz, Williams and Gabriel (1994) also report substantial earnings differences between white and black males, and they find that 54% of the black-white wage differentials was unexplained by human capital (such as education and experience) and other personal characteristics (such as marital status).

Economists in the U.S. have also studied the effects of many other factors on racial earnings inequality. Smith and Welch (Smith and Welch, 1977, 1988, 1989; Welch, 1973; Smith, 1984) demonstrate that not only the quantity but also the quality of schooling is important in racial earnings inequality. They suggest that there have been racial differences in school quality, and inferior training in schools attended by blacks has resulted in inferior job skills. They thus argue that black-white differentials in skills are partly responsible for their wage differentials; employers have rewarded lower productivity with lower earnings. However, they note, improvements in school quality over time have resulted in relative improvements in black human capital, and consequently, the relative earnings of younger blacks are higher than are those of older blacks. Implied in Smith and Welch's argument is the suggestion that discrimination in the educational system, rather than labour market discrimination, is a more important factor causing racial earnings disparities in the U.S. Duncan (1994) also suggests that there could be substantial racial differences in the quality of education. He reports that more educated white males hold occupations with steeper experience-earnings profiles and argues that significant racial differences in earnings growth on-the-job were very possibly a result of racial differences in school quality.

In terms of the effect of work experience, some researchers report that black workers did not seem to receive lower returns to on-the-job training (Duncan and Hoffman, 1979). In some instances, their returns to formal post-school training were even higher than those for whites (Flanagan, 1974; Blank, 1989). But this is probably a result of the overall lower levels of black earnings. Since the earnings levels of whites were

higher, the relative effect of post-school training on earnings would be smaller; alternatively, the earnings levels of blacks were lower and the relative effect of their training would be greater. Although returns to post-school training does not seem to account for racial differentials in earnings, there were large differences in the amounts of training received by white men compared to black men and these differentials accounted for a large proportion of the wage gap between white and black men (Flanagan, 1974; Duncan and Hoffman, 1979). In a study of racial differences in post-displacement earnings, Ong (1991) finds that blacks and Hispanics suffered greater earnings losses than whites. Since some job skills are not transferable, displaced workers lost the proportion of the wage representing the returns to their previous work experience and training. But substantially lower post-layoff wages offered to blacks and Hispanics strongly suggest the existence of discrimination in the labour market.

Occupation has also been studied by some U.S. economists as an important factor of racial earnings inequality. Idson and Price (1992) find that the primary factor causing observed wage differentials among whites, Hispanics and Blacks in the public sector is occupational attainment. For males, 70% and 88% of the wage gaps between white and black, and white and Hispanic are attributable to occupation. For females, the corresponding figures are 56% and 58%. Idson and Price therefore suggest that policies that attempt to address the issue of racial earnings inequalities need to focus on the factors producing racial inequalities in occupational achievements. In an attempt to incorporate the causes of occupational differences into an analysis of racial earnings differentials, Gill (1994) separates the contributions of differential access and occupational

choice to racial pay differences, and finds that differential access to high-paying occupations contributes substantially (nearly 50% of the wage differential) to the racial earnings inequality.

Another area studied by economists is different degrees of racial wage discrimination in government and private sectors. Although discrimination exists in public and private sectors alike, it is generally found that it is less severe in the public sector than in the private sector. For example, Long (1976) finds that, after adjusting for human capital and demographic factors, blacks in the U.S. federal government earned 76% of the average wage that whites earned; while in the private sector blacks earned only 71% of what whites earned. Similarly, Smith (1977) reports that, in the private sector, black males earned 19% less than their comparable white counterparts, while in the federal sector, blacks males earned 14% less than their white counterparts. Asher and Popkin (1984) find that white men in the U.S. postal service were paid comparably to white men in other industries, and that non-whites and women were paid comparably to their white male counterparts in the postal service, after controlling for differences in human capital and market conditions. But a more recent study in the U.S. by Heywood (1989) suggests that, after controlling for human capital and demographic variables, residual wage differentials between whites and non-whites were the highest in the federal sector (8%), second in the private sector (7%), and the lowest in state and local governments (6%).

Overall, conclusions about racial pay discrimination reached by economists and sociologists have been quite similar. They generally agree that human capital and other

earnings related factors account for a large proportion of the observed racial earnings differentials, and that there is a substantial proportion of the differential that remains unexplained by these factors. Although the estimated residual differential varies from study to study and from one setting to another, the persistence of this residual pay differential indicates the real existence of racial discrimination in the labour market.

### **Analytical Framework of the Present Study**

Discrimination related to earnings differentials can occur in many forms and places. When discrimination occurs before the worker enters the labour market, individuals are not given equal opportunities in preparation for generating earnings later on in the market place. For example, if discrimination occurs in the education system, students of similar abilities do not come out of school with comparable credentials and skills, and therefore have different earning potentials in the labour market. Because it happens before the direct process of earnings acquisition in the labour market, this kind of discrimination can be called "premarket discrimination." Discrimination can also occur in the labour market, in which case workers with equal preparation and productivity receive different wages. When factors that are unrelated to productivity acquire positive or negative values in the labour market, resulting in differentials in earnings among workers, labour market discrimination occurs. Current labour market discrimination is "the valuation in the labour market of personal characteristics of the workers that are unrelated to productivity" (Akbari, 1989: 21-22). Race and ethnicity, together with gender, have been identified as the most prominent factors providing the bases of pay

discrimination in the labour market.

As stated earlier, the goals of the present study are two-fold: to re-evaluate the Vertical Mosaic versus the New Mosaic thesis as regards to ethnic inequalities in earnings, and to estimate the extent of ethnic or racial discrimination in pay in the Canadian labour market in the early 1990s. Our examination will then have two focuses in the process of earnings attainment. The first is to examine the end product of the whole process, analyzing the observed earnings standings of Canadian ethnic groups. This will provide us with an overall picture of the current ethnic mosaic. If there are no substantial differences in earnings among the ethnic groups, as has been claimed by advocates of the New Mosaic thesis (Ornstein, 1981; Rosenbluth, 1984; Weinfeld, 1988; Winn, 1988), it is suggested that the Canadian mosaic is no longer vertical in the early 1990s as regards to earnings stratification, and that racial and ethnic inequality in economic attainment has been eliminated. But if there are still substantial earnings disparities among the groups, as has been demonstrated by supporters of the Vertical Mosaic thesis for earlier periods (for example, Satzewich and Li, 1987; Li, 1987, 1988; Rajagopal, 1990; Reitz, 1990; Satzewich, 1991), we can logically claim that in 1990 the ethnic groups are not yet in equal positions in the Canadian mosaic in terms of earnings attainment. Whether this is a result of current or past discrimination (Ram and Verma, 1980; Abella, 1984; Li, 1988, for example), or a result of other factors such as inter-group cultural differences (Royal Commission, 1969: 78-86; Tepperman, 1975: 135-41; Porter, 1985: 54), the reality would be that an earnings hierarchy of ethnic groups still exists.

The second focus of our examination will be on the process of earnings



distribution within the labour market, evaluating the direct influence of pay discrimination on ethnic earnings differentials. In other words, we will examine the existence and extent of "unequal pay for equal work" for workers of different ethnic groups. If individuals of different ethnic origins doing equal work are paid equally, it is suggested that there is no direct pay discrimination along ethnic lines in the labour market. If individuals of different origins doing equal work are paid differently, it is indicated that pay discrimination exists along ethnic lines. Our approach to estimating the existence and degree of direct pay discrimination along ethnic lines will be explained in Chapter 2.

It should be noted that direct pay discrimination or unequal pay for equal work does not exhaust the scope of discrimination in the labour market. Besides unequal pay for equal work, there are other, less direct, sources of discrimination within the labour market. The most prominent factors are differential access to employment and preferable positions, or unequal work despite equal qualifications (Bloom and Killingsworth, 1982; Gill, 1994), and unequal access to training (Flanagan, 1974). But since we are measuring the extent of unequal pay for equal work, differences in employment and occupational outcomes are incorporated in the measurement, and the resulting discrimination estimate is intended to capture ethnic pay differences that are net of group differences in other earnings-related characteristics.

The Public Use Microdata File on Individuals (PUMFI) drawn from the 1991 Census of Canada will be the major database for the study. Previous studies have been mostly based on data prior or including the 1981 Census. This new set of data, with larger sample size (3% of the population, compared to 2% for the 1981 file and 1% for

the 1971 file) and more ethnic groups (25 categories, compared to 16 categories for the 1981 file and 20 categories for the 1971 file), especially more visible minority groups (10 categories, compared to two categories for the 1981 file and five categories for the 1971 file), included, will enable us to draw a more complete picture of the various ethnic groups' recent economic status and to make comparisons among the groups in terms of their earnings in 1990.

The arrangement of subsequent chapters is as follows. Chapter 2 describes the data set for the study and the statistical procedures of the analysis. Chapter 3 first discusses the earnings effects of the factors included in the model and then focuses on the influence of ethnicity on the earnings attainments of Canadian workers. Chapter 4 and 5 deal with the interactive effects on earnings of ethnicity and education, and ethnicity and occupation. Chapter 6 considers the ethnic earnings disparities in the immigrant population.

## Notes to Chapter 1

1. There is no specific definition in Winn's article for "low-prestige" or "high-prestige" European groups. But he apparently refers to Eastern and Southern European groups as low-prestige and Northern and Western European groups as high-prestige groups (Winn, 1988: 196-200).

2. Ethnicity, as used in the study by the Royal Commission, "is the effect of ethnic origin when all the other factors are held constant; it is the expression of a complex phenomenon composed of many elements which are impossible to separate; among these are the quality of schooling; work attitudes; occupational choice; motivations and values; the quality, orientation, and effectiveness of institutions; obstacles to mobility; discrimination; and the weight of the past" (Royal Commission, 1969: 63).

## Chapter 2

### Data and Methods

To carry out the tasks of the present study, we will first determine the "gross effect" of ethnicity, which is simply the anti-logs of the mean log earnings of the ethnic groups. With this, we will be able to compare the relative positions of the groups in terms of their economic attainments, and based on this, evaluate the Vertical Mosaic versus the New Mosaic thesis. Earnings, however, are a function of a complex combination of many factors. With the gross effect of ethnicity, we cannot determine how much of the ethnic disparities are result of ethnicity *per se*, and how much they reflect the impact of other factors. Therefore, we need also to measure the "net effect" of ethnicity so that we can determine how much of the ethnic earnings disparities are attributable to ethnicity *per se*, free of the influences of other factors, or at least free of the influences of those factors we can control statistically.

Similarly, other earnings determinants have gross and net effects on earnings. One way to assess the impact of these factors on ethnic earnings disparities is to determine the net effects of these factors on earnings and then to examine the compositions of different ethnic groups in the corresponding variables. For example, if an ethnic group has proportionally more members in categories of a variable with net gains in earnings (say,

managers and professionals, etc., in the variable of occupation) and has proportionally fewer members in categories of the same variable with net deficits in earnings (say, unskilled workers, semi-skilled workers, etc.), we know that the factor of occupation has a positive effect on the earnings of this ethnic group. Therefore, to evaluate the influence of an ethnic group's educational and occupational achievements and employment pattern on its earning level, we also need to estimate the net effects of these variables on earnings.

### **The Data Set**

Since 1971, Statistics Canada has produced a number of microdata files for public use. These files are samples drawn from the Censuses and are stored on data tapes. For the purpose of examining extensively ethnic inequality in earnings in the Canadian labour market, the Public Use Microdata Files on Individuals (PUMFI) are the most appropriate data source available. They contain detailed information on the individual's ethnic origin and earnings in the year prior to the censuses. They also have considerable information on many of the other variables crucial for a model of earnings determination.

The 1991 PUMFI on which the present study is based is a 3% sample of the 1991 Canadian Census and it contains 809,654 cases. After respondents who did not work in 1990 (nearly half of whom were persons under the age of fifteen) have been excluded, the sample drops to 446,478 cases. This is the part of the sample that represents the working population in Canada in 1990.

A small proportion of the resulting sample were non-permanent residents. These

were persons who were in Canada on employment authorizations or Minister's permits or who were refugee claimants. Since the earnings of these individuals could have been significantly affected by factors other than those typical of the Canadian labour market, they are also removed and the sample drops slightly to 443,161 cases.

Also eliminated from analysis are a small number of cases with missing information on age, marital status, geographic mobility in the past five years, period of immigration, or education, all of which are considered factors of earnings determination in the present study and have been chosen to be included in our model. As a result, the sample size drops to 439,959.

Finally, to take the logarithm of earnings (see Note 1), individuals with zero or negative earnings have to be eliminated and the sample is further reduced to 425,107 cases. This comprises the working sample of the study.

From the sample with all the persons who worked in 1990 ( $N=446,478$ ) to this working sample ( $N=425,107$ ), the number of cases drops by 4.78%, nearly 70% of which were cases with zero or negative earnings in 1990. As a result, the average earnings of the sample increased by about 4%. This increase is slight in relative terms, and the ethnic composition of the sample has changed very little (see Table 2.1). Therefore, for the purposes of the present study, the sample's representativeness of the working population in 1990 should not be affected substantially by examining only those with positive earnings.

### **Determinants of Earnings and Variables in the Model**

To reflect the individual's earning power in the Canadian labour market, we include wages and salaries and self-employment income as earnings; investment income is not included as this type of income is not closely related to the interaction process in the labour market through which the individual's earning power is generated. The dependent variable of the model, Log Earnings, is created by taking the natural logarithms of earnings<sup>1</sup>.

The causal relationship between ethnic origin and individual earning power in the Canadian labour market is the focus of the present study. Nevertheless, a number of factors besides ethnicity are considered in sociology and economics to be important determinants of earnings and are often included in models of earnings determination. In the following pages, we are going to discuss the independent variables we will include in our analysis.

#### **Ethnicity**

Ethnicity, the central independent variable of the study, consists of 25 categories in our working sample: British; French; Dutch; German; Other Western European origins; Hungarian; Polish; Ukrainian; Balkan origins; Greek; Italian; Portuguese; Spanish; Jewish; Arab origins; West Asian origins; South Asian origins; Chinese; Filipino; Vietnamese; Other East and Southeast Asian origins; Latin American origins; Black origins; Aboriginal origins; and Others<sup>2</sup>.

To preserve the confidentiality of the information provided by individual

respondents, Statistics Canada has reduced the level of detail for this variable for individuals in the Atlantic provinces and the Territories. Only the British, French, German, Black, and Aboriginal origins are identified in these regions. All European origins other than the British, French, and German have been collapsed into "Other European Origins," all Asian origins have been collapsed into "Asian Origins," and Latin American origins into "Other Single Origins" (see Statistics Canada, 1994: 1, 51-6). In the present study, these less specific categories for the Atlantic provinces and the Territories are collapsed into the category of "Others." The effect of this less detailed information on ethnic origins of individuals in the Atlantic provinces and the Territories on the analysis of ethnic differences in earning power in Canada in general, however, will be minimal, since the total number of cases in these less specific categories is only 981, 2.8% of the total counts (35,226) in the Atlantic region and the Territories in our working sample, and 1.4% of the total counts (71,632) for the corresponding categories (i.e., European origins other than British, French and German; Asian origins; and Latin American origins) for the Central and Western provinces.

Among the categories of ethnic origin provided in the 1991 PUMFI, many include more than one ethnic groups. For example, in the category "Other East and Southeast Asian Origins," Burmese, Cambodian, Laotian, Thai, Indonesian, Japanese, Korean, Malay, and other Asians not identified elsewhere are included. Some of these groups may have quite different socioeconomic characteristics from those of others in the same category. For instance, persons of Japanese origin may have higher earnings than those of Burmese, Cambodian, Laotian and Thai origins (see Winn, 1988: 197). These

variations are obscured by the groupings and cannot be identified and analyzed. But although more refined categorization in ethnic origins is desirable, the PUMFI data are still the best source available in this regard and can largely meet the needs of the present study.

### Gender

Gender is generally considered one of the most important factors in earnings determination. It has been long established that women on average earn less than men and this disparity remains substantial even after other factors have been taken into account. It is known that gender earnings disparities are partly due to gender differences in a number of labour market related characteristics such as education, occupation and industrial distribution, and partly due to gender discrimination in the work place (see, for example, Armstrong and Armstrong, 1994). The variable of gender is therefore included in our model to capture these effects.

### Age and Age Squared

In models of earnings determination, "age" has been used to measure two different concepts. On the one hand, age is a proxy for labour market experience, especially for the analysis of earnings among men. Labour market experience is often derived from the equation "Experience = Age - Year of Schooling - Six" when direct information on experience is not available. In some data, the correlation between age and actual number of years worked for men is as high as over 0.9. Within the human capital framework, experience is considered an important factor of productivity and therefore a determinant



of earnings (for example, Mincer, 1974; Featherman and Hauser, 1978; Montgomery and Wascher, 1987; Blank, 1989; Gill, 1994; Duncan, 1994). On the other hand, age can also be seen as a proxy for history, for the different historical conditions that have shaped the socioeconomic lives of successive cohorts. Under this perspective, the control for age with cross-sectional data in models of earnings determination is concerned with cohort effects rather than labour market experience (Wright, 1979: 252). In the present study, age is used to capture the effect of experience.

When we include age in our model, age squared is also entered, since age is known to have curvilinear relationship with earnings. During the life cycle earnings first increase and then decline gradually after reaching a peak somewhere in middle age (see, for example, Becker, 1964; Mincer, 1974; Featherman and Hauser, 1978).

### Marital Status

It has been found that married men earned significantly more than single, divorced or widowed men (Denton, 1984; Korenman and Neumark, 1990; and Kilbourne, England and Beron, 1994). To explain this relationship, Kinney (1983) argues that the breadwinner role of men in their families encourages them to maximize earnings. May (1987) demonstrates that employers tend to favour married men over unmarried men, offering them a "family wage." In addition, the relationship may also be partly attributable to the tendency that married men are somewhat insulated from such forms of personal failure as delinquency (Blau and Duncan, 1967: 337-40). For women, the relationship between earnings and marriage tends to be weaker or negative. It has been

argued that, under the current division of labour in the family, women's domestic responsibilities conflict with their career (Becker, 1981, 1985). It is also shown that, contrasting to the situation for men, employers either have little preference regarding women's marital status or prefer single women over married women (Hill, 1979; Bartlett and Callahan, 1984).

The problem of causation here is apparent; whether marital status is considered a determinant of earnings, or it is seen as affected by earnings, or both marital status and earnings are considered results of other factors, depends very much on the researcher's theoretical predictions. For example, it is possible that men with higher earnings are more likely to get married and maintain the marriage because women prefer able breadwinners as husbands (Nakostein and Zimmer: 1987). Nevertheless, assuming marital status as a causal factor of earnings, we include it in our model as an independent variable. It has five categories: Married, Separated, Divorced, Widowed, and Single (Never married).

### Province

Uneven economic development among different regions and provinces in Canada has been characteristic of national growth. The enormous size of the country and locational disadvantages of some regions, variations in population, climate and culture, limitations of the market and urban centres, and serious external dependencies have resulted in this uneven economic development (Bryan, 1986: 195-211; Wien, 1988; and Sinclair, 1991) . As a result, large earnings disparities existed among the regions and

provinces. Ontarians earned significantly above the national average, Quebecers and residents of most Western provinces earned below the average, and workers in the Atlantic provinces earned the least (Sinclair, 1991). Therefore regional and provincial inequalities could be a vital factor in the determination of personal earnings. To capture the impact of this factor, the variable of Province is included in the model. Since significant disparities have been found not only among the regions but also among some provinces within a region, provinces are kept as categories rather than collapsed into regions. There are eleven categories in the variable: the ten provinces, each as a category, and the two territories combined as one category.

#### Metropolitan/non-metropolitan Area

It has been found that workers in metropolitan areas earned more than their nonmetropolitan counterparts (Bibb and Form, 1977; Dickens and Lang, 1985). This earnings disparity, it is argued, was the result of a number of factors. The cost of living is less in nonmetropolitan than metropolitan areas, which accounts for about 10-20% of the metropolitan/nonmetropolitan earnings disparity. Nonmetropolitan workers tend to be disadvantaged in human capital characteristics. But most importantly, metropolitan and nonmetropolitan workers are rewarded differently even when they have similar human capital characteristics because there are substantial differences in employment diversity and employer power between metropolitan and nonmetropolitan areas. In terms of employment diversity, the number and variety of jobs in a labour market determine the options available to individuals. Workers in labour markets with a wide range of

employment opportunities are more likely to find jobs that match their training and skills and to acquire upward mobility. Most nonmetropolitan areas are characteristic of small labour markets with less diversity in employment opportunities. In terms of employer power, a limited number of alternative employers means that each employer is better able to retain workers without offering substantial wage incentives, non-wage benefits, or promotion opportunities. The employers have more freedom to set wages and establish hiring practices. These conditions are also more frequently found in labour markets in nonmetropolitan areas. As a result, economic returns to workers in nonmetropolitan areas tend to be less than those to workers in metropolitan areas (McLaughlin and Perman, 1991).

To capture the effect of metropolitan versus nonmetropolitan areas on the earnings of individuals, the variable of Metropolitan/non-metropolitan Area will be included in the model. It refers to whether or not the individual was living in a Census Metropolitan Area (CMA) in 1991. A CMA is a large urban area, together with adjacent urban and rural areas which have a high degree of economic and social integration with that urban area. A CMA is delineated around an urban area with a population of at least 100,000 based on the previous census. Nineteen CMAs were identified in the 1991 Census by Statistics Canada. They were: Halifax, Quebec, Montreal, Sherbrooke and Trois-Rivieres, Ottawa-Hull, Oshawa, Toronto, Hamilton, St. Catharines-Niagara, Kitchener, London, Windsor, Sudbury and Thunder Bay, Winnipeg, Regina and Saskatoon, Calgary, Edmonton, Vancouver, and Victoria. All other areas were defined as nonmetropolitan areas (Statistics Canada, 1994: 13).

### Geographic Mobility

Migration has been seen in sociology as a selective mechanism by which the more able are channelled to places where their potential can be realized. It is argued that migrants tend to have higher potential for success, such as superior intelligence, social background, education, and work experience. At the same time, migration partly removes restrictions on achievement by enabling one to take advantage of opportunities not available in one's original community (Blau and Duncan, 1967: 243-76). However, if these personal and background factors have been taken into account, migrants, compared to their non-migrant counterparts, tend to suffer a loss in socioeconomic status possibly due to the necessary adjustment to the new labour market (Featherman and Hauser, 1978: 385-428). Some subsequent studies find that migration does not seem to result in higher earnings or the earnings returns are negligible (Cutright, 1974; Snipp and Sandefur, 1988; Tienda and Wilson, 1992), especially when selective migration is taken into account (Lieberson, 1978). Under certain circumstances, moving from smaller to larger communities, independent of differential migrant selectivity, could be negatively related to earnings attainments (Harris, 1981).

Based on previous findings, we expect the earnings effects of geographic mobility to be minimal. Nevertheless, we include geographic mobility in our model intending to capture the possible earnings disparities between mobile and non-mobile individuals, and among individuals with different degrees of mobility. Specifically this variable reflects the relationship between a person's place of residence on Census day and his/her place of residence five years earlier. There are six categories in the variable: Non-movers were

persons who were living in the same dwelling they had occupied five years earlier; Movers but Non-migrants were persons who were living in a different dwelling within the same census sub-division; Intraprovincial Migrants include two categories: persons who were residing in a different census subdivision within the same census division, and persons who were residing in a different census division within the same province; Interprovincial Migrants were persons who were residing in a different province within Canada; and External Migrants were persons who had been living outside Canada five years earlier (Statistics Canada, 1994: 117-8).

The variable of Geographic Mobility not only classifies whether an individual was mobile or not, but also measures, to some extent, the "scope" of the mobility. While this scope of mobility is spatial, it also conveys a measure of social distance involved in the mobility, that is, the degree of socioeconomic differences between the environment of the original community and that of the destination. For example, compared with intraprovincial mobility, interprovincial mobility usually involves both a higher degree of spatial movement and greater social distance. If we assume that a higher degree of mobility involves more courageous initiative which requires higher potential, and results in more opportunities in the destination, this scope of mobility may be positively related to earnings disparities. Alternatively, if we assume that a higher degree of mobility requires more adjustment to the new socioeconomic environment, mobility may be negatively related to earnings. It is hoped that with these categories we can capture the possible disparities in earnings resulting from the different extent of initiative required for the mobility and the different degree of opportunities obtained through the process.

### Period of Immigration

As a form of migration, immigration involves the greatest degree of spatial and social movement. It follows that immigrants may enjoy more advantages than the native-born in terms of socioeconomic achievement, partly because they are products of a positively selective mechanism and partly because they have come to where they believe the greatest opportunities are present. In terms of economic attainment, the foreign-born are generally found to be doing well in comparison to the native-born after 10-15 years of socioeconomic adjustment to the host country (Richmond and Kalbach, 1980: 52; Carliner, 1980; Long, 1980; Borjas, 1982; Borjas and Tienda, 1985; Meng, 1987; but Borjas, 1985; Baker and Benjamin, 1994). However, immigrants often encounter many obstacles, economic, social and cultural, in their initial years in the host country. The magnitude of these difficulties depends on the immigrant's material and psychological preparation for the mobility and the degree of differences between their home country and the host society. A period of adjustment, however, is inevitable, although the length of the period varies depending on the nature of the obstacles and personal efforts. It often takes immigrants many years to catch up with their native-born counterparts in earnings (Chiswick, 1978; Meng, 1987; Field-Hendrey and Balkan, 1991).

To capture the possible earnings disparities between the foreign-born and the Canadian-born, and among the foreign-born with different lengths of residence in the host country, we include in our model the variable Period of Immigration. It classifies whether the individual is Canadian-born or foreign-born, and if foreign-born, the period during which he or she immigrated to Canada. Although it is preferable to have more

refined categories of year of immigration, the grouping is constrained by the less detailed categories for the Atlantic provinces and the Territories in the original 1991 PUMFI data (Statistics Canada, 1994: 49). Consequently, the foreign-born are categorized into five groups by their year of immigration: 1945 or earlier, 1946-60, 1961-70, 1971-80 and 1981-90.

It should be noted that for the Atlantic provinces and the Territories, those who immigrated to Canada by 1960 have been coded into a single category in the PUMFI data, rather than into "1945 or earlier" and "1946-1960" as for other provinces. In our working sample, there are 363 cases in this category for the Atlantic provinces and the Territories. Since the distribution by period of immigration for immigrants in the Atlantic provinces and the Territories is similar to that for immigrants in the Central and Western provinces for the periods 1961-70, 1971-80 and 1981-90, we can assume that their distributions are also similar in the periods "1945 or earlier" and "1946-60." It follows that of the 363 cases in the Atlantic provinces and the Territories who immigrated to Canada in and before 1960, there should be only about 5% (or 18 cases) belonging to the "1945 or earlier" category, the ratio of the category "1945 or earlier" to categories "1945 or earlier" and "1946-60" combined for immigrants in the Central and Western provinces (see Tables 2.2 and 2.3). Because of this small ratio and small number of cases, all cases in the Atlantic provinces and the Territories that fall in the category "1960 or earlier" are coded into the category "1946-60." This should not produce any substantial distortion to the regression analysis while it allows the retention of the category "1945 or earlier" for the variable.



### Knowledge of Official Languages

Language is the most important aspect of communication which in turn is indispensable to any job. A worker must speak to his or her co-workers, superiors or customers. Failure to communicate efficiently curtails productivity. Because of this relationship between language proficiency and productivity, deficiency in language could preclude an individual from getting a job appropriate to his or her qualifications and therefore hinders his or her earning potentials. Once on the job, the worker's prospective promotions and earnings would be affected negatively unless his or her communication barrier is removed. In any case, language ability is a determinant of earnings. This relationship has been established with empirical data (Tainer, 1988). Because of Canada's bilingualism and the different socioeconomic background related to the two languages, it makes a difference whether one speaks English or French or both. A number of studies have dealt with this issue. Detailed results differ from study to study, but the general pattern of the findings is that bilinguals tend to earn the most, and monolingual English speakers tend to earn more than monolingual French speakers (Royal Commission on Bilingualism and Biculturalism, 1969: 21; Carliner, 1981; and Chiswick and Miller, 1988).

To capture the effects of the ability to speak English or French on earnings, we include in our model the variable Knowledge of Official Languages. It refers to the individual's ability to conduct a conversation in English only, in French only, in both English and French, or in neither of the two languages. These categories are very coarse and cannot provide a good measurement of the individual's English and French

proficiency. But since this is the only variable in the PUMFI data that deals with language ability, we have no other choice.

### Education

While the educational level of the labour force is an important factor affecting the level of productivity of a modern economy, the educational level of an individual in the labour market has become increasingly important as a determinant of power, privilege and earnings. It has been well established that higher levels of education are associated with higher levels of earnings (Becker, 1964; Mincer, 1974; Featherman and Hauser, 1978; Kuch and Haessel, 1979: 22-5; Wanner and Lewis, 1982; Hirschman and Kraly, 1988; Li, 1988: 100-101; Sandefur and Pahari, 1989; Kilbourne, England and Beron, 1994; Duncan, 1994). Only those with adequate and appropriate education and training can fit into key positions and obtain higher earnings.

Total years of schooling or highest degree or certificate obtained are usually employed in the measurement of level of education. Total years of schooling does not necessarily reflect the real level of knowledge and skills, and more importantly, the socially accepted credentials that an individual has. The highest degree, certificate or diploma obtained by the individual, on the other hand, can better reflect his or her real level of education, especially the kind of education that is related to working skills and earning power in the labour market (see Hunter and Leiper, 1993). For this reason, highest degree, certificate or diploma is a better variable for the purpose of capturing and analyzing the effect of education on earnings, and is therefore chosen to be included in

our model.

There are ten categories in the variable of highest degree, certificate or diploma obtained. They are No degree, certificate or diploma; Secondary/high school graduation certificate or equivalent; Trades certificate or diploma; Other non-university certificate or diploma; University certificate or diploma below bachelor level; Bachelor's degree(s); University certificate or diploma above bachelor level; Degree in medicine, dentistry, veterinary medicine or optometry; Master's degree(s); and Earned doctorate.

### Occupation

Obviously the earnings of individuals are heavily dependent upon their occupations. Earnings are the direct monetary reward to the individual for the performance of an occupational role (Sewell and Hauser, 1975; Featherman and Hauser, 1978; Gill, 1994; Kilbourne, England and Beron, 1994). For example, managers are usually at the top of the hierarchy of earnings. Professionals earn much more than other workers. Unskilled manual workers are usually at the bottom. In fact, a large proportion of total earnings inequality is accounted for by differences in occupation (Beck, 1991). Considerable percentages of earnings inequality in other social or demographic dimensions, such as race and sex, can also be attributed to the effect of differences in occupational distributions (see for example Chiswick, 1975). The variable of occupation is therefore included in our model to capture the effect of occupation on earnings.

In the 1991 PUMFI, occupation refers to the kind of work the individual was doing during the reference week (the week prior to enumeration). If one did not have a

job during that week, the data relate to the job of longest duration since January 1, 1990 (Statistics Canada, 1994: 132-3). Occupational categories were identified and grouped on the basis of the 1991 Standard Occupational Classification based on the nature and skills required of the occupations (1991 Census Dictionary, Catalogue No. 92-301E). There are fourteen categories in this variable: Senior managers, Skill Level IV; Middle and other managers, Skill Level IV; Professionals, Skill Level IV; Semi-professionals and technicians, Skill Level III; Supervisors, Skill Level III; Foremen/women, Skill Level III; Administrative and senior clerical, Skill Level III; Sales and service, Skill Level III; Skilled crafts and trades, Skill Level III; Clerical workers, Skill Level II; Sales and service, Skill Level II; Semi-skilled manual workers, Skill Level II; Sales and service, Skill Level I; and Other manual workers, Skill Level I (Statistics Canada, 1993b; 1994: 132-3). These occupations and skill levels are classified on the basis of the education, training and skills required to enter the job, and the kind of work performed, as determined by the tasks, duties and responsibilities of the occupation (1991 Census Dictionary, Catalogue No. 92-301E).

