

2002

# Human capital, social capital, and income attainment in Canada.

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**HUMAN CAPITAL, SOCIAL CAPITAL, AND INCOME ATTAINMENT IN CANADA**

**by**

**Daniele Cerri**

**A Thesis**

**Submitted to the Faculty of Graduate Studies and Research  
through Sociology and Anthropology  
in Partial Fulfillment of the Requirements for  
the Degree of Master of Arts at the  
University of Windsor**

**Windsor, Ontario, Canada  
2002**

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## **ABSTRACT**

### **Human Capital, Social Capital, and Income Attainment in Canada**

by

**Daniele Cerri**

**This thesis uses the 1989 General Social Survey of Canada in an effort to investigate the potential influence of social capital on income attainment for full-time members of the Canadian workforce. As well, it evaluates the comparative effects of social capital and human capital. More specifically, the analysis investigates whether social capital provides an alternative explanation to human capital for income attainment in the context of ethnicity/race, gender, and immigrant status. Other variables that have been shown to influence income are controlled for, including age, occupation, employment sector, and region.**

**The analysis reveals that both human and social capital have significant independent effects on income attainment. Human capital exerts a stronger effect than social capital and each appear to explain income attainment for some groups. Finally, despite the importance of these predictors, ethnicity/race, gender, immigrant status, as well as region, occupation, and employment sector are found to have independent effects on income attainment. Theoretical implications of findings are discussed.**

## **DEDICATION**

**To my parents, Egidio and Nicoletta, and my sister, Antonietta. Your inspiration, guidance, and support are the foundation of my academic achievements. Vi amo!**

## **ACKNOWLEDGEMENTS**

I would like to thank my thesis committee members, Dr M.R. Nakhaie, Dr. E. Maticka-Tyndale, and Dr. A. Andiappan. The completion of this thesis would have been impossible without their expertise and professional guidance. Andria Turner, graduate secretary in the Department of Sociology and Anthropology at the University of Windsor, also deserves recognition for her caring assistance. Special thanks also go to all of my friends and colleagues in Windsor: thank you for your friendship, love, and support. I would also like to thank numerous friends who have been a part of my life for several years. All of you have contributed in one way or another to the completion of this thesis. Finally, I would like to thank family members for their love and support throughout my academic life.



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## **I: INTRODUCTION**

The measure of an individual's quality of life in Canadian society is very much based on their acquisition of resources and rewards such as income (see Isajiw, 1999: 111; Lowe, 1999; Urmeter and Guppy, 1999). Accordingly, the issue of income inequality has been the focus of much theorizing and research. Researchers have particularly investigated the effects of human capital and ascribed characteristics such as ethnicity/race, gender, as well as immigrant status (see, for example, Boyd et.al., 1985; Curtis et.al., 1999; Nakhaie, 1999; Tepperman, 1975).

Generally, the explanation of income inequality focuses either on individual characteristics and attributes or structural/institutional forces. Human capital theory (Becker, 1995; Davenport, 1999; Mincer, 1974; Thurow, 1970), for example, explains income inequality as a function of differences in individual knowledge and skills. Researchers have shown that measures of human capital such as education, labour market experience, and language skills have strong effects on income (Boyd et.al., 1985; Guppy and Arai, 1993; Li, 2000; Sakamoto, 1988). However, researchers have also shown that the effect of human capital varies by ethnicity/race (Geschwender and Guppy, 1995; Lian and Matthews, 1998), gender (Goyder, 1981; Kidd and Shannon, 1996), immigrant status (Akbari, 1999; Wanner, 1998), and employment characteristics, namely, occupation and labour market characteristics (Bonacich, 1972; McRoberts, 1985).

Recently, the importance of social capital for resource attainment has received particular attention. Social capital, as defined by investments in social relationships with expected beneficial returns (Lin, 2001: 6; Portes, 1998: 6), has been shown to have an effect

on numerous social outcomes, including income attainment (Arrow, 2000; Baker, 2000; Boxman et.al., 1991; Fernandez-Kelly, 1995; Friedman and Krackhardt, 1997; Meyerson, 1994; Ooka. 2001; Portes, 1995; Potter, 2000; Putnam, 2000; Woolcock, 1998). The idea of social capital suggests that income attainment may not only be a function of an individual's ascribed characteristics, or knowledge and skills, but also their "connections" to other people. The currently popular adage "it's not what you know but who you know" succinctly expresses this possibility (see Baker, 2000: 2; Burt, 1992: 10).

This thesis uses the 1989 General Social Survey of Canada in an effort to investigate the potential influence of social capital on income attainment for full-time members of the Canadian workforce. The analysis focuses on whether social capital provides an alternative explanation to human capital for income attainment in the context of ethnicity/race<sup>1</sup>, gender, and immigrant status.

## **II: THEORETICAL FRAMEWORK**

### **Human Capital and Social Capital: Explaining Resource Attainment**

The main ideological framework addressing the issue of equality in Canadian society is liberalism. The liberal ideal which emerged in late-eighteenth century Europe is based on the belief that everyone should have an equal chance of succeeding in life. In Canada, this belief is enshrined in the Charter of Rights and Freedoms (see Bolt, 1999: 21-25; Boyd, 1985: 230; Naiman, 1997: 191-192; Nakhaie, 1998: 119). An element of liberalism that relates to the allocation of resources in the labour market is the meritocratic principle. According to this principle, an individual's attainment of resources in the labour market should be determined by their personal effort and talents. In a meritocratic system, success is based on the notion of equality of opportunity (see Jansen, 1981: 7; McRoberts, 1985: 68; Naiman, 1997: 192-196; Nakhaie, 1994: 27; Nakhaie, 1998: 119-120).

The principle of a meritocracy is reflected in the theory of human capital. Human capital explains an individual's access to resources and rewards as a function of their knowledge and skills (Becker, 1995; Davenport, 1999; Mincer, 1974; Portes and MacLeod, 1999: 375; Reitz and Sklar, 1997: 245; Thurow, 1970). More specifically, in the human capital model, individual knowledge and skills put to use in the labour market increase the value of an individual's contribution to the productive process which, in turn, produces higher financial rewards (Davenport, 1999: 19-20; Hunter, 1986: 82, 115; Nakhaie, 1994: 27; Sakamoto, 1988: 87). The human capital model is, therefore, based on a version of the meritocratic principle, where people are generally rewarded according to their abilities, efforts, and talents (Hunter, 1986: 115).<sup>2</sup>

Within the theory of human capital, education, labour market experience, and language skills can be used to measure one's knowledge and skills (see Mincer, 1974). First of all, "human capital theory argues that education is an investment in a person's stock of human capital and this investment is made with the expectation that it will produce higher income" (Friedman and Krackhardt, 1997: 318). Indeed, a more-educated individual can demand more income in the marketplace because he/she is an asset, more productive, and more valuable (Jones, 1985: 124; Porter, 1985: 38-40; Sakamoto, 1988: 87). In sum, the role of formal education in the human capital model is to supply people with knowledge and/or skills which qualify them for jobs whose rewards are commensurate with their credentials (see Hunter, 1986: 115; Nakhaie, 1994: 27).<sup>3</sup>

Labour market experience also contributes to human capital. The main idea here is that individuals with more years of experience in the labour market are rewarded for higher productivity as a result of their on-the-job training (Becker, 1995: 38; Sakamoto, 1988: 87). As Sakamoto (1988: 87) points out, "like education, an individual's investment in his/her stock of on-the-job training is said to reflect his/her conscious decision-making that attempts to maximize lifetime earnings."

Although not commonly acknowledged as such, language skills may also be conceived as a component of human capital (see Becker, 1995; Li, 2000: 297; Thurow, 1970). In Canada, language skills are particularly relevant given the recognition of English and French as official languages (see Elliott and Fleras, 1991). Accordingly, knowledge of English and French may be important for resource attainment since it is a requirement for many jobs, particularly in the public sector (Elliott and Fleras, 1991: 199; Nakhaie, 1998).

Being bilingual in Canada, therefore, can also be used as a measure of human capital.<sup>4</sup>

The theory of human capital is a micro-level analysis of human behaviour, in that it focuses on individuals competing for resources and rewards (Aguilera, 1999: 3; Collins, 1988: 415; Lowe, 1999: 115; Sakamoto, 1988: 87; Zhou, 1997: 984). Accordingly, its proponents stress the importance of investments in individual resources, such as, education, labour market experience, and language skills which function to increase the rate of return in the form of, for example, earnings (see Aguilera, 1999: 34; Becker, 1995: 76; Hunter, 1986: 115; Wanner, 2000: 317).

However, one of the issues with human capital theory is that not everyone benefits the same from their investments in knowledge and skills. The effect of human capital has been found to vary, for example, by ethnicity/race (Geschwender and Guppy, 1995), gender (Goyder, 1981; Kidd and Shannon, 1996), and immigrant status (Beaujot and Rappack, 1990; Beaujot, 1991; Grant and Oertel, 1998; Wanner, 1998). These differences may be due to discrimination or wider structural inequality. Alternatively, one's level of social capital may also account for these differences. As Potter (2000) argues, "a human-capital rich person may lack the social connections which would constitute a deficit of social capital" (*op. cit.*, 42).

Social capital can be generally defined as both the social relationships that develop through membership in social networks and other groups and the benefits these relationships may entail (see Portes, 1998: 6). The research on social capital has documented its effects on economic development, democracy, political participation, poverty, health, education, income, crime rates, and many other areas. Most of this research concerns "public social

capital” which refers to group relations in a community, nation, and society and the benefits these relations may entail at the aggregate level. However, social capital can also be analyzed at the individual level, or what has been identified as “private social capital” (Putnam, 2000: 20; Stolle and Rochon, 1998: 48-49).<sup>5</sup> In particular, social capital may provide socio-economic benefits for an individual who is well-connected.

Pierre Bourdieu (1985) conceptualizes social capital as the possible benefits accruing to individuals as a result of their memberships in neighbourhood, workplace and kin groups. For Bourdieu (1985: 252), the mutual trust and respect embedded in many of these groups are convertible into economic or other valued resources (see Nakhaie, 2001). For example, through their membership contacts, individuals may gain direct (eg. loans, investment tips, protected markets) and/or indirect (eg. information about available jobs) access to economic resources (Ooka, 2001: 124; Palloni, et.al., 2001: 1263; Portes, 1998: 4; Portes, 2000: 2). Accordingly, Bourdieu underlines the importance of memberships in new groups which produce contacts with people that would otherwise be inaccessible (see Smith, 2000: 513). For Bourdieu, it is others, not individuals themselves, who are the actual source of advantage (see Burt, 1992: 9; Portes, 1995: 13; Portes, 1998: 7).

Perhaps Bourdieu’s greatest contribution to an understanding of social capital is his instrumental definition of the concept. The French theorist is careful to point out that memberships in groups do not automatically confer benefits, economic or otherwise. Instead, for Bourdieu (1985: 249, 253), social capital is about investing time and energy in social relationships, “the profits of which will appear in the long run, in monetary or other form.” Accordingly, Bourdieu argues that a definition of social capital must separate its two

primary components: a) the social relationships that provide individuals access to resources possessed by others in the group, and, b) the resources themselves (see Portes, 1998: 4).

More recent theorists (Falk and Kilpatrick, 2000; Foley and Edwards, 1999: 146; Portes, 1998; Woolcock, 1998) have described Bourdieu's definition of social capital as contextual because it emphasizes the contingent nature of benefits depending on the individual and the type of group. Foley and Edwards (1999: 146), for example, support a contextual definition of social capital because, according to them, "access to social resources is neither brokered equitably nor distributed evenly." An unequal opportunity structure in terms of accessing social capital would undoubtedly indicate an unequal distribution of its benefits (see Beggs and Hurlbert, 1997: 602). Bourdieu's conceptualization of social capital has thus paved the way for more critical analyses of the concept.

James Coleman (1988, 1990, 1993, 1994) also emphasizes that it is others who are the source of an individual's ability to benefit from their social capital. The essence of social capital for Coleman is certain mechanisms that operate in groups which influence their members to behave in ways that are mutually beneficial. Similar to Bourdieu, Coleman highlights the importance of obligations, expectations, trust, information channels, norms, sanctions, and reciprocity. It is through these mechanisms that social capital acts as an individual resource for members of the group.

The emphasis Coleman (1988: S102-S105) places on the mechanisms that exist in groups helps us to understand how social capital is generated. One such mechanism is trustworthiness. In order for groups to exist, and for exchanges to take place within these groups, there must be mutual trust among the members (Coleman, 1990: 304). This basic



trust assures that obligations will be repaid (Coleman, 1988: S102-103). For example, if A provides B with valuable employment information, A trusts that B will return the favour in the future (see Coleman, 1988: S102). This process is also sometimes referred to as generalized reciprocity (see Flap, 1999: 8). Aguilera (1999: 12-13) also points out that the development of trust among members in a group turns non-personal contacts (ie. employment relationships) into personal contacts. This is important because use of personal contacts in the job search, as compared to non-personal contacts, produce better employment outcomes which, in turn, positively affect financial status (op. cit., 12-13).

Norms and effective sanctions are another mechanism identified by Coleman. For Coleman (1988: S104), norms are expectations that facilitate certain actions. In particular, he points out that one of the most important norms in social capital is that one should forego self-interest and act in the interests of the collective. If norms are broken, then sanctions are imposed, including exclusion from the group and, therefore, a loss of one's social capital. Norms assure that individuals maintain their obligations to others in the group (op. cit., 104).

Finally, Coleman (1988: S104) identifies information channels as a mechanism through which social capital is generated. For example, in some groups, information about jobs, loans, and lucrative investments is shared. This allows someone access to better economic prospects that they would otherwise not be exposed to. Information channels, therefore, evince that individuals with access to social capital may be more financially successful, particularly because they have more opportunities available to them.

In sum, Coleman argues that social capital is measured by trustworthiness, norms of reciprocity, and information channels. These mechanisms can also be seen as lubricants that

facilitate social capital and its outcomes. However, keeping in mind Bourdieu's instrumental/contextual understanding of social capital, these mechanisms do not automatically produce beneficial outcomes. Rather, they facilitate the formation of social capital and encourage individuals to act in ways that may be mutually beneficial (see Foley and Edwards, 1999: 146). This important distinction is not adequately addressed in Coleman's analysis of social capital which tends to overemphasize the beneficial or functional aspects of group relations (see Fernandez-Kelly, 1995: 216; Lin, 2001: 11).

