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# **SOCIAL CAPITAL AND LABOUR MARKET OUTCOMES FOR SOUTH ASIA-BORN IMMIGRANTS IN CANADA**

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# **Metropolis British Columbia**

## ***Centre of Excellence for Research on Immigration and Diversity***

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## TABLE OF CONTENTS

ABSTRACT	5
INTRODUCTION	6
SECTION I	10
• Data	10
• Methodology	11
• Conceptual Framework and Hypotheses	11
• Sample Characteristics of Immigrants to Canada	13
SECTION II	22
• Logistic Regression Results (Social Capital—Method I)	22
• Logistic Regression Results (Social Capital - Method II)	26
• Earnings Function (Social Capital - Method I)	30
• Earnings Function (Social Capital - Method II)	31
• Survey Findings	32
SECTION III	35
APPENDIX 1 - VARIABLE DESCRIPTIONS	36
• Dependent Variables	36
• Independent Variables	36
REFERENCES	38



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**ABSTRACT**

This paper examines the role of social capital in impacting labour market outcomes of South Asia-born immigrants in Canada using both quantitative and qualitative methodologies. Logistic regressions are used to predict the role of social capital in having gainful work, adopting informal job search methods, and employment in public sector. Earning functions to explain the impact on earnings of various variables including social capital. The results indicate that social capital is a significant predictor in impacting labour market outcomes but not in explaining variation in earnings. The survey of a few immigrants as well as informal interactions with them at places of religion, community centres, and so forth in Vancouver helped extract their views/experiences related to the role of social networking and suggestions regarding socio-economic policies that could facilitate immigrants' integration in the labour market of Canada. The paper concludes with an emphasis on the need for a database that is large enough to analyze the impact of social capital disaggregated for ethnic identity and gender. This will help induce more research in this relatively unexplored area and will help make economics "inclusive" of social phenomena for explaining economic performance.

## INTRODUCTION

The role of “social capital” in labour market outcomes is relatively unexplored in economics and needs extensive empirical analysis to validate its theoretic premise and significance in policy formation. It is an observable social phenomenon that, apart from human capital, social capital in the form of family, friends and other social networks impacts the labour market, through providing help in the job search (information effect), affecting selection of occupation/s, enhancing upward mobility on the job ladder, and increasing earnings (productivity effect) (Delattre and Sabatier 2004). Such social support systems are relevant particularly for immigrants as social capital provides an informal insurance that supports them in their quest for employment and helps them integrate in the labour market of the host country. However, with its positive externality, social capital can also have adverse effects on the process of immigrants’ integration in the labour market. Family and friends may not help increase the employability of immigrants as they provide shelter, which might lead to postponement of any job search, employment opportunities that may not correspond to an immigrant’s education/skill or liking, or geographical locations of work or housing that may not maximize their earnings. With such probabilities of both positive and negative impacts, the role of the host country’s government in facilitating integration of immigrants in the labour market through socio-economic policies becomes particularly important. Through immigration laws, a government could strengthen (lessen) or favour (restrict) family reunification, as “private” insurance provided by social networks replaces other types of “public” insurance (e.g. government assistance programs) that might otherwise be provided by the State (Dorantes and Mundra 2005). The government can help immigrants’ integration in the labour market through i) establishing and sup-

porting settlement and community-based organizations; ii) supporting family through programmes such as child care, counseling, and awareness generation; and iii) increasing immigrants' employability through capability-building programmes such as language and computer training and financial support directed towards enhancing their skills. Thus social capital, with its potential to impact the labour market, needs to be explored and studied in order to ascertain its theoretical impetus in both the economic analysis of the labour market and the formulation of appropriate socio-economic policies.

Social capital manifests in three main relational forms: "bonding social capital" (family and close friends), "bridging social capital" (friends belonging to different religion, ethnic group, language, etc.), and "social networking" (membership to various organizations). Among these, bonding social capital provides an important support system to immigrants, especially the "new" ones. However, this support could also reinforce exclusive ethno-cultural identities of immigrants, resulting in the "ethnic enclave phenomena" and potentially restricting their mobility both in terms of job and in spatial settlement pattern (Warman 2007). It is generally presumed that when comparing the bonding and bridging social capital of immigrants, they are rich in the former but not in the latter, which could expand their scope of positive outcomes in the labour market. The third form of social capital, social networking or membership in associations/organizations, provides a yet wider scope of social interaction. All three forms of social capital coupled with the diverse identities of immigrants reflected in distinct ethnic, gender, cultural and behavioural attributes may result in varied and sometimes conflicting labour market outcomes for different immigrants. This is an area of research in economics that needs detailed probing.

Some of the studies in this research area, including those undertaken by sociologists to analyze the impact of different forms of social capital on the labour market of immigrants, indicate that i) bonding social capital can lead to low-paying jobs in comparison to bridging social capital, which provides a much wider scope in the job search and offers increased opportunities for vertical mobility up the job ladder due to a wider network of friends with different background; ii) there is a non-monotonic relationship between the size of the social network and the probability of finding a job, i.e., increasing the size of sparse networks is beneficial to workers whereas it is detrimental in dense networks because of negative network externalities; iii) members of low status ethnic groups tend to achieve higher income when they have ties outside their own ethnic group. By contrast, members of high-status groups tend to do better when they have ties within their own group; and iv) immigrants who come under "family class," are not citizens, are undocumented workers, and/or are unskilled, depend more on social capital than those who are educated, skilled and citizens. (For details, please refer to Sabatini 2008; Xue 2007; Auncha et al. 2006; Franzen and Hangartner 2006; Borghans, Weel, and Weinberg 2006; Keith 2005; Delattre and Sabatier 2004; Dorantes and Mundra 2005; Ioannides and Loury 2004; Stone, Gray and Hughes 2003; Munshi 2003; Aguilera and Massey 2003; Oaka and Wellman 2003; Aguilera 2002; Petrongolo and Pissarides 2001; Mortensen and Passarides 1999; Montgomery 1991).