### Industrial Sector

According to dual economy theory (Beck, Horan and Tolbert, 1978; Tolbert, Horan and Beck, 1980) industries are divided into core and periphery. Core industries, such as petroleum, auto production and construction, are characterized by high productivity, high profits, intensive utilization of capital, a high incidence of monopoly elements, a high degree of unionization, and consequently high earnings of their

employees. Peripheral industries, such as agriculture, nondurable manufacturing and retail trade, are characterized by small firm size, high labour intensity, a high degree of product market competition, lack of unionization, low productivity, low profits, and consequently low earnings of their workers (Gordon, 1972; Bluestone, Murphy and Stevenson, 1973: 28-9). Once the economy is split into two major sectors, the mobility and earnings of the workers are contingent upon their locations in the labour market. Inter-sector mobility tends to be limited. The sector in which individuals are currently working is generally the one in which they began (Hodson and Kaufman, 1982; Jordan, 1982). The earnings of an individual, therefore, are influenced by the type of industry in which he or she is employed. Findings from empirical studies have provided evidence for this argument (Kuch and Haessel, 1979: 174-5; Taylor, Gwartney-Gibbs, and Farley, 1986; Li, 1988: 121).

To capture the effect of industry on earnings, the variable of industrial sector is included in our model. It refers to the general nature of the business carried out in the establishment where the individual worked during the reference week. If the individual was not employed in the reference week, the information refers to his/her job of longest duration since January 1, 1990 (Statistics Canada, 1994: 138-9). Industries were identified and grouped on the basis of 1980 Standard Industrial Classification (1991 Census Dictionary, Catalogue No. 92-301E). There are sixteen categories in the variable: Agriculture; Other primary industries; Manufacturing; Construction; Transportation and storage; Communication and other utilities; Wholesale trade; Retail trade; Finance, insurance and real estate; Business services; Federal government services;

Other government services; Educational services; Health and social services; Accommodation, food and beverage services; and Other services.

Weeks Worked, Weeks Worked Squared and Full-time or Part-time Weeks Worked

Finally, the earnings of a worker in a time period, such as a year, should be directly related to the length of time he/she works during that period. To capture the effect of length of time worked on annual earnings, it would be preferable to specify the total number of hours worked in that year. But in the 1991 PUMFI, only two variables are available that are related to the length of time worked in 1990. That is, weeks worked in 1990 and full-time or part-time weeks worked. The first measures the total number of weeks an individual worked in 1990, and the second refers to whether the weeks the individual worked were full weeks of work (30 hours or more per week) or not (Statistics Canada, 1994: 128). Before these variables are entered into our model, weeks 49 to 52 are collapsed into 49 as suggested by Statistics Canada (1994: 131), since there is strong evidence that a considerable number of full-year workers excluded (contrary to instructions) their weeks of vacation or sick leave with pay. At the same time, another variable, weeks worked squared, is introduced into the model to capture the quadratic relationship between log earnings and weeks worked (see Figure 2.1). Full-time versus part-time is entered into the model as a dummy variable.

### **The Model of Analysis**

Among the variables discussed above, Log Earnings, Age, Age Squared, Weeks

Worked and Weeks Worked Squared are continuous variables. All the others are categorical variables, and will be entered into the regression as dummy variables. The multiple regression equation can then be expressed as follows:

$$\begin{aligned}
 \text{Log Earnings} = & b_0 + \sum_{j=1}^{24} b_1(\text{Ethnicity})_j \\
 & + b_2(\text{Gender}) \\
 & + b_3(\text{Age}) + b_4(\text{Age Squared}) \\
 & + \sum_{j=1}^3 b_5(\text{Marital Status})_j \\
 & + \sum_{j=1}^{10} b_6(\text{Province of Residence})_j \\
 & + b_7(\text{Metropolitan/Non-metropolitan Area}) \\
 & + \sum_{j=1}^5 b_8(\text{Geographic Mobility})_j \\
 & + \sum_{j=1}^5 b_9(\text{Period of Immigration})_j \\
 & + \sum_{j=1}^3 b_{10}(\text{Knowledge of Official Languages})_j \\
 & + \sum_{j=1}^9 b_{11}(\text{Education})_j \\
 & + \sum_{j=1}^{13} b_{12}(\text{Occupation})_j \\
 & + \sum_{j=1}^{15} b_{13}(\text{Industrial Sector})_j \\
 & + b_{14}(\text{Weeks Worked}) + b_{15}(\text{Weeks Worked Squared}) \\
 & + b_{16}(\text{Part/Full-time Weeks Worked}) + e
 \end{aligned}$$

This semi-logarithmic regression, yields an Adjusted R Square of 0.57988, indicating that about 58% of the variation in Log Earnings has been accounted for by the

variables included in the model. The remaining, unexplained part, 42% of the total variance, can be attributed to errors in the measurement of earnings, factors of earnings determination that we have not been able to bring into the model, and possibly some unknown factors.

The regression also yields a coefficient for each of the dummy and continuous variables. If the independent variable is continuous, the coefficient represents the amount of change in Log Earnings as a result of a unit of change in the variable, controlling for all the other variables in the model. For example, if the regression yields a coefficient of 0.07 for Age and -0.0007 for Age Squared, it is indicated that, holding other variables constant, the Log Earnings of an individual would increase at a decreasing rate as his or her age increased. For a dummy variable, the coefficient represents the difference in Log Earnings between the category represented by the dummy and the base or reference category, again, holding other variables constant. For example, the variable Gender is entered into the regression as the dummy "Male." Suppose the regression yields a coefficient of 0.3 for males; we then know that males had 0.3 more in Log Earnings units than females did, holding other factors constant, i.e., earnings for males are  $e^{0.3}$  times as large as are for females with similar characteristics.

In interpreting results from regressions, researchers often use the coefficients directly. However, in a multiple regression with dummies, one category of each classificatory variable has to be omitted and coefficients for the remaining categories are expressed as deviations from the omitted (or base) category. We then do not have direct information on the base category in relation to the overall population. Since we are



comparing the earnings positions of a number of ethnic groups and evaluating the effects of a number of categories in different variables on earnings, it would be preferable to have direct information on the standing of a category relative to the general average or grand mean, rather than to another category. Therefore for analyses in Chapters 3, coefficients obtained from the multiple regression will be converted into coefficients expressed as deviations from the grand mean using the following formula (see Andrews, Morgan, Sonquist and Klem, 1973: 46-7):

$$a_{ij} = b_{ij} - \sum_{j'=1}^J p_{ij'} b_{ij'}$$

where  $a_{ij}$  = coefficient for category  $j$  of variable  $i$  expressed as deviation from the grand mean;

$b_{ij}$  = coefficient for category  $j$  of variable  $i$  expressed as deviation from the base category;

$p_{ij'}$  = the proportion of total cases falling in category  $j'$  of variable  $i$ ; and

$b_{ij'}$  = coefficient for category  $j'$  of variable  $i$  expressed as deviation from the base category.

Since the transformed coefficients are expressed as deviations from the grand mean rather than from the base category in the regression, the statistical significance for the original coefficients no longer applies and will not be listed in the tables.

It is quite common to treat coefficients from semi-logarithmic regressions as proxies of percentages. There is no serious problem when the absolute value of the

coefficient is small ( $<0.1$ ). But when the coefficient gets larger in absolute value, there will be substantial errors (cf. Halvorsen and Palmquist, 1980). When the coefficient is positive, it represents a larger percentage; and when the coefficient is negative, it represents a percentage smaller in absolute value. The larger the absolute value of the coefficient, the bigger the error. For example, when the coefficient is +0.05, +0.10, +0.25 or +0.50, the percentage it represents will be +5.1%, +10.5%, +28.4% or +64.9%, respectively; and when the coefficient is -0.05, -0.10, -0.25 or -0.50, the percentage will be -4.9%, -9.5%, -22.1% or -39.3%, respectively (see Table 2.4). In general, the relationship between increments (or differences, in the case of dummy variables) in percentage and that in log units can be described as follows:

$$p = 100 \frac{e^{a+x} - e^a}{e^a} = 100(e^x - 1)$$

where  $p$  = increment or difference in percentage;

$e$  = base of the natural logarithm, about 2.718;

$a$  = any constant; and

$x$  = increments or difference in log units

For convenience, all regression coefficients will be converted into percentages when displayed in tables throughout the thesis.

## Notes to Chapter 2

1. One of the assumptions of linear least-squares regression is that the distribution

of the dependent variable conditioned on the independent variables be normal or close to normal. As most distributions of incomes or earnings, the earnings distribution of our sample is considerably skewed. To reduce the skewness of earnings distributions, it is conventional to take the logarithms of the earnings before the regression is run. While this is a common practice among economists, sociologists have followed this to a lesser extent. For examples of use of log-earnings by sociologists, see Featherman and Hauser (1978), Fox and Fox (1986), and Beggs (1995).

2. Among these categories, British includes all single and multiple British responses; French includes French, Acadian and Quebecois; Other Western European origins include Austrian, Belgian, Flemish, Luxembourg and Swiss; Balkan origins include Albanian, Bulgar, Croatian, Macedonian, Serbian, Slovenian, and Yugoslav not included elsewhere (n.i.e.); Arab origins include Egyptian, Iraqi, Lebanese, Maghrebi origins, Palestinian, Syrian, and Arab, n.i.e.; West Asian origins include Afghan, Armenian, Iranian, Israeli, Kurdish, Turk, West Asian, n.i.e.; South Asian origins include Bengali, Punjabi, Singhalese, Tamil, Bangladeshi, n.i.e., East Indian, n.i.e., Pakistani, n.i.e., Sri Lankan, n.i.e.; Other East and Southeast Asian origins include Burmese, Cambodian, Laotian, Thai, Indonesian, Japanese, Korean, Malay, other Asian, n.i.e; Latin American origins include Argentinian, Brazilian, Chilean, Colombian, Ecuadorean, Guatemalan, Hispanic, Mexican, Nicaraguan, Peruvian, Salvadorean, Uruguayan, other Latin American, n.i.e.; Black origins include Black, Ghanaian, African Black, n.i.e, Barbadian, Cuban, Guyanese, Haitian, Jamaican, Trinidadian and Tobagonian, West Indian, n.i.e., Other Caribbean, n.i.e; Aboriginal origins include Inuit, Metis and North American Indian. All single and multiple origins not included in the first twenty-four categories are pooled into the category of Others (see Statistics Canada, 1994: 51-3).

**Table 2.1 Ethnic Compositions of the Working Sample and the Sample with All Respondents Who Worked in 1990**

Ethnic group	Sample with all respondents who worked			Working sample <sup>a</sup>		
	N	% of total	Cumulative %	N	% of total	Cumulative %
British	129,889	29.1	29.1	124,474	29.3	29.3
French	98,932	22.2	51.3	95,257	22.4	51.7
Dutch	6,468	1.4	52.7	6,190	1.5	53.1
German	17,075	3.8	56.5	15,897	3.7	56.9
Other W European	1,608	0.4	56.9	1,496	0.4	57.2
Hungarian	1,909	0.4	57.3	1,805	0.4	57.7
Polish	4,419	1.0	58.3	4,164	1.0	58.6
Ukrainian	7,230	1.6	59.9	6,846	1.6	60.3
Balkan	2,462	0.6	60.5	2,341	0.6	60.8
Greek	2,705	0.6	61.1	2,592	0.6	61.4
Italian	13,710	3.1	64.1	13,215	3.1	64.5
Portuguese	4,239	0.9	65.1	4,046	1.0	65.5
Spanish	1,237	0.3	65.4	1,055	0.2	65.7
Jewish	3,977	0.9	66.3	3,766	0.9	66.6
Arab	2,060	0.5	66.7	1,775	0.4	67.0
West Asian	1,173	0.3	67.0	964	0.2	67.2
South Asian	7,005	1.6	68.6	6,288	1.5	68.7
Chinese	9,376	2.1	70.7	8,553	2.0	70.7
Filipino	2,962	0.7	71.3	2,483	0.6	71.3
Vietnamese	1,235	0.3	71.6	1,158	0.3	71.6
Other E & SE Asian	2,145	0.5	72.1	1,911	0.4	72.0
Latin American	1,245	0.3	72.4	984	0.2	72.3
Black	5,241	1.2	73.5	4,725	1.1	73.4
Aboriginal	4,866	1.1	74.6	4,567	1.1	74.5
Others	113,310	25.4	100.0	108,555	25.5	100.0
Total	446,478	100.0		425,107	100.0	

a. Eliminated were those who did not work in 1990, were non-permanent residents, were with missing information on age, marital status, geographic mobility, period of immigration, or education, or had zero or negative earnings in 1990.

**Table 2.2 Period of Immigration -- Quebec, Ontario and Western Provinces**

<b>Period of Immigration</b>	<b>1945 or earlier</b>	<b>1946-60</b>	<b>1961-70</b>	<b>1971-80</b>	<b>1981-90</b>
<b>Count</b>	822	15,771	18,114	23,060	18,741
<b>Percent of Total</b>	1.1	20.6	23.7	30.1	24.5

Source: Public Use Microdata File on Individuals, 1991 Census of Canada

**Table 2.3 Period of Immigration -- Atlantic Provinces and Territories**

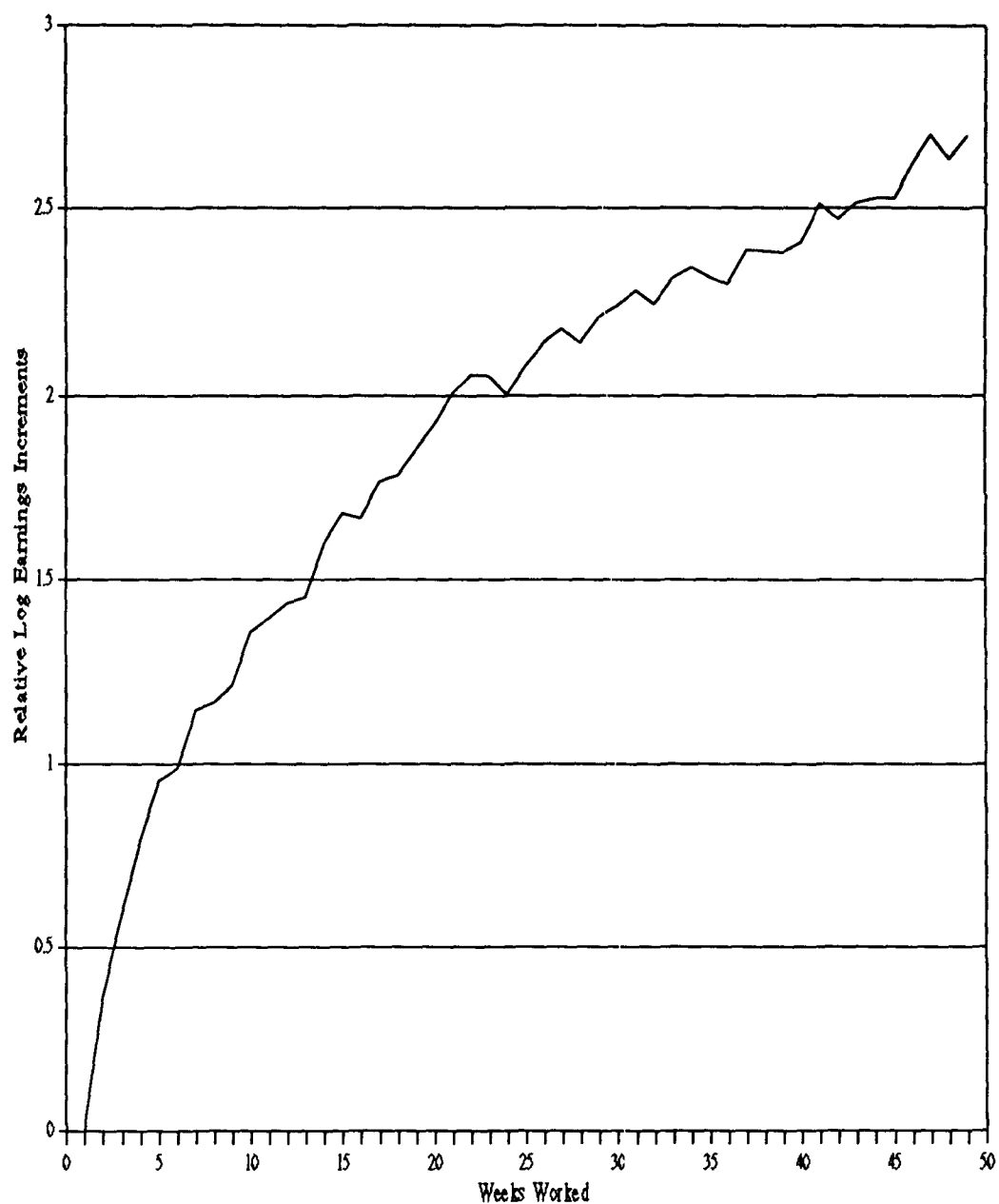
<b>Period of Immigration</b>	<b>1960 or earlier</b>	<b>1961-70</b>	<b>1971-80</b>	<b>1981-90</b>
<b>Count</b>	363	378	429	281
<b>Percent of Total</b>	25.0	26.1	29.6	19.4

Source: Public Use Microdata File on Individuals, 1991 Census of Canada

**Table 2.4 Conversion<sup>a</sup> between Changes in Ln Points and Percentage Points**

Positive Change				Negative Change			
For change in ln	Resulting change in %	For change in ln	Resulting change in %	For change in ln	Resulting change in %	For change in ln	Resulting change in %
+0.01	+1.0	+0.26	+29.7	-0.01	-1.0	-0.26	-22.9
+0.02	+2.0	+0.27	+31.0	-0.02	-2.0	-0.27	-23.7
+0.03	+3.0	+0.28	+32.3	-0.03	-3.0	-0.28	-24.4
+0.04	+4.1	+0.29	+33.6	-0.04	-3.9	-0.29	-25.2
+0.05	+5.1	+0.30	+35.0	-0.05	-4.9	-0.30	-25.9
+0.06	+6.2	+0.31	+36.3	-0.06	-5.8	-0.31	-26.7
+0.07	+7.3	+0.32	+37.7	-0.07	-6.8	-0.32	-27.4
+0.08	+8.3	+0.33	+39.1	-0.08	-7.7	-0.33	-28.1
+0.09	+9.4	+0.34	+40.5	-0.09	-8.6	-0.34	-28.8
+0.10	+10.5	+0.35	+41.9	-0.10	-9.5	-0.35	-29.5
+0.11	+11.6	+0.36	+43.3	-0.11	-10.4	-0.36	-30.2
+0.12	+12.8	+0.37	+44.8	-0.12	-11.3	-0.37	-30.9
+0.13	+13.9	+0.38	+46.2	-0.13	-12.2	-0.38	-31.6
+0.14	+15.0	+0.39	+47.7	-0.14	-13.1	-0.39	-32.3
+0.15	+16.2	+0.40	+49.2	-0.15	-13.9	-0.40	-33.0
+0.16	+17.4	+0.41	+50.7	-0.16	-14.9	-0.41	-33.6
+0.17	+18.5	+0.42	+52.2	-0.17	-15.6	-0.42	-34.3
+0.18	+19.7	+0.43	+53.7	-0.18	-16.5	-0.43	-34.9
+0.19	+20.9	+0.44	+55.3	-0.19	-17.3	-0.44	-35.6
+0.20	+22.1	+0.45	+56.8	-0.20	-18.1	-0.45	-36.2
+0.21	+23.4	+0.50	+64.9	-0.21	-18.9	-0.50	-39.3
+0.22	+24.6	+0.55	+73.3	-0.22	-19.7	-0.55	-42.3
+0.23	+25.9	+0.60	+82.2	-0.23	-20.5	-0.60	-45.1
+0.24	+27.1	+0.65	+91.6	-0.24	-21.3	-0.65	-47.8
+0.25	+28.4	+0.70	+101.3	-0.25	-22.1	-0.70	-50.3

a. The conversions were carried out as:  $p=100(e^x-1)$ , where  $p$  is the increment or difference in percentage,  $e$  is the natural logarithm, about 2.718, and  $x$  is the increment or difference in log units. See p.71.



**Figure 2.1 Plot of Relative Log Earnings Increments against Weeks Worked:** The data are obtained from a multiple regression with all the other independent variables discussed in this section controlled. The mean value of Log Earnings for the group of one week worked is set to 0 and those of all other groups are displayed relative to that.

## **Chapter 3**

### **Determinants of Earnings and the Significance of Ethnicity**

After running the multiple regression and carrying out the conversion procedures described in Chapter 2, we obtained the net effects of the independent variables on earnings. These net effects, together with gross effects, are displayed in Table 3.1. In this chapter, we will first describe the earnings effects of the control variables included in our model, and then analyze the influence of ethnicity in earnings attainment.

In Table 3.1, gross and net effects are expressed as percentage deviations from the grand mean. The number of cases in each category is also presented. Overall, independent variables included in the model explain 58% of the variance in log earnings. The remaining, unexplained part, 42% of the total variance, can be attributed to some unknown factors and to factors that we have not been able to bring into the model due to limitations of the data set.

#### **The Effects of Control Variables**

##### **Gender**

The earnings gap between males and females was strikingly substantial in Canada in 1990. Female workers made 26% less than the Canadian average while male workers



made 28% more than the average. When other variables were statistically controlled, the difference was still very large: females were disadvantaged at 15% below the average while males were advantaged at 15% above. A difference of 30 percentage points persisted between the two sexes even when they had comparable characteristics and did similar jobs.

### Age

Large earnings disparities existed among workers of different ages (Figure 3.1). Workers aged 35-55 earned 30% or more above the average; those around the age of 45 made the most, about 50% above the average. The more the category was away from middle age, the less its average earnings was. Those under the age of 25 earned substantially less than the average, reflecting their marginal participation in the labour market and their disadvantage in experience. Similarly, those over the age of 65 made much less than an average Canadian, mostly attributable to retirement. The fluctuations of the earnings levels for those aged 75 and over are probably due to the small numbers of cases falling in this range.

When other independent variables are held constant, the partial coefficient for age from the regression is 7.20987% (of grand mean) after conversion from log earnings units, and that for age squared is -0.07189%. The combined effect of Age and Age Squared, which represents the net influence of age (or experience, as explained in Chapter 2) on earnings, is shown in Figure 3.2. As we can see, net returns to age (or experience) are low when the worker is young. The rate of return increases until one is 45-50 years

of age, and then decreases as one gets older.

### Marital Status

Disparities among categories with different marital status were very large. Currently married individuals, the divorced, and the separated earned 29%, 25% and 15% more than the average respectively; the widowed and the never married made 14% and 48% less than the average respectively. After other variables have been taken into account, however, the disparities almost disappear. The separated (-1%) and the divorced (-2%) were minimally below the average; the currently married (4%) and the widowed (4%) were slightly above. The only category that was significantly different from the grand mean was the never married, at 9% below the average.

### Province of Residence

There were substantial regional disparities in earnings measured by the gross effect of province of residence. Individuals in all of the Atlantic provinces and two of the Prairie provinces, Manitoba and Saskatchewan, earned much less than the average Canadian, with average earnings ranging from 13% to 30% below the mean. Those in Newfoundland, Prince Edward Island, New Brunswick and Saskatchewan earned the least, with average earnings 20-30% below the national level. Individuals in Quebec, Alberta, British Columbia and the Territories had earnings around the average, with effects ranging from -2% to +1%. The only province whose residents earned significantly more than the average was Ontario, standing 9% above the grand mean.

When the net effect of province of residence was considered, the picture changed

a lot. Individuals in the Territories benefited greatly from the fact of their place of residence, with a net effect of 25% above the national level. Workers in Ontario and British Columbia remained slightly above the average by 5%. Quebecers moved from slightly above the average (+1%) to moderately below (-4%). The position of Alberta was hardly changed, staying slightly below the average (-2%). Individuals in all of the Atlantic provinces and Manitoba and Saskatchewan remained in disadvantaged positions, though to a much smaller extent, ranging from -3% to -10%.

An interesting phenomenon here is that the disadvantage of the lowest ranking provinces was offset the most by other independent variables. The gross effect of residence in Newfoundland was -30% and that in Prince Edward Island was -26%. With other factors taken into account, workers in these two provinces became only slightly disadvantaged at -5% and -3% respectively. In contrast, the gross effects of residence in Nova Scotia and Manitoba were -16% and -13% respectively. These negative percentages were not much offset by other factors and the corresponding net effects were only slightly higher at -10% and -9%. This is a strong indication that the explanatory powers of other factors in earnings varied greatly from province to province and had different impacts on regional inequality in earnings.

#### Metropolitan/non-metropolitan Areas

Residence in metropolitan areas versus non-metropolitan areas also had a substantial impact on earnings. Before controlling for any other variables, individuals living in non-metropolitan areas earned 14% less than an average Canadian worker, while

those living in metropolitan areas earned 10% more. The gap was narrowed substantially when other factors were taken into account. Non-metropolitan residents became disadvantaged at -6%, while metropolitan residents became advantaged at +4%.

### Period of Immigration

When we look at the gross effect of period of immigration, the disparities seem to be very large. Comprising the majority (82%) of the sample, Canadian citizens by birth had earnings close to the average at -3%. Variations were found mostly among immigrants landing in Canada in different periods. Those who arrived in Canada in the years 1946 to 1970 earned the most, at over 45% above the average. Those arriving in 1971-80 also had more-than-average earnings (+8%). Immigrants who had been in Canada for the longest time (arriving before 1946) and for the shortest time (arriving in 1981-90) earned the least, at -17% and -24% respectively.

These differences were greatly reduced with other variables statistically controlled. All categories except the one of the most recent arrivals clustered around the average. But a modest tendency seems to exist: the economic disadvantage experienced by immigrants gradually disappeared as their length of residence in Canada increased. Immigrants who arrived in 1981-1990 were disadvantaged at 14% below the average; immigrants arriving in 1971-80 were 5% below; those arriving in 1961-70 were at the average level; and those who arrived before 1961 were slightly advantaged in the Canadian economic system at +1% to +2%.

### Geographic Mobility

The disadvantage of the most recently arrived immigrants can also be seen with the variable of geographic mobility. External migrants, i.e., those who had been living outside Canada five years earlier, earned 30% less than the average. Compared with them, the average earnings of individuals in all other categories were quite close to the grand mean, with effects ranging from -2% to +7%. Non-movers made 2% less than the average, while non-migrants (movers within the same census subdivisions) and intraprovincial migrants made 4% to 7% more than the average. Interprovincial migrants earned about the same as the average. When other variables were controlled, external migrants were still significantly divergent from the grand mean at -11%. All the other categories clustered around the average, ranging from -1% to +2%.

#### Knowledge of Official Languages

There were apparent disparities among individuals with different knowledge of English or French, the official languages of Canada. Individuals who spoke both English and French fared the best, earning 7% more than the average; individuals who spoke only English earned minimally above the average (+1%); those who spoke only French earned 11% less than the average; and those who spoke neither English nor French had earnings far below average at -30%. These disparities in earnings, however, were largely attributable to other variables. When other factors were taken into account, those who spoke English only, French only, or both English and French were neither much advantaged nor much disadvantaged compared to the average Canadian, ranging from -3% to +1%. Only individuals who spoke neither of the official languages were still

disadvantaged in earnings at an average of 8% below the mean.

### Education

Education was a very important factor affecting earnings. Before other factors are taken into account, workers with no degree, certificate or diploma or with only a high school graduation diploma, earned much less than the average, at -30% and -15% respectively. Persons in all other categories earned substantially more, ranging from 19% to 273% above the average. Workers with a non-university certificate other than trades certificate or diploma made 19% more than the average; workers with a trades certificate or diploma made 27% more; those with a university certificate below bachelor's degree 33% more; those with a bachelor's degree 59% more; those with a university certificate above bachelor's degree 88% more; those with a master's degree 123% more; those with an earned doctorate 206% more; and those with a degree in medicine, dentistry, veterinary medicine or optometry 273% more. By and large, the higher the educational level one had, the more one earned, and the disparities in earnings among workers with different educational levels were great.

With other independent variables statistically controlled, workers without any certificate or diploma were still 13% below the average, while those with only certificates or diplomas below university level were near the average, ranging from -2% to +6%. The order of all other categories remains unchanged. They ranged from +12% for individuals with university certificates below bachelor's degree to +98% for those with degrees in medicine, dentistry, veterinary medicine or optometry. The advantage of individuals in

these higher categories over those with lower educational levels was great, and the differences among these categories were also very large.

### Occupation

Occupational category was another factor which strongly affected the earnings of Canadians in 1990. Managers and professionals earned much more than the average, ranging from +75% to +191%. Workers in skilled crafts and trades, supervisors, foremen/women, administrative and senior clerical workers, and semi-professionals and technicians also earned substantially more than the average, ranging from +11% to +36%. Sales and service workers at Skill Level III and semi-skilled manual workers earned minimally less than the average at -1% and -4% respectively. Clerical workers at Skill Level II, other manual workers, and sales and service workers at Skill Levels I and II earned the least, ranging from -60% to -10%.

When other variables are controlled, the disparities remained, though to a lesser extent. Managers and professionals were still much favoured, ranging from +22% to +54%. Supervisors were also in an advantaged position at +10%. Administrative and senior clerical workers, workers in skilled crafts and trades, semi-professionals and technicians, sales and service workers at Skill Level III, and foremen/women were near the average, ranging from 0% to +3%. Remaining significantly disadvantaged were clerical workers at Skill Level II, semi-skilled manual workers, sales and service workers at Skill Levels I and II, and other manual workers, ranging from -16% to -7%.

### Industrial Sector

The economic sector in which a person was employed had also important effects on the earnings of its workers. Comprising nearly 30% of our working sample, workers in agriculture, retail trade, accommodation, food and beverage services, and other services earned as much as 36% to 61% below the average. Workers in other industrial sectors had average earnings above the grand mean. The lowest among these categories were health and social services (+9%) and construction (+14%). Workers in other primary industries, manufacturing, transportation and storage, wholesale trade, finance, insurance and real estate, business services, government services other than those of the federal government, and educational services had earnings about 30% above the average. Those in communication and other utilities (+66%) and federal government services (+57%) had the highest average earnings.

When we measure the net effect of industrial sector, the four categories with lowest earnings were still at the bottom, ranging from -13% to -29%. Workers in business services (+1%) and educational services (-1%) stood near the mean. Next were workers in wholesale trade (+6%), health and social services (+7%), construction (+8%), finance, insurance and real estate (+9%), manufacturing (+11%), other government services (+11%), transportation and storage (+15%), federal government services (+22%), and communication and other utilities (+23%). Other primary industries were the most favoured at 37% above the grand mean.

#### Weeks Worked and Part/full-time Worked

The length of time worked should obviously be the factor most directly related to



earnings. As can be expected, earnings increased as the number of weeks worked increased, with few exceptions (Figure 3.3). Those who worked one week in 1990 had earnings 96% below the grand mean, and those who worked 49 or more weeks earned 55% more than an average Canadian worker. When other factors have been taken into account, earnings still increase with the number of weeks worked, at a slowly decreasing rate (Figure 3.4).