Robert Putnam (1995, 2000) is the most recent commentator on social capital. For Putnam, as for Bourdieu and Coleman, respect, trust, reciprocity and other norms of cooperation are the quintessential features of social capital. According to Putnam, these norms of cooperation develop through memberships in voluntary associations and other organizations (also see Wall et.al., 1998: 314-315). These memberships, or what Putnam refers to as "civic engagement," encourage contact between individuals in a community, creating greater networks, norms, and trust which facilitate coordination and cooperation for mutual benefit (Putnam, 1995: 67). The benefits can be acquired by both individuals and communities, making social capital both a private and a public good (Putnam, 2000: 20; also see Nakhaie, 2001; Stolle and Rochon, 1998: 48-49). For example, an individual may belong to an organization because s/he wants to contribute to the community but, in the process, they may also acquire personal benefits, such as access to potential economic partners and useful information about job opportunities (see Arrow, 2000: 3; Burt, 1992: 13; Coleman, 1988: S104; Granovetter, 1973; Nakhaie, 2001; Putnam, 2000: 319).

Table 1 (see appendix) presents a summary of the indicators used by Bourdieu,

Coleman, and Putnam to measure social capital. All three theorists use memberships in organizations and/or associations, although they each have a different unit of analysis (Wall et.al., 1998: 315). Coleman also analyzes the development of social capital within the family, while Putnam's civic orientation includes measures such as newspaper readership. Nevertheless, there continues to be debate on how to measure social capital as a multidimensional concept which possesses both individual and collective elements (see Lin, 2001; Nakhaie, 2001; Portes, 1998). These issues are discussed further in the final section of the thesis.

Other scholars have also contributed to the development of social capital theory. Mark Granovetter's (1973) pioneering work emphasized the importance of weak as opposed to strong ties. He argued that weak and infrequent ties that extended an individual's network beyond their immediate social circle exposed them to new contacts and information that provided better resource outcomes.

Nan Lin's (2001, 1999, 1990, 1982; also see Lin and Dumin, 1986) work on social resources theory is also particularly noteworthy. Social resources theory is similar to social capital, in that it expresses the idea that social networks provide access to contacts with valued goods in society. These valued goods can be represented by the contact's occupation, authority position, industrial sector, or income (Lin, 2001: 13). This conceptualization of social resources has been further specified as the contact resources approach. Such a conceptualization focuses on the use of contacts for instrumental action. Recent attention has been given to access to social resources, also known as the network resources approach. The network resources paradigm focuses on the composition of an individual's network,

namely the size, diversity, and range of the network. Along with her associates, Lin (1998) has integrated the two approaches and shown that a resource-rich network offers better opportunities to locate a resource-rich contact. In other words, some networks are better for resource attainment because they possess more valued resources and thus represent better social resources. Lin (1990) has also found that individuals at higher structural positions with rich personal resources (ie. education) tend to interact with others of similar personal resource characteristics. This has been termed the principle of homophily. Therefore, better personal resources may improve access to better network resources.

Ronald Burt (1992) has also investigated different types of social ties. He argues that network bridges, which connect two or more social groupings, facilitate the flow of information between the groups. Moreover, these network bridges may bring better information because, similar to weak ties, they expose individuals to new contacts. Accordingly, weak ties are more likely to be bridges (also see Lai et.al., 1998: 164). On a similar note, Putnam (2000: 23) argues that “bonding social capital is...good for getting by, but bridging social capital is crucial for getting ahead.”

In sum, many theorists who have contributed to the development of social capital tend to express a contextual/contingent understanding of the concept similar to that of Bourdieu. More specifically, the potential influence of social capital on resource attainment appears to be contingent on, 1) the original status position of an individual seeking advancement (ie. those of higher original socioeconomic status have better opportunities), and, 2) the type of tie used (ie. weak as opposed to strong ties).

## **Summary**

The human capital approach to resource attainment centers on the individual and, in particular, their acquisition of credentials, such as, education and work experience (Aguilera, 1999: 34). For proponents of human capital, these credentials are the most important factors in accumulating resources. Meanwhile, social capital also focuses on the individual, but it places them in the social context. Indeed, while human capital is an individual attribute, social capital lies in an individual's relations with others (Falk and Kilpatrick, 2000: 87; Friedman and Krackhardt, 1997: 319; Lin, 2001; Portes, 1998: 7; Zhou, 1997: 984). Stated differently, while human capital refers to the utility of an individual's personal resources, social capital stresses the use of social resources (see Flap, 1999: 7; Lai et.al., 1998; Marsden and Hurlbert, 1988). Furthermore, once social capital is formed through the norms of trust and reciprocity embedded in group relationships, it may contribute significantly to increasing resource attainment for its possessor. This suggests that social capital may have an independent effect on resource attainment above and beyond that of human capital. In fact, Putnam (2000: 321) suggests that social capital may be even more important than human capital. These and other possible relationships are the focus of the investigation in this thesis. Accordingly, what follows is a review of the existing research concerning the relationships between human capital, social capital, and resource attainment in the context of ethnicity, gender, and immigrant status in Canada.

### **III: REVIEW OF THE RESEARCH**

#### **Human Capital and Social Capital: Merit vs. Connections**

It was mentioned earlier that the meritocratic principle and human capital theory are similar in terms of their focus on abilities, efforts, and talents in explaining resource attainment. Accordingly, measures of human capital can be used to represent resource attainment based on merit.

Researchers have found that human capital is a positive predictor of resource attainment in Canada. The most documented example is that more years of education predicts higher income (Boyd, 1985; Guppy and Arai, 1993: 214; Jones, 1985; Li, 2000; Lian and Matthews, 1998; McRoberts, 1985). Lian and Matthews (1998), using a sub-sample of the 1991 Census of Canada (N=425,107), found that, “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 than those without secondary education” (*op. cit.*, 469). There is also evidence confirming that work experience contributes to increased earnings (see Boyd, 1993; Duncan, 1996; Li, 2000). Li (2000) analyzed a sub-sample of the 1996 Census of Canada (N=401,664) and found that a one year increment in either education or work experience on average increased annual earnings by \$840 (*op. cit.*, 302). Researchers (Li, 2000: 302-303; Verma and Basavarajappa, 1989: 448) have also pointed out that knowledge of both of Canada’s official languages (English and French) positively affects a person’s income. Li (2000: 302-303) found that being bilingual in both official languages brought a net earning advantage of about \$838 a year, while speaking neither one of the official languages resulted in a net penalty of about \$1,500 a year.

However, Li's study also revealed that being unilingual in French only brought an economic penalty. This suggests that it is knowledge of English which is most important for increasing resource attainment (Fenwick, 1982: 11). The ability to speak French may be more important in Quebec, but in the early 1990's English still predominated in Quebec because most firms were owned and managed by anglophones (see Elliott and Fleras, 1991).

Despite the importance of human capital, researchers have also shown that aspects of individuals that should have no influence on resource attainment in a liberal or meritocratic society operate as barriers to success (Porter, 1985: 30-33). Characteristics such as ethnicity/race, gender, and immigrant status have all been found to influence resource attainment in Canada. There are various explanations for the influence of these factors.

John Porter (1965) first investigated the relationship between ethnicity (which for Porter included racial categories) and resource attainment in his seminal work *The Vertical Mosaic*. Porter argued that there existed a hierarchical structure of statuses among the ethnic groups in Canada along occupational, educational, and income lines. In this hierarchical structure, Porter noted that the British and French were found in the higher echelons because of their "charter group status" while the "other" ethnic groups (non-charter groups) constituted the lower levels of the hierarchy due to their "entrance status" (also see Isajiw, 1999: 110; Lautard and Guppy, 1999: 220). Moreover, Porter (1965: 91-98) discussed the differences between the two charter groups. He argued that the French were economically disadvantaged compared to the British due to historical socio-economic processes such as different educational systems and industrialization processes. At least up to the early 1980's, the French remained relatively disadvantaged, even in Quebec (Feldhammer, 1985a;

Fenwick, 1982).

One explanation for ethnic inequality has been referred to as the individual competition approach (see Breton, 1979: 271-276). Proponents of this model argue that ethnic inequality is the result of difference in achievement motivation, value orientation, and educational aspiration among members of different ethnic groups which allow them to be more or less competitive in the labour market (also see Fenwick, 1982: 2-4; Naiman, 1997: 231). Therefore, according to this perspective, some ethnic groups experience greater social mobility and economic success as a result of their greater achievement orientation (see Naiman, 1997: 231-232).<sup>6</sup>

Similar to, but distinct from, the individual competition perspective is the approach to ethnic inequality known as assimilationism (Naiman, 1997: 231). Assimilation theories (for a review, see Alba and Nee, 1997) are generally based on the notion that certain groups are held back by their ethnic attachments, including traditional values, attitudes, and beliefs. More specifically, assimilation theorists argue that maintaining ethnic attachments may have negative implications for an individual's financial status since their exposure to the economic opportunities in the larger society may be limited (see Gordon, 1964; Wiley, 1967: as cited in Isajiw et.al., 1993: 178). For assimilationists, once individuals begin to participate in the wider society, that is once they assimilate, upward social mobility will follow.<sup>7</sup>

Another approach to ethnic inequality is the split labour market theory (Bonacich, 1972). The split labour market theory is a variant of labour market segmentation theory which stipulates that there are generally two types of labour markets: 1) "primary" (high-paying, high-status, full-time work), and, 2) "secondary" (low-paying, low-status, part-time



work). A split labour market is similar to a segmented labour market, except that it applies to the “primary” sector (Isajiw, 1999: 117). According to Bonacich (1972: 549), in a split labour market, there are two groups of workers available for the same work: high-paid labour and cheaper labour. In such a labour market, many members of minority ethnic groups, particularly those of visible minorities, tend to occupy lower level occupations.

Since the publication of Porter’s book, some researchers (Clement, 1985; Lautard and Loree, 1984; Olsen, 1980; Shamai, 1992) have reported the persistence of a hierarchical status structure based on ethnicity. Goldstein’s (1988) study concerning the relative social standing of different ethnic groups as perceived by some Canadians may be an indication of such a structure. Goldstein interviewed a representative sample of residents of Winnipeg, Manitoba, and Edmonton, Alberta, aged 18 years and older (N=1025), and found that respondents rated the relative social standing of members of various ethnic groups consistent with how they are actually treated. Goldstein (1988: 74) concluded that perceptions about the relative social standing of members of different ethnic groups reflected a collective conscience about the existence of structural inequality.

However, some researchers (for example, Brym and Fox, 1989; Darroch, 1985; Tepperman, 1975) have argued that the vertical mosaic is gradually eroding. Porter himself was involved in work (Pineo and Porter, 1985) which argued that many of the non-charter groups overcame their disadvantaged positions, due in large part to their increased levels of education. Tepperman (1975: 156) went as far as to argue that the notion of the preservation of a vertical mosaic is “patently false.”

Meanwhile, others suggest that the mosaic is not necessarily in decline but, rather,

it is changing in structure (Geschwender and Guppy, 1995; Herberg, 1990; Lian and Matthews, 1998). Geschwender and Guppy (1995: 82), for example, argue that, “the vertical mosaic has not so much collapsed, as been rearranged...ethnic membership still plays an important part in the Canadian mosaic, although British privilege has declined.” More specifically, Lian and Matthews (1998) argue that it is race rather than ethnicity per se that has become the fundamental basis of income inequality in Canada. They found that among 25 ethnic groups, those belonging to visible minorities had significantly lower incomes than other Canadians at all educational levels. The authors concluded that, “educational achievement at any level fails to protect persons of visible minority background from being disadvantaged in terms of the income they receive” (*op. cit.*, 475).

Income differentials between males and females also bring into question the reality of a meritocracy in Canada (see Goyder, 1981; Rosenfeld and Kalleberg, 1990; Wilson, 1988). More specifically, women have been found to earn approximately half as much as men (Nakhaie, 1994: 28; Rosenfeld and Kalleberg, 1990: 84) and this income gap fails to disappear when controlling for most factors associated with income, including human capital (see Guppy and Arai, 1993: 229; Nakhaie, 1994: 28). Nakhaie (1994) analyzed class, gender, and ethnic income inequalities based on sub-samples of Canadian data from 1973 (N=12,454) and 1984 (N=1,777) and concluded that, “once individual characteristics are taken into account, the sex-discriminatory income gaps remain substantial...females are at a significant disadvantage, regardless of their human capital and employment characteristics” (1994: 48).

Naiman (1997) argues that the lower economic position of women in Canada is the

result of a split labour market that is highly segregated by gender in which many women occupy lower-level jobs. In addition, more women than men have part-time jobs (also see Wilson, 1988: 537). Shelton and Firestone (1989) argue that part of the earnings gap is due to women's greater participation in household labour and, consequently, less time spent in the paid labour force. In their 1989 findings, Shelton and Firestone (1989: 109) report that, "employed women spent over 10 hours more per week on household tasks (including childcare) than employed men, but men spent almost 9 hours more per week in paid labour." The less time spent by women in the labour market, the less on-the-job training they acquire which, according to the human capital model, is an important determinant of earnings. For example, in the U.S., Duncan (1996: 466) points out that, "despite higher earnings effects of work experience for women, substantial increases in female experience are needed to close the gap completely." Although women's labour force participation has increased substantially in most Western industrialized countries, there continues to be sex-segregation in the labour force and, most importantly, women, on average, still earn less than men (Rosenfeld and Kalleberg, 1990: 69).

Immigrant status may also determine a person's resource attainment. Verma and Basavarajappa (1989: 448), for example, found that immigrant men and women in metropolitan areas of Canada in 1980 earned 1.9 and 5.9 percent less, respectively, than their Canadian-born counterparts. Boyd (1992) also found that being foreign-born negatively affected wages, particularly for immigrants of visible minority. More recent research by Li (2000) indicates that immigrants earn more than native-born Canadians, but that this advantage disappears when controlling for human capital. This means that any income

advantage for immigrants compared to native-born Canadians is a function of their human capital, or merit.

There are various explanations for unequal labour market outcomes for immigrants in Canada. One explanation advanced repeatedly is that many immigrants do not have the knowledge and skills necessary to adjust to the Canadian labour market (see Akbari, 1999: 162; Beaujot, 1991: 128; Grant and Oertel, 1998: 62; Weinfeld and Wilkinson, 1999: 63), causing what has been referred to as “diminishing returns to immigration” (see Grant and Oertel, 1998). However, this explanation is inconsistent with the statistics which show that immigrants entering Canada consistently possess high levels of knowledge and skills, particularly higher education (Akbari, 1999; Beaujot and Rappack, 1990). This has been especially true since the introduction of the “points system” in 1967 which was officially implemented in 1968. Under this system, immigrants are assessed “points” based primarily on socio-economic characteristics, including age, the demand for their occupation, knowledge of one or more of Canada’s official languages, and education (Akbari, 1999: 158; Kalbach and Kalbach, 1999a: 43; Simmons, 1999: 43; Wanner, 1998: 27). The introduction of the “points system” helped to ensure a higher level of human capital among immigrants to Canada (Weinfeld and Wilkinson, 1999: 67). In fact, many immigrants to Canada have possessed higher levels of human capital when compared to the native-born population (Akbari, 1999; Beaujot and Rappack, 1990: 122; Beaujot and Rappack, 1999: 126; McVey and Kalbach, 1995: 86).