With such diverse impacts and implications for policy, social capital needs to be examined for its significant role in widening and strengthening conceptual frameworks in theory and the practice of economics. Despite indications that interpersonal interactions play an important role in understanding individual labor-market outcomes, there is little analysis of this phenomenon by



economists (Borghans, Weel and Weinberg 2006). In the last two decades or so, though one finds a growing recognition of the fact that economic analysis of the labour market cannot ignore the social embeddedness of economic actors without sacrificing its explanatory power (Armengol 2006), the work in this area is scanty. This could be attributed to the lack of rich disaggregated secondary data on immigrants and social capital, which is a prerequisite for developing modeling tools of social networks in labor economics research (Armengol and Zenou 2005). There are also difficulties associated with estimating social capital due to non-standardized measuring tools. Though the available research in labour economics in general and economics of immigration in particular have contributed significantly in conceptualizing and estimating social capital, the complexities involved in assessing and evaluating social capital-induced labour market outcomes necessitate a much larger representative database that encompasses multiple identities of immigrants, which encourages more research in this relatively unexplored area of study.

The present study is undertaken with the intent to help fill this gap in the literature and to make economics more inclusive of social capital, both in the theory and the practice of studying labour market outcomes of immigrants. The paper focuses on South Asia/India-born immigrants in Canada. Though there have been studies to analyze the role of social capital, one does not come across studies specifically dealing with the labour market outcomes of immigrants from South Asia/India, which is the second largest source of immigrants to Canada, after China (Xue 2007; Auncha et al. 2006; Oaka and Wellman 2003; Ruddick 2003). The paper addresses two basic issues concerning immigrants of South Asia origin: i) whether social capital impacts their employment status in Canada and, ii) whether it determines their earnings. Section I discusses the data source, methodology, conceptual framework, hy-

potheses and descriptive characteristics of the sample; Section II analyzes the results of Logistic Regression and Earnings Functions; and Section III offers the paper's conclusion and recommendations

## SECTION I

### *Data*

To study the impact of social capital on the labour market outcomes of South Asia-born immigrants in Canada, we used the data contained in *Equality, Security and Community Survey 2002*. It is a stratified random sample of immigrants (born in sixty-three different countries) in Canada above the age of eighteen who speak either English or French. This is the only data set to gather information on various aspects of social capital that could be used for this study. Due to its limited coverage, the disaggregated data did not help use of statistical tools specifically in respect to gender-segregated information of an ethnic group. Hence the analysis is confined to the total immigrant respondents under the three categories: All (4450), South Asia (142), and India (100). Thus the South Asia sample is dominated by India-born immigrants. About fifteen respondents, most of whom were India-born, were interviewed by the author through a questionnaire in Vancouver, Canada. In addition to these interviews, informal interactions with immigrants at public places also helped clarify the role of social capital in the labour market and the policies of the Canadian government intended to help immigrants integrate in the Canadian economy.

## *Methodology*

The thrust of the analysis is to examine social capital as a determinant in the various labour market outcomes of immigrants in terms of gainful employability, job searches, employment sector, and earnings.

The descriptive statistics highlight the distinguishing characteristics of the sample across the three immigrant groups under study; the total immigrants are referred to as All, South Asia origin, and India origin. In order to analyze social capital as a predictor in labour market outcomes, logistic regression analysis was used. The next stage of analysis was to estimate earning functions in order to determine the role of social capital along with other explanatory variables such as human capital and other background characteristics in explaining earnings of the respondents. For this, the Ordinary Least Square method was used with annual earnings in the log form. The regression coefficients are thus percentage effect on the earnings.

Qualitative methodology was used through the questionnaire method in person or via email and also through informal interactions at public places such as religious and community centres to aid the quantitative analysis.

## *Conceptual Framework and Hypotheses*

The role of all the three forms of social capital, bonding, bridging and social networking, was analyzed. Two approaches are used to estimate social capital: i) incidence of social capital, i.e., whether it exists or not, and ii) its density. It is generally understood that people do have some form of social capital or another. Labour market outcomes depend not only on social capital but also on its density, i.e., size of the network and how strong the ties are in terms of frequency of interaction. Hence social capital is measured in terms

of its existence and also in terms of its density (see Appendix 1 for description of the variables). Two methods were used to estimate social capital: i) one "point" was given to any of the positive sub-option responses, i.e. if social capital exists (to measure the "level" impact) and ii) the sub option response was scored in descending order based on frequency of interaction to capture slope impact assuming the higher the score, the more positive the impact on labour market outcomes would be.

The following three hypotheses were tested to assess the impact of social capital:

***Hypothesis 1:*** *Social capital positively affects immigrants in having gainful employment.*

It is expected that social capital helps the immigrants to be gainfully employed either in paid or self-employment.

***Hypothesis 2:*** *Social capital increases the likelihood of executing a job search through family or friends*

Bonding/bridging/social networking increases the odds of getting employment through family or friends. It is expected that immigrants are more likely to get a job through informal rather than formal channels.

***Hypothesis 3:*** *Social capital is a predictor of employment in public/private sectors.*

Social capital positively impacts location of employment in formal public/private sectors.

The above three hypotheses are examined using logistic regression to study how the odds of being in gainful work, adopting informal job search techniques, and being in formal sector employment can be predicted by social

capital, given the human capital and other background characteristics. It is assumed that social capital as a predictor will have similar impact across all the three samples. Finally, earning functions are fitted hypothesizing that social capital positively impacts earnings of immigrants across all the three sample groups.