There was also a big difference in earnings between part-time and full-time workers. Part-time workers made 69% less than an average Canadian worker, while full-time workers earned 33% more than the average. When other factors had been controlled, part-time workers made 41% less than the average, while full-time workers made 14% more than the average.

### **The Significance of Ethnicity in Earnings Attainment**

We have seen in Chapter 1 that, based on 1961, 1971 and 1981 census data and data from other sources, ethnic groups fared differently in terms of monetary rewards in the labour market. Over the decades, some groups moved up in the socioeconomic hierarchy; others were trapped in disadvantaged positions. Ethnic inequality in earnings was consistently a significant phenomenon in Canadian society.

But what is the current situation in this regard, and towards what direction has Canadian society moved in ethnic inequality in earnings? In this section, we are going to examine the earnings disparities among various ethnic groups in 1990. With these new data and the analytical techniques explained in Chapter 2, we will be able to further test

the Vertical Mosaic thesis and its alternative, the New Mosaic thesis. This undertaking, together with those in the following chapters, will enhance our understanding of the significance of ethnicity for earnings in the current Canadian labour market, and it will also shed light on our understanding of the implications of ethnicity in the determination of socioeconomic status and mobility in Canadian society in general.

### Convergence between the Charter Groups

As discussed in Chapter 1, previous studies showed that earnings disparity between the two charter groups had been narrowing (Li, 1988: 84; Nakhaic, 1993). Evidence from the 1991 PUMFI suggests that disparities between the two charter groups continued to decrease (Table 3.1). Persons of British origin earned 5% more than an average Canadian, while those of French origin earned 2% more. The difference between the two groups was less than three percentage points. Members of the "lower" and "higher" charter groups (Porter, 1965: 91-8) have come to be in quite similar positions in terms of earnings.

When gender, age, marital status, province of residence, metropolitan versus non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part-time versus full-time work had been taken into account, the relative positions of the British and French were reversed: persons of British origin were at the average, while those of French origin were 3% above (Table 3.1). This new evidence suggests that the assertion that Francophones were discriminated against by Anglophones in the labour market (Ram and

Verma, 1980, for example) no longer holds. Rather, persons of French origin were favoured in the labour market, more than those of British origin with similar characteristics. The higher earnings of persons of British origin as compared to those of French origin were attributable to their preferable labour market characteristics. If the differences between the two groups in variables addressed in our model had been removed, those of French origin would have had about 3 percentage-point advantage over those of British origin.

#### Near Parity between Eastern and Western Europeans

In agreement with earlier research (Li, 1988; Herberg, 1990; Reitz, 1990), findings from the 1991 PUMFI suggest that Eastern Europeans had nearly achieved parity with Western Europeans other than the British and French, and both East and Western Europeans had above-average earnings. While Other Western Europeans, Germans and Dutch earned 26%, 9% and 6%, respectively, more than the national average, Hungarians, Ukrainians and Poles earned 14%, 13% and 5%, respectively, more than the average (Table 3.1). However, with other factors taken into account, Eastern Europeans tended to be less favoured as compared to their Western European counterparts. Other things being equal, Other Western Europeans and Germans were 8% and 1%, respectively, above the average Canadian. The Dutch were in an average position. On the other hand, Ukrainians were 3% above the national average, while Poles and Hungarians were 2% and 3%, respectively, disadvantaged.

Our findings indicate that Eastern Europeans were in similar earnings positions as

compared to Western Europeans partly because they had preferable labour market characteristics. If Eastern and Western Europeans had had identical labour market characteristics, then Eastern Europeans would have earned somewhat less than Western Europeans, although the differences would not have been substantial.

### Continued Advantage of Jews

Jews continued to be high performers in the labour market, their earnings surpassing those of any other group. Without controlling for any other independent variable, Jews stood at 34% above the national average. Their earnings were about 20-30 percentage points above those of most Eastern and Western Europeans, with the only exception of those of Other Western Europeans, and around 50 percentage points above those of some Southern European groups. When other factors had been taken into account, Jews were still at the top with an 8% advantage over the national average. The substantial reduction in percentage points ( $34 - 8 = 26$ , or three-fourths of the deviation) from gross to net effects indicates that a large proportion of the earnings advantage of the Jews was attributable to their favourable labour market qualifications. But the remaining 8% net advantage suggests that there were still some factors in the labour market that were unaccounted for by our model and that operated in favour of Jews.

### A Mixed Picture for Southern European Groups

Some groups from Southern Europe had caught up with Eastern and Western Europeans; some still lagged behind. With a gross effect index of +13%, Italians stood quite high in the earnings hierarchy, the fourth from the top, and around 10 percentage

points above the two charter groups. This indicates that after lifting themselves out of low earnings status during the 1960s (compare, for example, Royal Commission, 1970: 40-1, and Li, 1988: 84, using data from the 1961, 1971 and 1981 censuses), Italians had maintained and further improved their positions. Persons of Balkan origins also had above-average earnings at +6%. The advantaged positions of these two categories were largely attributable to their earnings related characteristics. When other factors had been taken into account, Italians were slightly above the average at +2%, and persons of Balkan origins were at the average level.

Among other Southern Europeans, Greeks and the Spanish lagged far behind other European groups, earning 12% and 17%, respectively, below the average. With other factors taken into account, these two groups still ranked the lowest among the European groups at -6% and -5% respectively. A fifth Southern European group, the Portuguese, earned slightly less than the average at -2%. But with other factors taken into account, Portuguese were among the top groups with an advantage of 7%, only one percentage point below Jews, indicating that they were in fact much favoured in the labour market.

#### Continued Disadvantage of Visible Minorities

It has been demonstrated in the literature that visible minorities have been disadvantaged in the Canadian labour market (Abella, 1984; Satzewich and Li, 1987; Li, 1987; Li, 1988; Rajagopal, 1990). Evidence from the 1991 PUMFI suggests that their unfavourable earnings positions remained basically unchanged.

All of the ten visible minority groups identified in the 1991 PUMFI had below-

average earnings. Chinese, South Asians and Filipinos ranked the highest among the visible minorities, making 6%, 7% and 7%, respectively, less than an average Canadian. Following them were Other East and Southeast Asians (-12%), Blacks (-13%), Arabs (-13%), West Asians (-16%) and Vietnamese (-20%), making about 10-20% less than the average. Further down the hierarchy were Latin Americans who earned 28% less than an average Canadian. At the very bottom were Aboriginal peoples at -48%. When other factors had been taken into account, the positions of most visible minorities were similar to each other. Eight of the ten groups were within the range of 5% to 8% below the national average. Latin Americans and Aboriginal Peoples were the most unfavoured in the labour market at -11% and -19% respectively.

#### Disparities between European and Visible Minority groups

Although earnings differences existed among European groups and, to a lesser extent, among visible minority groups, the most notable pattern of ethnic earnings disparity was that between European groups and visible minorities.

Of the twenty-four ethnic categories (excluding "Others") identified in the study, eleven had earnings above the average and thirteen below, before the adjustment of earnings-related factors. On the one hand, all of the eleven above-average categories were of European origins: six of them were in the range of +2% to +9%, three were between +13% to +14%, and two were high up at 26% and 34% above the average. On the other hand, among the thirteen below-average categories, only three were of European origins, making 2%, 12% and 17% less than the average. The other ten groups were all

of visible minority origins. Three of them had earnings between 6% and 7% below the average, five had earnings 12% to 20% below the average, and two earned as much as 28% and 48% less than the average. In fact, eleven of the thirteen European groups ranked higher than any of the ten visible minority groups; only two groups from Southern Europe earned less than some of the visible minorities.

Ethnic differences in earnings were considerably smaller when other factors had been taken into account. On the one hand, as compared to the grand mean, the unadjusted deviations of the earnings of Jews and Other Western Europeans drop from +34% and +26% to +8% with the adjustment. On the other, earnings deviations of Aboriginal Peoples and Latin Americans rise from -48% and -28% to -19% and -11%, respectively. Deviations of most of the other categories also decrease significantly in absolute values with the adjustment, moving towards the mean. This indicates that other variables in our model explained a large proportion of ethnic variations in earnings in 1990.

Nevertheless, the pattern of disparity between European and visible minority groups is still clearly observable after the adjustment. All of the nine favoured categories (those with positive net effects) were of European origins: three were advantaged relative to the average by 7% to 8%, six by 0% to 3%. Of the fifteen unfavoured categories (those with negative net effects), five were of European origins, ranging from 0% to -6%, and ten were of visible minority origins, eight of which were disadvantaged in the range of -5% to -8%, and two at -11% and -19%. Again, looking at the ranking of the groups, eleven of the thirteen European groups ranked above all of the ten visible

minority groups. One of the other two European groups, the Spanish, had the same net effect index (-5%) as South Asians, who had the highest score among the visible minorities. Greeks were the only group of European origin that had a score (-6%) slightly lower than those of two of the visible minority groups (South Asian and Chinese).

That substantial earnings disparities remained between European and visible minority groups after earnings-related factors had been taken into account indicates that workers of visible minority origins were unfavourably treated in the labour market; they consistently received fewer rewards than did their European counterparts. This will be further examined in our analyses of ethnic differences in returns to educational and occupational attainments in the following chapters.

### **Gender Differences in Ethnic Earnings Inequality**

Several recent studies (Li, 1992; Boyd, 1992; and Armstrong, 1994: 47-9) have documented earnings disparities among males and females of European and visible minority origins in Canada. They have shown that gender and race were important bases on which earnings disparities were formed in the Canadian labour market. It is argued in these studies that, in general, the effects of gender were more pronounced than those of race, and the effect of race on earnings was, to a large extent, dependent upon gender: race produced a greater effect on earnings among men than women.

Specifically, while white and non-white males enjoyed advantages in the labour market compared to their female counterparts, non-white males encountered substantial disadvantages compared to white males. In comparison, white and non-white women had



similar disadvantages in the labour market, though moderate differences were still existent between them. "Non-white women seem to have experienced a major jeopardy in earnings for being women, and only a marginal jeopardy for being non-white" (Li, 1992: 501).

In this section, we will examine the differences between males and females in ethnic earnings disparities in 1990. While Li's (1992) comparison is made between white and non-white men and women, our analysis will retain all the 25 ethnic categories in order to have a closer look into the issue.

#### Differences among Females

The first column in Table 3.2 reports the average earnings (converted from log earnings) of females of different ethnic origins, using females of British origin as the reference group. The figures are expressed as percentage deviations from the average earnings of females of British origin. Among the thirteen European groups, females of six groups earned more than their British counterparts. Jewish females made 26% more than females of British origin, Other Western European females 15% more, Ukrainian females 13% more, Italian females 9% more, Polish females 8% more, and Balkan females 7% more. Females of three European groups, the Hungarian, French and German, made about the same as those of British origin. Females of four European groups made less than their British counterparts. Portuguese females earned 6% less than British females, Greek females 6% less, Dutch females 9% less and Spanish females 19% less.

In contrast, among the ten visible minority groups, females of only one group, the Filipino, had earnings higher (+15%) than British females. Those of two groups (Chinese +1% and Black 0%) earned about the same as females of British origin. Females of the other seven groups had earnings lower than their British counterparts. Females of South Asian origins earned 7% less than British females, females of Other East and Southeast Asian origins earned 8% less, Vietnamese females 18% less, Females of Latin American, Arab and West Asian origins all 19% less, and females of Aboriginal origins 41% less.

When age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part-time/full-time worked had been controlled, net earnings disparity between European females and females of visible minority origins were smaller, but moderate differences were still observable (second column of Table 3.2). Among the thirteen European groups, females of seven groups were in more advantaged positions than those of British origin. Compared with British females with similar earnings-related characteristics, Jewish females earned 11% more, females of Other Western European origins 9% more, Portuguese females 8% more, Ukrainian females 6% more, those of Balkan origins 5% more, French females 4% more, and Italian females 3% more. Coefficients for females of the other six European groups (Polish, Greek, German, Dutch, Hungarian and Spanish) vary from -6% to +2%, but none of them were statistically significant, indicating that once other labour market characteristics had been taken into account, earnings of females of these groups were not significantly different from those of females of British origin.

Among females of the ten visible minority groups, only Chinese and Aboriginal females had earnings significantly different from those of British origin, holding other variables constant. Relative to British females, those of Chinese origin were in moderately favourable positions (+4%), while those of Aboriginal origins were in substantially disadvantaged positions (-13%). Coefficients for females of the other eight visible minority origins (South Asian, Black, Filipino, West Asian, Arab, Other East and Southeast Asian, Vietnamese, and Latin American origins) range from -5% to +2%. But none of them was statistically significant.

Therefore, when other independent variables had been statistically controlled, most of the earnings differences, positive or negative, were reduced substantially; many of them were statistically insignificant. For females of European origins, the earnings disparities in relation to those of British origins ranged from -19% to +26% before the adjustment; this range shrank to about -6% to +11% when other independent variables had been controlled. For females of visible minority origins, the disparities ranged from -40% to +15% before the adjustment; the range was reduced to about -13% to +4% after the adjustment. This indicates that a large amount of the earnings disparities for females of different ethnic origins as compared to their British counterparts was attributable to their differences in earnings-related characteristics.

Comparing the earnings status of females holding constant the earnings-related characteristics, we can see that females of visible minority origins were still in relatively poorer positions than those of European origins. While six of the thirteen coefficients for females of European origins and eight of the ten coefficients for those of visible minority

origins are not statistically significant, females of seven European origins were in more favourable positions (+3% to +11%) than their otherwise comparable British counterparts. In contrast, among females of visible minority origins, only those of Chinese origin were in a slightly more favourable position (+4%) than their British counterparts. Females of Aboriginal origins were substantially disadvantaged (-13%).

### Substantial Differences among Males

Earnings disparities among males of different ethnic origins were much greater than those among females (first column of Table 3.3). Among males of the thirteen European groups, those of seven groups ranked higher than their British counterparts. Jewish males earned 28% more than males of British origin, those of Other Western European origins 17% more, Hungarian males 9% more, Dutch males 6% more, German males 4% more, and Italian and Ukrainian males 3% more. Males of the other six European groups ranked lower than males of British origin. Males of Balkan origins made 5% less than British males, French males 5% less, Polish males 6% less, Portuguese males 10% less, Spanish males 22% less, and Greek males 26% less.

On the other hand, males of all of the ten visible minority groups earned substantially less than their British counterparts: South Asian males 16% less, Chinese males 18% less, Other East and Southeast Asian males 20% less, Arab males 24% less, West Asian, Filipino and Black males 26% less, Vietnamese males 31% less, Latin American males 41% less, and males of Aboriginal origins 57% less.

Clearly, males of visible minority origins were in severely disadvantaged positions

compared to those of European origins. While males of over half of the thirteen European groups had average earnings more than British males, males of all of the ten visible minority groups had earnings substantially lower than the British. In fact, males of all but two European groups ranked higher than males of any of the visible minority groups in the earnings hierarchy.

When other earnings-related factors were held constant, the magnitude of the earnings disparities for males of different ethnic origins decreased significantly (second column of Table 3.3). Among males of European origins, the disparities compared to those of British origins ranged from -26% to +28% before the adjustment; the range was reduced, ranging from -12% to +6% after the adjustment. Among males of visible minority origins, the disparities ranged from -57% to -16% before the adjustment; the range decreased to -24% to -10% after the adjustment.

Nevertheless, substantial net differences remained for many ethnic groups, especially those of visible minority origins. Males of four European groups were most favoured in the labour market. Compared with British males with similar qualifications, males of Other Western European origins earned 6% more, Portuguese males 6% more, Jewish males 5% more, and French males 2% more. Coefficients for males of five European origins (Italian, German, Dutch, Ukrainian and Hungarian) are not statistically significant, indicating that the earnings of males of these European origins were not significantly different from those of their otherwise comparable British counterparts. Males of the other four European groups were in unfavourable positions. Other things being equal, males of Balkan origins made 4% less than their British

counterparts, Spanish males made 6% less, Polish males 6% less, and Greek males 12% less.

On the other hand, all ten groups of males of visible minority origins were unfavoured in the labour market. Other things being equal, Vietnamese males earned 10% less than males of British origin, South Asian males earned 11% less, Arab males 12% less, West Asian males 13% less, Other East and Southeast Asian males 13% less, Chinese males 14% less, Black males 14% less, Latin American males 16% less, Filipino males 17% less, and those of Aboriginal origins 24% less.

Apparently, even with similar labour market characteristics, males of visible minority origins were in substantially disadvantaged positions compared to their British and other European counterparts. When earnings related factors had been taken into account, four of the thirteen European groups of males made moderately (+2% to +6%) more than British males, five groups had earnings similar to British males, and three groups earned moderately (-4% to -6%) less. Only one group, Greek males, earned substantially less (-12%) than their otherwise comparable British counterparts. In contrast, all ten groups of males of visible minority origins earned substantially less (-10% to -24%) than their otherwise comparable British counterparts. In fact, when the ethnic groups are ranked according to males' net earnings, eight of the ten visible minority groups ranked behind any of the thirteen European groups; only two groups (Vietnamese and South Asian) ranked slightly higher than one European group (Greek).

### Gender Differences in Ethnic Earnings Disparities

Significant earnings differences existed among females of different ethnic origins. While females of most European groups had earnings more than or about the same as their British counterparts, females of Dutch and several Southern European origins and females of most visible minorities earned substantially less than British females. Ethnic earnings disparities were much more substantial among males. While those of seven of the thirteen European groups had higher earnings than their British counterparts, males of the other six European groups and those of all of the ten visible minority groups had lower earnings. Among them, the disadvantages of Spanish and Greek males and males of all of the visible minority origins were very substantial, ranging from 16% to 57%. For either males or females, an ethnic hierarchy of earnings status is clearly visible, suggesting the persistence of the Vertical Mosaic in terms of earnings. Comparing the magnitude of the disparities, however, the ethnic stratification in earnings was much more profound in the male labour force.

When a number of earnings-related factors had been taken into account, females of European origins still tended to be in better positions than their visible minority counterparts. Females of over half of the thirteen European groups had adjusted earnings higher than British females, while only females of one visible minority group (Chinese) had higher adjusted earnings than British females. But overall, the disparities among the groups became quite modest: coefficients for females of the other European groups and for females of eight visible minority groups were not statistically significant, indicating that their adjusted earnings were not significantly different from those of their British

counterparts. Only Aboriginal females were still substantially worse off than British females, by 13%.

In comparison, the disparities among males of most ethnic origins did not disappear with the adjustments. While males of a majority of European origins had similar or moderately higher earnings than their comparable British counterparts, males of Balkan, Spanish, Polish and Greek origins and those of all of the visible minority origins earned less than the British. Again all of the visible minorities were in substantially disadvantaged positions, with effects ranging from -10% to -24%. In contrast, among the European groups, only Greek males (-12%) were in disadvantaged positions comparable to the visible minorities. It is therefore evident that ethnic pay differentials were much more substantial among men than among women in Canada.

The phenomenon that ethnic differences in earnings, with or without the adjustment of earnings-related factors, were larger among men than among women can be explained by what some researchers have called the "floor effect" -- earnings disparities tend to be greater at higher levels and attenuate at lower levels (Goyder, 1981: 332; Fillmore, 1990; Li, 1992: 503). Although both males and females of visible minority origins were in disadvantaged earnings positions compared to their European counterparts, males were generally at higher levels of earnings, and disparities among them were larger. Consequently, the disadvantages of male members of visible minorities compared to their European counterparts were magnified. On the other hand, females were generally at lower income levels, earnings disparities among them were relatively smaller, and the disadvantages of female members of visible minority origins compared to those of



European origins were reduced in magnitude. In other words, while the effect of gender put men and women into two broad tiers of earnings, the effect of ethnicity further differentiated visible minority men and women from their European counterparts. But with the "floor effect," visible minority women were only moderately disadvantaged relative to their European counterparts, while visible minority men were severely handicapped compared to European males.

Overall, resulting from the interaction of gender and ethnicity in the labour market, males of most European origins were at the top of the earnings hierarchy. Lagging far behind were males of visible minority origins and of some Southern European origins. Further down the scale were females of European origins, followed closely by females of visible minority origins.

### **The Vertical Mosaic Revisited**

Although earnings differences still existed among European groups, they were no longer profound for most. Disparities between the two charter groups were moderate; neither the British nor the French appeared to be in more privileged positions than a majority of other European groups. Most of the traditionally low status European groups, especially those from Eastern Europe, had caught up with their Western European counterparts. The exceptions were some Southern European groups, which were still substantially disadvantaged, and Jews, who stood high up in the hierarchy. The picture was markedly different from that in the early 1960s when the British were in substantially advantaged position, and the French and Southern and Eastern Europeans were in

substantially disadvantaged positions (Royal Commission, 1970: 40-66).

Among visible minorities, some groups from Asia (Chinese, South Asian and Filipino) were relatively better-off. Other Asian groups (Other East and Southeast Asian, Arab, West Asian and Vietnamese), Blacks and those of Latin American origins were in the middle. Aboriginal Peoples were at the very bottom, earning nearly 50% less than an average Canadian.

The most notable pattern of earnings disparities was that between European groups and visible minorities. Compared to their European counterparts, persons of visible minority origins were in substantially disadvantaged positions. Most European groups, except three Southern European groups (Portuguese, Greek and Spanish), had above average earnings, while all visible minority groups earned substantially less than the average. The 1991 PUMFI data also indicate that this pattern of ethnic earnings disparities was present in both the male and female labour forces. Li (1988) has found with the 1981 Canadian Census that ethnic earnings disparities existed largely along racial lines. With more visible minority groups included in the 1991 PUMFI, we can safely claim that a distinction in earnings status did exist between most European groups on the one hand and visible minorities and some Southern European groups on the other. This current pattern of ethnic inequality in earnings in Canada was quite similar to what Hirschman and Kraly (1988) describe for the American scene.

While disparities among European groups had been narrowing, suggesting a trend of convergence among this category, substantial differences existed between European groups and visible minorities. This narrowing of ethnic differences within racial groups

and the persistence of disparities between racial groups indicate that race has, to a large extent, replaced ethnicity as a significant factor in earnings attainment in present day Canada. From this perspective, neither the Vertical Mosaic thesis nor the New Mosaic thesis is adequate in describing current Canadian society. On the one hand, while supporters of the New Mosaic thesis (Ornstein, 1981; Rosenbluth, 1984; Weinfeld, 1988; Winn, 1988) were right in claiming that the influence of ethnicity was diminishing, they failed to emphasize the reality that race has emerged as an important factor in the determination of earnings. On the other, ethnic stratification, the fundamental basis of the Vertical Mosaic thesis, has disappeared in Canada to a large extent. Nevertheless, the Canadian mosaic is still vertical in the early 1990s, although race has replaced ethnicity as the major basis on which the stratification is formed.

### **Racial Discrimination in the Canadian Labour Market**

When a number of earnings-related variables were statistically controlled and the net or direct effect of ethnicity on earnings measured, disparities among the ethnic groups were substantially reduced. This notwithstanding, significant ethnic differences were still observable, especially between European groups and visible minorities, and especially among male workers, suggesting that while workers of different ethnic origins were not treated equitably in the Canadian labour market, race was even a more prominent basis on which workers, especially male workers, were discriminated in pay.

We have explained in Chapters 1 and 2 that if individuals of different ethnic or racial origins doing the same work are paid differently, racial or ethnic pay discrimination

exists. With our regression equation, differences in gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part-time/full-time work have been adjusted. Ethnic earnings disparities after the adjustment reflect the direct pay differentials along ethnic lines for similar personal and productivity characteristics and equal work.

It should be noted that our list of control variables, just as any other list, does not exhaust all possible earnings-related factors, and therefore our estimate of the net effect of ethnicity on earnings or direct ethnic pay discrimination very possibly still includes the influence of some unmeasured factors. But since the major factors of productivity (age or experience, language ability, education, occupation and length of time worked during the year) and labour market differences (industrial sector) are controlled, we have adjusted for the most important variables that could have influenced earnings. We therefore have reason to believe that the net ethnic earnings differentials are a good estimate of direct pay discrimination along ethnic lines in the labour market.

At the same time, it should also be reiterated that this estimate of direct pay discrimination does not encompass the whole range of possible labour market discrimination. Such discrimination could occur in other earnings-related areas in the labour market, such as differential access to employment and preferable occupational status (Bloom and Killingsworth, 1982; Gill, 1994) and unequal opportunities for on-the-job training (Flanagan, 1974). Therefore, while our measure of the net effect of ethnicity on earnings could slightly over-estimate direct pay discrimination, the total effect of

labour market discrimination on ethnic earnings differentials could be much larger.

Based on these understandings, it is clear that, despite the commonly accepted idea that persons with similar productivity should receive similar economic returns, workers of different ethnic origins were not rewarded equitably in the Canadian labour market. Many studies have indicated that members of visible minority origins did not have the same opportunities in the labour market as did their European counterparts; their credentials and job skills were less readily acknowledged by employers; and they often received lower earnings for doing the same work (Abella, 1984: 47; Li, 1987: 111; Satzewich and Li, 1987: 240; Bolaria and Li, 1988: 193-6; Rajagopal, 1990: 98-9; Herberg, 1990: 218-9). Racial discrimination in pay was still a significant phenomenon in the Canadian labour market in the early 1990s.

**Table 3.1 Gross and Net Effects of Various Factors on Earnings, Canada, 1990**

Variable	Gross effect <sup>a</sup> (%)	Net effect <sup>b</sup> (%)	N
<i>Ethnic origin</i>			
Jewish	34.4	8.2	3,766
Other Western European	25.6	7.9	1,496
Portuguese	-1.6	7.2	4,046
French	2.4	3.4	95,257
Ukrainian	13.1	2.9	6,846
Italian	13.2	2.0	13,215
German	8.8	0.7	15,897
British	5.3	0.3	124,474
Balkan	6.4	0.2	2,341
Dutch	6.1	-0.0	6,190
Polish	5.1	-1.9	4,164
Hungarian	14.2	-3.0	1,805
Spanish	-17.0	-5.4	1,055
Greek	-12.2	-6.0	2,592
South Asian	-6.6	-5.4	6,288
Chinese	-6.0	-5.6	8,553
Black	-12.5	-6.4	4,725
Vietnamese	-20.1	-7.5	1,158
Filipino	-6.8	-7.8	2,483
Other East & Southeast Asian	-11.7	-7.9	1,911
West Asian	-16.1	-8.1	964
Arab	-13.4	-8.2	1,775
Latin American	-28.2	-11.2	984
Aboriginal	-47.5	-18.6	4,567
Others	-7.4	-1.5	108,555
<i>Gender</i>			
Female	-25.6	-15.4	193,837

**Table 3.1 (Continued)**

Male	28.3	15.0	231,270
<i>Marital status</i>			
Single (Never Married)	-47.9	-9.1	114,456
Divorced	24.7	-1.5	18,064
Separated	14.7	-0.6	9,848
Now Married	28.8	4.1	277,081
Widowed	-13.9	4.2	5,658
<i>Province of residence</i>			
Nova Scotia	-15.9	-9.9	8,153
Manitoba	-12.7	-9.1	16,627
Saskatchewan	-21.6	-8.9	14,618
New Brunswick	-20.7	-6.5	10,536
Newfoundland	-30.4	-4.8	8,153
Quebec	1.2	-4.1	102,599
Prince Edward Island	-26.3	-2.6	2,005
Alberta	-2.3	-1.7	41,508
Ontario	8.8	4.8	162,894
British Columbia	0.3	5.0	51,638
Yukon & Northwest Territories	-1.2	24.9	1,382
<i>Metropolitan/non-metropolitan area</i>			
Non-metropolitan area	-14.2	-6.0	161,433
Metropolitan area	9.8	3.9	263,674
<i>Geographic mobility</i>			
Different CSD <sup>c</sup> , same CD <sup>d</sup>	6.8	2.0	26,937
Different CD, same province	4.1	1.7	49,855
Different dwelling, same CSD	4.9	1.6	105,843

**Table 3.1 (Continued)**

Non-movers	-2.3	-0.8	212,556
Interprovincial migrants	0.4	-0.9	18,899
External migrants	-30.0	-11.1	11,017
<i>Period of immigration</i>			
Canadian-born	-2.7	1.1	347,148
Immigration by 1945	-16.9	1.4	822
Immigration in 1946-60	47.9	2.4	16,134
Immigration in 1961-70	45.8	-0.3	18,492
Immigration in 1971-80	7.6	-5.2	23,489
Immigration in 1981-90	-23.7	-13.5	19,022
<i>Knowledge of official languages</i>			
English only	0.6	0.6	287,531
Both English & French	6.5	0.1	84,409
French only	-11.4	-3.4	50,547
Neither English nor French	-30.4	-7.8	2,620
<i>Education</i>			
No degree, certificate or diploma	-29.6	-12.9	127,183
High school graduation diploma	-15.2	-1.5	110,504
Trades certificate or diploma	27.1	1.3	55,101
Other non-university certificate	19.2	6.2	61,064
University certificate below bachelor level	33.3	12.1	9,715
Bachelor's degree(s)	58.6	19.1	40,735
University certificate above bachelor level	87.9	25.8	6,703
Master's degree(s)	123.3	32.2	9,936
Earned doctorate	205.7	50.5	1,890
Degree in medicine, dentistry, veterinary medicine or optometry	273.3	98.0	2,276



Table 3.1 (Continued)

<i>Occupation</i>			
Sales & service, Skill Level (SL) I	-59.7	-16.2	38,395
Other manual workers, SL I	-34.3	-14.1	18,442
Sales & service, SL II	-45.4	-12.2	49,831
Semi-skilled manual workers, SL II	-3.8	-8.0	48,628
Clerical workers, SL II	-10.1	-7.1	46,613
Foremen/women, SL III	25.2	-0.3	16,353
Sales & service, SL III	-0.7	0.9	19,154
Semi-professionals & technicians, SL III	10.8	2.5	24,513
Skilled crafts & trades, SL III	36.2	2.6	33,465
Administrative & senior clerical, SL III	11.0	2.7	26,467
Supervisors, SL III	34.7	9.8	5,860
Middle & other managers, SL IV	85.8	21.6	37,252
Professionals, SL IV	75.0	23.2	56,097
Senior managers, SL IV	191.1	53.5	4,037
<i>Industrial sector</i>			
Agriculture	-41.7	-29.4	13,493
Accommodation, food & beverage services	-61.3	-23.9	27,715
Other services	-43.6	-23.2	27,673
Retail trade	-36.2	-12.6	55,515
Educational services	30.3	-1.4	29,788
Business services	24.9	0.7	24,085
Wholesale trade	28.2	6.0	18,159
Health & social services	8.8	7.0	38,263
Construction	13.5	7.8	27,768
Finance, Insurance & real estate	31.1	8.6	24,525
Manufacturing	30.0	10.5	62,233
Other government services	27.4	10.7	20,526
Transportation & storage	38.6	14.8	17,574

Table 3.1 (Continued)

Federal government services	56.9	21.7	12,798
Communication & other utilities	66.0	22.7	14,404
Other primary	34.6	36.8	10,588
<i>Part-time or full-time weeks worked</i>			
Part-time	-69.2	-41.0	83,453
Full-time	33.4	13.8	341,654
Age <sup>a</sup>		7.21003	
Age squared		-0.07189	
Weeks worked		8.37071	
Weeks worked squared		-0.07165	
Grand mean		\$15,298	
Total number of cases		425,107	
Adjusted R Square		0.57988	

a. Gross effect measures the unadjusted percentage deviation of each category of each categorical variable from the grand mean.

b. Net effect measures the adjusted percentage deviation of each category of each categorical variable from the grand mean.

c. Census Sub-Division.

d. Census Division.

e. The net effect of Age and Age Squared should be understood as the percentage increments in earnings for each additional year of age when other independent variables are held constant. For example, other things being equal, an individual aged 16 would earn more than one aged 15 by

$$\{[16 (7.21003\%)] + [16^2 (-0.07189\%)]\} - \{[15 (7.21003\%)] + [15^2 (-0.07189\%)]\}$$

This also applies to Weeks Worked and Weeks Worked Squared.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 3.2 Gross and Net<sup>a</sup> Differences in Earnings: Females of Different Ethnic Origins Compared to Females of British Origin<sup>b</sup>, Canada, 1990**

Ethnic origin	Gross difference (%)	Net difference (%)
Jewish	25.9	11.4**
Other Western European	14.6	9.0**
Portuguese	-5.5	8.2**
Ukrainian	13.4	5.7**
Balkan	6.9	4.7*
French	-0.2	3.9**
Italian	8.9	2.7**
Polish	7.9	2.1
Greek	-6.0	1.9
German	-0.4	-0.3
Dutch	-8.8	-1.9
Hungarian	1.0	-4.3
Spanish	-19.4	-5.7
Chinese	0.5	3.8**
South Asian	-6.9	1.7
Black	0.4	1.1
Filipino	15.1	-0.4
West Asian	-19.3	-1.2
Arab	-18.8	-2.3
Other East & Southeast Asian	-7.9	-2.4
Vietnamese	-17.7	-4.6
Latin American	-18.7	-5.2
Aboriginal	-40.6	-12.7**
Others	-7.6	0.2

a. Obtained from a regression with interaction terms combining gender and ethnicity, and with age, marital status, province of residence, metro/non-metro area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part-time/full-time worked controlled; Adjusted R Square = 0.58015 from regression.

b. Net difference for British females from British males was -28.6%.