The economic experiences of immigrants, therefore, may be the result of a lack of recognition of foreign-attained credentials (Basok, 1997a; Basok, 1997b; Basran and Zong,

1998). The non-recognition of foreign-attained credentials may also indicate a type of discrimination in the form of differential recognition of labour market qualifications (Reitz, 1998: 15; Piche et.al., 1999: 209). This may be particularly true for qualified immigrants of racial minorities which represent a greater number of arrivals to Canada since the late 1970's (Akbari, 1999: 173; Basavarajappa and Jones, 1999: 230; Breton, 1999: 291; Weinfeld and Wilkinson, 1999: 62; Herberg, 1990: 218).

Others have argued that the economic experiences of immigrants are affected by their level of "Canadian experience." The argument is essentially based on the notion that most immigrants must adapt to their new surroundings after arriving in a new society. During this initial "period of adjustment," immigrants are believed to gradually acquire an understanding of the host society, particularly its labour market (Potter, 2000: 5). For example, the longer the period of time in Canada, the more immigrants will acquire an understanding of hiring practices (op. cit., 42). After this initial "period of adjustment", immigrants should expect their wage gaps to disappear with the acquisition of more "Canadian experience" (op. cit., 5). Research by Verma and Basavarajappa (1989) and by Li (2000) support this argument. Li (2000: 302), for example, found that with each additional year in Canada, immigrants earned \$181. The importance of Canadian experience can be related to the role of networks and social capital, in that, the longer that immigrants are in Canada, the more connections they develop.

The economic performance of immigrants, however, may have less to do with immigrants themselves and more to do with the ability (or inability) of the Canadian labour market to provide decent employment opportunities. Reitz (1998) argues that the most

important determinants of immigrant economic success are the structure of the host society's mainstream institutions, including the labour market. For example, immigrants may enter a new country during a period of high unemployment and recurring levels of recession (Grant and Oertel, 1998: 63; Weinfeld and Wilkinson, 1999: 68), thus hindering their earning potential. In other words, inequality in immigrant earnings may also be a function of a split labour market.

Similarly, Reitz (1998) argues that income inequality in a society is the most important determinant of immigrant earnings: "the most salient labour market attribute affecting immigrant entry-level earnings is the overall earnings inequality...the greater overall gap between rich and poor leads to lower immigrant earnings quite apart from considerations of skill levels" (Reitz, 1998: 203). Earnings inequality is particularly detrimental to immigrants who thus tend to compose a large proportion of lower-wage labour (see Grant and Oertel, 1998: 64; Reitz, 1998: 164; Wanner, 1998).

The experiences of immigrants can also be influenced by other structural factors, such as government policies. In Canada, for example, state policies like multiculturalism (Li, 1999), the Charter of Rights and Freedoms (Henry and Tator, 1999), and official bilingualism (Denis, 1999) can contribute to the maintenance of inequality.

Researchers have also shown that the effect of human capital differs by ethnicity/race (Geschwender and Guppy, 1995), gender (Goyder, 1981; Kidd and Shannon, 1996), and immigrant status (Beaujot and Rappack, 1990; Beaujot, 1991; Grant and Oertel, 1998; Wanner, 1998; Weinfeld and Wilkinson, 1999). This means that some individuals receive more or less from their investments in knowledge and skills in the form of occupation and

earnings (see Wanner, 1998: 37).

Geschwender and Guppy (1995) report that many members of minority ethnic groups do not receive the same economic rewards for their education when compared to the British. Using interaction terms to measure income returns to education, Geschwender and Guppy (1995: 78) note that higher education has a lesser payoff for First Nations and French-Canadian men than it does for British men (also see Lian and Matthews, 1998).

Many women also find it difficult to translate their human capital into commensurate economic rewards. Researchers (Goyder, 1981; Kidd and Shannon, 1996) have found that although women have relatively higher educational levels, they nonetheless experience lower income levels compared to men.

Finally, the effect of human capital has been found to vary by immigrant status. In particular, many immigrants to Canada who acquire their education and training abroad receive less from their investments in human capital compared to the Canadian-born population (Beaujot and Rappack, 1990; Beaujot, 1991; Grant and Oertel, 1998; Wanner, 1998; Weinfeld and Wilkinson, 1999). Wanner (1998), for example, found that immigrants received less for their foreign-attained education and work experience in terms of occupation and earnings (also see Akbari, 1999). This has been particularly true for “newer immigrants” who have immigrated from non-traditional source countries, many of whom are of visible minority status (Beaujot and Rappack, 1990; Beaujot, 1999; Boyd, 1992; Reitz, 1998; Wanner, 1998).

As discussed above, most of the research on the relationship between ethnicity/race, gender, and immigrant status and resource attainment has focused on the role of human

capital. A review of this research indicates that ethnicity, gender, and immigrant status also influence resource attainment, regardless of human capital. At the same time, existing research, particularly Canadian-based research, has emphasized the importance of human capital for resource attainment and has paid less attention to the significance of social capital. As mentioned earlier, social capital refers to both social relationships developed through memberships in groups and the benefits these relationships may entail (Portes, 1998: 6). What follows is a discussion of the research concerning social capital and resource attainment.

Research supports the hypothesis that social capital has a positive effect on resource attainment. Researchers have found that there are better job search outcomes for individuals who use social ties (Granovetter, 1973; Lin and Dumin, 1986), social resources (Campbell et.al., 1986; Lai et.al., 1998; Lin et.al., 1981), and social networks (Flap, 1999; Lai et.al., 1998: 160; Lin, 1999) in the job search process. This research began with Granovetter's (1973) now famous "strength of weak ties" hypothesis. Granovetter (1973) argued that an individual is more likely to find out about a job opening through a weak tie, such as, extended kin, co-workers, neighbours, and other acquaintances, rather than a strong tie, characteristic of relations with family and close friends (see Potter, 2000: 49; Powell and Smith-Doerr, 1994: 372). According to Granovetter, strong ties tend to link people of similar economic background and, therefore, information tends to be redundant (see Campbell et.al., 1986: 98; Powell and Smith-Doerr, 1994: 372; Smith, 2000: 513). For example, information about an available job may have the tendency to repeat itself among close friends. On the other hand, weak ties tend to link people from diverse backgrounds and thus exposes them



to information which they could not ordinarily attain (see Lai et.al., 1998: 160). As Granovetter (1973: 1371) points out, “a natural a priori idea is that those with whom one has strong ties are more motivated to help with job information...opposed to this is that those to whom we are weakly tied are more likely to move in circles different from our own and will thus have access to information different from that which we receive.” Granovetter’s hypothesis suggests that weak ties are the most important form of social capital in terms of acquiring resource attainment by virtue of the participation of members of these weak ties in a greater diversity of groups.

Lin (1990, 1982) and his associates (Lin et.al., 1981) built on Granovetter’s work and introduced the concept of social resources to refer to the people in groups that can provide beneficial outcomes (also see Campbell et.al., 1986; Lai et.al., 1998; Lin, 1999). Social resources were found to be beneficial for social mobility and status attainment, particularly occupational attainment, and provided a contrast to personal resources that are the focal point of human capital (Lin et.al., 1981: 395). Accordingly, researchers (Lai et.al., 1999) have recently referred to social capital as the use of social resources to achieve a specific end (also see Portes, 1998: 6; Portes, 2000: 2; Wall et.al., 1998: 304). This conceptualization parallels a human capital perspective which emphasizes the use of individual knowledge and skills (see Flap, 1999).

Social resources theory is based on three propositions regarding instrumental action that have been supported in empirical work (see Lin, 1990, 1982). The first, the social resources hypothesis, simply states that access to and use of better social resources leads to more success in terms of instrumental action. This is the contact resources approach

discussed earlier. For example, an individual seeking a (better) job will be more successful if they reach out to a network and contact with better resources (ie. better occupation). The other two propositions in social resources theory explain the determinants of accessing better social resources. The strength of position hypothesis states that one's original status position influences their ability to reach better social resources. More specifically, those of higher social position have access to better social resources. Accordingly, individuals of lower social position will try to develop contacts with others of higher social position, that is, those that represent better social resources (see Friedman and Krackhardt, 1997: 321; Lai et.al., 1998: 160; Lin, 1999: 470; Marsden and Hurlbert, 1988: 1040; Tausig, 1990: 338). This can be accomplished through the use of weaker ties (the strength of ties hypothesis). In the case of individuals of lower social position, use of weak ties increases the likelihood of reaching a contact at a higher social position (Lin, 1982: 134).

Nevertheless, there may be status related variations in network structures (Tausig, 1990: 333). For example, higher status individuals tend to form their own social networks and, in the process, exclude others (op. cit., 334). As a result, higher status individuals have direct advantages, namely, control of valued resources, and indirect advantages, vis-a-vis their ability to access better social resources. Consequently, there may be limited access to social capital.

The issue of access to social capital has recently received attention. Lin (1999, 2000) has investigated the possibility of "inequality in social capital" in which groups, such as, females and minority-group members may have different access to social capital because of their disadvantaged structural positions in society and associated social networks. In other

words, structural positions in society may influence the ability of individuals and groups to access potential forms of social capital (ie. the strength of position hypothesis in social resources theory). Similarly, Portes and Landolt (1996) have warned about “negative social capital” in which “the same strong ties that bring benefits to members of a group commonly enable it to bar others from access” (also see Portes, 1998: 15). Therefore, social capital may contribute to social inequality since some individuals and groups do not have the same opportunities as others to access instrumental social networks (see Lin, 2000).

Social networks, which generally refer to groups of people that are linked by different types of relations (Anderson and Laird, 1982; Collins, 1988: 415; Portes, 1995: 8), have also been used to illustrate the potential influence of contacts on status (occupational) attainment (Tausig, 1990; Lin, 1999). Accordingly, social networks have received a considerable amount of attention in the literature as sources of social capital (Flap, 1999; Lai et.al., 1998; Portes, 1995). Social networks are important for social capital because “information is more likely to be communicated, trusted, and effective if it is embedded in a social network” (Rosenbaum et.al., 1990: 265) and because social resources are embedded in many social networks (Campbell et.al., 1986: 98; Lin and Dumin, 1986: 365).

Social capital can be accessed through two types of social networking: informal and formal. Informal social connections generally refer to relations with those who are in close proximity to us, such as family and close friends (Coleman, 1988; Putnam, 2000: 93). Formal connections, on the other hand, take place in the wider community with those that are less well-known to us. The latter often develop as a result of individuals participating in community groups, such as voluntary organizations, professional and other associations

(McPherson and Smith-Lovin, 1982, 1986; Podolny and Page, 1998: 65-66; Putnam, 2000: 450; Stolle and Rochon, 1998: 48).

Participation in voluntary organizations and other associations has received some attention among scholars interested in social capital. Bourdieu, Coleman, and Putnam all use associational memberships as useful measures of social capital (Wall et.al., 1998: 315). The significance of memberships in organizations and associations is that they facilitate the development of social ties. As Portes (1998: 7) argues, "to possess social capital, a person must be related to others, and it is those others...that are the actual source of his or her advantage." More importantly, memberships in organizations and associations encourage the development of new social ties, particularly with people that would otherwise be inaccessible (see Smith, 2000: 513). This is consistent with Stolle and Rochon's (1998: 48) observations of social capital: "the idea of social capital encompasses the claim that the circle of trust is extended beyond the boundaries of face-to-face interaction to incorporate people not personally known." The same authors conclude that memberships in different types of associations have become an accepted measure of the formation of social capital (*op. cit.*, 48).<sup>8</sup>

As suggested by the above references, organizations and associations also serve as potential locations for the development and maintenance of important weak ties (McPherson and Smith-Lovin, 1982: 884; McPherson and Smith-Lovin, 1986: 62; Popielarz, 1999). Popielarz (1999) highlights this possibility in her discussion of "homophilic" and "heterophilic" ties. She refers to the former as personal networks, that is, relations between individuals who are similar to each other (ie. strong ties) and to the latter as relations between

people who have different social backgrounds (ie. weak ties). According to Popielarz, heterophilic ties are likely to develop in organizations where there are opportunities to form networks with people from diverse backgrounds. McPherson and Smith-Lovin's (1982, 1986) research on voluntary organizations and associations also leads them to conclude that, "voluntary associations are likely to be organizing foci for weak ties" (1986: 62). Accordingly, participation in these associations may confer instrumental advantages (Beggs and Hurlbert, 1997: 604), particularly in the form of resource attainment (McPherson and Smith-Lovin, 1982, 1986).

The ability of social capital to explain resource attainment is supported by research which shows that there are better occupational outcomes for individuals who use social ties (Lin and Dumin, 1986), social resources (Campbell et.al., 1986; Lai et.al., 1998; Lin et.al., 1981), and social networks (Flap, 1999; Lai et.al., 1998: 160; Lin, 1999) in the job search process. The literature, however, has focused little on the potential influence of social capital on income attainment.

The limited research concerning the relationship between social capital and income attainment has been conducted in some European countries and it has focused primarily on a particular section of the workforce. Meyerson (1994) studied the relationship between the social and human capital of 111 Swedish executive managers and their incomes. Meyerson (1994: 393) found that, while controlling for level of schooling, there was a strong positive effect of social capital, measured as contacts in external organizations and membership in elite clubs and professional associations, on income attainment. Meyerson summarizes: "social capital adds explained variation in income when incorporated into a human capital

model” (1994: 393).

Boxman et.al. (1991), in their study of the interplay of social and human capital in the income attainment process of 1359 top managers of larger companies in the Netherlands, found that social capital (external work contacts and memberships in elite clubs and professional associations) had a direct and independent effect on income, net of human capital. Similar to Meyerson, Boxman and his associates point out that, “social capital adds to, rather than replaces, human capital in the income attainment process of Dutch managers (Boxman et.al., 1991: 69). Boxman et.al. also found that people with more human capital have more social capital (p. 62) and that social capital helps at any level of human capital (p. 69).