### *Sample Characteristics of Immigrants to Canada (Table 1)*

The sample characteristics are disaggregated for gender to highlight the gender-based characteristics differential and also to indicate the non-applicability of statistical tools for undertaking gender-disaggregated analysis as in many cases the “women” sample turned out to be rather small. A common observation was that the South Asian/India sample was different in qualitative terms than the “All” sample.

#### Demographic Background

*Age:* The majority of the respondents irrespective of their origin belonged to the age groups 26-45 and 46 and above, out of the three age group classifications of 18-25, 26-45 and 46 and above. A higher percentage of men of Indian origin were in the age group 46 and above as compared to South Asian origin. In the case of the “All” sample, a near even percentage distribution of male and female were observed across the three age groups.

*Marital Status:* In the “All” sample, there was almost an even distribution of being married and belonging to the single and widowed category (“Otherwise” in Table 1), whereas in the South Asian and Indian origin samples, there was a higher percentage of “married” as compared to “otherwise” and a higher percentage of married women than married men.

*Household Size:* Across the three sample groups, the highest percentage with the household size of "single" was in the "All" sample. A much higher percentage in the size category "up to 5 members" was found in the South Asian and Indian origin sample, with the women sample making up a higher percentage than men.

#### Education and Employment

*Education:* A much higher percentage of both South Asian and Indian origin were found in the highest education category, namely degree, diploma, and Ph.D. This was true of both men and women.

*Gainfully Working:* The South Asian and Indian origin samples showed a higher percentage of respondents who were gainfully working (self-employed and working for pay) than the "All" sample, with the Indian origin sample having the highest percentage share for both men and women.

*Job Search Method:* Across the sample, the main method of job searching was through formal rather than informal means such as family or friends.

*Public/Private Sector Employment:* Employment in the private sector is more prevalent than that in the public sector, with the "All" sample having the highest percentage share of private sector employment among the sample groups. A higher percentage of women across the samples were in the public sector as compared to men.

## Annual Earnings

Out of the three annual income categories of low (up to C\$12,000), medium (C\$12,001-\$20,000), and high (more than C\$20,000), all three sample groups had earnings in the “high” category. The “All” sample had the highest percentage of income earners in this category at 64 percent, while South Asian and Indian origin samples each had about 55 percent. All three sample groups showed a higher percentage of women than men in the “low” category, but whereas the percentages of “All” and South Asian origin women in the low income category were substantially higher than that of their male counterparts (28.2 vs. 13.1 percent and 41.7 vs. 27 percent, respectively), the difference between Indian origin women and men was smaller (37.5 vs. 26.7 percent, respectively). This indicates a much lower incidence of low-income among Indian origin women. The gender-based differential across the levels of earnings was more pronounced in the case of the South Asian origin sample, with a larger gap between women’s and men’s earnings than in the “All” and Indian origin samples.

## Canadian citizenship

The “All” sample had the highest percentage of immigrants having Canadian citizenship (approximately 84 percent), whereas in the South Asian and Indian origin sample, there was about a 60:40 ratio of Canadian to non-Canadian citizens. In relative terms, a higher incidence of those having Canadian citizenship occurred in the South Asian origin sample than in the Indian origin sample.

## Years of Stay in Canada

Out of three categories (up to one year, two to four years, and more than four years), those who were residents of Canada for more than four years made up the highest percentage in all sample groups. This percentage was highest in the case of the "All" sample (80 percent), followed by 68 percent in both the South Asian and Indian origin samples. About 26 percent of both the South Asia and Indian origin samples had been in Canada for two to four years. Among women of these two groups, the share was 30-32 percent, double that of women in the "All" sample.

## Social Capital

### *i) Based on any positive response=1*

*Bonding Social Capital:* Incidence of bonding social capital was high in all three sample groups and highest in the case of the "All" sample. In the South Asian and Indian origin samples, the incidence of bonding social capital was lower among women than men.

*Bridging Social Capital:* In all three sample groups, a much higher percentage had bridging social capital as compared to those who did not. The Indian origin sample had the highest percentage of those who had bridging social capital while the "All" group the lowest. Women of South Asian and Indian origin had a lower percentage of bridging social capital than "All" sample women.

*Social Networking:* A much higher percentage, 95 percent to 99 percent in all three immigrant groups, were members of voluntary organizations. This percentage was highest in the "All" sample. Amongst South Asian and Indian origin samples, the extent of women's social networking was lower than that



of men. The results conform with the observation of various studies that “women” in general have relatively less social capital of this nature as compared to men.

*ii) Based on score*

Scores were given in descending order to the sub options of a question with highest interaction having the maximum numerical score, shown here in three ranges of low (0-5), medium (6-10), and high (11 and above).

*Bonding Social Capital:* Across the three sample groups, the highest percentage share was in the score range of 6-10. In the case of the “All” and Indian origin samples, the lowest percentage was in the “low” score range of 0-5. For the South Asian origin sample, the lowest was in the “high” score range of 10 and above. This was mainly due to the gender-based differential, with women having much a lower percentage share in the higher score category. In the “All” sample, there was not much difference in percentage distribution between men and women across the three score ranges. In the case of both South Asian and Indian origin samples, women had a much lower share in the high score category, more evident in cases of the former than the latter.

*Bridging Social Capital:* The highest percentage share for all sample groups was in the “high” score category (i.e., scores 11 and above). Among the three groups, the Indian origin sample had the highest percentage share followed by South Asian origin sample. Similar to bonding social capital, there was an almost non-existent gender-based differential in the “All” sample, whereas in both the South Asian and Indian origin samples, women had the highest percentage in the “low” score category.

*Social Networking:* In all three sample groups, the percentage share was found to be highest—almost 100 percent—in the score range of 0-5. This was true for both men and women.

The results indicate that women from South Asia and India have lower Bonding and Bridging social capital than men. However in “All” sample, this was not the case.