\* Significant at 0.10; \*\* Significant at 0.05.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 3.3 Gross and Net<sup>a</sup> Differences in Earnings: Males of Different Ethnic Origins Compared to Males of British Origin<sup>b</sup>, Canada, 1990**

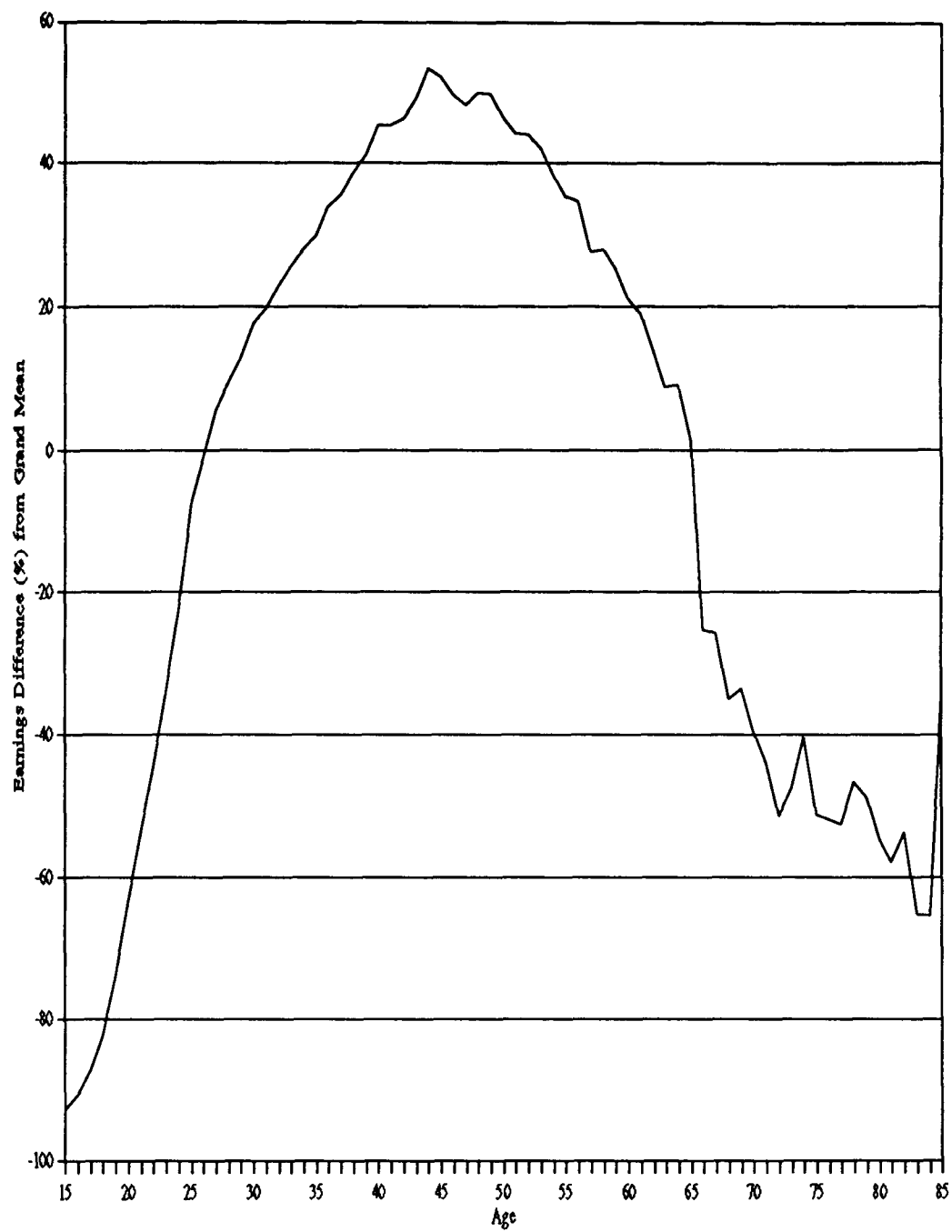
Ethnic origin	Gross difference (%)	Net difference (%)
Other Western European	17.2	6.4**
Portuguese	-9.6	6.0**
Jewish	28.2	4.9**
French	-5.4	2.4**
Italian	3.3	0.8
German	3.5	0.8
Dutch	5.5	0.7
Ukrainian	2.8	0.1
Hungarian	9.4	-2.8
Balkan	-5.2	-3.8*
Spanish	-22.2	-5.5*
Polish	-5.8	-5.7**
Greek	-26.2	-12.0**
Vietnamese	-31.1	-10.1**
South Asian	-16.0	-11.1**
Arab	-23.8	-12.3**
West Asian	-25.5	-13.0**
Other East & Southeast Asian	-19.7	-13.3**
Chinese	-18.1	-13.7**
Black	-26.3	-14.2**
Latin American	-41.2	-16.2**
Filipino	-26.3	-17.1**
Aboriginal	-56.9	-23.6**
Others	-13.6	-3.5**

1. Obtained from a regression with interaction terms combining gender and ethnicity, and with age, marital status, province of residence, metro/non-metro area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part-time/full-time worked controlled; Adjusted R Square = 0.58015.

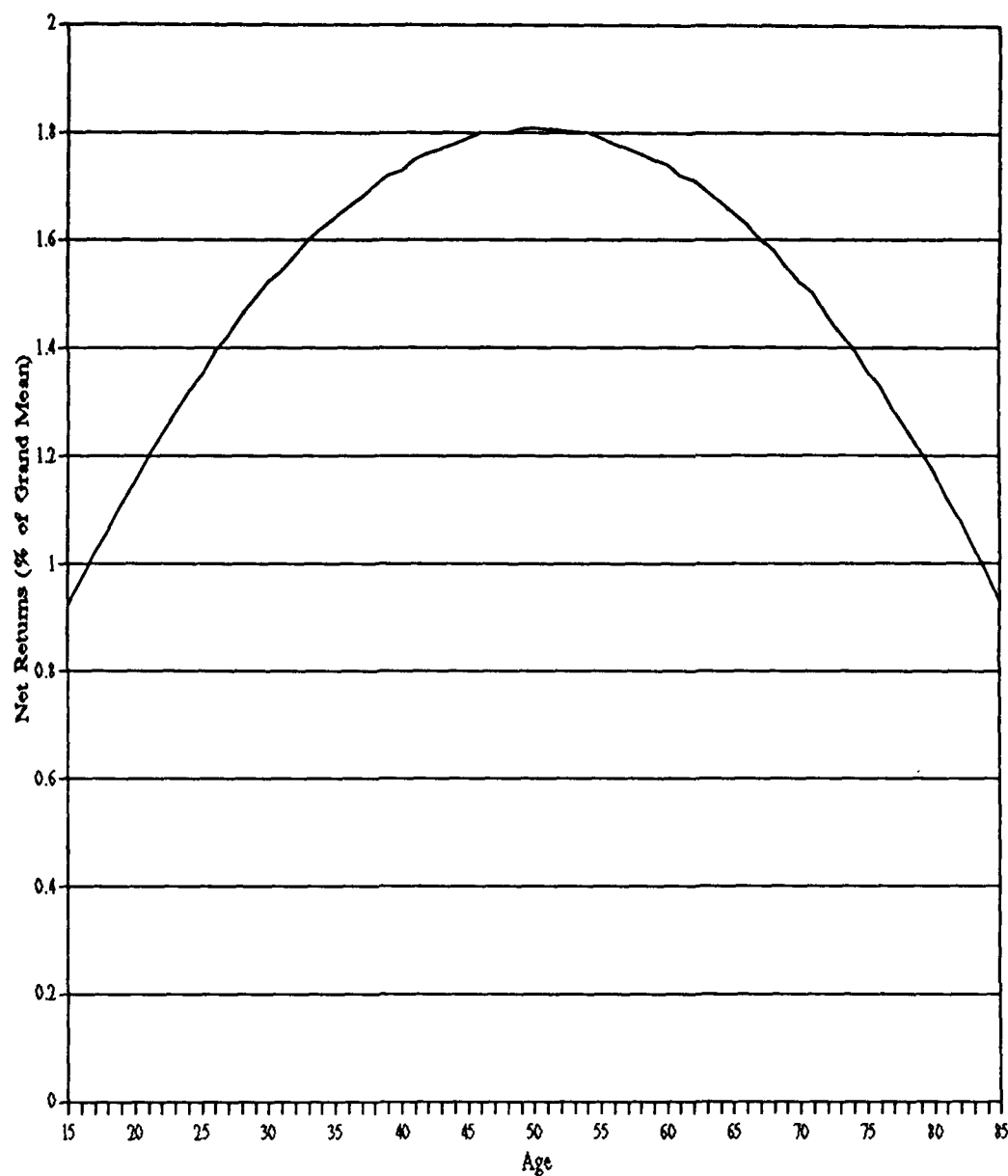
2. Net difference for British males from British females was 28.6%.

\* Significant at 0.10; \*\* Significant at 0.05.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

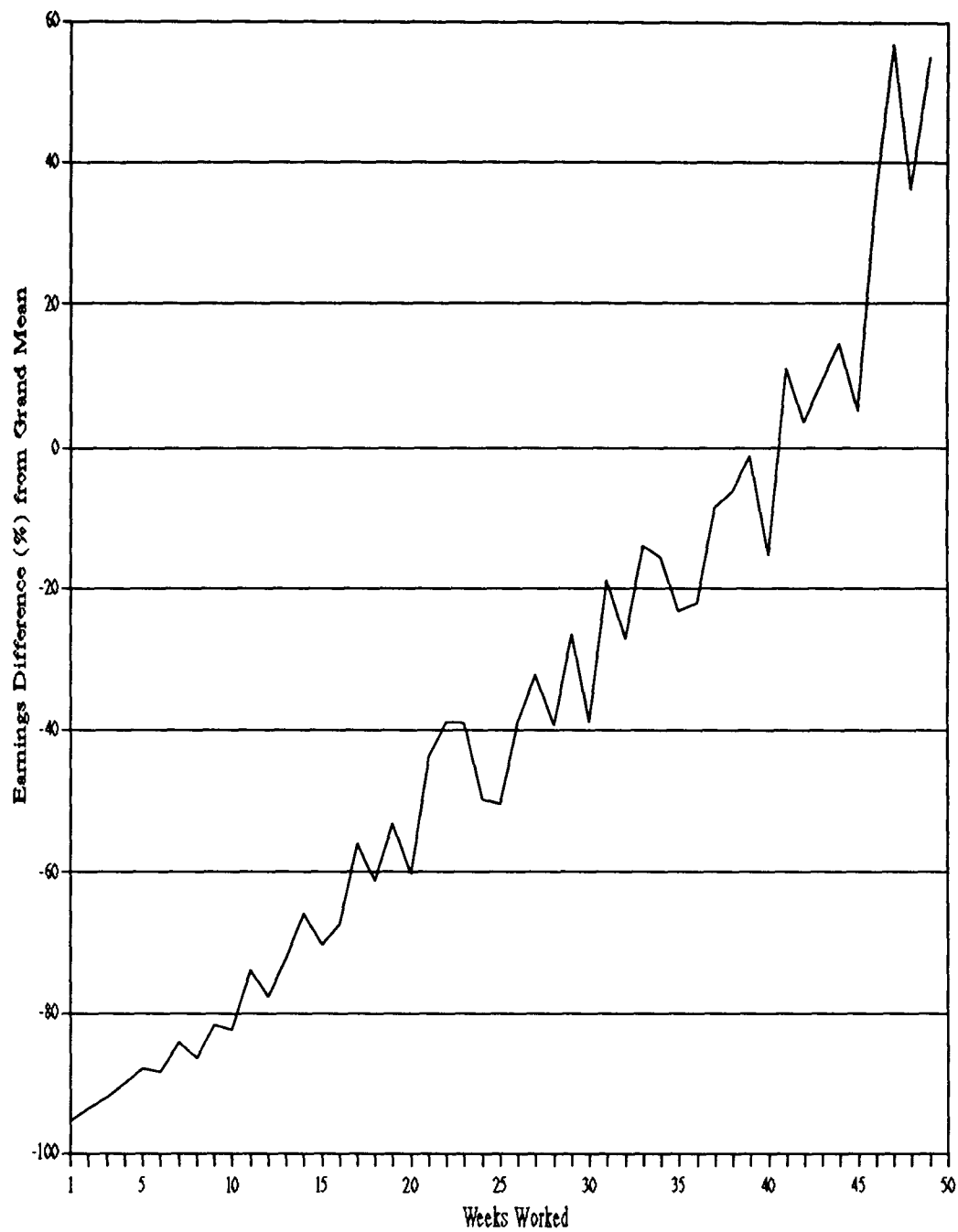


**Figure 3.1 Gross Effect of Age on Earnings of Individuals, Canada, 1990**

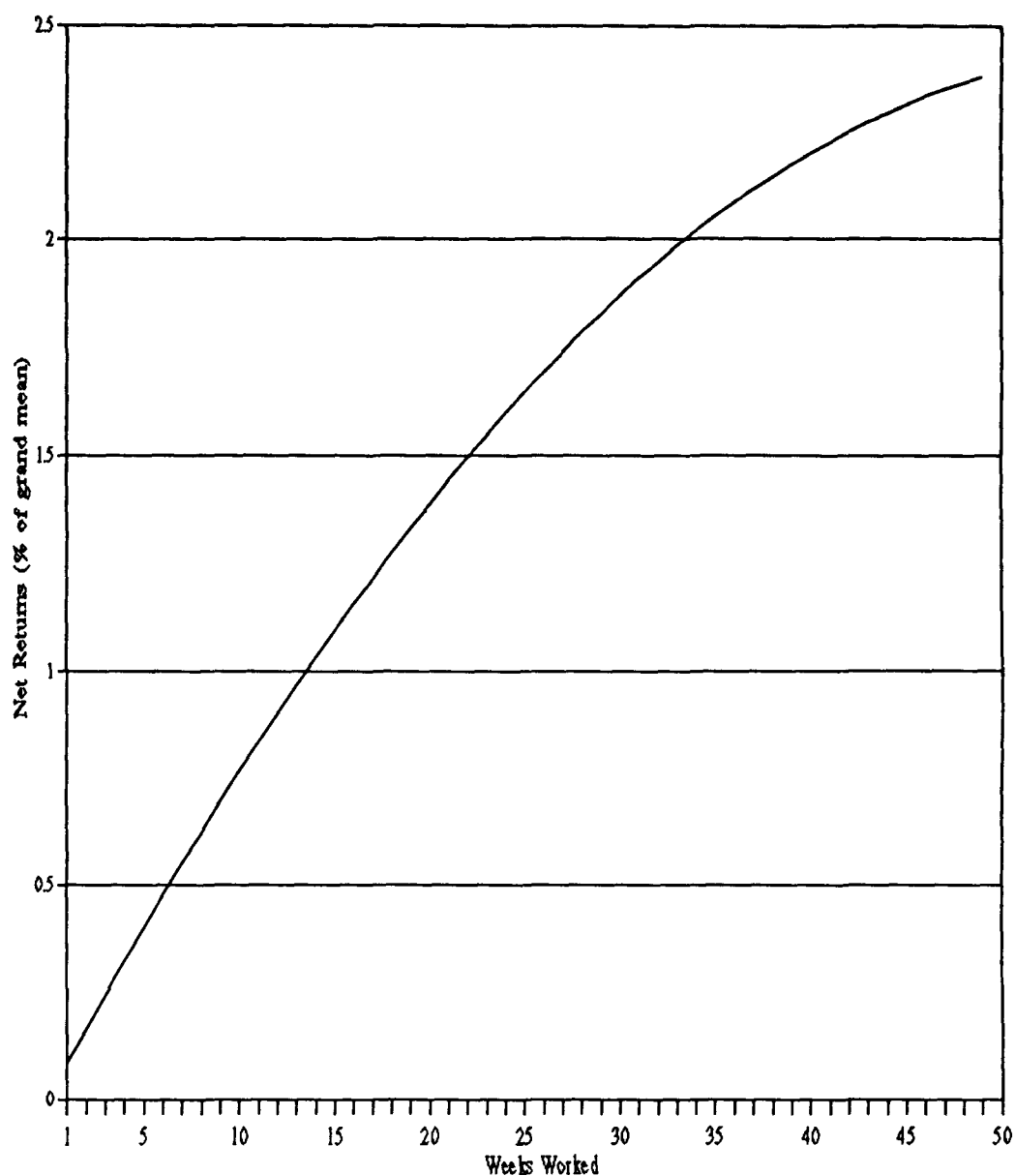


**Figure 3.2 Net Effect of Age on Earnings of Individuals, Canada, 1990**

Adjusting for ethnicity, gender, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part-time/full-time worked



**Figure 3.3 Gross Effect of Weeks Worked on Earnings of Individuals, Canada, 1990**



**Figure 3.4 Net Effect of Weeks Worked on Earnings of Individuals, Canada, 1990**  
Adjusting for ethnicity, gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, and part-time/full-time worked.



## **Chapter 4**

### **Education and Ethnic Disparities in Earnings**

We have shown in Chapter 3 that earnings disparities were substantial among Canadian ethnic groups. Most Europeans were in favourable positions, while visible minorities and some Southern European groups were severely handicapped. This pattern of disparity remained, though to a lesser extent, after a number of earnings-related factors had been taken into account.

Among the variables controlled in the assessment of net effect of ethnicity were education and occupation. It is generally agreed that education and occupation are among the most important determinants of earnings. The higher one's educational level and occupational status, the higher one's earnings. It follows that an ethnic group with higher average educational level and occupational status should have higher average earnings. In this chapter, we will examine the educational status of the ethnic groups in 1990, and analyze the consistency of the groups' monetary achievements with their achievement in education. This analysis will help us better understand the implications of educational achievements for different ethnic groups in terms of their attainments in earnings. The relationship between occupation and ethnic earnings disparities will be analyzed in Chapter 5.

### **Educational Achievements of the Canadian Ethnic Groups**

In modern society, a well-educated labour force is an essential condition for social and economic development (Royal Commission, 1969: 25). At the same time, education is a major asset for anyone in the society in acquiring desirable socioeconomic status. As Lenski wrote, "Of all the changes linked with industrialization, none has been more important than the revolution in knowledge. . . . it has caused education to become a much more valuable resource, and made educational institutions far more important in the distribution of power and privilege, than ever before in history." (Lenski, 1967: 364). This has become more the case as science and technology develop faster and faster. It is generally agreed that educational attainment has substantial positive impact, direct and indirect, on the earnings of individuals (McGuire and Pichler, 1969: 22; Mincer, 1974; Slottje, 1989: Chapter 6; and Inhaber and Carroll, 1992: 141-2).

Table 4.1 presents the gross and net effects of education on the earnings of individuals in 1990 Canada. Before other factors are taken into account, workers with no degree, certificate or diploma or with only a high school graduation diploma, earned much less than the average, at -30% and -15% respectively. Persons in all other categories earned substantially more, ranging from 19% to 273% above the average. Workers with a non-university certificate other than trades certificate or diploma made 19% more than the average; workers with a trades certificate or diploma made 27% more; those with a university certificate below bachelor's degree 33% more; those with a bachelor's degree 59% more; those with a university certificate above bachelor's degree 88% more; those with a master's degree 123% more; those with an earned doctorate 206%

more; and those with a degree in medicine, dentistry, veterinary medicine or optometry 273% more. The higher the educational level one had, the more one earned, and the average disparities in earnings among workers with different educational levels were enormous.

A large proportion of the effect of education on earnings could be mediated through such factors as occupation and employment. For example, individuals with higher educational levels tended to have higher occupational status and higher rates of full employment. But even with such factors statistically controlled, the impact of education on earnings was still substantial. Other things being equal, workers without any certificate or diploma earned 13% less than the average; those with a certificate or diploma below college level were near the average, ranging from -2% to +6%; those with university education earned 12% to 26% more; those with a master's or Ph.D. degree earned 32% and 51%, respectively, more than the average; and those with a degree in medicine, dentistry, veterinary medicine or optometry had the highest earnings, at 98% above the average.

Because the influence of education on the earnings of individuals is so enormous, the economic position of any group should be related to its members' educational attainments. In its report, the Royal Commission on Bilingualism and Biculturalism demonstrated that the ranking of the Canadian ethnic groups in income was reflected almost exactly by the ranking of their educational levels. In 1961, in the male non-agricultural labour force in Canada, the income ranking of the ethnic groups from the highest to the lowest was: Jewish, British, German, Other, Ukrainian, French and Italian.

The ranking for proportions having only elementary education from the lowest to the highest was the same, and the ranking of average number of years of schooling from the highest to the lowest was also the same. Only in the proportions having a university education, was the ranking slightly different: the German and the Other group shifted their positions; the positions of all of the other groups remained unchanged (Royal Commission, 1969: 26-29).

Although some researchers claim that the Canadian educational system has functioned to reproduce the existing socioeconomic hierarchy in favour of the dominant groups and to the disadvantage of the subordinate groups (see, for example, Li, 1988: 73-7; Shamai, 1992: 53-5), upward mobility of Canadian minority groups in the educational hierarchy has been apparent and substantial. Since the early decades of this century, the Canadian ethnic groups' standing in educational attainment has undergone significant changes. In 1921, illiteracy among the British was 1%, the lowest among the ethnic groups. Closely following the British, were the Dutch (2%), Scandinavians (2%), and Germans (3%). At the other end of the scale, illiteracy among Asians, Italians, Poles, and Ukrainians was about 20 to 30-fold greater than among the British. But by 1931, this sharp contrast had declined by half. After that, from 1951 to 1981, the range of difference between the British and these groups in terms of proportions with less than Grade 9 education was at worst two-fold. Aboriginal Peoples, Italians, the French and Ukrainians were the most under-educated during these years (Herberg, 1990: 210-1).

With respect to post-secondary education, many previously disadvantaged groups also made substantial gains between 1951 and 1981. During the thirty-year span, the

proportion of Canadians with post-secondary education increased 27%, from 8% in 1951 to 35% in 1981. Increases among Asians (39%, from 5% to 44%), French (25%, from 4% to 29%), Scandinavians (34%, from 6% to 40%) and Ukrainians (29%, from 3% to 32%) were larger than the Canadian average. In 1981, the ethnic groups with the highest percentages of post-secondary education were Filipinos (59%), Jews (53%), East Indians (46%), Koreans (43%), Japanese (41%), and Blacks (41%). It is notable that five of the six highest were visible minority groups. The British (38%) were in the middle of the ranking. The Italians (23%) and the Native Peoples (23%) were at the bottom (Herberg, 1990: 211-3).

Data from the 1991 PUMFI are in agreement with these findings. In Table 4.2, ten original categories of educational attainment measured by highest degree obtained were grouped into three levels: "Non-secondary Education" which includes No degree, certificate or diploma, with a gross effect of -30% and a net effect of -13% on earnings; "Secondary and non-university post-secondary education" which includes Secondary/high school graduation certificate or equivalent, Trades certificate or diploma, and Other non-university certificate or diploma, with gross effects of -15% to +27% and net effects of -2% to +6%; and "University education" which includes University certificate or diploma below bachelor level, Bachelor's degree(s), University certificate or diploma above bachelor level, Master's degree(s), Earned doctorate, and Degree in medicine, dentistry, veterinary medicine or optometry, with gross effects of +33% to +273% and net effects of +12% to +98%.

In 1991, 30% of the employed labour force in Canada had less than secondary

education, 54% had secondary or non-university post-secondary education, and 17% had university education (the first three columns of Table 4.2). Looking at the rates of non-secondary education, about two-thirds of the European groups and half of the visible minority groups were close to the Canadian average. At the same time, several Southern European groups (Italian 38%, Greeks 44% and Portuguese 60%), Vietnamese (41%), and Aboriginal Peoples (55%) had substantially higher rates of non-secondary education. At the other end, with substantially lower rates of non-secondary education were Arabs (23%), West Asians (19%), Jews (15%) and Filipinos (13%). The percentages of non-secondary education tended to be lower for visible minority groups than for European groups.

In terms of rates of university education (including graduate and medical education), most European groups were around the national average of 17% (British, French, Other Western European, Hungarian, Ukrainian, Balkan, and Spanish) or slightly below (Dutch, German, Greek, and Italian). Moderately above the average were Poles at 21%, and at the top were Jews (47%). At the bottom were Portuguese with only 5% having had university education. With the exception of Black (12%) and Aboriginal (4%), who ranked substantially below the national level, the remaining visible minority groups had high rates of university education. Latin Americans (18%) and Vietnamese (19%) were slightly above the national average. The other six groups (Arab, West Asian, South Asian, Chinese, Filipino, and Other East and Southeast Asian), had substantially higher rates of university education ranging from 27% to 38%.

A notable phenomenon here is the large percentage of most Asian groups that had

a university education. As a consequence of Canada's immigration policy since 1967, which emphasizes education as one of the criteria for admitting immigrants, foreign-born members of most ethnic groups had higher educational levels than their Canadian-born counterparts (columns 5, 6, 7 and 9, 10, 11 in Table 4.2). While the educational levels of the foreign-born members of most European groups were only slightly higher than that of their Canadian-born counterparts, the educational levels of the foreign-born members of several Southern European groups (Balkan, Greek and Italian) were lower than their Canadian-born counterparts. In contrast, Asian immigrants had much higher educational levels (probably resulting from the existence of larger pools of Asian emigrants, so that the educational criteria of immigration could be carried out to a greater extent in Asia) than their Canadian-born counterparts. Their rates of university education were about twice as high as that of their Canadian-born counterparts. This, together with their high foreign-born to Canadian-born ratios (over 85% for most Asian groups), substantially elevated the average educational levels of the Asian groups.

Overall, Jews and Filipinos stood at the top of the ethnic educational hierarchy. Large percentages of their members had university education (47% and 38% respectively), and only 13-15% did not complete secondary education. Following them were groups from Asia, also with rates of university education substantially higher than the national level. In the middle were Latin Americans and most European groups, with around-average levels in rates of university education and non-secondary education. Down the scale were Italians, Greeks, Vietnamese and Blacks, with slightly over 10% of their workers having had university education, and substantially higher-than-average rates of

non-secondary education. At the bottom were Portuguese and Aboriginal Peoples, both having less than 5% of their employed labour force with university education, and over half failing to complete secondary education.

### **Inconsistency between Educational Achievements and Earnings Acquisition**

The substantial gross and net effects of education on earnings found in the 1991 PUMFI data suggest that higher educational level was, in general, an asset in the Canadian labour market in the monetary achievement of an individual or an ethnic group. But for workers of different ethnic origins, education carried different economic values. The earnings of the workers could be very inconsistent with their educational qualifications. For example, while Filipinos were at the top of the Canadian educational hierarchy with Jews, they earned less (-7%) than an average Canadian, compared to Jews who earned substantially (34%) more than the Canadian average. Most of the other Asian groups also stood high in educational achievements, but they all had below-average earnings. The educational level of those of Latin American origins was in the middle of the ethnic educational ranking, but the average earnings of this group ranked the second lowest at -28%.

To better understand the earnings positions of the ethnic groups in relation to education, it would be helpful to examine the relative average earnings of members of the ethnic groups with comparable educational qualifications. Table 4.3 reports the relative earnings of ethnic groups within three broad educational categories: non-secondary education, secondary and non-university post-secondary education (hereafter called



secondary education for short), and university education. At the bottom of the table, the Canadian average is presented for each of the three educational categories, in dollars converted from the mean log earnings of the category. The average earnings (also converted from log earnings) of each ethnic group within the educational category was calculated and presented as a percentage deviation from the Canadian average of the category.

At the national level, those with secondary education earned about 50% more than those without secondary education, and those with university education earned about 150% more. But educational achievement carried very different values for workers of different ethnic origins. Substantial earnings disparities were found among the ethnic groups within each educational category.

#### Differences among European Groups

First, let us look at the differences between the British and French. Relative to the Canadian average for each category, workers of British origin earned 3% more in the category of non-secondary education, 7% more in the category of secondary education, and 8% more in the category of university education. In comparison, workers of French origin earned 12% more in the category of non-secondary education, 1% less in the category of secondary education, and 4% more in the category of university education. It appears that the French had a significant edge over the British at the low level. But at secondary and university levels, the British were more advantaged than the French. This suggests that while the French have caught up with or surpassed the British in

earnings at lower levels, they have not been able to do so at higher levels.

Compared to the British and French, Western European groups were in even better positions. Relative to the Canadian average, Dutch, Germans and Other Western Europeans earned 9%, 17% and 27% more, respectively, in the category of non-secondary education, and 9%, 12% and 26% more, respectively, in the category of secondary education. Only in the top category, was the situation less consistent. The Dutch earned slightly less (-3%) than the Canadian average and Germans earned minimally more (1%), while Other Western Europeans retained their advantage at 14% over the average.

Eastern Europeans were also in preferable positions, though to a lesser extent. Poles, Hungarians and Ukrainians earned 7%, 13% and 16%, respectively, more than the Canadian average at the lower level, and 3%, 13% and 16%, respectively, more in the middle category. For those with university education, Hungarians and Ukrainians also earned substantially (9% and 11%, respectively) more than the average, but Poles were below the mean at -9%.

The experience of Jews varied in different educational categories. At the lower level, they had an edge of 9% over the Canadian average. At the middle level, they earned slightly less (-4%) than an average Canadian. In the category of university education, Jews earned 19% more than the average, the highest of all ethnic groups and five percentage points more than the next highest group (Other Western European).