The results of the above studies support the notion that social capital has an independent effect on income attainment, that is, above and beyond the effect of human capital. However, the studies also demonstrate that social capital complements an individual’s human capital in the income attainment process. This is particularly evident in Boxman et.al.’s (1991) research which reveals that human capital produces social capital which, in turn, produces better income attainment. That is, research seems to suggest that human and social capital interact in predicting income attainment. Finally, there may be a spurious relationship where human capital may account for both social capital and its effects on income.<sup>9</sup>

The accumulation of social capital through memberships in organizations and associations may have an impact on resource attainment, in general, and income attainment, in particular. However, not all organizations and associations are beneficial in the same ways

or to the same degree (see Stolle and Rochon, 1998: 49). Beggs and Hurlbert (1997: 605), for example, argue that, “some organizations offer opportunities to form instrumentally useful contacts, while others do not.” More specifically, while some organizations and associations are “instrumental” in nature (ie. business/professional associations), others are more “expressive” (ie. volunteer organizations) (Chui et.al., 1993; Horton-Smith, 1994; McPherson and Smith-Lovin, 1982, 1986).<sup>10</sup> This is consistent with Bourdieu’s (1985: 249) instrumental/contextual definition of the concept which emphasizes the contingent nature of benefits accruing from one’s social capital depending on the type of group. Accordingly, the social capital accessed through organizations and associations does not necessarily create an improvement in one’s resource attainment. This suggests a conditional relationship between social capital and resource attainment, in that, only memberships in select groups provide benefits in the form of economic opportunities, particularly those groups that are more economically oriented (ie. professional/business related associations) (Chui et.al., 1993: 531; Horton-Smith, 1994: 248; McPherson and Smith-Lovin, 1982; McPherson and Smith-Lovin, 1986). It also suggests that each organization and association should be analyzed separately for its potential influence on resource attainment.<sup>11</sup>

As is the case with human capital, the effect of social capital may be different for some social groups (Lin, 2000: 786). More specifically, the effect of social capital may vary by ethnicity/race (Nakhaie, 2001; Ooka and Wellman, 1999; Portes, 1995; Putnam, 2000; Reitz and Sklar, 1997), gender (Beggs and Hurlbert, 1997; Fernandez-Kelly, 1995; McPherson and Smith-Lovin, 1982, 1986), and immigrant status (Putnam, 2000; Horton-Smith, 1994). More specifically, the effect on income attainment of belonging to

organizations and associations may be different based on these characteristics.

Reitz and Sklar (1997:237) found that maintaining an ethnic identity, such as speaking an ethnic language or speaking English with a particular accent, created social marginality, that is, increased social distance between members of different ethnic groups. According to Reitz and Sklar (1997: 267), this social marginality leads to “social costs” endured by members of minority ethnic groups for maintaining ethnic attachments, including “the exclusion of the minority group members from informal groups, social networks, and community organizations and institutions dominated by members of the majority ethnic and racial group.” Therefore, members of minority ethnic groups may not have the same opportunities to benefit from their social capital as others.

The effects of social capital may also vary based on gender (Beggs and Hurlbert, 1997; Fernandez-Kelly, 1995: 217; McPherson and Smith-Lovin, 1982, 1986). Researchers (Chui et.al., 1993; Curtis, 1971; Curtis et.al., 1992) indicate that males are more likely than females to participate in organizations and associations. However, according to Horton-Smith (1994: 248), comparative rates of participation for males and females is inconclusive. Some studies find more participation for males, while others reflect higher rates for females (op. cit., 248). This inconsistency of findings may be due to the fact that females participate more in “expressive” organizations (ie. volunteer work) and less in “instrumental” organizations (ie. business/professional organizations) (Chui et.al., 1993: 531; Horton-Smith, 1994: 248; McPherson and Smith-Lovin, 1982: 884; McPherson and Smith-Lovin, 1986:72). Nevertheless, McPherson and Smith-Lovin (1982: 884) have argued that “sex differences in voluntary affiliation create differences in the probability that men, as opposed to women, will



be exposed to useful information and potentially important acquaintances” (also see McPherson and Smith-Lovin, 1986). Indeed, men as compared to women have been found to have better access to information about possible jobs, business opportunities, and chances for professional achievement (Lin, 2000: 787).

Finally, the effect of social capital may vary based on immigrant status (Putnam, 2000: 322; Reitz and Sklar, 1997). Horton-Smith (1994: 250) notes that length of residence has a bearing on participation levels in voluntary organizations, with longer residency related to more participation (also see Mata, 2000: 160). This suggests different participation rates depending on immigration period. In other words, some immigrants have better social ties, namely those immigrants who have been in the host society longer. Therefore, some immigrants may not benefit from their social capital in the same way or degree as others do.

In addition to human and social capital, several other variables have been shown to influence resource attainment. The region of the country where one resides, for example, has been shown to influence income attainment. More specifically, researchers (Bryan, 1988; Brym, 1986; Wien, 1999) have noted that there are differences in an individual’s abilities to acquire resources depending on the region of the country they reside in and that per-capita income is often used as one of the primary indicators of regional disparities (Wien, 1999: 271).<sup>12</sup>

Occupation is obviously an important determinant of income (see McRoberts, 1985). Occupation is quite often used as an intervening variable between education and income or, along with education and income, as a measure of socio-economic status. Therefore, its effects must also be accounted for in an examination of income attainment.

Finally, researchers (Boston, 1988; Cherry, 1988: 185; Fenwick, 1982: 5-6; Shadd, 1987: 93; Rosenbaum et.al., 1990) point out that the labour market is divided into two distinct segments. commonly referred to as the dual or segmented labour markets. Primary markets are characterized by their use of advanced technology, capital intensive methods, and non-competitive markets.<sup>13</sup> In addition, because of the limited competition, firms in the primary market can afford unionization costs which are passed on to the consumer. In all, the lack of market competition promotes greater profit margins. On the other hand, the secondary market is characterized by small firms, low technology, and labour intensive techniques which make for lower profits (Rosenbaum et.al., 1990: 265; Fenwick, 1982: 6).<sup>14</sup> Most important is the fact that primary sector jobs are higher paying while those in the secondary sector are lower paying (Fenwick, 1982: 6) and there are greater returns to human capital in the primary sector (Boston, 1988: 108; Fenwick, 1982: 6; Shadd, 1987: 96).

### **Summary**

A review of the research indicates that human capital influences resource attainment. This model has been likened to a meritocracy, in which labour market outcomes are based on personal abilities, efforts, and talents. An alternative to human capital's explanation of social inequality is social capital. The research suggests that this social resource can be accessed through memberships in organizations and associations which act as avenues for the development of important weak and/or strong ties. More specifically, becoming a member of certain organizations/associations can improve resource attainment because members of these groups provide useful network ties and information about economic opportunities. However, individual attributes, such as, ethnicity/race, gender, and immigrant status may also

**affect resource attainment. Moreover, the effects of human and social capital on resource attainment may vary based on these characteristics.**

#### **IV: HYPOTHESES**

Based on the review of the literature, there are many possible relationships that can be tested. These relationships can be divided into direct and interaction effects.

##### **Direct Effects**

Human capital (Becker, 1995; Davenport, 1999; Mincer, 1974; Thurow, 1970) seeks to explain differences in resource attainment. Human capital theorists propose that resource attainment is a function of individual abilities and talents, such as, education, work experience, and language skills (see Boyd, 1985; Geschwender and Guppy, 1995; Jones, 1985; Li, 2000; McRoberts, 1985).

*Hypothesis 1: Human capital is positively related to income attainment.*

Social capital may improve an individual's resource attainment. A review of the literature suggests that this is possible by accessing weak and/or strong ties through memberships in community organizations and associations (Granovetter, 1973; Lai et.al., 1998: 160; Popielarz, 1999). However, the literature also points out different levels of social capital for each organization/association (Stolle and Rochon, 1998).

*Hypothesis 2: Social capital is positively related to income attainment.*

Nevertheless, a review of the literature suggests that ethnicity (Clement, 1985; Porter, 1965), gender (Goyder, 1981; Nakhaie, 1994), and immigrant status (Verma and Basavarajappa, 1989) also influence resource attainment, regardless of human or social capital.

*Hypothesis 3: Ethnicity, gender, and immigrant status are related to income attainment.*

### **Interaction Effects**

The effect of human capital may vary by ethnicity (Geschwender and Guppy, 1995), gender (Goyder, 1981; Kidd and Shannon, 1996), and immigrant status (Akbari, 1999; Beaujot and Rappack, 1990; Beaujot, 1991; Grant and Oertel, 1998; Wanner, 1998). These possible relationships can be analyzed with interaction tests (see Cohen and Cohen, 1983: Chapter 8).

*Hypothesis 4: The effect of human capital on income is different for various ethnic groups, males and females, and native-born Canadians and immigrants.*

The effect of social capital may also vary by ethnicity (Nakhaie, 2001; Ooka and Wellman, 1999; Portes, 1995: 18; Putnam, 2000: 322; Reitz and Sklar, 1997), gender (Beggs and Hurlbert, 1997; Fernandez-Kelly, 1995: 217; McPherson and Smith-Lovin, 1982; McPherson and Smith-Lovin, 1986), and immigrant status (Putnam, 2000: 322; Reitz and Sklar, 1997).

*Hypothesis 5: The effect of social capital on income is different for various ethnic groups, males and females, and native-born Canadians and immigrants.*

The literature also suggests an interaction effect between human and social capital (Boxman et.al., 1991; Meyerson, 1994).

*Hypothesis 6: There is an interaction effect between human capital and social capital on income.*

## **V: METHODOLOGY**

### **Data Source**

For the purpose of this thesis, data from the 1989 General Social Survey (GSS) of Canada - Cycle 4 are utilized. The 1989 GSS contains variables that are of interest to the aims of this thesis and which are either not included in other surveys or not made readily available to researchers. The survey was conducted in 1988 by Statistics Canada using telephone interviews with respondents using random digit dialing methods. The main sample is a national sample of 9,338 persons aged 15 and over, excluding residents of the Yukon and North West Territories and full-time residents of institutions.

### **Sample**

In order to more accurately address the aims of this research, several sample restrictions are applied to the existing data. Since one of the interests in this study is the effect of education on income, the sample is restricted to individuals 25 years of age or older to improve the likelihood that individuals have completed their education (see Geschwender and Guppy, 1995: 70; Guppy and Arai, 1993: 220; Wanner, 1998: 30; Wanner, 1999: 417). Of course, it is possible that people over 25 return to school in the future, but the numbers are small (Guppy and Arai, 1993: 220). Since most people complete their education by 25 years of age, this would also be the age by which they have entered the paid labour force on a regular, full-time basis. An upper age limit of 65 is also applied in order to exclude individuals who have retired from wage or salary income (see Geschwender and Guppy, 1995; Wanner, 1998).

The sample is also limited to respondents who indicated that their main activity was

working at a job or business. This excludes those respondents not in the labour force at the time of the survey, such as students and those keeping house. Also, only those respondents that work full-time (defined in the 1989 GSS as working 30 or more hours per week) are included in the analysis.

### **Variables of Interest and Measurement**

The variables of interest from the 1989 GSS include income, ethnicity, gender, immigrant status (recency of immigration), education, work experience, language skills, and belonging to organizations and associations. The following outlines how each variable is operationally defined. An indication of coding procedures is also provided.

*Income:* Income serves as the dependent variable. Questions about income in the 1989 GSS all refer to earnings accumulated in the year 1988. The measure used in this study is personal income in dollars, including wages or salaries and investments.

There is a decline in the sample size when using personal income, most likely due to the fact that some respondents refuse to disclose information related to their financial status. One way to avoid this loss of respondents is by assigning them the mean income for the sample. However, this would either overestimate or underestimate a respondent's income. Therefore, respondents who did not report an income are dropped from the analysis. The final sample size in multivariate models is 3442.

*Ethnicity:* There is much debate on the definition and measurement of ethnicity (see Nakhaie, 1995: 172; Nakhaie, 1998: 123).<sup>15</sup> The 1989 GSS asked respondents about their ethnic background in the following way: "to which ethnic or cultural group do you or did your ancestors belong?"<sup>16</sup> Original categories included French, English, Irish, Scottish,

German, Italian, Ukranian, and Other. The English, Irish, and Scottish are grouped together into a British category (see Porter, 1965; also see Lautard and Guppy, 1999; Nakhaie, 1998). The “don’t know” and “not stated” categories are dropped from the analysis. The “Other” category represents both “Other” and “Canadian” responses.<sup>17</sup> Prior research on national data sets in Canada has shown that most who report “Canadian” as their “ethnic” origin are born in Canada (Kalbach and Kalbach, 1999b: 12) and of British or French ancestry (Boyd and Norris, 2001; Boyd, 1999; Kalbach and Kalbach, 1999b). Another portion of the “Other” category includes all those from Asia, Africa, and Latin America, many of whom are visible minorities (see Boyd, 1999: 15). In order to separate their effects, two categories of “Canadian-Other” and Foreign-Other” are created.<sup>18</sup> Respondents that identified their ethnicity as “Other” and were born in Canada are categorized as “Canadian-Other” while those born outside Canada are designated “Foreign-Other.” Using a religious background question, a Jewish category is also distinguished. Respondents were also given the option of selecting multiple responses. The final ethnic categories are: British, French, German, Italian, Ukranian, Jewish, Canadian-Other, Foreign-Other, and Multiple.

The variables measuring ethnicity are first coded into nominal categories for a preliminary analysis of the levels of human capital, social capital, and income among the ethnic groups. For multivariate analyses, the categories are coded as dummy variables (see deVaus, 1996: 182, 221-224; Cohen and Cohen, 1983: 183-185). Each dummy variable is a dichotomy that expresses the effect of belonging to one group (coded as “1”) as compared to a “baseline” or “reference” group (coded as “0”). Dummy coding is most useful when there is a meaningful reference group or baseline. As mentioned earlier, researchers have



shown that the British have traditionally been at an advantage in terms of socio-economic status compared to the other ethnic groups. Therefore, in each phase of the analysis, the British group serves as the reference category to which the other ethnic categories are compared.

*Gender:* Respondents to the 1989 GSS were asked to indicate their gender, which is a nominal measure (female, male). For multivariate analyses, gender is dummy coded to females = 0 and males = 1.

*Immigrant Status:* As indicated earlier, immigrants entering Canada after 1967 did so under a “points system” which selects potential entrants based largely on their levels of human capital. Therefore, one might expect this group of immigrants to be economically rewarded for their relatively high level of knowledge and skills. However, more recent immigrants (ie. since 1976) were shown to be susceptible to lower returns to their human capital, particularly foreign-attained human capital (Beaujot and Rappack, 1990; Beaujot, 1999; Grant and Oertel, 1998; Wanner, 1998; Weinfeld and Wilkinson, 1999). Lower returns on foreign-attained human capital may be due to a lack of “Canadian experience” (Potter, 2000), a lack of recognition of foreign-attained qualifications (Basok, 1997a; Basok, 1997b; Basran and Zong, 1998), or racial discrimination (Akbari, 1999; Basavarajappa and Jones, 1999; Weinfeld and Wilkinson, 1999; Breton, 1999; Herberg, 1990). In an attempt to address these issues, a variable measuring recency of immigration is dummy coded to compare different immigration cohorts (before 1966, 1966-1976, after 1976) to the Canadian-born population.