TABLE 1: SAMPLE CHARACTERISTICS OF IMMIGRANTS TO CANADA (IN %)

	ALL			SOUTH ASIAN			INDIAN			
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	
Age										
17-25	13.3	13.1	13.2	16.0	13.3	14.9	16.9	10.5	14.4	
26-45	44.9	42.8	43.8	50.6	61.7	55.3	42.4	60.5	39.5	
46 and above	41.8	44.1	43.0	33.3	25.0	29.8	40.7	28.9	36.1	
Total (n)	2031	2285	4316	81	60	141	59	38	97	
Marital status										
Married	50.0	51.6	49.1	69.5	80.0	73.9	70.0	84.2	75.5	
Otherwise	50.0	48.4	50.9	30.0	20.0	26.1	30.0	15.8	24.5	
Total (n)	2057	2342	4399	82	60	142	60	38	98	
Household size										
Single	21.5	20.9	21.2	9.9	5.0	7.8	13.6	7.7	11.2	
Up to 5 members	74.2	75.2	74.7	76.5	83.3	79.4	78.0	79.5	78.6	
More than 5 members	4.3	3.9	4.1	13.6	11.7	12.8	8.5	12.8	10.2	
Total (n)	2056	2349	4405	81	60	141	59	39	98	
Education category										
Up to High School education	38.1	36.9	37.5	20.8	25.9	23.0	21.1	24.3	22.3	
Completed tech. & community college	30.9	36.2	33.7	22.1	25.9	23.7	21.1	24.3	22.3	
Degree, diploma, & Ph.D.	31.1	26.9	28.8	57.1	48.3	53.3	57.9	51.4	55.3	
Total (n)	2025	2315	4340	77	58	135	57	37	94	
Gainfully working										
Self-employed & working for pay	66.3	54.5	60	73.2	63.3	69.0	73.3	76.3	74.5	
Otherwise	33.7	45.5	40	26.8	36.7	31.0	26.7	23.7	25.5	
Total (n)	2061	2355	4416	82	60	142	60	38	98	
Job through family/friend										
Friends & relatives	32.6	27.9	30.2	39.6	24.2	33.7	40.5	26.9	34.9	
Otherwise	67.4	72.1	69.8	60.4	75.8	66.3	59.5	73.1	65.1	
Total (n)	1261	1295	2556	53	33	86	37	26	63	

**TABLE 1: SAMPLE CHARACTERISTICS OF IMMIGRANTS TO CANADA (IN %) - CONTINUED**

	ALL			SOUTH ASIAN			INDIAN		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Job in public/private sector									
Public	26.9	44.2	35.6	8.8	27.3	15.6	10.5	26.9	17.2
Private	73.1	55.8	64.4	91.2	72.7	84.4	89.5	73.1	82.8
Total (n)	1237	1243	2480	57	33	90	38	26	64
Income category									
Up to \$12,000	13.1	28.2	20.7	27.0	41.7	32.3	26.7	37.5	30.4
\$12,001 to \$20,000	13.4	17.7	15.6	14.3	8.3	12.1	15.6	12.5	14.5
More than \$20,000	73.5	54.2	63.8	58.7	50.0	55.6	57.8	50.0	55.1
Total (n)	1550	1566	3116	63	36	99	45	24	69
Citizenship									
Canadian	83.9	85.9	84.9	62.2	55.7	59.4	58.3	59.0	58.6
Other	16.1	14.1	15.1	37.8	44.3	40.6	41.7	41.0	41.4
Total (n)	1000	1085	2085	82	61	143	60	39	99
Years in Canada									
Up to 1 year	5.2	2.6	3.9	7.8	3.6	6.0	7.1	2.8	5.4
2 to 4 years	16.7	15.3	16.1	20.8	32.1	25.6	23.2	30.6	26.1
More than 4 years	78.1	82.1	80.0	71.4	64.3	68.4	69.6	66.7	68.5
Total (n)	484	463	947	77	56	133	56	36	92
Social Capital (Y=1, N=0)									
Bonding social capital									
Bonding Social Cap.	96.1	95.3	95.6	92.5	81.7	87.9	91.4	78.9	86.5
No Bonding S.C.	3.9	4.7	4.4	7.5	18.3	12.1	8.6	21.1	13.5
Total (n)	2056	2353	4409	80	60	140	58	38	96
Bridging social capital									
Bridging Social Cap.	80.6	83.0	81.9	97.6	88.3	93.7	96.7	92.1	94.9
No Bridging S.C.	19.4	17.0	18.1	2.4	11.7	6.3	3.3	7.9	5.1
Total (n)	2063	2360	4423	82	60	142	60	38	98

TABLE 1: SAMPLE CHARACTERISTICS OF IMMIGRANTS TO CANADA (IN %) - CONTINUED

	ALL			SOUTH ASIAN			INDIAN			
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	
Social Networking										
0-5	98.50	98.98	98.76	100	100	100	100	100	100	
6-9	1.31	0.85	1.06	-	-	-	-	-	-	
10 and above	0.19	0.17	0.18	-	-	-	-	-	-	
Total (n)	2065	2362	4427	82	61	143	60	39	99	
Social networking										
Social Networking	99.3	98.6	98.9	96.3	93.3	95.1	96.7	92.1	94.9	
No Social Networking	0.7	1.4	1.1	3.7	6.7	4.9	3.3	7.9	5.1	
Total (n)	2065	2359	4424	82	60	142	60	38	98	
Social Capital- (Scores ranging)										
Bonding Social Capital										
0-5	12.78	13.41	13.11	19.18	29.41	23.39	18.87	25.81	21.43	
6-10	58.80	57.95	58.35	57.53	52.94	55.65	56.6	51.61	54.76	
11 and above	28.42	28.64	28.54	23.29	17.65	20.97	24.53	22.58	23.81	
Total (n)	1949	2214	4163	73	51	124	53	31	84	
Bridging Social Capital										
0-5	1.89	1.35	1.60	00	3.28	1.40	00	2.56	1.01	
6-9	33.72	33.91	33.82	15.85	19.67	17.48	11.67	23.08	16.16	
10 and above	64.39	64.73	64.57	84.15	77.05	81.12	88.33	74.36	82.83	
Total (n)	2064	2362	4426	82	61	143	60	39	99	