For Southern European groups, there is a mixed picture. At the lower level, most of the groups, except the Spanish (-5%), were substantially above the Canadian average. Persons of Balkan origins (19%), Greeks (16%), Italians (42%) and Portuguese (35%)

without secondary education earned about 20-40% more than an average Canadian with similar levels of education. But at the other two levels, they were mostly disadvantaged. Among those with secondary education, those of Balkan origins and Italians earned 5% and 8% respectively more than the average, Portuguese earned slightly less than the average, and Greeks (-17%) and the Spanish (-17%) earned substantially less. For those with university education, only Italians were slightly above the average at 2%; persons of Balkan origins (-5%) were moderately below the average, and Greeks (-25%), Portuguese (-13%) and the Spanish (-29%) earned substantially less than the average.

Overall, European groups were well rewarded for their education. At the lower level, most of the groups had earnings substantially more than the Canadian average. Only the British were slightly above the average and the Spanish slightly below. In the middle of the educational hierarchy, a majority (9) of the 14 groups had earnings more than the average, while the other five earned less than the average. For the top educational category, half of the groups had above-average earnings, and half had below-average earnings.

#### Substantial Disadvantage of Visible Minorities

In contrast to the favourable positions of European groups, all of the visible minority groups were in disadvantaged positions in every category. At the lower level, five of the 10 visible minority groups, i.e., Arabs (-5%), South Asians (-7%), Chinese (-8%), Vietnamese (-6%) and Blacks (-7%), earned moderately less than an average Canadian with similar educational level, ranging from about -5% to -7%. The other five

groups, West Asians (-19%), Filipinos (-33%), Other East and Southeast Asians (-19%), Latin Americans (-14%) and Aboriginal Peoples (-42%), had earnings substantially less than the average. For those with secondary education, all 10 visible minority groups earned substantially less than the average. Five of them, South Asians (-14%), Chinese (-16%), Filipinos (-17%), Other East and Southeast Asians (-18%) and Blacks (-12%), had earnings 12% to 18% below the average. The other five groups, Arabs (-28%), West Asians (-27%), Vietnamese (-27%), Latin Americans (-32%) and Aboriginal Peoples (-34%), earned about 25-35% less than the average. At the top educational level, only Blacks and Chinese were relatively better-off compared to other visible minorities, earning 7% and 10% respectively less than the average. The earnings of the other eight groups were again substantially below the mean: South Asians (-15%), Other East and Southeast Asians (-19%), Vietnamese (-21%), Filipinos (-22%), Aboriginals (-24%), Arabs (-26%), West Asians (-28%) and Latin Americans (-39%).

The disadvantage of workers of visible minority origins is clearly demonstrated. All of the visible minority groups had below-average earnings in each of the categories, most of their deficits were substantial, and many earned more than 25% below the average. In contrast, a majority of the European groups had above-average earnings within each educational category, although a small number of them had below-average earnings for the middle and upper level educational categories. Only two groups (Greek and Spanish) earned substantially less than the average in the category of secondary education, and three groups (Greek, Portuguese and Spanish) in the category of university education.

It is noticeable that the European groups with substantially below-average earnings at the middle and upper educational levels were all from Southern Europe. This coincides with our findings described in the preceding chapter that Southern European groups experienced similar difficulties, though to a lesser extent, as their visible minority counterparts, in obtaining earnings comparable to their productivity. And the relative disadvantage of their members was aggravated as they moved up the educational hierarchy.

Clearly, even though visible minority groups had significantly improved their educational status, they had not acquired comparable earnings. Members of European groups had greater ease than their visible minority counterparts in utilizing their educational achievements in moving up in the socioeconomic hierarchy. High consistency of the ethnic groups' earnings positions and their educational attainments reported by the Royal Commission on Bilingualism and Biculturalism probably is explained by the small number (six) of ethnic groups that were identified, with all visible minorities pooled into the "Other" group.

This does not imply that education was unimportant in the upward mobility of an ethnic group or its members in terms of monetary attainment. If workers of visible minority origins had not had the education they possessed, their situations would have been worse. What our findings suggest is that educational achievement did not necessarily bring about economic success; the market value of educational qualifications varied substantially with ethnicity.

### **Ethnic Differentials in Returns to Education**

It has been found in the U.S. that persons of different ethnic origins are rewarded differently for their educational qualifications (Sandefur and Scott, 1983; Barringer and Kassebaum, 1989). Some Canadian researchers have demonstrated that visible minorities usually ranked lower in earnings than in educational achievement (Winn, 1988; Herberg, 1990). Our foregoing discussion also suggests that returns to education were very different for Canadians of different ethnic origins. But although these are strong indications that Canadians of visible minority origins did not receive equitable returns to their educational qualifications, other factors could have been at work to generate the results. For example, if the male-female ratio of an ethnic group was substantially lower than that of other groups, its lower ranking in earnings may have been a result of a gender effect rather than of lower returns to educational attainment. Similarly, if the age structure of an ethnic group is significantly different from other groups, it is possible that an age effect was responsible for its different ranking in earnings as compared to its rankings in educational achievement. Therefore, if we want to have a direct and more reliable measurement of ethnic differences in returns to educational achievement, it is necessary to take into account the effects of other earnings-related factors. Otherwise, the claim of ethnic differentials in returns to labour market qualifications is less convincing.

To help evaluate the extent to which unequal returns to educational attainment were responsible for ethnic disparities in earnings, Table 4.4 reports the "net" returns to educational attainment for persons of different ethnic origins as compared to those for persons of British origin. The results were obtained from a regression similar to that

explained in Chapter 2. The only difference was that the dummies for the variables Ethnicity and Education in the original model were replaced with dummies representing the interactive categories of ethnicity and education. This model captures the same effects as the original model, except that it also captures the interaction effects of ethnicity and education.

Because of its dominant position in Canadian society in terms of socioeconomic and numeric status, the British group is used as the base line category at each educational level. That is, the net returns to education for workers of other ethnic origins are expressed as percentage differences from the returns for workers of British origin in the same educational category. For example, when we read "3.1" for those of French origin with "no degree, certificate or diploma," we know that workers of French origin in this category had returns to education about 3% more than their British counterparts at the same educational level and with comparable characteristics in other earnings-related dimensions. At the same time, the category of "no degree, certificate or diploma" is used as the base category for other levels of education for the British. For example, workers of British origin with a "high school graduation certificate" had a net return to education about 13% more than their counterparts (also of British origin) with "no degree, certificate or diploma." The table also presents the statistical significance ("\*" for 0.10 and "\*\*\*" for 0.05) for the coefficients.

#### Differences among the European Groups

First of all, as can be expected, the net economic returns to education for workers

of British origin were very significant. Compared with those with no degree, certificate or diploma, those who completed high school earned 13% more, those with a trades certificate earned 17% more, those with other non-university certificates 21% more, those with a university degree below bachelor level 27% more, those with a bachelor's degree 40% more, those with a university certificate above bachelor level 47% more, those with a master's degree 58% more, those with a doctorate degree 77% more, and those with a degree in medicine, dentistry, veterinary medicine and optometry 142% more. The economic value of education for persons of British origin in the Canadian labour market is beyond doubt.

Other things being equal, persons of French origin with an education of bachelor's degree or under had an edge of 2% to 8% over their British counterparts. At levels above bachelor's degree, returns to education for persons of French origin were not different (coefficients not statistically significant) from those for persons of British origin. This overall advantage of the French, though moderate, further supports our argument in Chapter 3 that the French were in fact favoured in the labour market. Evidence from Table 4.4 indicates that, especially at lower levels, the French were favoured over the British.

Returns to education for most Eastern and Western European groups were similar to those for the British at most educational levels: most of the coefficients were statistically insignificant. Only in a few categories, did these groups show statistically significant differences from the British. For the groups from Western Europe, Other Western Europeans who did not complete high school and those with other non-university



certificates had higher returns than persons of British origin by 14%; Germans who did not complete high school had slightly higher returns (+4%) than the British; and workers of Dutch origin with a university certificate below bachelor level, with a master's degree, and with a degree in medicine earned 12%, 18% and 41%, respectively, less than their British counterparts.

Among Eastern Europeans, Ukrainians with other non-university certificates and with a bachelor's degree had moderately higher returns than their British counterparts by 4% and 6% respectively, and those with a university certificate below bachelor level earned 14% less than the British. Hungarians with other non-university certificates had lower returns than the British by 11%. Poles with a university certificate below bachelor level and with a master's degree had returns 19% and 14%, respectively, less than the British.

In general, returns to education for Eastern and Western Europeans were similar to those for persons of British origin. At the same time, it is noticeable that Other Western Europeans were slightly more favoured, while the Dutch and all three Eastern European groups tended to be slightly disadvantaged. This is again consistent with our findings discussed in Chapter 3 that while the net effects of ethnicity for Western Europeans tended to be positive, Eastern Europeans tended to register negative net effects of ethnicity.

Similar to that for Eastern and Western European groups, returns to education for most Southern European groups did not appear to be substantially different from their British counterparts. The differences in returns were statistically significant only in a few

educational categories. For workers of Italian origin, those who completed high school and those with other non-university certificates had returns 3% and 7% respectively more than their British counterparts, and those with a degree in medicine had returns 26% less than the British. Returns for persons of Balkan origins were not different from those for the British at any level. Workers of Portuguese origin without high school had returns 11% higher than their British counterparts, and the returns of those with a university certificate below bachelor's level were 23% lower than those for the British. Workers of Spanish origin who completed high school had returns 14% less than their British counterparts. The Greeks seemed to be the most disadvantaged of all Southern European groups: returns for them were significantly less than those for the British in four of the ten educational categories: those who had not completed high school (-6%), those with high school education (-7%), those with a university certificate below bachelor level (-33%) and those with a degree in medicine (-50%).

Finally, Jews were able to generate higher returns than the British in the two categories at the bottom of the educational hierarchy (22% and 8%). But in the other eight categories their differences from the British were not significant.

Overall, European groups did not appear to have substantially different returns to education taking the British as the benchmark or in comparison to each other. Having said that, workers of some origins (French, Other Western European and Jewish) tended to have slightly higher returns than their British counterparts, at least at the lower end of education, and those of some other origins (Dutch, Hungarian, Polish, Spanish and Greek) tended to have slightly lower returns.

### Low Educational Returns for Workers of Visible Minority Origins

Consistent with our findings in Chapter 3 that the net effects of ethnicity on earnings were negative for all of the ten visible minorities, these groups all had substantially lower returns to education in comparison to the British in many categories. This is in sharp contrast to the situation for European groups.

Workers of Arab origins had returns 6%, 13%, 23%, 18%, 22%, 18% and 28%, respectively, lower than their British counterparts in the categories of high school graduation certificate, trades certificate, university certificate below bachelor level, bachelor's degree, university certificate above bachelor level, master's degree and degree in medicine. Only in three categories, were their returns not significantly different from those of the British. The returns for West Asians were lower than the British in three categories: those who completed high school (-10%), those with a master's degree (-18%), and those with a degree in medicine (-31%). The returns for South Asians were significantly lower than those for the British in six of the ten educational categories: high school graduation certificate (-4%), trades certificate (-9%), bachelor's degree (-18%), university certificate above bachelor level (-13%), master's degree (-19%), and degree in medicine (-16%). Returns for the Chinese were significantly lower than the British in eight categories: no degree, certificate or diploma (-4%), high school graduation certificate (-5%), other non-university certificate (-6%), bachelor's degree (-14%), master's degree (-10%), earned doctorate (-26%), and degree in medicine (-15%). Filipinos with a trades certificate, other non-university certificates, a bachelor's degree and a master's degree had returns 13%, 8%, 12% and 21%, respectively, lower than their British counterparts.

Vietnamese had returns lower than the British in six categories: high school graduation certificate (-12%), trades certificate (-20%), university certificate below bachelor level (-19%), bachelor's degree (-13%), university certificate above bachelor level (-39%), and degree in medicine (-43%). For Other East and Southeast Asians, those with a high school graduation certificate (-10%), a bachelor's degree (-15%), and a degree in medicine (-35%) had returns significantly lower than the British; but those with a university certificate below bachelor level had returns 20% higher than their British counterparts, and this is the only category in which a visible minority group had significantly higher returns to education than the British. Returns for Latin Americans were lower than the British in four categories: high school graduation certificate (-12%), other non-university certificate (-30%), bachelor's degree (-24%), and university certificate above bachelor level (-31%). Returns for Blacks were lower than the British in three categories: no degree, certificate or diploma (-8%), other non-university certificate (-10%) and bachelor's degree (-10%). And finally, returns for Aboriginal Peoples were lower than their British counterparts in five categories: no degree, certificate or diploma (-19%), high school graduation certificate (-16%), trades certificate (-20%), other non-university certificate (-25%), and degree in medicine (-77%).

Overall, workers of visible minority origins had substantial difficulties translating their educational achievements into economic returns. Compared with their European counterparts, who had returns to education similar to the British, those of visible minority origins had returns substantially lower than the British in a large number of categories. Specifically, out of the 129 coefficients for the thirteen European groups, only thirty were

statistically significant, among which sixteen were positive and fourteen negative. In comparison, out of the ninety-nine coefficients for the ten visible minority groups, half (fifty) were significant, almost all of which (forty-nine) were negative, and nearly four-fifths (thirty-nine) of them were over 10% in absolute value.

### **Summary and Discussion**

In 1991, many traditionally low status groups had moved up in the educational hierarchy. Although some Southern European groups stayed low in educational attainment, and Aboriginal Peoples were still trapped at the bottom of the hierarchy, most visible minorities, especially those from Asia, had caught up with or surpassed Eastern and Western European groups. This was, in part, a result of the process through which large numbers of Asian immigrants with high educational levels had entered Canada in the past three decades. For the Canadian-born, differences among the ethnic groups were slight and there was no apparent pattern of ethnic disparity. The contention that the Canadian school system has been a mechanism to reproduce and create social inequality (Shamai, 1992: 44-45) is not supported by our findings. If that were the case, ethnic inequality in educational achievement among the Canadian-born would be significant, and disadvantaged minority groups would be in unfavourable positions. It can thus be logically argued that the Canadian educational system in general no longer favoured some ethnic groups over others, and the Canadian system of educational stratification is no longer characterized by the dominant and superior positions of the charter and other European groups.

But when we compare the earnings positions of the ethnic groups with their positions in education, significant inconsistencies are observed. On the one hand, even though most visible minority groups ranked high in educational achievement, they were at the bottom of the earnings hierarchy. On the other hand, most European groups had around-average educational levels, but most of them were in advantaged positions in terms of earnings. In fact, when we compare the earnings of the ethnic groups within three broad categories of educational levels, all visible minority groups had below-average earnings in each of the categories, while most European groups had above-average earnings. This evidence suggests that similar educational qualifications carried different economic values in the Canadian labour market for individuals of different ethnic origins, and visible minorities had greater difficulties than their European counterparts in translating their educational achievements into monetary rewards.

Our analysis of the net returns to education (adjusting for other earnings-related factors) confirms that workers of different ethnic origins did receive differential returns for their comparable educational achievements. Even though they were the same in gender, age (experience), immigrant status, occupation, industrial sector, length of time worked in 1990, etc., the earnings of workers of different ethnic origins could still be substantially different at the same level of educational credentials. The overall pattern was again that all visible minorities had returns substantially lower than their European counterparts. Among the fourteen European groups, only the Dutch, Hungarian, Polish and Greek appeared to have lower returns in certain educational categories.

As explained in the last section of Chapter 1, the measurement of ethnic

differences in earnings after adjustment for earnings-related factors is a good estimate of direct pay discrimination based on ethnicity. In Chapter 3 we reported that ethnicity registered differential economic values, indicating the existence of pay discrimination in the Canadian labour market. Our findings also pointed to the apparent pattern that the earnings disparities were largely seen between European and visible minority groups, indicating that pay discrimination in the labour market tended to be racially oriented. In this chapter, these findings have been further elaborated with our comparisons of the net ethnic differences within educational category. Evidence of ethnic differentials in returns to education, or adjusted earnings differences among the ethnic groups within each educational category, confirms the existence of ethnic and racial pay discrimination. The fact that in most educational categories European groups had relatively higher returns and visible minorities had substantially lower returns indicates that at each of these educational levels, workers of visible minority origins suffered from substantial pay discrimination.

**Table 4.1 Gross and Net Effects of Education on Earnings of Individuals, Canada, 1990**

Highest degree obtained	Gross effect (%)	Net effect <sup>a</sup> (%)	N
No degree, certificate or diploma	-29.6	-12.9	127,183
High school graduation diploma	-15.2	-1.5	110,504
Trades certificate or diploma	27.1	1.3	55,101
Other non-university certificate	19.2	6.2	61,064
University certificate below bachelor's degree	33.3	12.1	9,715
Bachelor's degree(s)	58.6	19.1	40,735
University certificate above bachelor's degree	87.9	25.8	6,703
Master's degree(s)	123.3	32.2	9,936
Earned doctorate	205.7	50.5	1,890
Degree in medicine, dentistry, veterinary medicine or optometry	273.3	98.0	2,276

a. Controlling for ethnicity, gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, occupation, industrial sector, weeks worked, and part-time/full-time worked; Adjusted R Square = 0.57988 from regression.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.



**Table 4.2 Educational Compositions of the Canadian Ethnic Groups, Canadian-born and Foreign-born, 1991**

Ethnic group	Canadian-born and foreign-born				Canadian-born				Foreign-born			
	Non-secondary education <sup>a</sup>	Secondary and non-univ post-secondary education <sup>b</sup>	Post-secondary education <sup>c</sup>	N	Non-secondary education <sup>a</sup>	Secondary and non-univ post-secondary education <sup>b</sup>	Post-secondary education <sup>c</sup>	N	Non-secondary education <sup>a</sup>	Secondary and non-univ post-secondary education <sup>b</sup>	Post-secondary education <sup>c</sup>	N
Canada	29.9	53.3	16.7	425,107	30.0	54.3	15.7	347,148	29.4	49.1	21.5	77,959
British	30.1	53.7	16.2	124,474	31.3	53.1	15.6	110,336	20.1	58.4	21.5	14,138
French	29.9	55.0	15.1	95,257	30.1	55.1	14.8	93,922	16.9	50.1	33.0	1,335
Dutch	29.2	58.0	12.8	6,190	27.5	59.5	13.0	3,789	31.8	55.7	12.5	2,401
German	33.1	53.3	13.6	15,897	35.2	51.6	13.2	12,050	26.5	58.5	15.0	3,847
Other W European	26.9	56.0	17.0	1,496	30.6	54.3	15.1	857	22.1	58.4	19.5	639
Hungarian	26.4	56.3	17.3	1,805	29.4	55.4	15.2	911	23.3	57.3	19.5	894
Polish	25.4	53.6	20.9	4,164	28.6	52.0	19.4	2,005	22.5	55.2	22.3	2,159
Ukrainian	34.0	49.5	16.5	6,846	34.2	50.2	15.6	6,364	30.9	41.1	28.0	482
Balkan	30.7	54.1	15.2	2,341	23.4	56.6	20.0	820	34.6	52.7	12.7	1,521
Greek	44.1	45.3	10.6	2,592	23.3	59.8	16.9	1,006	57.3	36.1	6.6	1,586
Italian	37.6	49.5	12.9	13,215	19.6	62.4	17.9	6,701	56.1	36.2	7.7	6,514
Portuguese	59.7	35.9	4.5	4,046	36.6	57.5	5.9	704	64.5	31.3	4.2	3,342
Spanish	31.0	54.5	14.5	1,055	30.1	54.5	15.4	123	31.1	54.5	14.4	932
Jewish	14.8	37.8	47.4	3,766	14.1	37.0	48.9	2,496	16.1	39.3	44.6	1,270

**Table 4.2 Educational Compositions of the Canadian Ethnic Groups, Canadian-born and Foreign-born, 1991  
(Continued)**

Ethnic group	Canadian-born and foreign-born				Canadian-born				Foreign-born			
	Non-secondary education <sup>a</sup>	Secondary and non-univ post-secondary education <sup>b</sup>	Post-secondary education <sup>c</sup>	N	Non-secondary education <sup>a</sup>	Secondary and non-univ post-secondary education <sup>b</sup>	Post-secondary education <sup>c</sup>	N	Non-secondary education <sup>a</sup>	Secondary and non-univ post-secondary education <sup>b</sup>	Post-secondary education <sup>c</sup>	N
Arab	22.9	43.9	33.2	1,775	22.3	56.2	21.5	274	23.0	41.6	35.3	1,501
West Asian	18.6	48.4	33.0	964	21.8	58.2	20.0	55	18.4	47.9	33.8	909
South Asian	27.6	45.6	26.8	6,288	33.3	52.9	13.9	403	27.3	45.1	27.6	5,885
Chinese	29.5	42.8	27.7	8,553	15.3	54.3	30.4	1,186	31.7	41.0	27.3	7,367
Filipino	13.3	48.9	37.9	2,483	39.7	52.6	7.7	78	12.4	48.7	38.8	2,405
Vietnamese	41.0	40.2	18.8	1,158	75.0	16.7	8.3	12	40.7	40.4	18.9	1,146
Other E & SE Asian	25.0	46.0	29.0	1,911	18.5	52.6	29.0	666	28.5	42.5	29.0	1,245
Latin American	27.4	54.8	17.8	984	22.2	61.1	16.7	18	27.5	54.7	17.8	966
Black	31.6	56.5	11.9	4,725	37.5	53.2	9.3	731	30.5	57.1	12.4	3,994
Aboriginal	54.9	40.9	4.2	4,567	55.1	40.8	4.1	4,532	31.4	51.4	17.1	35
Others	27.1	55.3	17.6	108,555	27.9	55.6	16.4	97,109	20.0	52.3	27.6	11,446

a. Including those with No degree, certificate or diploma.

b. Including Secondary/high school graduation certificate or equivalent, Trades certificate or diploma and other non-university certificate or diploma.

c. Including University certificate or diploma below bachelor level, Bachelor's degree(s), University certificate or diploma above bachelor level, Master's degree(s), Earned doctorate and Degree in medicine, dentistry, veterinary medicine or optometry.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada

**Table 4.3 Relative Earnings<sup>a</sup> of Ethnic Groups by Educational Level, Canada, 1990**

Ethnic group	Non-Secondary Education <sup>b</sup>	Secondary and Non-University Post-Secondary Education <sup>c</sup>	University Education <sup>d</sup>
British	3.0	7.0	7.5
French	11.6	-1.0	4.1
Dutch	9.4	9.4	-3.0
German	17.4	11.6	1.0
Other W European	27.1	25.9	13.9
Hungarian	12.8	12.8	9.4
Polish	7.3	3.0	-8.6
Ukrainian	16.2	16.2	10.5
Balkan	18.5	5.1	-4.9
Greek	16.2	-16.5	-25.2
Italian	41.9	8.3	2.0
Portuguese	35.0	-3.9	-13.1
Spanish	-4.9	-17.3	-28.8
Jewish	9.4	-3.9	18.5
Arab	-4.9	-28.1	-25.9
West Asian	-18.9	-27.4	-28.1
South Asian	-6.8	-13.9	-14.9
Chinese	-7.7	-15.6	-9.5
Filipino	-33.0	-17.3	-22.1
Vietnamese	-5.8	-26.7	-20.5
Other E & SE Asian	-18.9	-18.1	-18.9
Latin American	-13.9	-32.3	-39.3
Black	-6.8	-12.2	-6.8
Aboriginal	-42.3	-34.3	-24.4
Others	-19.7	-4.9	-4.9
Canada	\$10,768	\$15,692	\$26,410

a. Expressed as percentage deviations from Canadian average of each corresponding educational category.

b. Including those with No degree, certificate or diploma.

c. Including Secondary/high school graduation certificate or equivalent, Trades certificate or diploma and other non-university certificate or diploma.

d. Including University certificate or diploma below bachelor level, Bachelor's degree(s), University certificate or diploma above bachelor level, Master's degree(s), Earned doctorate and Degree in medicine, dentistry, veterinary medicine or optometry.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada

**Table 4.4 Net Returns<sup>a</sup> to Education for Persons of Different Ethnic Origins<sup>b</sup> as Percentage Differences from Those for Persons of British Origin, Canada, 1990**

Ethnic origin	Highest degree obtained									
	No degree, certificate or diploma	High school graduation certificate	Trades certificate	Other non-university certificate	University certificate below bachelor level	Bachelor's degree(s)	University certificate above bachelor level	Master's degree(s)	Earned doctorate	Degree in medicine <sup>c</sup>
British <sup>d</sup>		13.2**	16.8**	21.3**	27.3**	39.6**	47.4**	58.3**	76.6**	141.7**
French	3.1**	1.7**	3.0**	5.3**	8.1**	2.3*	2.8	1.2	5.4	4.2
Dutch	0.5	2.8	1.6	-2.0	-18.4**	-3.9	-3.9	-12.4*	1.9	-40.6**
German	3.7**	-0.5	-2.1	0.7	3.7	-2.6	-3.4	-7.0	-3.4	-14.7
Other W European	14.0**	5.2	1.0	14.3**	16.2	0.9	-7.4	2.4	6.1	-24.4
Hungarian	-2.4	-2.1	-1.3	-11.3**	-18.7	-2.0	4.4	11.4	-17.0	8.3
Polish	-3.6	-1.1	1.8	1.1	-19.2**	0.6	-3.0	-14.4**	-6.1	-12.5
Ukrainian	2.7	3.1	2.7	4.0**	-14.4**	5.6*	-2.2	-3.4	-13.8	6.3
Balkan	2.4	-3.6	-2.0	5.3	4.6	-2.1	-5.6	-5.8	-8.6	-3.4
Greek	-6.3**	-6.6**	0.4	-1.7	-32.5**	-9.3	-15.7	-2.4	-25.9	-50.1**
Italian	-0.6	2.7*	-0.0	7.1**	8.3	-1.1	-2.1	3.6	-1.8	-26.4*
Portuguese	11.0**	3.1	4.8	2.8	-22.5*	-4.9	5.3	0.6	-	-41.7
Spanish	4.1	-14.4**	0.7	-6.0	-13.1	-14.7	0.5	-20.2	48.5	14.6
Jewish	21.9**	8.0**	3.3	3.1	3.2	4.4	6.7	0.7	6.7	-2.2

**Table 4.4 Net Returns<sup>a</sup> to Education for Persons of Different Ethnic Origins<sup>b</sup> as Percentage Differences from Those for Persons of British Origin, Canada, 1990 (Continued)**

Ethnic origin	Highest degree obtained									
	No degree, certificate or diploma	High school graduation certificate	Trades certificate	Other non-university certificate	University certificate below bachelor level	Bachelor's degree(s)	University certificate above bachelor level	Master's degree(s)	Earned doctorate	Degree in medicine <sup>c</sup>
Arab	1.4	-6.2*	-12.6**	1.6	-22.7**	-17.8**	-22.3**	-18.1**	1.6	-27.7**
West Asian	-5.4	-10.4**	-5.3	-0.6	-10.2	-7.5	-15.6	-18.2**	-25.7	-30.5*
South Asian	2.9	-3.9*	-8.6**	-4.1	-0.7	-17.7**	-12.8*	-18.9**	-6.8	-15.9*
Chinese	-4.4**	-5.3**	-3.3	-5.6**	-6.6	-7.3**	-14.1**	-10.3**	-26.3**	-15.2*
Filipino	-6.4	-2.1	-12.5**	-8.2*	-7.5	-12.4**	-12.5	-20.9*	-	-13.0
Vietnamese	0.8	-11.9**	-19.7**	3.2	-19.3*	-12.7*	-39.2**	-6.9	-7.0	-42.7**
Other E & SE Asian	-4.2	-10.2**	-3.7	-6.8	20.2*	-14.6**	-10.1	-12.1	-27.5	-35.1**
Latin American	3.7	-11.7**	-2.3	-29.8**	-7.8	-24.4**	-31.1**	-18.7	-30.4	-40.6
Black	-8.1**	-3.1	-3.3	-10.4**	-3.7	-10.0**	10.6	-12.4	-10.3	-10.2
Aboriginal	-18.8**	-16.0**	-20.0**	-24.7**	-1.9	-8.0	-24.2	-20.2	-49.4	-76.7*
Others	-2.7**	-0.3	-1.7*	-0.9	0.3	-3.7**	-2.5	-6.7**	-2.6	-7.2

a. Controlling for gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, occupation, industrial sector, weeks worked, and part-time/full-time weeks worked; Adjusted R Square = 0.58007 from regression.

b. The net returns to education for workers of various ethnic origins are expressed as percentage differences from the returns for workers of British origin in the same educational category.

c. Including degrees in medicine, dentistry, veterinary medicine and optometry.

d. The category of "No degree, certificate or diploma" for the British is the base category for other categories for the British.

\* Significant at 0.10; \*\* Significant at 0.05.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada

## **Chapter 5**

### **Occupation and Ethnic Disparities in Earnings**

While education is important in earnings attainment, occupation is the factor most directly related to earnings. Educational advantages are translated into earnings advantages primarily through the acquisition of favourable occupational status (Duncan, 1961). Earnings are in fact monetary rewards to the worker for his or her performance of an occupational role. The amount of the reward is presumably determined by the importance of the occupational role in the socioeconomic system and the complexity of skills and knowledge involved.

Although it is difficult to evaluate the importance of an occupational role in the society as compared to others, the market system somehow manages to relate occupational status quantitatively to monetary rewards by assigning different earnings to different occupational roles. Table 5.1 reports the gross and net effects of occupation on earnings of Canadians in 1990 based on the 1991 PUMFI. Before other factors had been taken into account, senior managers stood out at the top, earning 191% more than the average. Following them were middle and other managers and professionals earning 86% and 75%, respectively, more than the average. Workers in skilled crafts and trades, supervisors, foremen/women, administrative and senior clerical workers, and semi-professionals and

technicians also earned substantially more than the average, ranging from +11% to +36%. Slightly below the average were sales and service workers at Skill Level III and semi-skilled manual workers at -1% and -4%, respectively. Substantially below the average were clerical workers, other manual workers, and sales and service workers at Skill Levels I and II, ranging from -10% to -60%.

When other variables had been controlled, senior managers, middle and other managers, and professionals were still much favoured, earning 54%, 22% and 23%, respectively, more than an average worker. Supervisors were also in an advantaged position at +10%. Administrative and senior clerical workers, workers in skilled crafts and trades, semi-professionals and technicians, sales and service workers at Skill Level III, and foremen/women were near the average, ranging from 0% to +3%. Remaining significantly disadvantaged were clerical workers, semi-skilled manual workers, sales and service workers at Skill Levels I and II, and other manual workers, ranging from -16% to -7%. The economic significance of occupational status is apparent.

### **Occupational Achievements of the Canadian Ethnic Groups**

Historically the Canadian occupational hierarchy was ethnically stratified. In 1931, 5% of the Canadian male labour force were in the professional and financial occupations which were identified as high status occupations. While Jews (7%) and the British (6%) were over-represented in these occupations, all other groups were under-represented: French (4%), Dutch (4%), Germans (3%), Scandinavians (2%), Italians (2%), Eastern Europeans (1%), Asians (0.5%), Other Europeans (0.5%), and Native Indians

(0.3%). At the low level, 18% of the male labour force were in primary (logging, fishing and mining) and unskilled occupations. Most under-represented in these occupations were Jews (3%), followed by Germans (12%), Dutch (13%), and British (13%). The other groups were over-represented: Scandinavians (19%), French (21%), Asians (28%), Eastern Europeans (30%), Italians (44%), Other Europeans (54%), and Native Indians (63%). Overall, Jews and the British were at the top of the occupational hierarchy. French, German, and Dutch were next. In the lower strata of the structure were Scandinavians, Eastern Europeans, Italians, Other Central Europeans, Asians, and Native Indians. This pattern was little changed for another twenty years (Porter, 1965: 80-5).