*Education:* The 1989 GSS asked several questions about educational achievements

and two are adapted for this study. The first question inquired about years of elementary and high school education successfully completed and is measured at the interval level. The second question asked respondents to indicate their highest level of education attained after high school and is measured nominally. The two questions are combined and coded as years of schooling as follows: 0 = no formal schooling, 3 = 1-5 years (some elementary), 6 = completed elementary, 7 = seven years, 8 = eight years, 9 = nine years, 10 = ten years, 11 = eleven years, 12=secondary graduate, 13 = some college/trade school, 14 = some university/college diploma/certificate, 15= some university, 16= undergraduate degree, and 20 = M.A./PhD. Number of years of schooling is, therefore, used as an indicator of education.

*Labour Market Experience:* In the 1989 GSS, labour market experience can be represented in two ways. First, the 1989 GSS contains the following question: “For how many weeks during 1988 did you do any work at a job or business?” This question addresses labour market experience within the year of the survey and is measured at the interval level as number of weeks.<sup>19</sup> Overall labour market experience is estimated by subtracting from age the years of schooling and the six years before schooling began (see Li, 2000: 297; Wanner, 1998: 30) and is measured at the interval level in years.<sup>20</sup>

*Bilingualism:* For the purpose of this thesis, several questions were used to measure the ability to understand and speak English and French, the two official languages of Canada. Although the questions do not necessarily capture all of the respondents who understand and speak English and French, these were the best available measures in the 1989 GSS. Dummy coding is again used with not being bilingual in the official languages used as the

reference category to which being bilingual is compared.

*Community Organizations and Associations:* The 1989 GSS asked respondents about their participation in the following organizations and associations: charitable, service or volunteer organization; neighbourhood, community or school-related association; religious or church-related group; social, cultural or ethnic group; sports or athletic association; public interest group; business, professional or other work related organization; and political organization. The questions are based on “yes” and “no” responses and are, therefore, measured nominally. For multivariate analyses, categories are coded as dummy variables. Non-membership in an organization/association is used as the reference category to which membership is compared. As noted earlier, a factor analysis was conducted to assess the feasibility of creating an overall index. The results did not suggest creating such an index so each organization/association was kept separate.

As mentioned earlier, region, occupation, and labour segmentation also influence resource (income) attainment. In addition to the independent variables listed above, these variables are introduced to control for their noted influences on income attainment (see Tolbert et.al., 1998). The introduction of these variables is particularly important so that the effects of measures of human and social capital are not overestimated. In other words, by controlling for these variables, we can be more confident that it is the independent effects of human and social capital that are being calculated rather than the spurious effects of region, occupation, or labour markets. These control variables are entered in the regression analyses.

*Region:* The regions of the country are often differentiated as: 1) Atlantic (Newfoundland, PEI, New Brunswick, and Nova Scotia, 2) Quebec, 3) Ontario, 4) Prairies

(Manitoba, Saskatchewan, Alberta, 5) B.C. (Wien, 1999). The same coding procedure is used in this thesis. Dummy coding is used to differentiate regions of the country and the Atlantic (ie. Maritimes) region is used as the reference category to which all others are compared.

*Occupation:* Occupation is measured as occupational status, divided into six categories of. 1) Managers, 2) Professionals (Architects, Teachers, Health Workers, Artists), 3) White-Collar (Accounting, Librarian, Sales), 4) Blue Collar (Processing, Mechanical, Electrical, Textile, Construction. 5) Farmers, and 6) Other (see Jones, 1985: 116; Nakhaie and Curtis, 1998: 493). The categories are dummy coded with the Blue Collar category acting as the reference group.

*Employment Sector:* As pointed out earlier, work in the primary versus secondary labour markets has an effect on income attainment. To address these differences, dummy coding is used and the reference category is the secondary labour market to which the primary labour market is compared.

Boston (1988: 106) points out that there is disagreement concerning the factors that determine the boundaries of the labour markets: labour turnover and tenure, wages and fringe benefits, size, profitability, market concentrations and capital intensity, presence or absence of unions, the extent of workers' control over the productive process (*op. cit.*, 106). The current study categorizes occupations into primary and secondary industries consistent with previous studies (Boston, 1988; Fenwick, 1982; Shadd, 1987). Where there are contradictions, occupations are categorized in the industry that they are most often identified with in the previous literature.

## **Statistical Techniques**

Preliminary descriptive statistics provide an indication of the levels of human and social capital among Canadians in 1988 and accompanying levels of mean income (see Table 1). Table 2 considers the levels of human capital, social capital, and income among selected sub-groups in Canada.

The second phase of the analysis utilizes multivariate techniques. In particular, regression analysis (Cohen and Cohen, 1983) is used to investigate the relative strengths of specific variables while controlling for others. A hierarchical regression is first run with variables entered as sets. The variables are entered in a particular order to address: 1) the explanatory power of human and social capital, and, 2) the temporal order of variables. Accordingly, region and gender are first entered as a set (Model 1), followed by ethnicity and period of immigration (Model 2). Years of schooling, number of weeks worked in 1988, work experience, and bilingualism are then entered together in an attempt to analyze the variance in income explained by measures of human capital, above and beyond that explained by region, gender, ethnicity, and immigration period (Model 3). Next, core sector employment and occupation are entered together to control for work characteristics (Model 4). Finally, organizational and associational involvements are entered in an attempt to analyze the amount of variance in income caused by measures of social capital, above and beyond that of variables entered previously in the model (Model 5). This final model will help analyze the independent effect of social capital on income. A significant effect of social capital on income would challenge the existence of a meritocracy since social relations are not necessarily a function of one's skills or abilities (Lai et.al., 1998: 117).

The statistics that provide the most useful information in the hierarchical regression are the multiple correlation R and R-squared, as well as the standardized and unstandardized regression coefficients. The multiple correlation R and R-squared provide important and relatively easy interpretable results. They give the proportion of variance in the dependent variable explained by sets of independent variables. Stated differently, the multiple R and R-squared allow the researcher to delineate the amount of difference in the dependent variable caused by independent variables or, in this case, groups of variables used to measure theoretical models. The multiple correlation R-squared is particularly useful, in that, it can be expressed as a percentage. This will allow an evaluation of the explanatory power of each model/theory.

Unstandardized coefficients represent one unit change in the dependent variable accounted for by one unit change in the independent variable. This statistic also allows comparisons for the relative effects of variables within groups, that is within different models. For example, unstandardized coefficients will allow a determination of which organizations and associations, as measures of social capital, have significant effects on income. Standardized coefficients, otherwise known as betas, provide an indication of the relative strengths of variables between groups. Betas will therefore indicate the strongest predictors of income.

As a dependent variable, the logarithm of earned income, rather than actual earnings, is often used to make relationships more linear (Geschwender and Guppy, 1995: 78). This often results in higher explained variance (ie. larger R-squared). Therefore, regression analysis is also conducted using a logged version of income. The results for logged income

are conducted for the final model and can be found in Table 5. This procedure allows a comparison of the arithmetic regression results with those for logged income.

Interactions (see Cohen and Cohen, 1983: chapter 8) will be run by regressing income on human and/or social capital multiplied by ethnicity or gender or immigration period. Such a method will indicate whether the effects of human and/or social capital on income are different for males and females, different ethnic groups, and/or native-born and immigrants. Using protected block tests, significant interactions in bivariate regression analyses are individually included in a model containing all variables.

## **VI: ANALYSIS OF FINDINGS**

### **Descriptive Analysis**

Table 2 provides a preliminary assessment of the relationships between human capital and social capital with mean personal income. The asterisks indicate whether level of income is significantly higher or lower when compared to the reference category. Overall, the table indicates that both human capital and social capital are related to income.

All measures of human capital, except for bilingualism, are significantly related to higher income. Respondents with an educational background of less than high school reported about \$3000 and \$10,000 less than those with a high school or more than high school education, respectively.

Years of labour market experience is also associated with income. Respondents with less than 15 years of labour market experience earned more than \$4000 less than those with between 15 and 30 years of experience and about \$1700 less than those with more than 30 years of experience. The more weeks worked in 1988 is consistently related to higher levels of income. This again is in accordance with human capital theory. Respondents who worked less than 25 weeks in 1988 earned about \$6700 less than those who worked between 25 and 49 weeks and about \$16,500 less than those who worked more than 49 weeks in 1988.

Measures of social capital also support the relationship between “connections” and income status. Belonging to an organization or association is consistently related to higher levels of income and the relationship is significant for four out of the eight measures. Among all organizations and associations, belonging to a professional association increases one’s income more than other types of associations, by almost \$11,000. The instrumental



nature of professional associations is thus supported, but the importance of voluntary, community, and religious groups, previously thought to be more expressive in nature, is unexpected (Chui et.al., 1993; Horton-Smith, 1994; McPherson and Smith-Lovin, 1982; McPherson and Smith-Lovin, 1986).

Table 3 shows the mean levels of human capital, social capital, and income among the sub-groups. To assess levels of social capital, a scale was constructed to measure the average number of organizational/associational involvements. It is important to note that in this table, the small sample sizes for some groups (ie. Italian, Ukranian, Jewish) have the potential to produce unstable results. Indeed, some of the results for these groups are not significant even though differences are larger than those for the groups with larger sample sizes that are significant.

The British group represents the reference category to which all other ethnic categories are compared. The average income for the French category is significantly lower when compared to the British. In fact, the average income for the French is the lowest among all ethnic categories considered. This result defies the idea that the French are advantaged due to their charter-group status in Canada. Rather, the French are the most economically disadvantaged group. This may be a function of lower levels of human capital and social capital among this group. Indeed, both the average number of years of education and average number of organizational/associational involvements for the French are significantly lower when compared to the British. The German category also has significantly lower years of education when compared to the British, but, unlike the French, this does not translate into significantly lower income levels. The Jewish category exhibits

significantly higher income levels. However, the difference between the Jewish group and the British group on all other measures is not significant. This latter result is clearly the result of the small sample size (N=20) for the Jewish group which produces potentially unstable and therefore statistically non-significant results. Finally, the average number of weeks worked in 1988 for the Foreign-Other category is significantly higher and the average number of years of labour market experience for the Multiple category is significantly lower.

The results for gender suggest a process of unequal returns on investments on human capital for women. When compared to females, males have significantly lower average years of schooling, but significantly higher income levels (see Goyder, 1981; Kidd and Shannon, 1996). Females earn about 70% of males' income. However, males have significantly higher levels of work experience and associational memberships than females.

When the Canadian-born category is compared to successive immigrant cohorts, the results tend to confirm the findings of previous research. Immigrants who entered Canada before 1966 have significantly higher income which may be a function of their significantly higher levels of work experience. In other words, this cohort of immigrants has lived in Canada long enough to acquire "Canadian experience" and/or "Canadian connections" in the labour market (Potter, 2000). Meanwhile, immigrants who arrived in Canada after 1966 have higher levels of education. This is consistent with the implementation of the points system in the late 1960's (see Akbari, 1999; Beaujot and Rappack, 1990; Driedger, 1989; Simmons, 1999; Wanner, 1998; Weinfeld and Wilkinson, 1999). The post-1976 immigrant cohort has higher levels of education but lower income. The lower income for this group may be due to their lower levels of labour market experience, an important component of

“Canadian experience.” This may help to explain the significantly lower levels of income for this group of immigrants. The native-born and immigrant groups do not differ in their levels of social capital.

In sum, Table 3 tends to support the importance of both human and social capital for income attainment. However, human capital appears to be more important than social capital.

In Table 3, it is also worth noting the significantly lower average number of organizational and associational involvements for the French compared to the British and for females compared to males. This may be indicative of inequality of social capital (Lin, 1999, 2000), in that the French and females have different access to potential forms of social capital due to their disadvantaged structural positions in society and associated social networks.

### **Regression Analysis**

The results for multivariate regression analysis are presented in Table 4. The results generally confirm the findings from the descriptive analyses. In Table 4, it is important to note that each additional set of variables takes into account the effect of those previously entered.

Region and gender are entered together in Model 1. All those living in Quebec, Ontario, Prairies, and B.C. have significantly higher income compared to residents of the Maritimes. The same is true in Models 2 through 5, but the impact of region decreases when variables measuring human capital are introduced in Model 3. In terms of gender, males have an income advantage over females of more than \$10,000.

In Model 2, ethnicity and immigration period are entered. The ethnic groups have the same or lower income compared to the British. In particular, belonging to the French, German, and Foreign-Other groups exerts negative effects on income while the Jewish group has higher income. Except for the newest immigrants who have the least Canadian experience, all other immigrants have significantly higher income than the Canadian-born group. The male advantage in income of over \$10,000 remains in Model 2.

In Model 3, measures of human capital are entered. When this is done, R-squared increases from 15.7% to 37.5%, the highest increase among the models. This supports the existence of a meritocracy in Canadian society. Among the measures of human capital in Model 3, education is the strongest predictor of income ( $\beta = .45$ ), followed by number of weeks worked in 1988 ( $\beta = .21$ ) and work experience ( $\beta = .21$ ). Bilingualism does not appear to affect income.

Model 3 also allows an analysis of the effects of gender, ethnicity, and immigration period on income while controlling for human capital. Gender remains a strong predictor of income. More specifically, even when controlling for education and work experience, women earn about \$10,000 less than men. The effect of ethnicity decreases when controlling for human capital, suggesting that education and work experience likely explain the disadvantages for the French, German, and Foreign-Other, and the advantage for the Jewish. The higher incomes for both the pre-1966 and post-1966 immigrant cohorts are no longer significant when controlling for human capital, meaning that education and work experience may also explain the income advantage over the Canadian-born for these two immigrant cohorts. Conversely, the negative result for the post-1976 immigrant cohort becomes

significant, suggesting that their human capital is not paying off.

Core sector employment and occupation are entered in Model 4. In both cases, there are strong effects on income. Employment in the core (ie. primary) sector resulted in significantly increased income compared to employment in the periphery (ie. secondary) sector. Meanwhile, managers, professionals, and farmers all earn significantly more than blue-collar workers. The results for white-collar and others are negative, but non-significant. The effect of being male decreases slightly when sector and occupation are entered, suggesting that the male income advantage may be partly due to work-related characteristics. Sector employment and occupation also make the difference between British and French earnings non-significant, suggesting that the French gap in income is also likely due to these factors (see Fenwick, 1982). The result for the post-1966 immigrant cohort once again becomes significant in Model 4, indicating that sector and occupation also partly explain the income advantage for this group of immigrants. Finally, the difference between the Canadian-born and the post-1976 immigrant cohort decreases in significance, suggesting that work-related factors partly explain the income disadvantage for this group of immigrants.