## SECTION II

### *Logistic Regression Results (Social Capital—Method I)*

***Hypothesis 1:*** *Social capital positively affects immigrants in having gainful employment.*

*All:* None of the forms of social capital turned out to be significant predictor of people having gainful employment. Household size and length of stay in Canada were also not significant in predicting the likelihood of people being gainfully employed. The odds of being employed were positively related to younger age, being single, and not having Canadian citizenship. Immigrants having university education were more likely to be employed than those who completed high school and/or some technical education. Thus high “human capital” in qualitative terms turned out to be a significant predictor of being gainfully employed.

*South Asian Origin:* Being married reduced the likelihood of being gainfully employed in comparison to being single. Having completed high school also reduced the likelihood of gainful employment in comparison to those having university education. Those having bridging social capital, i.e., friends with different language, religion, and/or ethnic group, had less likelihood than those having friends with similar background to be gainfully employed.

*Indian Origin:* A smaller household size, single status, not being a Canadian citizen, and recent arrival in Canada increased the odds of being employed as compared to a larger household size, married status, Canadian citizenship, and a relatively longer stay in Canada.

The results indicate that university education, being single, and not having Canadian citizenship in general are predictors of gainfully employed status.

Social capital does not have much impact on gainfully employed status, except in the case of the South Asian origin sample, where having friends with similar background (rather than different background in terms of language, religion and ethnicity) turned out to be a predictor.

TABLE 2: PREDICTOR OF GAINFULLY WORKING IN CANADA

VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )	B	Exp( $\beta$ )
Age	-0.0127*	0.9874	-0.0160	0.9841	-0.0232	0.9771
Household Size	0.1093	1.0195	-0.0446	0.9564	-0.3800*	0.6838
Marital Status (1)	-0.5630***	0.5695	-1.5432***	0.2137	-4.1652***	0.0155
Citizenship (1)	-0.3569**	.06998	-1.0096	0.3644	-2.3356*	0.0968
Education (1)	-0.4400**	0.6440	-1.3371**	0.2626	-1.4062	0.2451
Education (2)	-0.3986**	0.6712	0.1655	1.1799	0.8250	2.2819
Length of stay in Canada	-0.0030	0.9970	-0.0278	0.9726	-0.1281**	0.8798
Bonding social capital (1)	-0.2408	0.7870	-0.3594	0.6981	-1.1388	0.3202
Bridging social capital (1)	-0.3350	0.7153	-3.3028***	0.0368	-4.5144	0.1100
Social networking (1)	-0.4244	0.6542				
Constant	1.6052		3.4570		9.0299	
Nagelkerke R <sup>2</sup>	0.062		0.293		0.562	
-2log likelihood	1122.428		117.745		50.459	

Note: For All the Logistic Regression and Earnings Function Results

I: Variable specification of Logistic Regression I & II and Earning Functions I & II

i) Marital status = Married = 1, otherwise = 0

ii) Citizenship: Canadian citizen = 1, otherwise = 0

iii) Education (1) = some + completed secondary education; Education (2) = completed technical + some university, Reference category = Diploma, degree & Ph.D (Logistic Regression).

iv) Degree education: Diploma, Degree & Ph.D = 1, otherwise = 0 (Earnings Function)

v) Job through family or friends = 1, otherwise = 0 (Earnings Function)

vi) Length of stay in Canada = in years

*Social Capital: Logistic Regression I & Earning Function I*

vii) Bonding Social Capital: if Yes = 1, No = 0

viii) Bridging Social Capital: if Yes = 1, No = 0

ix) Social Networking: if Yes = 1, No = 0

*Social Capital: Logistic Regression II & Earning Function II*

x) Bonding, Bridging and Social Networking in terms of "score"

II: \* significant at 10%; \*\* significant at 5% and \*\*\* significant at 1% level.

**Hypothesis 2:** Social capital increases the likelihood of job search through family or friend

*All:* The odds of executing a job search through family or friend decreases with age and are higher with a lower level of education than with a higher level of education. None of the social capital forms turned out to be predictors of carrying out a job search through family or friends.

*South Asian Origin:* A larger household as compared to a smaller one had a dampening impact on finding job through family or friends. Thus, odds of finding a job through family/friends increased with small size of household.

*Indian Origin:* None of the variables turned out to be a significant predictor of executing a job search through family or friends.

Social capital thus did not predict carrying out a job search through the informal means of family or friends. Logistics regression for the "All" sample showed that factors like being young in age and having lower-level education could be the factors increasing the odds of executing a job search through family or friends.

TABLE 3: PREDICTORS FOR EXECUTING A JOB SEARCH THROUGH FAMILY OR FRIENDS IN CANADA

VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )
Age	-0.0219*	0.9784	-0.0174	0.9828	-0.0566	0.9450
Household Size	0.0254	1.0257	-0.3176*	0.7279	-0.2342	0.7912
Marital Status (1)	-0.2466	0.7813	0.0427	1.0436	0.3700	1.4478
Citizenship (1)	-0.2899	0.7483	0.2257	1.2531	0.2676	1.3068
Education (1)	0.9903***	2.6921	-0.1285	0.8794	-0.8649	0.4211
Education(2)	0.6202***	1.8592	0.4045	1.4985	0.7366	2.0889
Length of stay in Canada	0.0022	1.0022	0.0096	1.0097	0.0277	1.0281
Bonding social capital (1)	0.4036	1.4973	-0.0710	0.9314	-0.1039	0.9013
Bridging social capital (1)	0.0320	1.0325				
Social Networking (1)						
Constant	-0.3768		0.9085		1.6237	
Nagelkerke R <sup>2</sup>	0.067		0.100		0.243	
-2log likelihood	574.312		89.530		58.836	

See Table 2 notes



**Hypothesis 3:** *Social capital is a predictor of employment in the public sector.*

*All:* The odds of being employed in the public sector increases with a longer stay in Canada and with university education.