In the middle of the century, however, the pattern began to change. By 1961 there had been some significant developments in the relative positions of the groups. First, Jews had surpassed the British in overall occupational status. While 9% of the total male labour force and 11% of the British males were in professional and financial occupations, 16% of Jews were in these occupations. At the lower level, 10% of the total male labour force and 8% of the British were in primary and unskilled professions, whereas only 1% of Jews were in these occupations. Second, the position of Asians was substantially improved. They moved from being under-represented (-4% in 1931) to being over-represented (+2%) in professional and financial occupations, and from being over-represented (+10% in 1931) to being under-represented (-4%) in primary and unskilled occupations. Third, most European groups also improved their positions, especially Eastern Europeans and Other Europeans. They had reduced their under-representation in professional and financial occupations from about -4% to about -1%, and had essentially



eliminated their over-representation in primary and unskilled occupations from +12% and +36% to 0% and +2%, respectively (Porter, 1965: 86-7).

By 1981, the picture had changed further. Of the top five groups holding high-status (administrative and professional) jobs, three were visible minorities (Filipinos, Blacks and Chinese), the other two being Jews and the British. In the middle were two visible minority groups (East Indian and Indochinese) and five groups from Eastern and Western Europe. At the bottom, were Native Peoples, the Dutch, and three groups from Southern Europe (Italians, Greeks and Portuguese) (Herberg, 1990: 217; see also Hunter, 1986: 149-154).

Over the decades, upward mobility in occupational status of Jews and visible minorities was significant. This trend continued to the early 1990s. With more detailed information on ethnicity and other socioeconomic dimensions, the 1991 PUMFI enables us to examine ethnic occupational status more closely. In Table 5.2, fourteen categories of occupations are grouped into three levels based on the "Skill Levels" defined by Statistics Canada, and coinciding with the net effects of the occupational categories estimated from our model. Low earnings occupations had net effects of -7% to -16%. They include Clerical workers (Skill Level II), Sales and Service (Skill Level II), Semi-Skilled Manual workers (Skill Level II), Sales and Service (Skill Level I), and Other manual workers (Skill Level I). Medium earnings occupations had net effects of 0% to +10%. They include Semi-professionals and Technicians (Skill Level III), Supervisors (Skill Level III), Foremen/women (Skill Level III), Administrative and Senior Clerical (Skill Level III), Sales and Service (Skill Level III), and Skilled Crafts and Trades (Skill

Level III). High earnings occupations had net effects of +22% to +54%. They include Senior Managers (Skill Level IV), Middle and Other Managers (Skill Level IV), and Professionals (Skill Level IV).

From Table 5.2, it can be seen that 48% of the employed labour force in Canada in 1990 was in low earnings occupations, 30% in medium earnings occupations, and 23% in high earnings occupations. Jews (31%) had the smallest proportion in low earnings occupations. Western and Eastern European groups also tended to be under-represented in low earnings occupations. The British (46%), French (48%), and Polish (48%) were close to the overall percentage, and Ukrainians (43%), Germans (43%), Dutch (43%), Hungarians (42%) and Other Western Europeans (39%) were under-represented in these occupations. All Southern European groups were over-represented in low earnings occupations. The Italians (49%), Balkans (50%), and Greeks (50%) were slightly over-represented, and the Spanish (60%) and Portuguese (64%) were substantially over-represented. Among visible minorities, West Asians (42.8%), Arabs (44%), Other East and Southeast Asians (45%), and Chinese (46%) were under-represented in low earnings occupations; South Asians (57%), Aboriginal Peoples (60%), Filipinos (60%), Vietnamese (62%), Blacks (62%) and Latin Americans (63%) were substantially over-represented in these occupations.

At the high level, Jews were again at the top, with 47% of their workers in high earnings occupations. Western and Eastern Europeans were all quite close to the total labour force figure of 23%, ranging from 21% to 25%. All Southern European groups, with the exception of Greeks (21%), were under-represented in high earnings occupations,

ranging from 10% to 19%. Among visible minorities, Arabs (33%), Other East and Southeast Asians (31%), West Asians (29%) and Chinese (28%) were significantly over-represented in high earnings occupations. South Asians (22%) were close to the overall percentage. The other groups were substantially under-represented: Filipinos (18%), Blacks (17%), Vietnamese (15%), Latin Americans (13%) and Aboriginal Peoples (13%).

Overall, Jews were over-represented at the top of the Canadian occupational hierarchy, followed by Eastern and Western Europeans and several Asian groups. Southern Europeans, Filipinos, Vietnamese, Latin Americans, Blacks, and Aboriginal Peoples were over-represented at the bottom.

### **Ethnic Earnings Differences within Occupational Categories**

The substantial net effects of occupational status on earnings found in the 1991 PUMFI suggest that higher occupational status was an asset in the Canadian labour market in the monetary achievement of a worker or an ethnic group. This effect of occupational status, much the same as that of educational status, however, was heavily dependent upon ethnicity; comparable occupational achievements carried quite different economic values for workers of different ethnic origins, and the earnings of the workers could be very inconsistent with their occupational achievements. For example, Arabs, West Asians, Chinese, and Other East and Southeast Asians were significantly over-represented in high earnings occupations and under-represented in low earnings occupations, but they all had below-average earnings.

To better understand the earnings positions of the ethnic groups in relation to their

occupational status, it would be useful to examine the relative average earnings of the ethnic groups with comparable occupational qualifications. Table 5.3 reports the relative earnings of ethnic groups within three broad occupational categories: low-earnings occupations, medium-earnings occupations, and high-earnings occupations. The average earnings converted from log earnings of each ethnic group within the occupational category was calculated and presented as percentage deviation from the Canadian average of the category. At the bottom of the table, the Canadian average is presented, for each of the three occupational categories, in dollar amounts, also converted from the mean log earnings of the category. On average, a Canadian worker in a medium-earnings occupation earned about 75% more than one in a low-earnings occupation, and a worker in a high-earnings occupation earned about 170% more. But substantial earnings disparities were found among the ethnic groups within each occupational category.

### The Favourable Positions of the European Groups

Examining differences between the British and the French, workers of British origin earned 3% more in low- and medium-earnings occupations, and 6% more in high-earnings occupations in relation to the Canadian average of each category. In comparison, workers of French origin earned 7% more in low-earnings occupations, about average in medium-earnings occupations, and 2% less in high-earnings occupations. Quite similar to their relative earnings positions across educational categories, the French had some edge over the British at the lowest occupational level. But at the higher levels, the British were favoured while the French were slightly unfavoured. This again confirms

that while the French have caught up or surpassed the British in earnings at lower levels, they have not been able to do so at higher levels.

The other Western European groups fared even better than the British and French. Among the nine interactive categories for these groups, the Dutch in high-earnings occupations (-4%) were the only group with below-average earnings. The Dutch in low-earnings and medium-earnings occupations earned 6% more than the average; Germans in low-earnings, medium-earnings and high-earnings occupations earned 13%, 4% and 1%, respectively, more than the average; and Other Western Europeans in low-earnings, medium-earnings and high-earnings occupations earned 22%, 16% and 16%, respectively, more than the average.

Quite similarly, Eastern Europeans were also in significantly favourable positions. Compared to the Canadian average for each of our broad occupational categories, the earnings of Hungarians in low-earnings, medium-earnings and high-earnings occupations were 13%, 12% and 7% more; Poles earned 11% and 7% more in low-earnings and high-earnings occupations but slightly less (-1%) in medium-earnings occupations; and Ukrainians earned 19%, 4% and 6%, respectively, more in low-earnings, medium-earnings and high-earnings occupations.

Among Southern Europeans, persons of Balkan origins and Italians fared very well within each category. They earned about 20% more than the Canadian average in low-earnings occupations, about 10% more in medium-earnings occupations, and 6% more in high-earnings occupations. The experience of the Portuguese was quite different at different occupational levels: at the bottom of the hierarchy, they earned 25% more than

the average; in the middle, they earned 3% more; but at the top, their earnings were 13% less than the category mean. Greeks and the Spanish were disadvantaged at all levels: at the bottom, both groups were 4% below average; in the middle, Greeks earned 12% less while the Spanish earned 3% less than the average; and at the top category, the earnings of Greeks were 21% below average and those of the Spanish were 27% below.

Finally, the earnings of Jews were moderately below average at the lower levels, -2% for low-earnings occupations and -6% for medium-earnings occupations. But at the top occupational level, their earnings were the highest of all ethnic groups, 28% above the average.

Overall, workers of Western and Eastern European origins and those of Balkan and Italian origins fared well at all occupational levels. With a few exceptions, most of these groups had above-average earnings in all categories, many significantly so. Only some groups from Southern Europe (Greek and Spanish, and Portuguese in the top category) were in unfavourable positions. At the top occupational category, most above-average groups earned 6-7% more than the mean. But Other Western Europeans and Jews were in substantially more favourable positions, earning 16% and 28% more than the average. In the next section, we will find out how much of the advantage for these two groups was attributable to direct differential returns to occupational achievements.

### The Disadvantage of the Visible Minorities

In sharp contrast to the advantaged positions of most European groups, almost all visible minority groups were in substantially disadvantaged positions within every

occupational category. At the bottom of the occupational hierarchy, Vietnamese (-8%), Chinese (-9%), Latin Americans (-13%), Other East and Southeast Asians (-17%), West Asians (-19%), Arabs (-21%), and Aboriginal Peoples (-39%) earned substantially less than an average Canadian with comparable occupational status. Only three groups, South Asians, Filipinos and Blacks, earned minimally (1%) more than the average. In the middle of the hierarchy, while Filipinos earned 7% more than the average, and South Asians (-3%) and Blacks (-2%) earned slightly less, all the other groups had earnings substantially less than the average: Chinese (-10%), Other East and Southeast Asians (-10%), Vietnamese (-14%), Arabs (-15%), Latin Americans (-20%), West Asians (-21%), and Aboriginals (-42%). At the top, only two groups were not substantially disadvantaged compared to the average: South Asians earned 4% less than the average and Filipinos earned about the same as an average Canadian. The disadvantages of the other eight groups tended to be even greater than those at the lower occupational levels: Chinese (-10%), Blacks (-14%), Vietnamese (-15%), Other East and Southeast Asians (-17%), Arabs (-19%), and West Asians (-21%) earned, on average, about 10-20% less than the mean; and Latin Americans and workers of Aboriginal origins earned 39% and 45%, respectively, below the average.

The relatively high earnings of South Asians, Blacks in the two lower occupational categories, and especially Filipinos, compared to other visible minorities, were probably attributable to certain favourable earnings-related characteristics of these groups within the categories. For example, the Filipinos in each occupational category might possess higher educational credentials than their counterparts of visible minority and European

origins, and this advantage within occupational categories could cancel out some of the negative effects a visible minority usually faced and thereby slightly elevated their earnings. In our analysis of net returns to occupational achievements that follows, we will know if the Filipinos were really in favourable positions within the occupational categories taking into account other earnings-related factors and if the above speculations are supported by the evidence.

### **Ethnic Differentials in Returns to Occupational Achievements**

Just as we explained for the case of returns to education, these findings of substantial ethnic differences in earnings within occupational categories are strong indications that returns to occupational achievements were different for workers of different ethnic origins. But to evaluate these returns directly and more accurately, it is necessary to statistically control the effects of other earnings-related factors.

Table 5.4 reports the "net" returns to occupational attainments for persons of different ethnic origins as compared to those for persons of British origin. The results were obtained from a regression similar to that explained in Chapter 2. The only difference was that the dummies for the variables Ethnicity and Occupation in the original model were replaced with dummies representing the interactive categories of ethnicity and occupation. This model captures the same effects as did the original model, except that it also captures the interaction effects of ethnicity and occupation.

Again the British is used as the base line category for the evaluation of the other ethnic groups in each occupational category. First, the category of "Senior managers" is



used as the base category for the comparison of other occupational categories for the British. For example, the coefficient for "middle and other managers" of British origin is -26.5 (first row, second column); therefore, this group of workers had an average return to their occupational achievement, net of the influence of other factors, about 27% less than senior managers of British origin. The returns to occupational achievement for workers of other ethnic origins are expressed as percentage differences from the returns for workers of British origin in the same occupational category. For example, the coefficient for French senior managers is -21.0 (first column, second row), and therefore senior managers of French origin, on average, earned 21% less than their otherwise comparable British counterparts. The table also presents the statistical significance ("\*" for 0.10 and "\*\*\*" for 0.05) of the coefficients.

#### Differences among the European Groups

First, differences in net economic returns to occupational achievement among workers of British origin in different categories were very substantial. Compared with senior managers, middle and other managers and professionals earned 27% less; semi-professionals and technicians, supervisors, foremen/women, administrative and senior clerical workers, sales and service workers (skill Level III), and workers of skilled crafts and trades earned 36-43% less; and clerical workers, sales and service workers (skill levels I and II), semi-skilled manual workers, and other manual workers earned 46-52% less. The direct economic benefits of occupational achievement for workers of British origin are obvious.

Compared to the British, returns to workers of French origin were higher in nine of the fourteen occupational categories. In the categories of professionals (4%), semi-professionals and technicians (4%), skilled crafts and trades (6%), clerical workers (3%), sales and services (4% for skill level II and 5% for skill level I), and semi-skilled manual workers (4%), returns to the French were 3-6% more than those to their British counterparts with similar characteristics. Foremen/women and other manual workers of French origin earned 12% and 11%, respectively, more than their British counterparts. In three occupational categories (supervisors, administrative and senior clerical, and sales and services skill level III), the French were not significantly different from the British. In only two categories were the French disadvantaged relative to the British: senior managers (-21%) and middle and other managers (-3%).

Higher returns to occupational achievement for workers of French origin in most categories further confirm our contention in Chapter 3 that Francophones were no longer discriminated against in terms of monetary rewards as claimed in the literature; on the contrary, they were favoured in most cases. This is probably a result of continued efforts of the French community and the federal and some provincial governments to protect and promote the interests of the French in the workplace. It is noticeable, however, that while the French received higher returns in most occupational categories, the two categories in which the French were significantly disadvantaged compared with the British were categories of management that had the highest earnings. Especially in the top category, "Senior managers," the disadvantage of the French was substantial. This indicates that although the French were favoured in the Canadian labour market at most occupational

levels, they were still disadvantaged at the top of the hierarchy. At this level, discrimination might still be a factor hindering their earnings.

Returns for other Western European groups in most occupational categories were not significantly different from those for their British counterparts. In the fourteen categories, Germans had lower returns in one category and higher returns in two categories, the Dutch had lower returns in three categories and higher returns in one category, and Other Western Europeans had higher returns in two categories. Specifically, in comparison to their otherwise comparable British counterparts, professionals and technicians of German origin earned 5% less, while sales and service workers at skill level I and other manual workers of French origin earned 6% and 11% respectively more. The returns for the Dutch were 6-8% lower than those for the British in the categories of middle and other managers, professionals and technicians, and sales and services skill level II, but 10% higher in the category of foremen/women. The two categories in which Other Western Europeans had higher returns than their British counterparts were foremen/women (31%) and sales and services skill level II (23%). Overall, returns to occupational achievements for persons of Western European origins were similar to those of their British counterparts, although differences were found in a small number of categories.

Workers of Eastern European origins had experiences similar to that of their Western European counterparts. For Ukrainians, ten of the fourteen coefficients are not statistically significant, while returns for them were lower than those for the British in the category of foremen/women (-9%) and higher in the categories of clerical workers (8%),

sales and services skill level I (8%) and other manual workers (15%). For Hungarians, only one coefficient is significant: senior managers of Hungarian origin had returns 32% lower than the British. Poles had lower returns in the categories of foremen/women (-11%), skilled crafts and trades (-7%) and semi-skilled manual workers (-8%), and higher returns in the category of sales and services skill level I (11%).

Jews had higher returns than the British in many occupational categories. While half of their fourteen coefficients were statistically insignificant, and one of the significant coefficients was negative (-17% for semi-professionals and technicians of Jewish origin), the other six coefficients were positive. Jews were favoured in the labour market compared to the British in the occupational categories of middle and other managers (+13%), professionals (+7%), supervisors (+29%), administrative and senior clerical (+16%), and sales and services (+16% for skill level III and +22% for skill level II). The favourable position of Jews was apparent. While none of the ethnic groups had higher returns than the British in the category of senior managers, Jews were the only group that had higher returns than the British in the category of middle and other managers, and were one of the two groups (the other being French) that had higher returns than the British in the category of professionals. Coefficients for all the other groups in these categories were either negative or insignificant. This indicates that among the Canadian ethnic groups, only Jews were favourably treated as compared to the British in some echelons at the top of the occupational hierarchy.

Among Southern Europeans, Italians and Portuguese tended to have higher returns than the British. While having similar returns as did their British counterparts in eight

of the fourteen occupational categories, Italians had higher returns in four categories: foremen/women (+14%), other manual workers (+10%), and sales and services (+8% for skill level II and 5% for skill level I), and lower returns in the other two categories: middle and other managers (-4%) and semi-skilled manual workers (-5%). For Portuguese, ten coefficients are not statistically significant while four are. Of these four categories, professionals and technicians of Portuguese origin earned 11% less than their comparable British counterparts, but in the categories of sales and services (+9% for skill level II and +19% for skill level I) and other manual workers (+23%), Portuguese had substantially higher returns than the British.

Returns for persons of Balkan origins were similar to those for the British in ten occupational categories. Of the other four categories, they had higher returns than the British in two categories (+19% for sales and services workers at skill level I and +16% for other manual workers) and lower returns in the other two (-14% for middle and other managers and -20% for sales and services workers at skill level III).

Workers of Spanish and Greek origins tended to have lower returns than their British counterparts, but only in a small number of categories. In the category of middle and other managers, the Spanish had returns 22% lower than the British; and in the category of other manual workers, their returns were 19% lower than those for the British. The Greeks had lower returns than their British counterparts in four categories: middle and other managers (-19%), semi-professionals and technicians (-14%), sales and services skill level III (-10%), and semi-skilled manual workers (-22%).

Overall, workers of European origins had similar economic returns to occupational

achievements as did their British counterparts. But moderate differences existed for some groups: Jews, the French, and to a lesser degree, Other Western Europeans, tended to have higher returns than the British; and Greeks, the Spanish, and to a lesser extent, Poles and the Dutch, tended to receive lower returns.

### Low Returns for Visible Minorities

Quite different from the experience of European groups, returns to occupational achievements for visible minorities were substantially lower than for the British. Of the 140 coefficients for all visible minority groups, only four were positive and statistically significant. In relation to the British, Arabs working as foremen/women and administrative and senior clerical workers had returns 45% and 22%, respectively, higher; South Asians working as sales and services workers at skill level I received returns 5% higher; and Chinese working as foremen/women had returns 16% higher. Nearly four-tenths (fifty-five) of the coefficients were negative and significant, and most of them (forty-six) were over 10% in absolute value.

For example, South Asians had lower returns than their British counterparts in eight of the fourteen categories: senior managers (-20%), middle and other managers (-16%), professionals (-12%), semi-professionals and technicians (-9%), sales and services skill level III (-15%), skilled crafts and trades (-12%), clerical workers (-6%), and semi-skilled workers (-4%). Chinese also had lower returns than the British in eight occupational categories: senior managers (-36%), middle and other managers (-17%), professionals (-5%), semi-professionals and technicians (-8%), sales and services skill

level III (-11%), skilled crafts and trades (-11%), semi-skilled workers (-9%), and other manual workers (-9%). Aboriginal peoples were not only located at the bottom of the occupational hierarchy, but also had apparently the lowest returns to their occupational achievements. Except in the categories of supervisors, foremen/women and clerical workers, persons of Aboriginal origins had substantially lower returns than the British in all of the other eleven occupational categories, most exceeding 20% in absolute value.

The deficits of other groups tended to be somewhat less extensive, but their disadvantages were still substantial. Blacks had lower returns than the British in six categories: senior managers (-38%), middle and other managers (-16%), professionals (-8%), skilled crafts and trades (-9%), semi-skilled manual workers (-19%), and other manual workers (-20%); Filipinos had lower returns in five categories: middle and other managers (-18%), sales and services skill level III (-18%), skilled crafts and trades (-15%), clerical workers (-17%), and semi-skilled manual workers (-17%); Arabs also had lower returns in five categories: senior managers (-35%), middle and other managers (-17%), professionals (-16%), semi-skilled manual workers (-18%), and other manual workers (-24%); West Asians had lower returns in four categories: middle and other managers (-23%), skilled crafts and trades (-15%), semi-skilled manual workers (-18%) and other manual workers (-28%); Other East and Southeast Asians had lower returns in three categories: middle and other managers (-21%), professionals (-11%) and skilled crafts and trades (-14%); Latin Americans had lower returns in three categories: professionals (-35%), semi-skilled manual workers (-15%) and other manual workers (-25%). And finally Vietnamese had lower returns than did the British in two categories:

professionals (-19%) and semi-skilled manual workers (-7%).

Looking across the occupational categories, it appears that the disadvantages of the visible minorities were most serious at the top levels. For senior managers, five of the visible minority groups received substantially lower returns, and the returns for four of them were as low as over 35% less than those for the British. For middle and other managers, eight of the visible minority groups had substantially lower returns, all of which were greater than 15% in absolute value. Among professionals, eight of the visible minority groups had lower returns than the British. Although in some other occupational categories, such as semi-skilled manual workers (column 12), there are also large numbers of visible minority groups with lower returns, the deficits tended to be smaller in absolute value, and they do not appear to cluster with their neighbouring categories as much as the top three categories. This suggests that at the top of the Canadian occupational hierarchy, workers of visible minority origins suffered most intensively in returns to their occupational achievements.

### **Summary and Discussion**

Over the past decades, there has been significant occupational mobility among the Canadian ethnic groups. In 1990, Jews continued to be over-represented at the top of the Canadian occupational hierarchy, followed by Eastern and Western Europeans. Several Asian groups, such as Arabs, West Asians, Chinese, and Other East and Southeast Asians, have moved up and were in slightly better positions than most European groups. At the same time, Southern Europeans, Filipinos, Vietnamese, Latin Americans, Blacks,



and Aboriginal Peoples were still over-represented at the bottom.

From his analysis of Canadian censuses up to 1981, Herberg (1990) concluded that a contest system of socioeconomic status attainment was operating for the acquisition of education in Canada and in the transformation of this human capital into commensurate occupational status. By and large this contention is supported by our findings from the 1991 PUMFI data. As we have seen in the last chapter, educational mobility has been significant among the Canadian ethnic groups; many traditionally low status groups had moved up in the educational hierarchy. To a lesser extent, occupational mobility was also evident among the ethnic groups; many Asian groups have achieved parity with Eastern and Western European groups. But the ethnic groups' achievements in occupational status did not reflect their achievements in education: most Asian groups and Latin Americans ranked lower in occupational status than in educational status, while most European groups ranked higher in occupational status than in educational status. This indicates that, compared to members of European groups, visible minorities still encountered greater difficulties translating educational credentials into comparable occupational status. One important factor here might be that large proportions of visible minorities were immigrants, and foreign-earned degrees and diplomas were less readily recognized in the Canadian labour market, inhibiting them from securing commensurate occupational positions. Another important factor could be racial discrimination by which individuals and their educational qualifications were treated unfavourably in the process of employment and promotion.

Although many visible minority groups have made significant achievements in

occupational status, their earnings remained substantially below those of their European counterparts. Comparing the average earnings of the ethnic groups within three broad occupational categories -- low-earnings, medium-earnings and high-earnings occupations -- we found that in 1990 workers of most European origins, with the exceptions of Greeks and the Spanish, had above-average earnings in most categories, while almost all visible minority groups earned substantially less than the average in every occupational category.

These findings suggest that the significance of occupational attainment to monetary success was very much dependent upon ethnicity. It is no surprise that individuals of the same or similar occupational status had different earnings, since different incumbents of similar occupational roles can vary enormously in performance and productivity. But when there exists a pattern of ethnic differences, the significance of ethnicity in affecting the relationship between earnings and occupations is suggested. Furthermore, when such differences are found largely along racial lines, the impact of race in the process of transforming occupational attainments into earnings acquisition is indicated.

When we took other earnings-related factors into account, and estimated the net returns to occupational achievements for workers of different ethnic origins, it became evident that while workers of most European origins had similar economic returns to occupational achievement as did their British counterparts, returns for most visible minorities were substantially lower than the British in a large number of occupational categories, especially near the top of the hierarchy. These findings confirm that workers of different ethnic origins were not treated equitably in terms of economic rewards for their employment. The fact that substantial disparities in returns existed between workers

of European and visible minority origins suggests that race was still a significant phenomenon in the Canadian labour market, and that racial discrimination still negatively and substantially affected the economic lives of visible minorities.

As McLaughlin and Perman pointed out (1991: 351), workers of one group may receive lower earnings than workers of another group because they have lower levels of the characteristics valued in the labour market (such as education and occupation), or because they are paid less for these characteristics, or some combination of the two. In Canada as of 1990, it appears that the unfavourable earnings positions of most visible minorities were largely caused by inequitable monetary rewards in the workplace: although most Asian groups had above-average levels of educational and occupational status, their earnings were substantially lower than the average, and their returns to educational and occupational achievements were significantly below those of their European counterparts. For a few visible minority groups, such as Blacks and Aboriginals, especially the latter, the unfavourable earnings position was a result of a combination of their low levels of educational and occupational achievements, and low returns to their achievements.

**Table 5.1 Gross and Net Effects of Occupation on Earnings of Individuals, Canada, 1990**

Occupation	Gross effect (%)	Net effect <sup>a</sup> (%)	N
Senior manager, Skill Level (SL) IV	191.1	53.5	4,037
Professional, SL IV	75.0	23.2	56,097
Middle & other manager, SL IV	85.8	21.6	37,252
Supervisors, SL III	34.7	9.8	5,860
Administrative & Senior Clerical, SL III	11.0	2.7	26,467
Skilled crafts & trades, SL III	36.2	2.6	33,465
Semi-professional & technician, SL III	10.8	2.5	24,513
Sales & service, SL III	-0.7	0.9	19,154
Foreman/woman, SL III	25.2	-0.3	16,353
Clerical worker, SL II	-10.1	-7.1	46,613
Semi-skilled manual worker, SL II	-3.8	-8.0	48,628
Sales & service, SL II	-45.4	-12.2	49,831
Other manual worker, SL I	-34.3	-14.1	18,442
Sales & service, SL I	-59.7	-16.2	38,395

a. Controlling for ethnicity, gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, industrial sector, weeks worked, and part-time/full-time worked; Adjusted R Square = 0.57988 from regression.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 5.2 Occupational Compositions of Canadian Ethnic Groups, 1991**

Ethnic group	Low-earnings occupations <sup>a</sup> (%)	Medium-earnings occupations <sup>b</sup> (%)	High-earnings occupations <sup>c</sup> (%)
Canada	47.5	29.6	22.9
British	46.3	29.5	24.2
French	47.6	30.8	21.7
Dutch	43.0	35.6	21.5
German	43.3	34.8	21.9
Other W European	38.7	36.0	25.3
Hungarian	42.2	35.1	22.7
Polish	48.1	30.6	21.3
Ukrainian	43.4	33.4	23.2
Balkan	50.1	32.1	17.9
Greek	50.4	28.4	21.2
Italian	48.9	31.9	19.3
Portuguese	63.6	26.9	9.6
Spanish	59.7	27.2	13.1
Jewish	31.4	21.4	47.2
Arab	43.7	23.5	32.8
West Asian	42.8	28.5	28.7
South Asian	57.1	20.9	22.0
Chinese	45.5	26.1	28.4
Filipino	60.2	22.2	17.6
Vietnamese	61.6	23.7	14.7
Other E & SE Asian	45.4	23.4	31.2
Latin American	62.7	24.2	13.1
Black	61.6	22.5	16.9
Aboriginal	59.7	27.3	13.0
Others	47.7	28.9	23.4

a. Including Clerical workers Skill Level (SL) II, Sales and Service SL II, Semi-Skilled Manual workers SL II, Sales and Service SL I, and Other manual workers SL I.

b. Including Semi-professionals and technicians SL III, Supervisors SL III, Foremen/women SL III, Administrative and senior clerical SL III, Sales and service SL III, and Skilled crafts and trades SL III.

c. Including Senior managers SL IV, Middle and other managers SL IV, and Professionals SL IV.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 5.3 Relative Earnings<sup>a</sup> of Ethnic Groups by Occupational Level, Canada, 1990**

Ethnic group	Low-earnings occupations <sup>b</sup>	Medium-earnings occupations <sup>c</sup>	High-earnings occupations <sup>d</sup>
British	3.0	3.0	6.2
French	7.3	-0.2	-2.0
Dutch	6.2	6.2	-3.9
German	12.8	4.1	1.0
Other W European	22.1	16.2	16.2
Hungarian	12.8	11.6	7.3
Polish	10.5	-1.0	7.3
Ukrainian	18.5	4.1	6.2
Balkan	18.5	8.3	6.2
Greek	-3.9	-12.2	-20.5
Italian	22.1	12.8	6.2
Portuguese	24.6	3.0	-13.1
Spanish	-3.9	-3.0	-26.7
Jewish	-2.0	-5.8	28.4
Arab	-20.5	-14.9	-18.9
West Asian	-18.9	-21.3	-21.3
South Asian	1.0	-3.0	-3.9
Chinese	-8.6	-10.4	-10.4
Filipino	1.0	7.3	0.2
Vietnamese	-7.7	-13.9	-14.9
Other E & SE Asian	-17.3	-10.4	-17.3
Latin American	-13.1	-19.7	-39.3
Black	1.0	-2.0	-13.9
Aboriginal	-39.3	-42.3	-45.1
Other	-12.2	-3.0	-3.0
Canada	\$10,309	\$18,061	\$27,979

a. Expressed as percentage deviations from Canadian average of each corresponding occupational category.

b. Including Clerical workers Skill Level (SL) II, Sales and Service SL II, Semi-Skilled Manual workers SL II, Sales and Service SL I, and Other manual workers SL I.

c. Including Semi-professionals and technicians SL III, Supervisors SL III, Foremen/women SL III, Administrative and senior clerical SL III, Sales and service SL III, and Skilled crafts and trades SL III.

d. Including Senior managers SL IV, Middle and other managers SL IV, and Professionals SL IV.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 5.4 Net Returns<sup>a</sup> to Occupational Attainments for Persons of Different Ethnic Origins<sup>b</sup> as Percentage Differences from Those for Persons of British Origin, Canada, 1990**

Ethnic origin	Occupation <sup>c</sup>													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
British <sup>d</sup>		-26.5**	-27.2**	-39.8**	-36.4**	-43.1**	-40.3**	-40.1**	-40.4**	-45.8**	-49.4**	-45.8**	-52.2**	-51.3**
French	-21.0**	-3.4**	3.6**	4.0**	2.6	12.4**	0.4	-0.1	6.1**	2.7**	4.3**	3.7**	5.3**	10.5**
Dutch	-3.6	-7.1**	-7.7**	-3.2	8.8	10.1**	1.6	-0.1	0.9	1.2	-6.1**	4.4	1.1	8.2
German	1.1	-1.4	-4.7**	-0.9	4.7	1.4	2.8	-3.6	-2.4	2.5	0.3	0.8	6.3**	11.3**
Other W European	-14.5	5.4	1.7	4.0	14.8	30.5**	13.0	6.8	-7.0	-6.4	23.0**	1.5	14.2	18.4
Hungarian	-31.6*	-9.0	3.3	-6.2	-6.2	7.1	-7.4	1.9	-2.5	-7.1	-6.4	-0.4	-9.5	8.2
Polish	-19.5	1.7	-0.3	-4.4	12.4	-10.8*	2.3	-3.6	-7.0*	-4.8	1.9	-7.8**	10.9**	-2.9
Ukrainian	-8.4	-1.3	-1.3	6.1	12.0	-9.1**	4.2	3.1	3.0	7.7**	4.0	2.2	7.9**	15.3**
Balkan	-17.6	-13.6**	-4.4	2.1	15.6	-0.5	7.6	-20.3**	-3.8	1.3	-0.1	-3.4	19.1**	15.6**
Greek	-15.0	-18.9**	-8.4	-14.3*	1.4	-8.2	8.3	-9.9**	-8.2	2.6	5.1	-22.0**	3.5	5.6
Italian	-10.1	-4.4*	-0.0	-4.4	7.6	14.3**	4.4	2.8	-1.7	2.8	7.6**	-4.5**	5.0**	10.4**
Portuguese	-23.5	-1.1	-10.8*	5.8	-1.9	1.9	11.1	4.5	3.0	-1.9	8.8*	3.5	19.0**	23.2**
Spanish	-43.9	-22.4**	-12.4	7.2	-12.3	4.0	-7.4	8.2	-7.5	-9.0	4.4	-9.2	6.0	-18.9**
Jewish	10.4	13.0**	6.5**	-16.5**	29.3**	2.7	16.4**	16.2**	0.7	-1.7	21.5**	-12.0	-5.7	-14.6

Table 5.4 (Continued)

Ethnic origin	Occupation <sup>c</sup>													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Arab	-35.0**	-17.1**	-16.1**	-2.3	-8.4	44.7**	22.4**	-9.5	-8.3	-7.4	4.8	-17.5**	-4.7	-24.0**
West Asian	22.1	-23.0**	-5.3	-8.9	23.9	-5.1	0.0	-8.1	-15.3*	-1.5	-2.9	-20.0**	7.5	-27.8*
South Asian	-19.9*	-15.6**	-11.6**	-9.2**	-6.6	-8.2	2.8	-14.8**	-12.4**	-6.3**	-1.4	-4.3*	5.4*	6.1
Chinese	-35.7**	-16.6**	-5.3**	-8.3**	-8.8	16.0*	3.8	-11.2**	-11.2**	-1.6	0.1	-8.9**	0.0	-9.2*
Filipino	-32.1	-18.4**	2.5	-7.6	3.7	-10.2	6.4	-17.5**	-14.5**	-16.6**	-1.8	-16.9**	-3.9	-3.1
Vietnamese	34.8	-13.0	-19.3**	-2.0	22.4	12.4	-1.7	-10.9	-4.7	-7.6	-12.2	-7.3*	-1.2	-5.2
Other E & SE Asian	-3.1	-21.4**	-10.9**	1.2	-11.8	4.4	-7.2	-11.1	-14.3*	-0.8	-1.8	-7.1	-6.4	-2.8
Latin American	-30.6	-2.1	-34.6**	-3.9	-23.9	-1.7	-10.6	-8.2	-11.4	-6.5	-7.2	-15.0**	5.5	-25.2**
Black	-37.9**	-15.5**	-7.5**	-5.0	-8.8	-13.9	0.3	-0.0	-9.0**	0.4	-0.2	-18.6**	2.1	-19.7**
Aboriginal	-43.3**	-26.3**	-20.6**	-27.0**	-14.1	0.4	-12.6**	-20.2**	-23.7**	-3.2	-15.9**	-20.9**	-13.3**	-22.9**
Others	-6.7**	-3.8**	-3.2**	-2.3*	-1.5	-1.9	-1.1	-2.8*	1.3	-1.6	-0.7	-1.4	-1.4	-0.6

a. Controlling for gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, industrial sector, weeks worked, and part-time/full-time weeks worked; Adjusted R Square = 0.58045.

b. The returns to occupational achievement for workers of various ethnic origins are expressed as percentage differences from the returns for workers of British origin in the same occupational category.

c. Categories of occupation are: 1. Senior managers Skill Level (SL) IV; 2. Middle and other managers SL IV; 3. Professionals SL IV; 4. Semi-professionals and technicians SL III; 5. Supervisors SL III; 6. Foremen/women SL III; 7. Administrative and senior clerical SL III; 8. Sales and service SL III; 9. Skilled crafts and trades SL III; 10. Clerical workers SL II; 11. Sales and service SL II; 12. Semi-skilled manual workers SL II; 13. Sales and service SL I; and 14. Other manual workers SL I.

d. The category of "Senior managers" for the British is the base category for other categories for the British.