Measures of social capital entered in Model 5 indicate that use of social resources can influence income attainment. Memberships in community, athletic, and professional groups have a positive effect on income, supporting social capital theory. In contrast, the coefficient for voluntary organization involvement is negative, suggesting an economic loss for members of these groups. This finding does not support social capital theorists' emphasis on the importance of voluntary involvement.

In Model 5, it is possible to consider the effect of all variables simultaneously. The

explained variance in income accounted for by all of the variables in the analysis is 43.9%. Human capital alone explains 11.5% of the variance in income.<sup>21</sup> Education (number of years of schooling) is the best predictor of income among all of the variables ( $\beta = .34$ ). Hypothesis 1 regarding a positive relationship between human capital and income is therefore supported. Social capital adds 2.8% to the explained variance in income, above and beyond other models.<sup>22</sup> Membership in a professional organization is the next best predictor of income ( $\beta = .16$ ) after education ( $\beta = .34$ ), gender ( $\beta = .31$ ), work experience ( $\beta = .22$ ), and number of weeks worked in 1988 ( $\beta = .20$ ). This supports hypothesis 2 which postulated a positive relationship between social capital and income.

Gender is the second strongest predictor of income ( $\beta = .31$ ) after education and its effect is much stronger than the next best predictor, work experience ( $\beta = .22$ ). The effect of being male has obvious economic advantages (see Goyder, 1981; Nakhaie, 1994; Rosenfeld and Kalleberg, 1990; Wilson, 1988). Taking all variables in the analysis into account, women earn more than \$9000 less than males. Hypothesis 3 concerning gender differences in income is thus supported. When variables measuring social capital are introduced in Model 5, the effect of being male decreases slightly, suggesting that participation in social networks and other groups to some extent explain higher income for men.

Ethnicity also appears to affect income attainment, regardless of human capital, social capital, or any other variable considered. Particularly noteworthy are the significant negative results for the Foreign-Other category throughout the table. Considering all variables, this group earns more than \$2000 less than the British group. The German and Multiple

categories also exert negative effects on income. With all variables accounted for, the German and Multiple groups earn about \$1700 and \$1400 less than the British, respectively. Finally, the results for the Jewish group are positive, with this category earning about \$8000 more than the British with all variables considered. Hypothesis 3 concerning ethnic differences in income is therefore supported. Social capital does not eliminate ethnic differences in income.

Those immigrating to Canada before 1966 have significantly higher income compared to native-born Canadians. More specifically, with all variables accounted for, those immigrating to Canada before 1966 earn about \$1500 more than native-born Canadians. Immigrants to Canada after 1966 also have higher income, although the result is non-significant. Conversely, immigrants entering Canada after 1976 are at an income disadvantage when compared to the Canadian-born. The differences between the British and post-1976 immigrant cohort decrease in significance in Model 5, suggesting that social capital helps this group of immigrants. Hypothesis 3 concerning immigrant differences in income compared to native-born Canadians is also supported.

With all variables considered, employment in the core sector improves one's income by about \$3300. When measures of social capital are included in Model 5, the effects of being a manager and professional are reduced, suggesting that social capital explains some of the income advantage for individuals in these occupational categories (Boxman et.al., 1991; Meyerson, 1994). This may indicate that social capital for income attainment is more important in the business and professional worlds, where "social networking" and "connections" are crucial for success (see Baker, 2000).

Table 5 provides regression results for Model 5 using logarithms of the dependent variable, income. As mentioned earlier, logging income often results in a stronger coefficient of determination (ie. larger R-squared). However, results are generally the same as in Table 4 with only a few exceptions. First, the coefficient of determination for logged income in Table 5 is actually weaker (R-squared = 36.7%). Second, the significant coefficients in Table 4 for Prairies, German, and immigration before 1966 are not significant in Table 5. Finally, rather than work experience, the number of weeks worked in 1988 is the next best predictor of logged income after years of schooling and gender.

In sum, regression analysis confirms that human capital is the most powerful predictor of income. The results also allow a more confident conclusion that social capital has an independent effect on income. In particular, the coefficient of determination (R-squared) for variables measuring social capital indicates that there is a 2.8% increase in explained variance in income, with memberships in professional organizations seeming to account for most of this variance. Nevertheless, human capital and gender exert stronger and independent effects on income attainment.

Significant interaction terms are listed in Table 6. Tests for interactions reveal that there are no significant differences in the effects of human or social capital on income for the various ethnic groups compared to the British. However, there are significant interactions for gender and immigration period.

In terms of gender, results indicate that the effect of human capital on income is stronger for males than females. More specifically, males receive \$134.55 more than females for each additional year of work experience and \$101.91 more for each additional week



worked in 1988.

The effect of education on income is stronger for immigrants to Canada after 1976 compared to the Canadian-born category. Being an immigrant who entered Canada after 1976 results in \$818.20 more for each additional year of education. This finding is inconsistent with previous research which has shown that, compared to native-born Canadians, the post-1976 immigrant cohort receives less for their human capital, particularly human capital that is acquired abroad (Beaujot and Rappack, 1990; Beaujot, 1991; Grant and Oertel, 1998; Wanner, 1998; Weinfeld and Wilkinson, 1999). Moreover, regression analysis showed an income disadvantage for this group of immigrants compared to the Canadian-born category when controlling for human capital. One possible explanation is that many of the respondents in this group acquired their education in Canada. Another possibility is that it is Canadian experience in the form of work experience which accounts for the economic disadvantage experienced by this group of immigrants as evidenced in regression analysis. In fact, when work experience is removed from the final regression model, the negative coefficient for the post-1976 immigration cohort becomes larger ( $b = -3023.50$ ) and significant ( $p < .05$ .)

Several significant interactions were also discovered that support the hypothesis that human and social capital interact to produce better income attainment (Boxman et.al., 1991; Meyerson, 1994). Being a member of a professional organization results in better income returns on weeks worked in 1988 and education in the amount of \$306.28 and \$368.75, respectively. There are also better income returns on work experience for members of interest groups and athletic associations, \$168.42 and \$128.91, respectively.

Finally, being bilingual results in greater income returns for the Canadian-Other category in the amount of \$14,097. However, further analysis with the use of cross-tabulations revealed that this result is a function of a large sample size ( $N = 4098$ ) of which only 5 respondents were both Canadian-Other and bilingual. Therefore, this result does not appear in Table 6 and it does not merit interpretation.

## **VII: CONCLUSION AND DISCUSSION**

This thesis has sought to investigate the potential influence of social capital on income attainment. The results show that 2.8% of the variance in income is explained by measures of social capital alone. The findings support the potential importance of social relations for resource attainment. However, human capital is more important than social capital. Measures of human capital explain 11.5% of the variance in income alone. Therefore, “what you know” appears to be more important than “who you know.” Finally, despite the importance of human and social capital, ethnicity, gender, and immigrant status are found to have significant effects on income. Measures of ethnicity, gender, and immigrant status respectively explain 0.9%, 7.9%, and 0.2% of the variance in income alone.<sup>23</sup>

The findings of this thesis support a contextual/contingent understanding of the benefits accruing from one’s social capital (Bourdieu, 1985; also see Falk and Kilpatrick, 2000; Foley and Edwards, 1999: 146; Portes, 1998; Stolle and Rochon, 1998: 49; Woolcock, 1998), in that only memberships in certain types of organizations and associations are related to higher income. Members of professional, as well as community and athletic organizations have significantly higher incomes compared to individuals that do not belong to these groups. However, this does not appear to be the case for members of voluntary, religious, ethnic, interest, or political organizations. In fact, membership in voluntary organizations is related negatively to income. The results are consistent with previous research in the social resources tradition, in that some groups present better opportunities because their members possess more valued resources, in this case income. The results are also consistent with recent research into social capital (Flap and Volker, 2001; Nakhaie, 2001) which stresses that

different networks (ie. different forms of social capital) predict different outcomes.

The contextual/contingent nature of benefits stemming from memberships in different organizations and associations can perhaps be accounted for by other socioeconomic factors associated with group members such as education and occupation. Indeed, social resources theory (Lin, 1982, 1990) suggests that some networks are dominated by individuals of higher socio-economic status and that such networks thus present more opportunities to acquire economic resources for its members (also see Friedman and Krackhardt, 1997: 321; Lai et.al., 1998: 160; Marsden and Hurlbert, 1998: 1040; Tausig, 1990: 338). To investigate this possibility, correlations were conducted for measures of social capital with measures of human capital and occupation (see Table 8). Among the results, professional associations are related positively to education ( $r = .343$ ;  $p < .01$ ) and professional occupations ( $r = .228$ ;  $p < .01$ ) and negatively to blue collar occupations ( $r = -.208$ ;  $p < .01$ ). The results suggest that higher education and higher status occupations influence access to instrumental social networks such as memberships in professional groups. In other words, access to better social capital for income attainment may be limited to individuals of higher original socioeconomic background (Tausig, 1990: 333). This supports the strength of position hypothesis in social resources theory (Lin, 1982, 1990) which postulates that access to better social resources is influenced by original status position. The relationship between professional associations on the one hand and education and professional occupations on the other may also be indicative of negative social capital (Portes and Landolt, 1996), as well as inequality of social capital (Lin, 1999, 2000), both of which express the possibility that access to social capital is limited to certain individuals. Finally, the correlations may reveal that the importance of

belonging to professional associations for income attainment is a function of a spurious relationship in which education and occupation explain the positive results and not professional memberships per se. More specifically, the correlation between education and professional associations may indicate that the latter's influence on income may be a function of human capital rather than social capital. This would suggest that the importance of social capital for resource attainment is perhaps exaggerated.

The positive relationship between community associations and income suggests that community groups are not only productive in terms of developing trust and cooperation needed for the building of public social capital (Putnam, 2000) but that they are also potential locations for the development of private or individual social capital. Tindall and Wellman (2001: 273-275) point out that community relations are not necessarily tightly-knit and socially-close as they were previously thought to be. Rather, communities have also become sparsely-knit and spatially-dispersed networks that connect people to diverse social circles (Tindall and Wellman, 2001: 274). In other words, community associations may reveal the importance of weak ties, in that, they connect individuals to diverse contacts.

The positive relationship between athletic associations and income may also reveal the instrumental nature of weak ties. Indeed, sports teams and other athletic groups tend to bring together a diverse group of individuals from different backgrounds.

Conversely, the non-significance of religious, ethnic, and interest groups for income may be explained by the strong ties or bonding social capital that connect their members (Putnam, 2000). Indeed, most of these groups are limited to connections with others of similar background and/or interests. In other words, religious, ethnic, and interest groups

may be closed networks that are better for the development of trust and cooperation needed for public social capital (Flap and Volker, 2001: 301).

Weak ties thus seem to be the most important type of social capital for income attainment. However, strong ties may also be instrumental, particularly for higher status individuals because strong ties are likely to connect them to other individuals of higher socio-economic background. The instrumental role of professional association memberships for income attainment may reflect the importance of strong ties among individuals of higher socio-economic status.

The negative result for memberships in voluntary organizations may reflect what Portes and Landolt (1996) identify as “negative social capital” (also see Portes, 1995, 1998). According to Portes (1995: 14), negative social capital refers to the fact that although some social relations may provide economic benefits, others may constrain an individual’s economic pursuits. This may be the case with voluntary involvement in terms of lost time in unpaid work. That is, many people who belong to voluntary organizations may commit a considerable amount of time to the group and its efforts may be expressive rather than instrumental. Alternatively, voluntary organizations may be reflective of bridging social capital. Indeed, voluntary organizational memberships are highly correlated with other measures of associational memberships (see Table 9), suggesting that voluntary groups link individuals to other networks. Therefore, while voluntary organizations may not necessarily be instrumental for income attainment themselves, they may connect individuals to other income opportunities. On an empirical level, the correlations between voluntary organizations and other associations may suggest that once other measures of social capital

are controlled, involvement in voluntary organizations is negligible. To be sure, voluntary organizations was entered as the only measure of social capital in the final regression model (Model 5) and the effect is positive, although non-significant.

Finally, mention should be made of the possibility that social capital may contribute to social inequality (Lin, 2000). The findings of this thesis suggest that there is both different access to as well as different amounts or qualities of social capital. In particular, one's original position, namely their education and occupation, seem to influence the ability to access better social capital for income attainment. Therefore, social capital may simply reproduce original social inequalities rather than improving status positions.

Measures of human capital, namely, education and work experience exert strong effects on income. However, being bilingual in the official languages of Canada did not significantly affect income attainment. This may be because it is English and not bilingualism per se which is related to higher income attainment (Fenwick, 1982; Porter, 1965). The non-significant result for bilingualism may also be due to the confounding effects of ethnicity and language (see Yasmin and Abu-Laban, 1992: 207). To investigate this possibility, correlations were conducted and bilingualism appears to be somewhat related to French ethnicity ( $r = .241$ ;  $p < .01$ ) (see Table 10). The limited measure of bilingualism used in this thesis should also be considered as a reason for its non-significant effect on income. Despite the non-significance of bilingualism, the strong effect of human capital in the form of education and work experience suggests that the notion of a meritocracy in Canada has some evidence in reality. Similarly, the significant effects of ethnicity, gender, and immigrant status in Model 5 reveal that inequalities still exist.

The British group has higher income than the German, Foreign-Other, and Multiple groups. Ethnic inequality appears to be explained mostly by levels of human capital, occupation, and core sector employment, but not social capital. The results do not support the traditional “vertical mosaic” view of ethnic inequality as originally outlined by Porter (1965). However, the results fail to reflect the total dismantling of the vertical mosaic as claimed by Tepperman (1975). Rather, the mosaic in 1988 seemed to portray signs of changing in nature (Geschwender and Guppy, 1995; Herberg, 1990; Lian and Matthews, 1998). In particular, the results support recent findings (Lian and Matthews, 1998) which indicate that race may be the fundamental basis of income inequality in Canada. Considering all variables in the analysis, the Foreign-Other category has the greatest income disadvantage compared to the British. As already mentioned, most of the respondents in this group are members of visible minorities. However, the negative result for the Foreign-Other group may also be confounded with the fact that this group has been in Canada a shorter period. In fact, correlations for this group of immigrants and immigration periods after 1966 ( $r = .439$ ;  $p < .01$ ) and after 1976 ( $r = .439$ ;  $p < .01$ ) suggest that this is the case (see Table 10). Therefore, the lower incomes for the Foreign-Other group may also be a function of a lack of Canadian experience and/or networks.

Gender has the strongest effect on income after education. Controlling for all variables in the analysis, men earn about \$9000 more than women. The results confirm what Nakhaie (1994: 48) argues: “females are at a significant disadvantage, regardless of their human capital and employment characteristics.” This study indicates that social capital does not explain this disadvantage. As well, the effect of human capital, in the form of work



experience and weeks worked in 1988, is stronger for males than females. The strong effect of gender on income while controlling for human capital, social capital, and other variables suggests that discrimination may affect the lives of many women in Canada in concrete ways (see Feldhammer, 1985b: 45). However, since all of the relevant and confounding variables have not been controlled for in this analysis, the discrimination hypothesis cannot be completely verified.