*South Asian and Indian Origin:* None of the variables except bonding social capital, in the form of interaction with close family, turned out to be significant predictor of being employed in the public sector.

Thus social capital turns out to be a significant predictor of employment in the public sector for South Asians, including people of India origin.

VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )
Age	-0.0072	0.9931	-0.0358	0.9648	-0.0224	0.9779
Household Size	-0.0972	0.9074	0.1656	1.1801	0.1481	1.1596
Marital Status (1)	-0.3989	0.6711	-0.8007	0.4490	-0.9545	0.3850
Citizenship (1)	-0.1028	0.9023	-1.5043	0.2222	-2.1027	0.1221
Education (1)	-0.8256***	0.4380	-11.0712	0.0000	-11.7451	0.0000
Education (2)	-0.2609	0.7703	-0.5916	0.5534	-0.5725	0.5641
Length of stay in Canada	0.0485***	1.0497	0.0569	1.0586	0.0283	1.0287
Bonding social capital (1)	-0.8250	0.4382	2.5256*	12.499	2.6804*	14.590
Bridging social capital (1)	0.5254	1.6911	-6.6139	0.0013	-6.9143	0.0010
Social networking (1)						
Constant	-0.9495		-0.9504		-0.4237	
Nagelkerke R <sup>2</sup>	0.142		0.343		0.394	
-2log likelihood	490.522		46.373		34.041	

See Table 2 notes

*Logistic Regression Results (Social Capital - Method II)*

***Hypothesis 1:*** *Social capital positively affects immigrants having gainful employment.*

*All:* Being married as compared to being single reduces the odds of being gainfully employed. Similarly, technical education as compared to university education reduces the odds of being gainfully employed. Having a higher bridging social capital score turns out to be a significant predictor of people having gainful employment.

*South Asian Origin:* In the case of people of South Asian origin, being married and having a high school level education have a negative impact on gainfully working as compared to those who are single or have higher education. Bridging social capital also turned out to be a significant predictor.

*Indian Origin:* The odds of people gainfully working decreases with age, larger size of household, Canadian citizenship, longer stay in Canada, and higher social network score. Technical education as compared to university education, and having bridging social capital increase the odds of being in gainful work.

The results thus indicate that higher education and bridging social capital do improve the odds of being gainfully employed.

TABLE 5: PREDICTORS FOR GAINFULLY WORKING IN CANADA

VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )
Age	-0.0098	0.9902	-0.245	0.9758	-0.1607**	0.8516
Household Size	0.0344	1.0350	0.0138	1.0139	-0.9088**	0.4030
Marital Status (1)	-0.5276***	0.5900	-1.6215***	0.1976	-8.7081**	0.0002
Citizenship (1)	-0.02564	0.7738	-1.0251	0.3588	-5.3166**	0.0049
Education (1)	-0.2791	0.7565	-1.4990**	0.2233	-2.1030	0.1221
Education (2)	-0.3360*	0.7146	0.2549	1.2904	4.2544*	70.4158
Length of stay in Canada	-0.0010	0.9990	-0.0270	0.9734	-0.1651*	0.8470
Bonding social capital score	-0.0310	0.9695	0.1274	1.1359	-0.2723	0.7616
Bridging social capital score	0.1518***	1.1639	0.6460***	1.9079	1.4785***	4.3866
Social networking score	-0.0249	0.9754	-0.2708	0.7627	-1.1032*	0.3318
Constant	-0.1104		-4.2069		7.5281	
Nagelkerke R <sup>2</sup>	0.058		0.383		0.749	
-2log likelihood	1021.744		93.500		27.652	

See Table 2 notes

**Hypothesis 2:** *Social capital increases the likelihood of job search through family or friend.*

*All:* Being young, not having Canadian citizenship, having a lower level of education and a higher score on bonding social capital increase the odds of carrying out a job search through family or friends.

*South Asian and Indian Origin:* Smaller household size and having a higher score on social networking, i.e., membership in various organizations, as compared to those having a lower score, increase the odds of executing a job search through family or friends for South Asian origin immigrants. In the case of Indian origin immigrants, none of the variables turned out to be a significant predictor.

Social capital in the forms of bonding and social networking thus turned out to be predictors of utilizing informal means of job searches.

**TABLE 6: PREDICTORS FOR EXECUTING A JOB SEARCH THROUGH FAMILY OR FRIENDS IN CANADA**

VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )
Age	-0.0208*	0.9794	-0.0071	0.9930	-0.0609	0.9409
Household Size	0.0372	1.0379	-0.04991**	0.6071	-0.2847	0.7523
Marital Status (1)	-0.1707	0.8430	-0.3838	0.6813	0.0242	1.0245
Citizenship (1)	-0.4897*	0.6128	0.2300	1.2587	0.0735	1.0762
Education (1)	1.0206***	2.7750	0.4284	1.5348	-1.3277	0.2651
Education (2)	0.6383***	1.8934	0.1249	1.1331	0.6819	1.9776
Length of stay in Canada	-0.00004	1.0000	0.0028	1.0028	0.0221	1.0224
Bonding social capital score	0.0708*	1.0734	0.0673	1.0697	0.2046	1.2271
Bridging social capital score	-0.0692	0.9331	-0.2767	0.7583	-0.3045	0.7375
Social networking score	-0.0370	0.9637	0.6801**	1.9741	0.4674	1.5958
Constant	-0.1858		3.2361		3.5280	
Nagelkerke R <sup>2</sup>	0.096		0.241		0.373	
-2log likelihood	517.540		70.512		45.925	

See Table 2 notes

***Hypothesis 3:*** *Social capital is a predictor of employment in the public sector.*

*All:* Lower-level education as compared to university-level education reduces the odds of having employment in the public sector. The length of stay in Canada also turns out to be a significant predictor of public sector employment.