\* Significant at 0.10. \*\* Significant at 0.05.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.



## **Chapter 6**

### **Ethnic Earnings Disparities among Immigrant Groups**

#### **The Socioeconomic Adjustment and Earnings of Immigrants**

Socioeconomic adaptation of immigrants to the host society has been studied by many Canadian and American sociologists and economists. As early as the 1920s, Park (1928) examined the social and cultural transition of the migrant and the assimilation of the "marginal man" in the United States. In recent decades, studies of the economic assimilation of immigrants in Canada and the United States have been carried out by many researchers. Based mostly on cross-sectional data, researchers demonstrated that immigrants encountered substantial initial difficulties in their adjustment to the economic system of the host society. Newly arrived immigrants experienced a significant earnings disadvantage compared to the native-born with similar labour market characteristics, such as educational levels and work experience (Kalbach, 1970; Chiswick, 1978; Richmond and Kalbach, 1980; Chiswick and Miller, 1988; Field-Hendrey and Balkan, 1991).

Researchers argued that the earnings disadvantage that newly arrived immigrants suffered is largely a result of their lack of certain labour market characteristics associated with higher earnings that were usually possessed by the native-born. Most importantly, recent immigrants are less likely to have the educational credentials and occupational

qualifications recognized in the host country to apply the skills acquired in their country of origin. This applies to most immigrants, with a few exceptions, such as those immigrating from the United States or United Kingdom to Canada. Employers tend to be less informed about the implications of the educational and occupational credentials and the productivity of recent immigrants. It is harder for them to check school and previous employment references from abroad. Therefore, employers tend to be more reluctant to hire recent immigrants for certain positions. As a result, it is more difficult for new immigrants to translate their earlier educational and occupational qualifications into income attainment. In addition, new immigrants have little or no firm-specific training, which also tends to deflate their earnings. Supporting these arguments, a number of studies reported that returns to pre-immigration schooling and experience were much smaller than returns to post-immigration schooling and experience (DeSilva, 1992; Miller, 1992; Abbott and Beach, 1993; Beach and Worswich, 1993). As well, returns to schooling and experience were greater for immigrants from English-speaking developed countries than for those from other countries (Chiswick and Miller, 1988).

Deficiency in the English language is another important barrier to the adjustment of many new immigrants to Canada and the U.S., hindering the immigrants' success in seeking employment and in career advancement compatible with their educational and occupational qualifications. Carliner (1979) reported that immigrants from English-speaking countries did better economically than immigrants from non-English-speaking countries. Tienda (1983), Koch (1987) and Hughey (1990) all demonstrated that English language ability was among the most important determinants of immigrants' earnings.

Chiswick (1991) found that, while both speaking fluency and reading fluency in English were positively related to the earnings of immigrants in the U.S., reading fluency is more important than speaking fluency as a determinant of the immigrants' earnings.

Researchers argued that as immigrants' years of residence in the host country accumulate, their knowledge and experience of the new society grow and the gap between their native-born counterparts and themselves in labour market characteristics narrows. They modify their skills to meet new needs, acquire additional credentials supplementing the educational and occupational qualifications they have obtained in their home countries, gain job-specific training, acquire general and labour market related knowledge of the host country, and improve their language proficiency. As a result, they more and more resemble their native-born counterparts, and their initial disadvantage in earnings diminishes gradually. In addition, it is argued, immigrants are more motivated than the native-born to make investments in general education and postschool training that are relevant for employment in the host country. While these investments tend to depress their initial earnings, they reinforce the immigrants' earnings advancement later on. As a result, after about 10-20 years' residence in the host country, immigrants disadvantage in earnings disappears (Kalbach, 1970; Chiswick, 1978; Carliner, 1980; Meng, 1987; Chiswick and Miller, 1988; Field-Hendrey and Balkan, 1991).

More recently, the foregoing arguments of immigrant adaptation has come under criticism, largely from a methodological perspective. Several studies (Borjas, 1985; 1994; Baker and Benjamin, 1994), using pooled regression analysis based on two or more censuses, have demonstrated that, for most immigrant groups, within-cohort growth in

earnings was significantly smaller than that estimated in cross-sectional studies, and there could be "permanent" differences across arrival cohorts and between immigrants and their native-born counterparts. The seeming earnings effect of immigrant adaptation was, in large part, a result of a decline in the "quality" (education, skills and other measured and unmeasured factors of earnings) of immigrant cohorts admitted to the United States and Canada.

Borjas (1985) argues that there are at least two factors that can bias cross-sectional estimates of assimilation effects and raise serious doubts about the conclusion that the earnings of immigrants rise rapidly as they assimilate. The first problem arises from the fact that many immigrants eventually return to their country of origin. For example, it is estimated that 18% of immigrants admitted to the United States between 1960 and 1970 had emigrated by 1970. Therefore the cross-sectional estimate of economic progress of immigrants is in fact a comparison of the average success of different immigrant cohorts before and after self-selection. If immigrants who do not do well in the host country are more likely to emigrate, the estimate of the assimilation effect will be biased upward, since earlier cohorts of immigrants will have been self-selected to include only the most successful, while recent cohorts contain a more representative portion of the immigrant pool. In fact, using longitudinal data from the Survey of Natural and Social Scientists and Engineers, Borjas (1989) found that return migration is more likely among immigrants who did not perform well in the U.S. labour market.

The second problem with cross-sectional analysis is that the intended measure of economic progress could represent, at least in part, differences between immigrant cohorts

(Borjas, 1985; 1994; Baker and Benjamin, 1994). In estimating rates of economic progress, cross-sectional analysis relies on a variable representing the years of residence in the host country to measure the economic progress of immigrants. However, years of residence in the host country also represent the year of entry into the host country. In fact, with cross-sectional data, this variable represents successive immigrant cohorts with different years of entry rather than the same cohort with different lengths of residence in the host country. As a result, the regression coefficient of years of residence measures both the economic progress (the within-cohort effect) and the effect of the average difference across successive entry cohorts (the across-cohort effect).

Borjas (1985) notes that all cross-sectional studies implicitly assume that the average "quality" of successive cohorts of immigrants is not changing over time. Based on this assumption, if recently arrived immigrants earn 10% less than those who arrived 10 years earlier, it follows that the earnings of recently arrived immigrants will increase by 10% in the next decade (net of aging effect). If, in reality, there was no significant difference in quality (education and skills) between immigrant cohorts, there would be little problem with the cross-sectional approach. If, however, this assumption is not empirically valid, there will be a serious problem of bias, the direction of which depends on the secular trend in the quality of the immigrant cohorts admitted to the host country. Borjas argues that if, for example, institutional changes in immigration policies or political disturbances in sending countries lead to higher quality immigration, the cross-sectional estimate of the assimilation effect would be downwardly biased. If the shift from occupational to family preferences and the increase in unscreened illegal immigrants

has lowered the average quality of immigrant cohorts, the cross-sectional estimate of the assimilation effect would be upwardly biased and the impact of the assimilation process on the earnings of immigrants would be overestimated.

According to several studies, the "quality" of immigrants to the U.S. (Borjas, 1985, 1994) and Canada (Beaujot, et al, 1988; Baker and Benjamin, 1994), measured by earnings of different immigrant cohorts at a certain time after arrival using two or more successive censuses, has in fact experienced significant decline in the past decades. Beaujot and Rappak (1988) also report that new immigrant groups, especially those arriving during the 1980s, had lower educational levels and more language problems. But another Canadian study shows that the quality decline occurred only among the less skilled male immigrants. Immigrant women and male immigrants employed in the professional categories did not experience a decline in quality (deVoretz and Fagnan, 1990).

Even though the economic progress of immigrants may be overestimated by cross-sectional studies, and there could be differences in the average "quality" of immigrants between different entry cohorts, there was indeed a process of earnings upgrading among immigrants. For example, while criticizing the cross-sectional studies of immigrant adaptation, Borjas (1994) reported that the relative (to native-born) earnings of immigrants in the U.S. grew by about 10% during the first two decades after arrival. Based on these understandings, we assume, in our analyses in the following sections, that earnings differences among immigrant cohorts were the result of the effects of a combination of socioeconomic adaptation and other factors such as discrimination and cohort differences

in labour market characteristics.

Although all immigrants seem to face substantial difficulty and a period of adjustment, their experiences were quite different from each other. A number of studies have reported that, in the U.S. and Canada, immigrants from English-speaking developed countries fared the best, while those from third-world countries were substantially disadvantaged. For example, Richmond and Kalbach (1980) report that, in Canada, immigrants from the U.K. and U.S. had the highest earnings, while those from Asia and Southern Europe had the lowest earnings. Richmond (1989) finds that, after controlling for age and education, Caribbean-born male immigrants earned 18% less than Canadian-born men, and Caribbean-born female immigrants earned 11% less than their Canadian-born counterparts. Since there was no apparent language barrier for these immigrants, their substantial earnings disadvantage suggests the possibility of racial discrimination.

In the U.S., Poston, Jr., Martin, and Goodman (1982) report that immigrants to the U.S. from Asian and Latin American countries are not faring as well economically as immigrants from European countries. One reason is that immigrants from these newer source countries have fewer of the characteristics associated with higher economic attainment than immigrants from the European countries. But even after these factors had been adjusted statistically, Asian and Latin American immigrants still earned less than immigrants from the old sources. Daneshvary and Weber (1991) reported that residual earnings differences were non-existent for European immigrants (compared to the native-born), while there were substantial differentials for Latin American immigrants, pointing to possible discrimination. Daneshvary and Schwer (1994) found that black immigrants

to the U.S. earned 22% less than their non-black counterparts in 1980, of which 14% was due to differences in earnings related characteristics and 8% due to differentials in returns to human capital.

In the sections that follow, we will use the 1991 PUMFI data in our analysis of the earnings of immigrant groups in 1990 Canada and focus on the ethnic differences within each immigrant entry cohort. The purposes of our analysis are, first, to determine the existence and magnitude of ethnic earnings disparities within these entry cohorts, and second, to estimate direct pay discrimination in the Canadian labour market faced by immigrant groups. While the unadjusted earnings differences will present a picture of earnings stratification of immigrant groups, the adjusted differences are estimates of direct pay discrimination, since occupation and length of employment in 1990, as well as education and experience (age), have been taken into account.

### **Comparing Earnings Status of Immigrant Groups: Gross Differences**

First of all, data from the 1991 PUMFI indicate that substantial earnings differences existed among immigrants entering Canada during different periods (Table 6.1). While the average earnings of the Canadian-born in 1990 were 3% below the Canadian average, immigrants entering Canada before 1946 and after 1980 earned 17% and 24% less respectively than the average, and those entering Canada in 1946-60, 1961-70 and 1971-80 earned 48%, 46% and 8%, respectively more than the average. These differences suggest that among the immigrant cohorts, there existed substantial disparities in the degree of adaptation to the Canadian labour market and in other earnings related



characteristics.

When ethnicity, gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part/full-time worked have been statistically controlled, earnings differences among the immigrant cohorts are very substantially reduced, although they are still evident. While the Canadian-born were slightly advantaged (+1%) compared with an average Canadian, the indices were -14% for immigrants entering Canada in 1981-90, -5% for those entering Canada in 1971-80, -0.3% for those entering Canada in 1961-70, 2% for those entering Canada in 1946-60, and 1% for those entering Canada before 1946. It seems that, for most immigrant cohorts, much of the gross earnings differences are explained by the control variables. The exception is the most recent cohort (that entering Canada during 1981-90): over half of its earnings deficit was not accounted for by these variables. This remaining differential was probably a combination of adaptation effect and the effect of differences in certain unmeasured earnings related characteristics.

This being the case for the immigrant population in Canada as a whole, there were significant earnings differences among immigrants of different ethnic origins within each arrival cohort. In Table 6.2 we list the average earnings (converted from log earnings) of immigrants of different ethnic origins by years of immigration to Canada. For the Canadian total and those of British origin, average earnings are presented in dollar amounts. The earnings of the other groups are presented in percentage terms compared to those of immigrants of British origin entering Canada during the same period.

In relative terms, earnings of cohorts of British immigrants were similar to or slightly higher than those of the average immigrant population. The only exception was that newly arrived (in 1981-90) immigrants of British origin earned substantially (40%) more than an average immigrant entering Canada during that period, suggesting that, among the new arrivals, those of British origins had a substantial advantage in earnings. On the basis of this preliminary observation, we will examine the relative earnings of immigrants of different ethnic origins compared to those of immigrants of British origin within each arrival cohort.

#### Earnings Differences among European groups

For the cohort entering Canada during 1981-90, most groups from Europe had more difficulties than did their British counterparts. Nine of the thirteen groups had, on average, earnings about 13-28% less than their British counterparts. Jewish immigrants earned 13% less than British immigrants, Hungarian immigrants earned 14% less, Greek immigrants 14% less, French immigrants 21% less, immigrants of Balkan origins 24% less, Portuguese immigrants 24% less, Ukrainian immigrants 25% less, German immigrants 27% less, and Polish immigrants 28% less. Immigrants of Dutch and Spanish origins earned 35% and 42%, respectively, less than their British counterparts. The exceptions were immigrants of Other Western European and Italian origins, who fared better than their British counterparts, with earnings 5% and 13%, respectively, higher than the latter. It is quite clear that recent immigrants of British origin had substantial advantage over their counterparts from most other European origins.

For the 1971-80 cohort, earnings disparities between British immigrants and other European immigrants were much less than those in the 1981-90 cohort. Five groups had earnings 8-15% less than their British counterparts: Dutch (-8%), Portuguese (-12%), German (-14%), Greek (-15%) and Spanish (-15%) origins. Another five groups, Hungarian (-3%), French (+0.2%), Italian (+1%), Polish (+3%) and Balkan (+4%) origins, had earnings only slightly different from those of their British counterparts. The other three groups, immigrants of Other Western European (+10%), Ukrainian (+11%) and Jewish (+14%) origins, had earnings substantially more than those of their British counterparts. In this cohort, although immigrants of some European origins still fell behind those of British origin, many did not, and some even had earnings higher than their British counterparts.

In the 1961-70 cohort, a large number of European groups had earnings less than their British counterparts, but the magnitude of the deficits was somewhat smaller than those for the 1981-90 cohort. Two groups, immigrants of Spanish (-1%) and Ukrainian (-5%) origins, earned slightly less than those of British origins. Eight groups had earnings substantially less than their British counterparts ranging from -9% to -17%: French (-9%), Polish (-10%), Dutch (-11%), German (-13%), Balkan (-13%), Hungarian (-14%), Portuguese (-15%), and Italian (-17%). Immigrants of Greek origin entering Canada during 1961-70 earned 27% less than their British counterparts. Only two groups, Other Western Europeans (6%) and Jews (9%), had higher earnings than the British.

For immigrants arriving in Canada during 1946-60, many European groups had earnings slightly less than or about the same as those of the British, and several groups

had higher earnings than the British. The earnings of immigrants of German, Other Western European, Hungarian, Polish, Balkan, Italian and Portuguese origins entering Canada during this period were from 3% less to 2% more than the earnings of their British counterparts. Earnings of French, Ukrainian, and Jewish immigrants were 7%, 16% and 21%, respectively, more than immigrants of British origin. Only three groups, the Dutch (-7%), the Greeks (-12%) and the Spanish (-12%), had earnings significantly less than their British counterparts. Figures for the before-1946 cohort fluctuate greatly and are not reliable because of the small sizes of most categories (see Table 6.3).

In general, non-British European immigrants tend not to do as well economically as British immigrants, but the differences were smaller for earlier cohorts. There appears to be a tendency of earnings convergence between British and non-British European immigrants, suggesting the general process of economic adaptation, faster for immigrants of British origin and slower for immigrants of other European origins. In the 1981-90 cohort, most non-British European immigrant groups earned substantially less than those of British origin; in the 1946-60 and 1971-80 cohorts, only a few of them earned significantly less than the British, and many had levels of earnings similar to the British. But the 1961-70 cohort seems to be an exception: a large number of the groups had substantially lower earnings than the British. Cohort differences may have contributed to this inconsistency. Immigrants of British origin in this cohort had significantly higher average earnings (\$24,265 compared to \$22,747, the second highest, for the 1946-60 cohort). Apparently immigrants of many non-British European origins failed to catch up with their British counterparts, possibly due to their more substantial disadvantages in

earnings related characteristics.

### Significant Earnings Disadvantage of Immigrants of Visible Minority Origins

Compared to immigrants of European origins, those of visible minority origins appeared to have greater initial difficulties, and it took them longer to "catch up" with their British counterparts. In the 1981-90 cohort, all ten groups of immigrants of visible minority origins earned substantially less than their British counterparts. South Asians (-29%), Chinese (-30%), Filipinos (-32%), West Asians (-34%) and Vietnamese (-36%) earned about one-third less than their British counterparts. The other groups earned about 40-65% less than the British. In the 1971-80 cohort, relative earnings of immigrants of visible minority origins were significantly higher. Two groups, those of Chinese and Filipino origins, reached parity with their British counterparts. The deficits of most of the other groups were also substantially smaller than for the 1981-90 cohort. Nevertheless, these groups of immigrants still earned significantly less than the British, ranging from -7% to -27%. And immigrants of Aboriginal origins remained 67% below the British level. Judging from these two cohorts, recent immigrants of visible minority origins had greater initial difficulties than their British and other European counterparts, and their later adaptation was also slower and more difficult. Considering the fact that immigrants of most visible minorities had much higher levels of education than their European counterparts (Chapter 4), these disadvantages cannot be attributed to a "decline of quality" (Borjas, 1985) in the successive immigrant cohorts of visible minority origins. Alternatively, greater cultural differences between Canada and their native countries,

deficiency in the English and French language, and racial discrimination in the labour market may have contributed significantly to their earnings disadvantage. Analysis of net earnings differences in the next section will help us evaluate the significance of direct pay discrimination in the earnings disparities among immigrants of different ethnic origins within these entry cohorts.

In the 1961-70 cohort, the overall position of immigrants of visible minority origins in relation to immigrants of British origin was better. Five of the ten visible minority groups earned as much as or more than their British counterparts. Immigrants of Arab (-0.3%) and Chinese (+0.1%) origins earned as much as British immigrants, and those of South Asian (+2%), Vietnamese (+5%) and Filipino (+14%) origins earned moderately to substantially more than their British counterparts. At the same time, the other five groups, Blacks (-6%), West Asians (-14%), Other East and Southeast Asians (-16%), Latin Americans (-26%), and Aborigines (-71%) still earned substantially less than their British counterparts. The relative positions of immigrants of visible minority origins entering Canada in 1946-60 and before 1946 appeared to be even better, but due to the small size of the categories (see Table 6.3), there were larger fluctuations and the figures are not reliable.

Briefly, in 1990, cohorts of British immigrants matched the general pattern of earnings of cohorts of the general immigrant population in Canada. Compared to immigrants of British origin, those of other European origins in the most recent cohort (1981-90 arrivals) experienced substantial difficulties, but earlier immigrants of European origins have overcome their difficulties, and have caught up with their British

counterparts. Recent immigrants of visible minority origins encountered greater difficulties than those of European origins. Visible minority immigrants from earlier cohorts fared better, but they still tended to be more disadvantaged in earnings than those of European origins.

### **Comparing Net Earnings Differences among Immigrant Groups**

As we saw in the last section, substantial earnings disparities existed among immigrants of different ethnic origins. Some groups, especially those of visible minority origins, were disadvantaged in most arrival cohorts. But one may argue that this could be a result of substantial differences in qualifications and productivity, such as education, occupation and length of time employed during 1990, among the groups considered, rather than unequal opportunities available to these groups and their differential treatment in the labour market. To examine the net effect of ethnicity on the earnings of immigrants in Canada, we show, in Table 6.4, coefficients (in percentage points) for immigrants of different ethnic origins for each entry cohort. These coefficients were obtained from a regression including all earnings related variables discussed in Chapter 2, and dummies representing different immigrant groups with different years of entry into Canada, with immigrants of British origin as the base line category.

To begin with, let us look at immigrants of British origin entering Canada in different periods. The base category here is Canadian-born persons of British origin. Other things being equal, recent immigrants (those who came to Canada in 1981-90) were disadvantaged relative to the Canadian-born by 6%. This disadvantage was reduced to

3% for those who came to Canada during 1971-80. For the 1961-70 cohort, the deficit disappeared; the coefficient was not significant. Those who immigrated to Canada in 1946-60 were slightly advantaged compared to the Canadian-born by 3%. The coefficient for those who entered Canada before 1946 was again insignificant. Although there could be cohort differences in labour market characteristics, the apparent pattern of advancement coupled with increased length of residence in Canada suggests an adaptation process.

While the measurable aspects of educational level, occupational attainment, and language proficiency had been accounted for, the effects of the unmeasured aspects of these factors on earnings should also have been minimal since most immigrants of British origin had presumably come from the United Kingdom or the United States, and thus were competent in the English language and had educational and occupational qualifications readily recognized in the Canadian labour market. However, their initial disadvantages in earnings as compared to their Canadian-born counterparts suggest that they might still lack certain desirable labour market characteristics. Recently arrived immigrants would be less familiar with Canadian institutions and customs in the labour market and would have no or less firm-specific training. These were negative factors in their efforts to seek employment or promotion consistent with their qualifications. After a period of adjustment, immigrants of British origin reached earnings parity with their Canadian-born counterparts, probably by accumulating Canadian experience, improving their knowledge of Canadian customs and organizations in the labour market, and obtaining firm-specific training. Their subsequent advantage in earnings over the otherwise comparable Canadian-born may be seen as supportive evidence of the



hypothesis that immigrants are a positively selected group with certain unobservable characteristics such as higher motivations (Bloom, Grenier and Gunderson, 1994: 12).

Compared to immigrants of British origin with similar labour market characteristics, immigrants of a majority of the other European origins did not appear to be disadvantaged economically; only a few of them tended to be disadvantaged, especially for the later cohorts. In the 1981-90 cohort, seven of the thirteen coefficients for the European groups were not statistically significant, indicating that once other factors had been accounted for, earnings of these groups were not reliably different from those of their British counterparts. At the same time, five groups were significantly disadvantaged compared with their British counterparts. They were immigrants of Balkan (-13%), Jewish (-13%), Dutch (-14%), Polish (-18%) and Spanish (-19%) origins. The only group that was advantaged relative to the British were those of Italian origin, exceeding the British by 19%.

In the 1971-80 cohort, ten of the thirteen coefficients for the European groups were not statistically significant. Only three groups, those of German, Greek and Hungarian origins, were significantly disadvantaged relative to their British counterparts, with deficits of 8%, 12% and 18%, respectively. The overall relative (to the British) position of the European immigrants who entered Canada during 1961-70 were similar to that of the 1971-80 cohort. Nine of the thirteen coefficients were statistically insignificant. Coefficients for the other four groups were negative. Immigrants of Italian origin were disadvantaged compared to the British by 5%, those of German origins by 6%, those of Balkan origins by 6%, and those of Greek origin by 11%. In the 1946-60

cohort, ten of the thirteen European groups were not significantly different in earnings from their otherwise comparable British counterparts. Two groups of immigrants, those of Dutch (-4%) and Hungarian (-9%) origins, were disadvantaged compared to their British counterparts, while those of Jewish origin had an advantage of 13% over those of British origin.

For European immigrants entering Canada before 1946, none of the coefficients is statistically significant. But this cannot be simply interpreted as that, within this entry cohort, there was little adjusted earnings difference between immigrants of non-British European origins and those of British origins, since the insignificance of the coefficients is partly due to the small sizes of the categories (see Table 6.3).

In sharp contrast to the experience of European immigrants, the disadvantage of immigrants of visible minority origins compared to British immigrants with similar earnings related characteristics was much more profound. In the cohort of the most recent arrivals (1981-90), nine of the ten coefficients for immigrants of visible minority origins were negative and statistically significant. Other things being equal, immigrants of South Asian origins earned 13% less than their British counterparts, those of Chinese, Filipino, Vietnamese, Other East and Southeast Asian, West Asian, Black, and Latin American origins about 15-17% less, and those of Arab origins 22% less. The coefficient for immigrants of Aboriginal origins was negative (-28%) but not statistically significant, as a result of the small size of the category (13 cases). Although only slightly over one-third of European immigrant groups in this cohort were substantially disadvantaged relative to otherwise similar British immigrants, all groups of immigrants with visible minority

origins were substantially disadvantaged.

In the 1971-80 cohort, all ten visible minority groups were significantly disadvantaged relative to the British. Among them, immigrants of Chinese origin were the least disadvantaged (-6%), while those of Aboriginal origins the most severely unfavoured (-42%). The other eight groups fell within the range of 10-16% in disadvantage relative to their British counterparts. There was little difference in relative earnings for immigrants of visible minority origins between the cohorts of 1971-80 and 1981-90. This is again in contrast to the fact that only three of the thirteen non-British European immigrant groups in the 1971-80 cohort were significantly disadvantaged compared to the British.

In the 1961-70 cohort, only four of the ten coefficients for immigrant groups of visible minority origins were statistically significant. Immigrants of South Asian origins were disadvantaged relative to the British by 6%, those of Chinese origin by 8%, those of Other East and Southeast Asian origins by 15%, and those of Aboriginal origins by 46%. Most coefficients for immigrant groups of visible minority origins in the 1946-60 and before 1946 cohorts were not statistically significant. But this again cannot be taken as suggesting earnings parity between immigrants of British origin and those of visible minority origins within these earlier cohorts; small sizes of the categories should be a major reason for this finding (see Table 6.3).

An interesting phenomenon concerning the Canadian-born population should be noted here. Recall that for the population including both the Canadian-born and foreign-born, adjusted earnings of visible minorities were at least 5% below the Canadian

average. But when we make the comparisons among the Canadian-born only, the deficits of most visible minorities were significantly reduced (column 1 of Table 6.4), some coefficients even become positive (although insignificant). Only the disadvantages of Canadian-born Filipinos, Latin Americans and Aborigines appeared to be just as substantial as or even more serious. Considering the substantial earnings disadvantages of immigrants of visible minority origins and the relatively small sizes of the Canadian-born populations of these groups (see Table 6.3), the overall disadvantage of these groups was largely a result of the disadvantage of their foreign-born members.

### **Unmeasured Factors, Discrimination and the Residual Earnings Differentials**

In sum, immigrants of British origin fared relatively well in Canada, although they also needed some time to adjust economically to the new country. In the cohort of the most recent arrivals (1981-90), the earnings of immigrants of almost all ethnic origins were substantially lower than those of their British counterparts. In the 1971-80 cohort, the relative earnings disadvantages of immigrants of most European origins were no longer profound. Immigrants of visible minority origins had greater initial difficulties than those of European origins and it took them longer to catch up with immigrants of British origin.

When other earnings-related factors have been taken into account, improvements in earnings over time can still be observed for immigrants of British origin. Since, unlike the analyses by Borjas (1985, 1994) and Baker and Benjamin (1994), our model has taken into account the effect of occupational status, the across-cohort effect (reflecting what is

claimed to be the quality difference between immigrant cohorts) should have been largely eliminated. The rationale is that if there was quality difference between successive immigrant cohorts, this difference should be largely reflected in the disparities in occupational achievements of the cohorts. Where occupational differences had been statistically controlled, the residual earnings differentials should be the effects of other factors, possibly those of adaptation: earlier cohorts tended to be better adjusted to the socioeconomic system and had higher earnings attainments even with similar occupational groups.