The incomes of immigrants to Canada compared to their native-born counterparts depend on the period of immigration. Immigrants who entered Canada before 1976 fare well and, in fact, the pre-1966 cohort is at an income advantage compared to native-born Canadians. The income advantages for these immigrants stem primarily from human capital characteristics (Li, 2000), but also positions in the labour force and social capital. Conversely, immigrants entering Canada after 1976 have lower incomes compared to native-born Canadians. The income disadvantage for the post-1976 immigrant group appears to be due to a lack of Canadian experience (Potter, 2000; Verma and Basavarajappa, 1989; Li, 2000). Nevertheless, the income disadvantage for this group of immigrants may also be due to structural issues, such as the condition of the Canadian labour market (Grant and Oertel, 1998: 63; Weinfeld and Wilkinson, 1999: 68), wider income inequality in Canada (Reitz, 1998), and/or government policies (Denis, 1999; Henry and Tator, 1999; Li, 1999). Also, as mentioned earlier, correlations suggest that many of this group of immigrants are of Foreign-Other ethnicity and likely of visible minority (see Akbari, 1999; Basavarajappa and Jones, 1999; Beaujot and Rappack, 1990; Beaujot, 1999; Boyd, 1992; Reitz, 1998; Wanner, 1998) (see Table 10). Therefore, the lower income for this immigrant cohort may also be a

function of ethnic/racial inequality. However, since this thesis does not control for all factors associated with income attainment, the role of discrimination cannot be confirmed. Social capital somewhat helps the income of the post-1976 immigrant cohort. There are no significant interaction effects for immigrant status and social capital on income.

This thesis has investigated the potential influence of social capital on income attainment. However, it is important to consider the indicators used to measure social capital. Although memberships in community organizations and associations are commonly used to measure social capital, this measure does not necessarily capture many of the elements theorized to be part of social capital, such as, social support, social integration, social structure, access to and use of social resources, and network locations of individuals, including density, size, and range of relationships (see Lin, 2001). The results of this thesis are therefore limited to the specific measures of social capital available in the 1989 GSS.

There also continues to be debate concerning specific measures of social capital and predicted outcomes (see Nakhaie, 2001). The results of this thesis suggest that memberships in voluntary organizations and other associations are not particularly important for income attainment. However, this does not mean that such measures are not indicative of social capital. Such a conclusion would contribute to a tautological definition of social capital in which its being depends on its outcomes (see Lin, 2001; Portes, 1998). Similarly, organizational and associational memberships may have a greater impact on other areas of social life, such as, the development of trust, obligations, and other norms of cooperation (Coleman, 1988; Stolle and Rochon, 1998: 48) or in the development of political activity (Putnam, 2000). In other words, perhaps memberships in organizations and associations are

better measures of public social capital than private social capital (Putnam, 2000: 20). Also, memberships in organizations and associations may have a greater influence on occupational attainment (Beggs and Hurlbert, 1997; Granovetter, 1973; Lin and Dumin, 1986; Ooka and Wellman, 1999) and not income attainment, per se. One could hypothesize that this is a function of the more direct relationship between social relations and access to job opportunities.

The reader should also note the cross-sectional nature of the data used for this thesis. The use of cross-sectional data makes it difficult to completely address the extent to which memberships in organizations and associations improve income attainment over the lifetime. As it stands, the most that can be said is that members of some organizations and associations have higher incomes and that by joining such groups, individuals may improve their income attainment via the development of closer relations. In other words, this thesis has indicated which organizations and associations more likely provide better social resources.

The use of cross-sectional data also makes it unclear whether it is memberships in organizations and associations that produce higher income or whether those with higher incomes become more involved in community groups (see Boxman et.al., 1991: 62; Meyerson, 1994: 390). This suggests that there may be a reciprocal relationship between social capital and income. In an attempt to address the issue of a reciprocal relationship, a sub-analysis was conducted using only the younger cohort (25-34). Such a procedure minimizes the problem of a reciprocal relationship, in that, analyzing this younger group of respondents helps isolate the possibility that memberships in organizations and associations

precedes the accumulation of income. The results of this procedure can be found in Table 7 of the appendices and they tend to confirm the effect of social capital on income. However, this procedure still does not adequately address the problem of a reciprocal relationship.

Finally, this thesis points to the need for further research concerning social capital and income attainment. First and foremost, longitudinal data is required to better address the problem of a reciprocal relationship. The use of longitudinal data would permit a better assessment of the influence of social capital on income over the course of the lifetime. Future research should also attempt to better assess the reality of “who you know” for various social outcomes. This is particularly important to gauge the extent to which society is organized based on the principles of a meritocracy. That is, many individuals may acquire their positions in society based on their social relations and not their merits. Indeed, as Lai et.al. (1998: 117) have noted, social resources may not be indicative of one’s skills or abilities. Therefore, the idea of social capital demands critical appraisal, especially in light of its current appeal and acceptance.

## **ENDNOTES**

1. **Ethnicity and race are not identical (see Li, 1999; Feldhammer, 1985b). The former refers more to identificational aspects among people while the latter include more rigid factors such as skin color. The two concepts are used in this thesis because the “Foreign-Other” category used as a measure of ethnicity may be more appropriately conceived as a racial category. This difference is important because the experiences of visible minority groups in Canada are much different than those of other ethnic groups.**
2. **Both the meritocratic principle and the theory of human capital are based on the notion of equality of opportunity. However, in Canada, for example, not everyone has the same opportunity to access higher educational opportunities. Studies have shown that educational attainment is strongly correlated with socio-economic background (ie. parent’s education and income), race, and ethnicity (Guppy and Arai, 1993; Naiman, 1997: 281). Females also tend to follow distinct educational paths which sustain gender segregation in the paid labour force (Naiman, 1997: 281). Therefore, to argue that outcomes are based on personal efforts, abilities, talents, or merit ignores the existence of structural inequality.**
3. **It should be pointed out that there are noted variations in rewards depending on the supply of and demand for different educational credentials (ie. finance degree vs. philosophy degree holder) (see Krahn and Lowe, 1991; Wanner, 2000). The implication is that some types of education may be more valuable than others.**
4. **It should be noted that language skills could also be used as a measure of civic participation and, thus, social capital. Indeed, knowledge of English and/or French is required to participate in most community groups. As well, bilingualism may be an ascribed characteristic in terms of being born into a particular ethno-cultural group (ie. French).**
5. **Stolle and Rochon (1998) use the terms “personal social capital” and “public social capital” to differentiate between a micro-and macro-level analysis.**
6. **It is apparent that in the individual competition model of ethnic inequality, society is perceived as a level playing field while at the same time structural inequality is ignored (see Henry and Ginsberg, 1988). For example, low achievement orientation may be the result of structural barriers and low socio-economic status that create a lack of desire in people because they feel helpless that change can occur in their lived experiences (Isajiw, 1985: 6). Blaming individuals for these circumstances is blaming the victims and an emphasis on their ethnic backgrounds reasserts a culture of poverty thesis (see Li, 1999: 9-13; Naiman, 1997: 231-232). Likewise, high achievement orientation may also be a reaction to structural barriers. The statistics for Canada show that many ethnic groups (ie. Filipinos, Chinese) have sought educational qualifications that, according to the individual competition model, evinces high motivation (see Kalbach and Kalbach, 1999a: 44). However, according to Hirschman and Wong (1986), the educational aspirations of Asians are also the result of structural conditions, namely, past discrimination against the group that enforces the desire to acquire educational qualifications in order to achieve upward social mobility.**

7. However, what is more important for the members of different ethnic minorities is their ability to participate in the wider society because members of ethnic groups may be restricted from participating in certain social circles. Reitz and Sklar (1997), for example, find that maintaining an ethnic identity, such as, speaking an ethnic language or speaking English with a particular accent may create social marginality, that is, increased social distance between members of different ethnic groups. This social marginality clearly reduces the chances that members of a minority ethnic group will establish contacts in the larger community. Therefore, the status of an ethnic group is also very much a function of the majority ethnic group(s) (see Isajiw, 1999: 112-115).
8. The authors also argue that, “memberships in associations are believed to create generalized interpersonal trust, which can be used as a lubricant that makes possible a variety of forms of social interaction and cooperation” and that, “although social capital may be fostered by a variety of formal and informal interactions between members of society, the full range of these interactions is not observable...what we can observe is the prevalence of memberships in voluntary organizations in a given society” (Stolle and Rochon, 1998: 48).
9. Other researchers have also noted the close relationship between human and social capital. Lin (1999), for example, points out that, “better educated and better trained individuals tend to move in social circles and clubs rich in resources.” Stated differently, those with more education and training are likely to interact with others of similar personal resource characteristics which may provide them additional advantages (Boxman et.al., 1991: 53; Lai et. al., 1998: 163). Therefore, those with more personal resources may also have better social resources. On a more theoretical level, Glaeser et.al. (2000) note that “individual (ie. personal) social capital might be seen as the social component of human capital” (brackets added). This means that some individuals can more effectively put to use their abilities and talents in the form of social skills which may be beneficial in the pursuit of certain ends. This is also suggested by Friedman and Krackhardt (1997) and Helliwell and Putnam (1995). This may explain why Bourdieu views human capital as “cultural capital” (see Gans, 1992: ix, xix; Lamont and Fournier, 1992: 5; Portes, 1998: 12). Lin also interestingly points out that when human capital is high, social capital is less important since individuals already possess personal resources that help in their acquisition resources in the labour market. Conversely, when human capital is low, social capital is more important. The empirical research, however, tells us that social capital does not replace human capital (Boxman et.al., 1991), at least for managers.
10. Lin (1990: 248) points out that instrumental actions refer to the adding of valued resources while expressive actions refer to maintaining valued resources.
11. To be sure, factor analysis was performed in order to evaluate the feasibility of creating an overall index. The results of this procedure did not suggest creating such an index.
12. For a discussion on the theoretical explanations for regional disparities, see Brym (1986: 4-18) and Wien (1999: 272-277).

13. The primary sector is also referred to as the “core” (Fenwick, 1982) or “monopoly” (Shadd, 1987).
14. The secondary sector is also referred to as the “periphery” (Fenwick, 1982) or “competitive” (Shadd, 1987).
15. Most of the debate revolves around whether ethnicity is an objective phenomenon or a purely subjective one. The objective approach is one in which ethnic groups are seen as real phenomena that exist “out there” while the subjective approach is one where ethnicity is defined as the process by which individuals identify themselves, and are perceived by others, as belonging to a particular group (see Anderson and Friederes, 1981: 47; Eller and Coughlan, 1993; Grosby, 1994; Isajiw, 1985: 4-5; Waters, 1998). It should also be pointed out that respondents that identify themselves as belonging to the same ethnic group do not necessarily share common beliefs, norms, and values. Indeed, many have been in Canada for many years and have become assimilated into Canadian society (Nakhaie, 1995: 172).
16. Boyd (1999: 3) points out that such a question tends to conflate responses of ethnic origin (to what group did my ancestors belong?) with those of individual ethnic identity (what group gives me a sense of who I am?) and those of group ethnic identity (what group do others assign me to/or what group represents a community in which I participate as a social, economic, or political actor?) (also see Kalbach and Kalbach, 1999b: 11). In other words, the question confuses an objective definition of ethnicity (ancestry) with a subjective interpretation (self-identity). As a result, it is impossible to determine whether respondents to the 1989 GSS answered the question measuring ethnicity in terms of their own ethnic identity or their ancestry (Kalbach and Kalbach, 1999b: 12; Boyd and Norris, 2001: 2). The question is thus a crude measure of ethnicity and presents a shortcoming to the efforts of this research.
17. Although “Canadian” is not an appropriate answer to the traditional ethnic origin ancestry question (Kalbach and Kalbach, 1999b: 10), between 1986 and 1996, it became the fastest growing “ethnic” origin response in Canadian censuses (Boyd and Norris, 2001; Boyd, 1999; Kalbach and Kalbach, 1999b). For a discussion of the explanations for this trend, see Boyd (1999).
18. According to Kalbach and Kalbach (1999b: 7), “as there is reason to believe that most of those reporting themselves as having only Canadian ancestry are of British or French ancestry, these should also be considered as part of Canada’s dominant sociocultural base.” Therefore, combining “Canadian” and “Other” responses could lead to the erroneous conclusion that the category has, for example, high levels of income (see Boyd, 1999: 17).
19. It is important to note that the number of weeks worked in a given year may also be an indication of labour market conditions. For example, an individual may be limited to working a certain number of weeks due to a layoff, temporary shutdown, or seasonal unemployment.

20. It is recognized that this is a rough measure of labour market experience because it assumes continuous labour force participation. In particular, it fails to take into account the more complex careers of women who leave the labour force for periods at a time to have children (Nakhaie, 1994: 31; Wanner, 1998: 30).
21. The variance caused by measures of human capital was calculated as follows: all variables in the analysis (43.9%) minus all variables except those for human capital (32.4%) for a total of 11.5%.
22. The variance caused by measures of human capital was calculated as follows: all variables in the analysis (43.9%) minus all variables except those for social capital (41.1%) for a total of 2.8%.
23. The variance caused by measures of ethnicity, gender, and immigrant status was calculated as follows: all variables in the analysis (43.9%) minus all variables except those for ethnicity (43.0%), gender (36.0%), and immigrant status (43.7%) for a total of 0.9%, 7.9%, and 0.2%, respectively.



**Table 1: Operationalizing Social Capital<sup>1</sup>**

<b>Level of Analysis</b>	<b>Bourdieu</b>	<b>Coleman</b>	<b>Putnam</b>
<b>Individual</b>	<ul style="list-style-type: none"><li>- relationships</li><li>- friendships</li><li>- memberships</li></ul>		
<b>Individual/ Family/Community</b>		<ul style="list-style-type: none"><li>- family size</li><li>- parents' presence in the home</li><li>- mother's expectation of child's education</li><li>- family mobility</li><li>- church affiliation</li></ul>	
<b>Community/Region</b>			<ul style="list-style-type: none"><li>- memberships in voluntary organizations</li><li>- voting participation</li><li>- newspaper readership</li></ul>

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<sup>1</sup>Adapted, with some modifications, from Wall et.al., (1998: 314).