*South Asian and Indian Origin:* None of the variables were statistically significant in predicting employment in the public sector.

TABLE 7: PREDICTORS FOR WORKING IN THE PUBLIC SECTOR IN CANADA

VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )	$\beta$	Exp( $\beta$ )
Age	-0.0026	0.9975	-0.0308	0.9697	-0.0175	0.9827
Household Size	-0.1178	0.8889	0.2861	1.3312	0.2196	1.2456
Marital Status (1)	-0.3834	0.6815	-1.0317	0.3564	-0.7931	0.4525
Citizenship (1)	-0.1168	0.8897	-1.0083	0.3648	-1.4379	0.2374
Education (1)	-0.6155**	0.5404	-8.4476	0.0002	-8.7411	0.0002
Education (2)	-0.1620	0.8505	-0.5210	0.5939	-0.3487	0.7056
Length of stay in Canada	0.0449***	1.0459	0.0570	1.0587	0.0409	1.0417
Bonding social capital score	-0.0145	0.9856	-0.1748	0.8396	-0.1540	0.8573
Bridging social capital score	-0.0247	0.9756	0.2079	1.2311	-0.0657	0.9365
Social networking score	0.1278	1.1363	-0.0475	0.9536	-0.2224	0.8006
Constant	-0.7407		-2.4011		0.9746	
Nagelkerke R <sup>2</sup>	0.127		0.303		0.347	
-2log likelihood	471.963		43.360		31.717	

See Table 2 notes

The role of social capital as per the Logistic regression I indicates that social capital of any form (Table 2) reduces the odds of being engaged in gainful work. It also does not predict using informal means for a job search (Table 3). Bonding social capital, however, predicts employment of South Asian origin and Indian origin immigrants in formal sectors of employment (Table 4). In Logistic regression II, which captures the density of the social network, one finds that social capital in the form of bridging social capital does predict immigrants being gainfully employed (Table 5). Higher bonding capital and social networking scores do predict enacting job searches through family or friends in "All" and South Asian origin samples, respectively (Table 6). However, social capital does not predict employment in the public sector (Table 7). It can be deduced from the results that the role of social capital as a predictor is sensitive to the method of its estimation. Social capital measured in terms of stronger ties reflected in higher frequency of interaction improves the impact analysis. The overall results of the study are in general accordance with the

related studies cited above in this area that indicate social capital is an important predictor in immigrants' participation in labour market and in their reliance on informal means for job searches.

*Earnings Function (Social Capital - Method I)*

*All:* Earnings were explained by age as a proxy for experience. The negative age square confirms decreasing returns to experience. There were positive returns to higher education as compared to all other levels of education. None of the other variables including social capital were statistically significant.

*South Asian Origin:* There was a positive impact of length of stay in Canada on earnings. Those who were married had relatively lower earnings than those having single status. All the remaining variables were statistically insignificant.

*Indian Origin:* Length of stay in Canada and household size had a positive impact on earnings whereas being married and having bonding social capital had a negative impact on earnings as compared to those who were single and did not have bonding social capital. These results correspond to many empirical studies that concluded bonding social capital leads to lower earnings among immigrants. The family ties make the immigrants risk-averse in the labour market.

TABLE 8: EARNINGS FUNCTION I

VARIABLES	SOUTH ASIAN					
	ALL		ORIGIN		INDIAN ORIGIN	
	$\beta$	t-value	$\beta$	t-value	$\beta$	t-value
Constant	-0.555	-1.121	2.063	0.864	5.750**	2.477
Age	0.0861***	3.818	0.0713	0.633	-0.105	-0.989
Age <sup>2</sup>	-0.00091***	-3.464	-0.0011	-0.815	-0.00086	-0.706
Degree education (1)	0.152**	1.978	-0.0812	-0.348	-0.152	-0.728
Job through family/friends (1)	0.0137	0.173	-0.368	-1.161	-0.503	-1.824
Citizenship (1)	0.0273	0.248	-0.442	-1.453	-0.508	-1.498
Length of stay in Canada	0.0031	0.763	0.0559**	2.847	0.0578**	3.262
Marital status (1)	0.0700	0.713	-0.961***	-3.216	-1.305***	-4.878
Household size	-0.0235	-0.827	0.0435	0.335	0.274*	2.182
Bonding social capital (1)	0.126	0.686	-0.826	-1.355	-1.098*	-2.239
Bridging social capital (1)	-0.0597	-0.465	---	---	---	---
Social networking (1)	--	---	---	---	---	---
Adjusted R <sup>2</sup>	0.200		0.319		0.674	
F- ratio	4.502***		1.990		4.220*	

See Table 2 notes

### *Earnings Function (Social Capital - Method II)*

*All:* The statistically significant explanatory variables were age, square of age, degree education, and social networking score. The impact on earnings were as per the expected hypothesis that experience has positive but decreasing returns on earnings; similarly, higher education leads to higher earnings as does a higher density of social network.

*South Asian and Indian Origin:* Except for being married having a negative impact on earnings, none of the variables was statistically significant.

Comparing earnings function I and II, the former is a better fit. Social capital in relative terms is not a major factor in explaining variation in earnings as compared to human capital. It becomes evident that social capital

has a negative impact on earnings in the case of the earnings function of the Indian origin sample in both earnings functions I and II. Only in case of the “All” sample did social networking have a positive impact on earnings.