At the same time, a progressive reduction in net earnings disadvantages on the part of other immigrant groups compared to their British counterparts can also be observed, indicating that immigrants of other ethnic origins had greater initial disadvantage than British immigrants, and that, with more experience in Canadian society, they were able to reach parity or near parity with their British counterparts. There were, however, significant differences between immigrants of European origins and those of visible minority origins. First, with comparable labour market characteristics, immigrants of visible minority origins experienced greater and much more extensive initial earnings disadvantages than those of European origins. Second, it took longer for immigrants of visible minority origins than for those of European origins with similar qualifications to narrow down their disadvantages.

It is noticeable that for the most recently arrived immigrants, large proportions of the earnings disparities between those of British origin and those of other origins were removed when other factors had been taken into account. With the exception of two

groups (Other Western Europeans and Italians), recent immigrants of ethnic origins other than the British had average earnings around 15-40% less than their British counterparts. When other variables were controlled, most of the differences (with the exceptions of those for immigrants of Arab and Aboriginal origins) were reduced to less than 20% or were statistically insignificant. This indicates that large amounts of the earnings disadvantages that most recent immigrants experienced were attributable to their unfavourable labour market characteristics such as lower educational levels and occupational status.

Nevertheless, significant earnings disparities remained, after other factors had been taken into account, between immigrants of British origin and those of other origins, especially those of visible minority origins. In fact, in the 1981-90 cohort, about half of the disparities between British immigrants and immigrants of visible minority origins remained unaccounted for by the variables included in our model. This suggests that, together with the factors measured in our study, certain unmeasured factors were operating in the production of the earnings disparities, especially for immigrants of visible minority origins. In the 1971-80 cohort, the adjusted earnings of immigrants of South Asian, Chinese and Filipino origins were even lower than their unadjusted earnings, indicating that their earnings related characteristics were in fact above the Canadian average and that their below-average adjusted earnings were largely attributable to unfavourable market conditions. A similar situation can be observed for immigrants of South Asian and Chinese origins in the 1961-70 cohorts.

To account for the residual earnings differentials among immigrants of different

ethnic origins in each entry cohort, there are several important factors. First of all, similar educational credentials, as measured in the PUMFI data, that had been obtained in the immigrants' home countries could have different labour market values. Those obtained in the United States, United Kingdom, and other European countries tend to be more highly appraised and more readily accepted than those obtained in the third world countries from which most immigrants of visible minority origins come. Whether or not educational credentials from different countries represent substantially different qualifications among the Canadian immigrant population is beyond the scope of the present study. But differential treatment of educational qualifications might very well have contributed to the production of the residual earnings disadvantages experienced by immigrants of visible minority origins, who had to take positions with lower educational requirements and accept lower earnings. It was only after a period of adjustment that some of them were able to modify their educational qualifications, acquire Canadian equivalents, and reduce or eliminate the part of their earnings deficits attributable to their unfavourable foreign educational credentials.

Second, limited ability in the English or French language might still be an important factor in the earnings disadvantages experienced by immigrants of visible minority origins and those of some of the European origins. Although English and French language ability was measured in the PUMFI data and the variable was included in our regression analysis, the measurement of the variable only distinguished whether or not the individual had the ability to conduct a conversation in English or French. This measurement was probably not fine enough to provide a good estimate of the individual's

overall English or French language proficiency. It is reasonable to assume that, among those categorized as having the ability to conduct a conversation in English or French, variations in the ability to use the oral language could still be very large. In addition, this variable did not measure the individual's state of literacy in English or French which was essential for most positions in the Canadian labour market today. Whether the individual was looking for a job or seeking a promotion, his or her language ability in spoken and written English or French would be very important. In the job market, it would affect the result of the endeavour to find an ideal job. Once a position was secured, it affects work performance and communication with colleagues and superiors, and thus has substantial effects on subsequent promotions.

Generally speaking, among those categorized as having the ability to conduct a conversation in English or French, immigrants of most ethnic origins would have more difficulties in spoken and written English or French than those of British and French origins, and therefore tended to be in a less favourable position in this regard. Given the fact that European languages are relatively similar to English and French, and immigrants of European origins would have had more opportunities to be exposed to the English or French language, European immigrants should have less language difficulty than immigrants of most visible minority origins (Blacks and Latin Americans are exceptions). As their length of residence in Canada increased, differences in English or French language proficiency would diminish gradually between immigrants of visible minority origins and those of European origins, and the earnings disparities between these two broad categories resulting from language differences would also gradually disappear.



Third, immigrants of European origins, especially those of British and other Western European origins, had fewer cultural barriers to their adaptation to the Canadian society and labour market than those of visible minority origins. Canadian society is similar to that of the United States and Western European countries; it is also similar, though to a smaller extent, to that of Eastern and Southern European countries. Canadian culture has origins in Western civilization. The political, economic and organizational systems in Canada operate in similar ways as in the United States and Western Europe. The practices and customs of daily life, in the labour market and within economic organizations are also carried out in similar ways. Because of these similarities between Canada and their home countries, immigrants of European origins should experience fewer cultural barriers. They would have less difficulty fitting themselves into Canadian societal and organizational systems and should feel relatively comfortable with the new social and cultural environment. They should also find it relatively easy to understand and to practice "Canadian" ways, and to communicate with the majority of their Canadian-born colleagues. All this should help reduce the negative effects that cultural differences could have had on the immigrants' efforts in seeking employment consistent with their qualifications, on their work performance, and on their economic returns in the labour market.

In contrast, Canadian society is very different from societies found in most third world countries from which most immigrants of visible minority origins come. These societies have evolved from civilizations very different from that in the West and therefore have substantially different cultural traditions from those found in the Canadian

mainstream. Also, third world countries are in stages of social and economic development quite different from that found in Canada and the West; their political, economic and organizational systems are substantially different from those in Canada. Because of this, it would take immigrants of visible minority origins more effort to adapt to Canadian society, and to understand and follow the customs and practices of the Canadian labour market. In addition, they would tend to have more difficulties in their everyday communication with their Canadian-born colleagues due to cultural differences. All these cultural factors would inevitably hinder or delay the integration of immigrants of visible minority origins into Canadian society in general and the Canadian labour market in particular, and play a negative role in their earnings achievement.

Finally, but not at all least important, discrimination or differential treatment of workers was very possibly a contributing factor. Since disadvantages were found much more profoundly for immigrants of visible minority origins than for those of European origins, it is suggested that such discrimination was, to a large extent, along racial lines. The progressively diminishing negative coefficients for most immigrant groups suggests that direct pay discrimination affected recent immigrants more seriously. It is possible that, when combined with language difficulties and cultural differences, recent immigrants, especially immigrants of visible minority origins, were more vulnerable to pay discrimination. When they had gained more Canadian experience and improved their communication skills and understanding of the Canadian culture, they were better protected from unfair treatment in the labour market.

**Table 6.1 Gross and Net<sup>a</sup> Earnings Effects of Period of Immigration, Canada, 1990**

Period of immigration	Gross effect (%)	Net effect (%)	N
Canadian-born	-2.7	1.1	347,148
Immigration by 1945	-16.9	1.4	822
Immigration in 1946-60	47.9	2.4	16,134
Immigration in 1961-70	45.8	-0.3	18,492
Immigration in 1971-80	7.6	-5.2	23,489
Immigration in 1981-90	-23.7	-13.5	19,022

a. Controlling for gender, age, marital status, province of residence, metro/non-metro area, geographic mobility, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part/full-time worked; Adjusted R Square = 0.57988 from regression.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 6.2 Earnings Differences (%): Individuals of Different Ethnic Origins Compared to Individuals of British Origin, by Period of Immigration, Canada, 1990**

Ethnic group	Canadian-born	Foreign-born, year of immigration to Canada				
		by 1945	1946-60	1961-70	1971-80	1981-90
French	+0.1	+67.8	+6.7	-8.9	+0.2	-21.0
Dutch	-7.9	-32.5	-6.8	-10.9	-7.5	-35.1
German	+1.0	-15.7	-1.1	-13.1	-14.1	-26.5
Other W European	+13.1	-6.4	-2.9	+6.0	+10.1	+4.8
Hungarian	+0.3	-3.0	-1.1	-14.0	-2.5	-14.0
Polish	+12.2	-3.3	+1.6	-9.8	+2.9	-27.7
Ukrainian	+9.4	+8.9	+15.6	-4.8	+11.4	-24.6
Balkan	-25.3	+59.3	-2.0	-13.4	+4.2	-23.9
Greek	-41.3	-27.1	-12.4	-26.9	-14.6	-13.8
Italian	-7.3	+35.4	-1.3	-16.7	+0.8	+12.7
Portuguese	-42.4	-	+1.8	-14.5	-12.2	-24.2
Spanish	-45.3	+20.7	-12.2	-1.3	-14.9	-42.0
Jewish	+31.7	+2.1	+21.0	+8.8	+14.2	-13.3
Arab	-20.7	-61.0	+14.5	-0.3	-9.9	-42.4
W Asian	-36.9	+59.9	+25.0	-14.3	-18.4	-34.0
S Asian	-61.8	+46.9	+33.2	+1.6	-6.9	-28.9
Chinese	-27.3	+55.9	-12.5	+0.1	-0.7	-30.2
Filipino	-82.1	+227.9	-31.0	+14.2	+2.2	-31.5
Vietnamese	-21.7	-	-16.9	+4.6	-16.4	-35.7
Other E & SE Asian	+5.1	+22.1	-46.9	-16.3	-25.0	-42.1
Latin American	-58.2	-0.0	-83.0	-25.7	-26.6	-41.6
Black	-46.1	+0.4	-0.6	-5.7	-11.8	-39.1
Aboriginal	-48.5	-	+36.8	-70.7	-66.8	-64.8
Others	-11.4	+3.6	+3.8	-8.9	-10.9	-27.2
British	\$15,604	\$12,505	\$22,747	\$24,265	\$17,634	\$16,222
Canada	\$14,882	\$12,707	\$22,629	\$22,301	\$16,468	\$11,575

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 6.3 Numbers of Cases in Immigrant Groups by Period of Immigration, Canada, 1991**

Ethnic group	Canadian-born	Foreign-born, year of immigration to Canada				
		by 1945	1946-60	1961-70	1971-80	1981-90
British	110,336	268	3,814	4,524	3,942	1,590
French	93,922	22	248	414	434	217
Dutch	3,789	21	1,643	338	261	138
German	12,050	79	2,136	848	466	318
Other W European	857	12	303	150	109	65
Hungarian	911	23	449	159	124	139
Polish	2,005	42	373	242	242	1,260
Ukrainian	6,364	63	243	64	42	70
Balkan	820	16	301	633	431	140
Greek	1,006	5	316	764	402	99
Italian	6,701	21	2,924	2,733	664	172
Portuguese	704	0	249	1,041	1,459	593
Spanish	123	2	29	142	371	388
Jewish	2,496	47	275	263	384	301
Arab	274	3	36	262	488	712
West Asian	55	1	23	130	239	516
South Asian	403	2	47	767	2,780	2,289
Chinese	1,186	2	354	841	2,753	3,417
Filipino	78	1	4	239	1,045	1,116
Vietnamese	12	0	1	11	498	636
Other E & SE Asian	666	2	16	147	596	484
Latin American	18	1	3	40	413	509
Black	731	3	54	788	1,868	1,281
Aboriginal	4,532	0	2	12	8	13
Others	97,109	186	2,291	2,940	3,470	2,559

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

**Table 6.4 Net<sup>a</sup> Earnings Differences (%): Individuals of Different Ethnic Origins Compared to those of British Origin, by Period of Immigration to Canada, 1990**

Ethnic group	Canadian-born	Foreign-born, year of immigration to Canada				
		by 1945	1946-60	1961-70	1971-80	1981-90
British <sup>b</sup>		-1.7	+2.8**	+1.5	-3.3**	-5.9**
French	+3.5**	+24.5	+6.3	-4.2	+5.7	-5.3
Dutch	+1.1	+9.0	-3.9*	-0.8	-3.1	-13.6**
German	+1.2	+13.0	-0.8	-5.8**	-8.1**	-6.7
Other W European	+8.4**	+18.2	+0.5	+4.3	+8.9	+13.4
Hungarian	+0.8	-8.8	-8.7**	-9.3	-18.1**	-3.6
Polish	+1.2	+14.3	+2.4	-1.7	-2.1	-18.1**
Ukrainian	+2.7**	+12.4	+3.3	+13.4	-1.5	+8.3
Balkan	+1.3	+12.4	+1.0	-6.0*	-0.3	-12.5*
Greek	-5.5**	-35.1	-1.7	-11.3**	-12.0**	-0.7
Italian	+4.0**	+4.0	-1.5	-4.9**	-0.1	+19.1**
Portuguese	+8.1**	--	+6.3	+0.7	+2.1	+6.3
Spanish	-4.7	-32.2	+4.1	+0.7	-6.7	-19.0**
Jewish	+9.8**	+4.6	+13.3**	+6.8	+1.0	-12.5**
Arab	+1.5	-68.3**	+4.6	-4.2	-11.1**	-22.1**
West Asian	-2.4	+33.6	+13.3	-9.7	-14.3**	-16.7**
South Asian	-5.0	+61.0	+6.9	-6.3**	-10.0**	-13.0**
Chinese	-4.7**	-44.0	-13.6**	-8.2**	-6.0**	-15.7**
Filipino	-23.3**	+15.8	+6.4	-7.4	-10.6**	-15.8**
Vietnamese	+22.3	--	-14.8	+7.7	-12.2**	-15.3**
Other E & SE Asian	-1.9	+49.6	-37.8**	-15.0**	-15.0**	-16.1**
Latin American	-25.2	+69.2	-26.9	-15.8	-16.0**	-17.1**
Black	-5.2*	+84.2	-11.4	-4.4	-10.2**	-16.8**
Aboriginal	-18.5**	--	+5.3	-45.7**	-41.8**	-27.8
Others	-1.4**	-5.1	-1.5	-3.1	-4.2**	-12.3**

a. Controlling for gender, age, marital status, province of residence, metro/non-metro area, geographic mobility, knowledge of official languages, education, occupation, industrial sector, weeks worked, and part/full-time worked; Adjusted R Square = 0.57999 from regression.

b. Coefficients for immigrants of British origin are in comparison to Canadian-born individuals of British origin.

\* Significant at 0.10; \*\* Significant at 0.05.

Source: Public Use Microdata File on Individuals, 1991 Census of Canada.

## **Conclusions**

In 1965, John Porter depicted Canadian society as a Vertical Mosaic, emphasizing its stratification on the basis of ethnicity. He argued that, because of the predetermined differences among the ethnic groups in power and status, ethnicity has been an important factor in the formation of social classes in Canada, and the ethnic hierarchy of socioeconomic status has been remarkably rigid and consistent. Using 1931, 1951 and 1961 Canadian Census, Porter demonstrated that those of Jewish and British origins were high in the occupational hierarchy, the French and those of other Europeans origins ranked relatively low in the hierarchy, and Aboriginal Peoples were at the bottom of the stratification system (Porter, 1965: 60-103).

Over the decades, Porter's Vertical Mosaic thesis has been supported by many subsequent researchers. They maintained that differences in occupational status among Canadian ethnic groups continued to be substantial despite moderate decline in recent decades. They demonstrated that, for the two charter groups, the occupational status of the British remained significantly higher than that of the French (Royal Commission, 1969: 36-45; Breton and Roseborough, 1971; Boyd, et al, 1981). Jews and Northern and Western Europeans were in favourable positions, visible minorities and South Europeans were in disadvantaged positions, and Aboriginal Peoples were at the bottom (Porter, 1985; Li, 1988; Lautard and Guppy, 1990; Reitz, 1990). Therefore, "Occupational inequality

is still substantial enough to justify the use of the concept 'vertical mosaic' to characterize this aspect of ethnic relations in Canada" (Lautard and Loree, 1984: 342). Intergroup disparities in education, differential treatment of immigrant groups by Canadian immigration policy, group differences in length of residence in Canada, cultural differences, and discrimination in the labour market are believed to be the most important factors determining ethnic occupational inequality (Blishen, 1970; Breton and Roseborough, 1971; Li, 1978; 1987; Porter, 1985; Jabbra and Cosper, 1988; Reitz, 1990). It was also argued that the Canadian educational system had been a mechanism to reproduce and create social inequality, and therefore reinforce the vertical mosaic (Li, 1988: 77-83, 96; Shamai, 1992).

Alternatively, advocates of the New Mosaic re-examined Porter's thesis and argued that the picture of ethnic stratification in Canada was inconsistent with the Vertical Mosaic, and that the significance of ethnicity in the attainment of socioeconomic status was declining (Tepperman, 1975; Pineo, 1976; Darroch, 1979; Ornstein, 1981). They showed that the convergence process in occupational status among ethnic groups in Canada had become more apparent since Porter's original analysis (Reitz, 1980: 150-153) and that gains by non-charter groups had been significantly greater than those of the charter groups (Boyd, et al, 1981; Pineo and Porter, 1985: 382-384). It was demonstrated that Porter's hierarchy of the four strata (charter groups, North Europeans, South Europeans, and visible minorities) had changed dramatically: the British had dropped from the top to the middle, and Asians had moved to the top with Jews (Herberg, 1990). It was thus argued that the Vertical Mosaic may have been only a transitional period in the



decades of great immigration (Pineo and Porter, 1985: 390), and that ethnicity was no longer a drawback for social mobility in Canada (Isajiw, Sev'er and Driedger, 1993). In terms of ethnic mobility in education, advocates of the New Mosaic thesis argued that the Canadian educational system had provided equal opportunity to all ethnic groups. They showed that non-charter groups had gained significantly in educational achievement compared to the British, and that there was no evidence of ethnic inequality in education in Canada. It is claimed that the Canadian educational system, despite all the criticism of it, had worked effectively to help minority Canadians overcome the disadvantages of their background (Pineo and Porter, 1985: 391; Herberg, 1990).

While there are still ethnic differences in social status in Canada, strong evidence in the literature has shown that there has been considerable mobility among Canadian ethnic groups in education and occupation, and that there has been a convergence in socioeconomic status among ethnic groups in Canada since Porter's original analysis. As a matter of fact, many researchers in support of the Vertical Mosaic thesis acknowledge that there has been a decline in the relationship between ethnicity and educational and occupational achievements in Canada, and that many traditionally low-status groups have moved up in the Canadian socioeconomic hierarchy (Lautard and Loree, 1984: 342; Li, 1988: 93; Lautard and Guppy, 1990: 203; Shamai, 1992: 47-49).

Our analysis of data from the 1991 Census indicate that this trend continued into the 1990s. While some Southern European groups stayed low in educational attainment, and Aboriginal Peoples were still trapped at the bottom of the hierarchy, most visible minorities, especially those from Asia, had caught up with or surpassed East and Western

European groups. To a lesser extent, occupational mobility was also evident among Canadian ethnic groups. While Jews continued to be over-represented at the higher layers of the Canadian occupational hierarchy, followed by Eastern and Western Europeans, several Asian groups, such as Arabs, West Asians, Chinese, and Other East and Southeast Asians, have moved up in the hierarchy and were in slightly better positions than most European groups.

Mobility in education and occupation would, of course, have influenced the process of earnings attainment, and many Canadian ethnic groups might have benefited from this development. However, as a result of different degrees and manifestations of ethnic and racial discrimination and other socioeconomic factors, the extent of ethnic mobility in earnings has been quite different from that in education and occupation. The central task of the present study was to evaluate the Vertical Mosaic versus the New Mosaic thesis with respect to ethnic disparities in earnings, and to estimate the extent of ethnic or racial discrimination in pay in the Canadian labour market in the early 1990s.

### **The Declining Significance of Ethnicity and the Persistent Significance of Race**

A large number of studies have been carried out in Canada addressing the issue of earnings inequalities among ethnic groups. Evidence has indicated that the significance of ethnicity in earnings acquisition had been declining, but that race continued to be a key factor in the process of earnings attainment. On the one hand, the pattern of ethnic stratification in earnings underwent substantial changes between the 1960s and the 1980s, and the significance of ethnicity in the process of earnings attainment had declined for

the white ethnic groups. The disparity between the two charter groups was substantially reduced during these two decades; the British were no longer in advantaged positions in relation to most of the other white ethnic groups; and Eastern and some Southern European groups had caught up with Western European groups. In addition, earnings disparities experienced by white ethnic groups could largely be attributed to their differences in earnings related characteristics. After education, occupation and other intervening variables had been taken into account, their earnings disparities largely disappeared, indicating that direct labour market discrimination in monetary rewards was minimal among these groups.

On the other hand, earnings inequality was still a serious and consistent phenomenon for visible minorities and for some South European groups. These groups, especially visible minorities, still suffered from earnings inequality despite their upward mobility in educational and occupational status.. Members of these groups earned substantially less than an average Canadian, and their earning disadvantages persisted after various intervening variables had been taken into account. This suggests that racial discrimination in the Canadian labour market was still a significant factor detrimental to the status mobility of members of these ethnic groups in terms of earnings attainment. Evidence has shown that racial discrimination in the Canadian labour market in terms of economic rewards was exercised in several ways. Members of minority groups often had greater difficulty getting promotions than their white counterparts with similar qualifications. Some employers did not accept foreign-earned educational and professional credentials, especially those earned in less developed countries where most

immigrants of visible minority groups had come from. The issue of pay equity was still valid; members of ethnic minorities were often paid less than their white counterparts for the same job.

From our analysis of the evidence existing in the literature, it is evident that most white ethnic groups were no longer significantly different from each other in earnings, but that most non-white groups and some Southern European groups were differentiated from them. The multi-level hierarchy that Porter described had largely become a two-plane structure where most white groups were at the upper level and the non-white and some Southern European groups were at the lower level. Thus, both the Vertical Mosaic and the New Mosaic theses have merit in describing the Canadian ethnic hierarchy of earnings, but neither is sufficient. On the one hand, proponents of the New Mosaic perspective were right in pointing out that the overall significance of ethnicity in the process of earnings attainment was diminishing. But this perspective neglects the reality of the continuing presence of race as an important factor in earnings determination. On the other, the Vertical Mosaic thesis is still valid, to some extent, for Canadian society: earnings inequalities persisted among some ethnic groups, and such inequalities were especially substantial along racial lines. But since ethnic stratification, which is the fundamental basis of the Vertical Mosaic thesis, has given way to racial stratification, the Canadian mosaic is no longer vertical in the same way as described by Porter.

#### **New Evidence from the 1991 Census of Canada**

Starting from these understandings, the present study has re-examined the issue

of ethnic and racial inequalities in earnings, and estimated the degree of pay discrimination along ethnic or racial lines, using the Public Use Microdata File on Individuals drawn from the 1991 Census of Canada. This new data set, with larger sample size and more ethnic groups, especially more visible minority groups, has enabled us to draw a more complete and more recent picture of the various ethnic groups' economic status.

In the analysis throughout the present study, we have had two focuses in the examination of ethnic inequalities in earnings. The first was to examine the observed earnings standings of Canadian ethnic groups, which was the end product of the whole process of earnings attainment in Canadian society and has provided us with an overall picture of the current ethnic mosaic. With this approach, we have been able to compare and evaluate the Vertical Mosaic and the New Mosaic theses. The second focus has been on the process of earnings distribution within the labour market, evaluating the extent of direct pay discrimination on the basis of ethnicity and race, or the extent of "unequal pay for equal work" for workers of different origins.

In our examination of the observed earnings positions of Canadian ethnic groups in 1990, it is found that earnings differences were not profound among most European groups. Disparities between the two charter groups were quite moderate; neither the British nor the French were in more advantaged positions than a majority of the other European groups; and most of the traditionally low status European, especially those from Eastern Europe, had caught up with their Western European counterparts. The exceptions were some groups from Southern Europe (notably the Greeks and Spanish), which were

still substantially disadvantaged, and Jews, who retained superior positions in the hierarchy. This picture was substantially different from that in the early 1960s when the British were in significantly advantaged positions, and the French and Southern and Eastern Europeans were in disadvantaged positions (Royal Commission, 1970: 40-66). We also found that some degree of earnings disparities existed among visible minority groups. Some groups from Asia (Chinese, South Asians and Filipinos) were relatively better-off compared to other visible minority groups. Other Asian groups (Other East and Southeast Asians, Arabs, West Asians and Vietnamese), Blacks and those of Latin American origins were in the middle. Aboriginal Peoples were at the very bottom, with earnings barely 50% of those of an average Canadian.

The most notable pattern of earnings disparities found in the 1991 PUMFI data was that between European groups and visible minorities. Compared to their European counterparts, persons of visible minority origins were in substantially disadvantaged positions. Most European groups, except three Southern European groups (Portuguese, Greeks and Spanish), had above average earnings, while all visible minority groups earned substantially less than the average. Li (1988) has found with data from the 1981 Canadian Census that ethnic earnings disparities persisted largely along racial lines. With many more visible minority groups included in the 1991 PUMFI (ten compared to two in the 1981 PUMFI), we can safely claim that a distinction in earnings status did exist between most European groups on the one hand and visible minorities and some Southern European groups on the other. This current pattern of ethnic inequality in earnings in Canada is quite similar to the American scene described by Hirschman and Kraly (1988).

While disparities among European groups had been narrowing, suggesting a trend of convergence among this category, substantial differences existed between European groups and visible minorities. This narrowing of ethnic differences within racial groups and the persistence of disparities between racial groups indicate that race has, to a large extent, replaced ethnicity as a prominent factor in earnings attainment in present day Canada. Based on this evidence, neither the Vertical Mosaic thesis nor the New Mosaic thesis is adequate in describing current Canadian society. The reality is that the Mosaic is still vertical, but race has replaced ethnicity as the fundamental basis of this hierarchy.

In our estimation of the net or direct effect of ethnicity on earnings, a number of earnings-related factors, namely, gender, age, marital status, province of residence, metropolitan/non-metropolitan area, geographic mobility, period of immigration, knowledge of official languages, education, occupation, industrial sector, and length of time worked in 1990, were statistically controlled. Nevertheless, substantial disparities remained, though to a lesser extent, between European groups and visible minorities. All of the nine favoured categories (those with positive net effects) were of European origin: three were advantaged relative to the average by 7% to 8%, three by 2% to 3%, and another three by less than 1%. Of the fifteen unfavoured categories (those with zero or negative net effects), five were of European origins, ranging from 0 to -6%, and ten were of visible minority origins, eight of which were disadvantaged in the range of -5% to -8%, and two at -11% and -19%. Looking at the ranking of the groups, twelve of the fourteen European groups ranked above all of the ten visible minority groups. One of the other two European groups, the Spanish, had the same net effect index (-5%) as South

Asians who had the highest score among the visible minorities. Greeks were the only group of European origin who had a score (-6%) slightly lower than those of two of the visible minority groups (South Asians and Chinese).

The advantage of most European groups and the disadvantage of visible minority groups were demonstrated more clearly when the net effects were estimated within educational and occupational categories. The overall pattern was again that all visible minorities were disadvantaged at every educational and occupational level, while most European groups were in favourable positions. Our analysis of ethnic earnings inequalities within immigrant cohorts indicates that, with comparable labour market characteristics, immigrants of visible minority origins experienced greater and much more extensive initial earnings disadvantage than those of European origins, and it took longer for the former than for the latter to narrow their disadvantages. It is evident that, compared to their European counterparts, immigrants of visible minority origins suffered more from their immigrant status. When combined with language difficulties and cultural differences, recent immigrants of visible minority origins were more vulnerable to pay discrimination.

The fact that substantial earnings disparities remained between European and visible minority groups after earnings-related factors had been taken into account indicates that workers of visible minority origins were unfavourably treated in the Canadian labour market. Despite the commonly accepted idea that persons with similar productivity should receive similar economic returns, workers of different ethnic origins were not rewarded equitably in the Canadian labour market. The substantial earnings differentials



after statistical adjustment, especially those within educational and occupational categories and immigrant cohorts, clearly demonstrate that equal work was not paid equally, and that racial discrimination in pay was still a significant phenomenon in the early 1990s.

### **Contributions of the Study and Suggestions for Future Research**

It is hoped that the present study will contribute to the debate over ethnic earnings inequalities in Canada. Starting from an evaluation of the Vertical Mosaic versus the New Mosaic thesis, the major contribution of the study is that it clearly demonstrates that the Canadian mosaic is still vertical in terms of earnings attainment, and that race has largely replaced ethnicity as a key factor in the earnings stratification of the mosaic. Therefore, industrialization did bring with it a unique "opportunity structure" within which socioeconomic mobility was more extensive (cf. Lipset and Bendix, 1959; Boyd, et al, 1985: 5): ethnic background appears to be less important in the process of earnings attainment. However, the influence of race remains, even though principles of universalism have replaced particularism in terms of ethnicity and many other dimensions of ascription.

The significance of the present study also lies in the fact that, compared to previous studies, it is based on a much larger and more recent data set with more ethnic groups, especially more visible minority groups. This has enabled us to draw a more complete and more representative picture of the various ethnic groups' recent economic positions and to make comparisons among the groups, especially between European and visible minority groups. This has also enabled us to incorporate more ethnic groups in

the examination of adjusted and unadjusted ethnic earnings disparities within educational and occupational categories and within immigrant entry cohorts. Therefore, for interested readers, researchers and government agencies, this study provides a rich source of information on the general earnings standings of the Canadian ethnic groups, their earnings disparities at different educational and occupational levels and within immigrant entry cohorts, and on the net effect of ethnicity on earnings, overall or within educational and occupational categories, and within immigrant entry cohorts.

In demonstrating changes in ethnic stratification in earnings over time, the present study has made some fragmentary historical comparisons using results from previous studies. This is apparently not sufficient for a description of the historical changes in ethnic groups' relative earnings positions and in pay discrimination in the labour market. There have been some studies in the literature that performed historical comparisons (for example, Winn, 1988; Herberg, 1990). But these studies include only a limited number of visible minorities and have not incorporated earnings-related variables in their statistical analyses. PUMFIs from the 1981 and 1971 Censuses contain a limited number of visible minority categories. It is hoped that, when future PUMFIs are available, presumably with at least as many ethnic groups as in the 1991 PUMFI, historical comparisons of ethnic and racial inequalities in earnings will be made based on unitary analyses of the data from different censuses. Such analyses and comparisons will be more informative about the relative economic mobility of the Canadian ethnic groups.

We have seen in Chapter 6 that substantial earnings disparities existed between immigrants of European and visible minority origins. After statistical adjustment, the

disparities remained for the more recent entry cohorts; but for the earlier cohorts and the Canadian-born, a majority of the coefficients were insignificant (Tables 6.2 and 6.4). Considering that a large proportions of the visible minority populations were foreign-born, with heavy concentration in the more recent entry cohorts (Table 6.3), the overall earnings disadvantage of visible minority groups largely reflected the disadvantages of their recently arrived members. But this cannot lead conclusively to an assertion that there is no pay discrimination for the Canadian-born and earlier immigrant entry cohorts, since the insignificance of the coefficients could very well have been a result of small numbers sampled in these categories. Therefore, when new and relevant data are available, further analyses of ethnic earnings differences and pay discrimination among the Canadian-born and earlier immigrant cohorts are necessary for a more complete picture of the economic positions and experience of Canadian ethnic groups.

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