**Table 2: Mean Income for Canadians in 1988 by Measures of Human Capital and Social Capital (Full-time Participants in the Labour Force)<sup>1</sup>**

<i>Level of Education</i>	<b>Mean Income</b>	<b>N</b>
less than high school (reference)	23, 119.74	436
high school	26, 532.76***	1338
more than high school	33, 277.11***	1801
<i>Years of Labour Market Experience</i>		
less than 15 years (reference)	27, 322.25	1425
15-30 years	31, 787.28***	1490
more than 30 years	29, 114.93***	660
<i>Weeks Worked in 1988</i>		
less than 25 weeks (reference)	14, 763.36	116
25-49 weeks	21, 505.53***	506
more than 49 weeks	31, 454.03***	2954
<i>Language Skills</i>		
Non-Bilingual (reference)	29,482.68	3362
Bilingual	29,732.21	163
<i>Organization/Association Membership</i>		
<b>Voluntary Organization</b>		
no (reference)	28,596.13	2599
yes	31,917.80***	979
<b>Community Association</b>		
no (reference)	28,522.31	2774
yes	32,892.86***	803
<b>Religious Group</b>		
no (reference)	29,217.88	3024
yes	31,072.20***	554
<b>Ethnic Group</b>		
no (reference)	29,047.94	3005
yes	31,899.82	571
<b>Athletic Association</b>		
no (reference)	27,983.95	2532
yes	33,184.40	1044
<b>Interest Group</b>		
no (reference)	29,096.96	3354
yes	35,653.94	222
<b>Professional Association</b>		
no (reference)	26,893.92	2718
yes	37,765.97***	858
<b>Political Organization</b>		
no (reference)	29,171.37	3353
yes	34,604.84	222

\* = p<.10  
 \*\* = p<.05  
 \*\*\* = p<.001

<sup>1</sup> Asterisks indicate significant differences from the reference groups at different probability levels.

**Table 3: Mean Levels of Human Capital, Social Capital, and Income for Various Sub-Groups in Canada, 1988<sup>1</sup>**

<i>Ethnicity</i>	Average # of Years of Schooling	Average # of Years of Labour Market Experience	Average # of Weeks Worked in 1988	Average # of Organizational/Associational Involvements	Average Income	N
British (reference)	13.03	20.47	48.51	1.44	30,045.62	1009
French	12.46***	20.20	48.39	1.13***	27,759.62**	789
German	12.22**	20.85	49.65	1.38	28,513.30	188
Italian	12.72	20.16	50.79	1.18	32,358.06	62
Ukranian	13.50	20.39	50.43	1.81	32,976.53	98
Jewish	14.26	21.29	51.00	2.10	42,000.00***	20
Canadian Other	13.42	19.34	49.56	1.72	32,355.08	236
Foreign Other	13.29	20.85	50.00*	1.34	29,435.34	249
Multiple	13.43	18.95**	49.02	1.61	29,172.45	873
Total	13.03	20.00	48.98	1.44	29,537.38	3524
<i>Gender</i>						
Females (reference)	13.16	19.15	48.53	1.34	23,410.27	1436
Males	12.89***	20.65**	49.20***	1.49***	33,585.03***	2143
Total	13.03	19.90	48.87	1.43	28,497.65	3579
<i>Nativity/Immigration Period</i>						
Canadian-born (reference)	12.93	19.66	48.80	1.43	29,269.25	3074
Immigrated before 1966	12.73	26.69***	50.03*	1.44	32,996.15**	208
Immigrated 1966-1976	13.87***	20.18	50.67**	1.50	31,895.35	172
Immigrated after 1976	13.96**	15.06***	48.30	1.24	25,528.30*	106
Total	13.00	19.98	48.96	1.43	29,502.49	3560

\* = p<.10  
 \*\* = p<.05  
 \*\*\* = p<.001

<sup>1</sup> Asterisks indicate significant differences from the reference groups at different probability levels.

**Table 4: Standardized and Unstandardized Regression Coefficients for Income Attainment and Predictors**

	Model 1		Model 2		Model 3		Model 4	
	b	beta	b	beta	b	beta	b	beta
<b>Maritimes (reference)</b>								
Quebec	2373.39**	.06	3723.86***	.10	1864.89**	.05	1757.71**	.05
Ontario	5682.55***	.16	5350.06***	.15	2670.92***	.08	2534.54***	.07
Prairies	3693.46***	.11	3339.48***	.10	1624.15**	.05	1513.50**	.05
B.C.	4363.00***	.10	3923.78***	.09	2463.75**	.06	2565.78***	.06
Male	10091.20***	.35	10148.56***	.35	10115.14***	.35	9556.83***	.33
<b>British (reference)</b>								
French			-2580.25**	-.08	-1302.36*	-.04	-1069.15	-.03
German			-3476.85**	-.05	-1943.08**	-.03	-1640.18*	-.03
Italian			-1386.32	-.01	3.57	.00	242.40	.002
Ukranian			1984.90	.02	929.22	.01	1205.32	.01
Jewish			10580.59**	.05	8311.29**	.04	7701.56**	.04
Canadian Other			1566.68	.03	977.87	.02	1105.43	.02
Foreign Other			-3943.83**	-.07	-2923.38**	-.05	-2531.04**	-.04
Multiple			-856.48	-.03	-1488.47**	-.05	-1329.76**	-.04
<b>Canadian-born (reference)</b>								
Immigrated before 1966			3605.08**	.06	1558.96	.03	1730.25*	.03
Immigrated 1966-1976			3226.48**	.05	123.71	.002	-68.38	-.01
Immigrated after 1976			-1875.12	-.02	-3092.51**	-.04	-2479.41*	-.03
# of Years of Schooling					2014.33***	.45	1736.07***	.38
# of weeks worked in 1988					386.18***	.21	371.66***	.20
Work experience					273.59***	.21	266.69***	.21
Bilingual					1413.56	.02	1670.10	.03
<b>Secondary Sector (reference)</b>								
Core Sector							3351.26***	.12
<b>Blue Collar (reference)</b>								
Manager							5279.26***	.14
Professional							4746.49***	.14
White Collar							-666.69	-.02
Farmer							5351.97***	.08
Other							-3561.23	-.02
Constant	20333.72***		20989.29***		-28015.44***		-26880.59***	
R2	14.0%		15.7%		37.5%		41.2%	
N	3442		3442		3442		3442	

\* = p<.10  
 \*\* = p<.05  
 \*\*\* = p<.001

**Model 5**

	<b>b</b>	<b>beta</b>
<b>Maritimes (reference)</b>		
<b>Quebec</b>	2081.11**	.06
<b>Ontario</b>	2738.74***	.08
<b>Prairies</b>	1188.71**	.04
<b>B.C.</b>	2207.36**	.05
<b>Male</b>	9025.99***	.31
<b>British (reference)</b>		
<b>French</b>	-914.40	-.03
<b>German</b>	-1789.85*	-.03
<b>Italian</b>	-304.31	-.003
<b>Ukranian</b>	1074.53	.01
<b>Jewish</b>	8323.47**	.04
<b>Canadian Other</b>	1147.76	.02
<b>Foreign Other</b>	-2234.87**	-.04
<b>Multiple</b>	-1483.80**	-.05
<b>Canadian-born (reference)</b>		
<b>Immigrated before 1966</b>	1568.78*	.03
<b>Immigrated 1966-1976</b>	232.64	.003
<b>Immigrated after 1976</b>	-2121.96	-.03
<b># of Years of Schooling</b>	1547.88***	.34
<b># of weeks worked in 1988</b>	358.28***	.20
<b>Work Experience</b>	277.15***	.22
<b>Bilingual</b>	1295.27	.02
<b>Secondary Sector (reference)</b>		
<b>Core Sector</b>	3330.86***	.12
<b>Blue Collar (reference)</b>		
<b>Manager</b>	4296.73***	.12
<b>Professional</b>	3625.09***	.10
<b>White Collar</b>	-936.03*	-.03
<b>Farmer</b>	4818.52***	.07
<b>Other</b>	-3896.22	-.02
<b>Voluntary Organization</b>	-1259.05**	-.04
<b>Community Association</b>	1701.07**	.05
<b>Religious Group</b>	-445.92	-.01
<b>Ethnic Group</b>	-704.28	-.02
<b>Athletic Association</b>	1592.99***	.05
<b>Interest Group</b>	-389.52	-.01
<b>Professional Organization</b>	5280.69***	.16
<b>Political Organization</b>	234.20	.004
<b>Constant</b>	-24693.55***	
<b>R2</b>	43.9%	
<b>N</b>	3442	

\* = p<.10

\*\* = p<.05

\*\*\* = p<.001

**Table 5: Standardized and Unstandardized Regression Coefficients for Logged Income**

<b>Model 5</b>	<b>b</b>	<b>beta</b>
<b>Quebec</b>	.07**	.05
<b>Ontario</b>	.12***	.07
<b>Prairies</b>	.05	.03
<b>B.C.</b>	.09**	.04
<b>Gender</b>	.37***	.28
<b>French</b>	-.02	-.02
<b>German</b>	-.04	-.02
<b>Italian</b>	.01	.00
<b>Ukranian</b>	.07	.02
<b>Jewish</b>	.22*	.02
<b>Canadian Other</b>	.02	.00
<b>Foreign Other</b>	-.10*	-.04
<b>Multiple</b>	-.06**	-.04
<b>Immigrated before 1966</b>	.06	.02
<b>Immigrated 1966-1976</b>	-.01	-.00
<b>Immigrated after 1976</b>	-.14**	-.04
<b>Education</b>	.06***	.28
<b># of weeks worked in 1988</b>	.02***	.26
<b>Work Experience</b>	.008***	.15
<b>Bilingualism</b>	.05	.02
<b>Core Sector</b>	.15***	.12
<b>Manager</b>	.16***	.10
<b>Professional</b>	.16***	.10
<b>White Collar</b>	-.05*	-.03
<b>Farmer</b>	.18***	.06
<b>Other</b>	-.05	-.01
<b>Voluntary Organization</b>	-.06**	-.04
<b>Community Association</b>	.07**	.05
<b>Religious Group</b>	-.02	-.01
<b>Ethnic Group</b>	-.004	-.01
<b>Athletic Association</b>	.06**	.04
<b>Interest Group</b>	-.03	-.01
<b>Professional Organization</b>	.16***	.10
<b>Political Organization</b>	.01	.01
<b>Constant</b>	7.73	
<b>R2</b>	36.7%	
<b>N</b>	3442	

\* = p&lt;.10

\*\* = p&lt;.05

\*\*\* = p&lt;.001

**Table 6: Significant Interaction Effects Via Block Modeling<sup>1</sup>**

<b>Interaction Term</b>	<b>Interaction Coefficient (b)</b>	<b>R-square Change</b>	<b>F-value</b>
<b>Work Experience x Gender</b>	134.55	.002	.000
<b>Weeks Worked in 1988 x Gender</b>	101.91	.001	.032
<b>Education x Immigration After 1976</b>	818.20	.001	.010
<b>Weeks Worked in 1988 x Professional Organization</b>	306.28	.003	.000
<b>Education x Professional Organization</b>	368.75	.001	.015
<b>Work Experience x Interest Group</b>	168.42	.001	.023
<b>Work Experience x Athletic Association</b>	128.91	.002	.002

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<sup>1</sup>Interaction terms were entered individually in the final model.

**Table 7: Standardized and Unstandardized Regression Coefficients for the Effects of Social Capital on Income Attainment (Ages 25-34)<sup>1</sup>**

<b>Variables Measuring Social Capital</b>	<b>b</b>	<b>beta</b>
<b>Voluntary Organization</b>	-1345.03*	-.05
<b>Community Association</b>	1701.96**	.05
<b>Religious Group</b>	-178.61	-.01
<b>Ethnic Group</b>	625.09	.02
<b>Athletic Association</b>	1137.54*	.04
<b>Interest Group</b>	-1226.67	-.02
<b>Professional Organization</b>	4501.38***	.15
<b>Political Organization</b>	983.66	.02
<b>N</b>	1464	

\* =  $p < .10$

\*\* =  $p < .05$

\*\*\* =  $p < .001$

<sup>1</sup>The effects of other variables in the final model are controlled for.



**Table 8: Correlations for Measures of Social Capital with Measures of Human Capital and Occupation**

Social Capital	Voluntary Organization	Community Association	Religious Group	Ethnic Group	Athletic Association	Interest Group	Professional Organization	Political Organization
<b>Human Capital</b>								
Education	.175**	.153**	.067**	.110**	.147**	.168**	.343**	.090**
Work Experience	-.015	-.053**	.075**	.024	-.160**	-.037*	-.117**	.020
# of Weeks Worked in 1988	.044**	.040**	.025	.017	.066**	.032*	.095**	.032*
<b>Occupation</b>								
Manager	.096**	.055**	.038*	.051**	.073**	.029	.143**	.050**
Professional	.124**	.099**	.061**	.081**	.048**	.119**	.228**	.055**
White Collar	-.033*	-.027	-.011	-.032*	-.041**	-.049**	-.116**	-.024
Blue Collar	-.148**	-.121**	-.087**	-.064**	-.049**	-.081**	-.208**	-.069**
Farmer	-.029	.016	.016	-.052**	-.031*	-.012	-.013	.004
Other	.003	.021	-.002	.035*	.009	.011	-.015	-.018

\* = p<.05

\*\* = p<.01

**Table 9: Correlations between Measures of Social Capital**

	Voluntary Organization	Community Association	Religious Group	Ethnic Group	Athletic Association	Interest Group	Professional Organization	Political Organization
Voluntary Organization	1.00	.433**	.233**	.293**	.186**	.216**	.299**	.181**
Community Association	.433**	1.00	.205**	.264**	.197**	.197**	.271**	.136**
Religious Group	.233**	.205**	1.00	.170**	.035**	.059**	.136**	.098**
Ethnic Group	.293**	.264**	.170**	1.00	.140**	.148**	.207**	.122**
Athletic Association	.186**	.197**	.035**	.140**	1.00	.077**	.186**	.086**
Interest Group	.216**	.197**	.059**	.148**	.077**	1.00	.225**	.180**
Professional Organization	.299**	.271**	.136**	.207**	.186**	.225**	1.00	.176**
Political Organization	.181**	.136**	.098**	.122**	.086**	.180**	.176**	1.00

\*\* = p < .01

**Table 10: Correlations for Measures of Ethnicity with Immigration Periods and Bilingualism**

	British	French	German	Italian	Ukrainian	Jewish	Canadian-Other	Foreign-Other	Multiple
Before 1966	-.030	-.121**	.068**	.191**	-.020	.092**	-.070**	.260**	-.082**
After 1966	-.050**	-.103**	-.012	.013	-.039*	.044**	-.062**	.439**	-.075**
After 1976	-.052**	-.080**	-.016	-.008	-.015	-.016	-.050**	.409**	-.071**
Bilingualism	-.115**	.241**	-.053**	.008	-.037*	-.004	-.037*	-.036*	-.025

\* = p<.05

\*\* = p<.01

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