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**TABLE 9: EARNINGS FUNCTION II**


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VARIABLES	ALL		SOUTH ASIAN ORIGIN		INDIAN ORIGIN	
	$\beta$	t-value	$\beta$	t-value	$\beta$	t-value
Constant	0.577	-1.052	-0.395	-0.111	4.541	1.099
Age	0.0927***	4.025	0.0757	0.564	-0.0148	-0.124
Age <sup>2</sup>	-0.0009***	-3.608	-0.0011	-0.702	-0.00058	-0.398
Degree education (1)	0.144*	1.787	-0.0729	-0.215	-0.773	-1.858
Job through family/friends (1)	0.0285	0.342	-0.383	-1.051	-0.322	-1.069
Citizenship (1)	0.0305	0.268	-0.444	-1.165	-0.557	-1.594
Length of stay in Canada	0.0008	0.200	0.0544	1.757	0.112	2.684
Marital status (1)	0.0686	0.661	-1.015**	-2.712	-1.675**	-4.513
Household size	-0.0266	-0.908	0.119	0.612	0.258	1.379
Bonding social capital score	-0.0011	-0.076	0.0194	0.303	-0.128	-1.343
Bridging social capital score	-0.0075	-0.285	0.110	0.756	0.0228	0.105
Social networking score	0.0608**	2.033	-0.0663	-0.453	-0.227	-1.428
Adjusted R <sup>2</sup>	0.216		0.151		0.703	
F- ratio	4.358***		1.291		3.796	

See Table 2 notes

### *Survey Findings*

To supplement quantitative analysis, a survey of a few immigrants was undertaken in Vancouver. There were about fifteen respondents including one associated with an immigrant settlement agency. They were interviewed through questionnaires. All except one were of Indian origin. Though it is not a representative sample, the interviews along with the responses gathered through informal interaction at public places did help highlight the role of both social capital and the socio-economic policies of Canada.



## Social Capital

Almost everyone attached lot of importance to social capital in the form of family, friends, and various organizations, both governmental and nongovernmental, helping the immigrants in various ways. Social capital was considered to be effective provided the human capital component was strong enough to get into a better-paid labour market. The main comments/observations were as follows.

1. Family, friends, and membership in organizations do help the immigrants to integrate in the Canadian labour market. However, ultimately education, skill and determination to adapt to society/the economy determine the long-term labour market outcomes.
2. Role of social interactions is relatively more important in self-employment than in paid employment.
3. Social networks, especially family or friends, do limit job and spatial mobility. However, one has to accept these limitations as a tradeoff, of sorts, as the emotional aspect of living is as important as labour market success.
4. Most of the respondents got their job through formal methods, which also supported the findings based on Logistic regression analysis.

## Government Policies

In general, interviewees were satisfied with Canadian government social policies for immigrants, especially in relation to many other countries. However some concerns were expressed as follows.

1. New immigrants should be assisted in the following procedural steps leading to gainful employment:
  - i. Assessment of skills and qualifications

- ii. Thorough understanding of the Canadian job market
  - iii. Evaluation of foreign education and training. This fee should be paid/ subsidized by the Canadian government. Currently, the immigrant pays for this service, and because it is expensive, most immigrants skip this very vital step in the process. Alternatively, the Canadian immigration should make it mandatory and keep the cost affordable by providing this service in the immigrant's home country.
  - iv. Assistance in identifying methods of bridging the gap between current and required qualifications.
  - v. Assistance for childcare.
  - vi. Counseling centres for immigrants, especially women.
  - vii. Language training and awareness workshops related to the labour market, social policy, and various support programmes in Canada. This could be done at both the pre- and post-landing stage. Print and electronic reading material on Canadian society, economy, natural resources, climate, and so forth should also be made available to potential immigrants.
2. There should be recognition of Indian university and professional degree/ diploma education.
3. More collaboration and interaction is needed among institutions of higher learning in India/South Asia and Canada.

### SECTION III

Social capital is an important determinant impacting labour market outcomes. In consonance with most of the studies in this area, the present study based on Canadian data indicates that i) social capital does have a role to play in predicting whether immigrants will be engaged in gainful work and in the job search; ii) the role of social capital is sensitive to the method of estimating it. The score method turned out to be better than giving a “positive number to any sub response” in identifying the nature and extent of impact of social capital in gainful employment, the job search, and sector of employment; iii) in explaining the variation in earnings, social capital does not turn out to be as significant a determinant as human capital; and iv) the primary survey, though not a representative one, also corresponded with the results of the quantitative analysis. At the very least, the survey helped identify a few areas of policy intervention for the Canadian government to consider when it seeks ways to help immigrants integrate in the labour market of Canada.

The impact of social capital hinges on many factors, including the attributes of the sample. There is a need for much more extensive disaggregated data than what the present study could use and also empirical studies to model the role of social capital in economic analysis of labour market. This will not only help us to understand the social phenomena explaining economic outcomes but also make economics more inclusive and public policies more effective and appropriate for immigrants needing support in their integration in the host country’s socio-economic milieu.

## APPENDIX 1 - VARIABLE DESCRIPTIONS

### *Dependent Variables*

#### Logistic Regression:

*Nature of employment Status:* If gainfully working (self employed + wage/salary earners) = 1, otherwise = 0

*Job through friend/relative:* Dummy = 1 if job obtained through friend/relative; if obtained through other methods = 0

*Sector of employment:* If in public sector = 1, private sector = 0

#### Earnings Function:

*Log of Annual Earnings:* Earnings through wage/salary or through self-employment

### *Independent Variables*

*Age:* in years

*Marital Status:* If married = 1, single (unmarried+widowed+divorced) = 0

*Household size:* in number

*Years of education:* If completed secondary education = 1, technical+community+some university = 2, Reference category = Degree, diploma and PhD

#### Social Capital: Method-1

*Bonding social capital:* Positive response to any sub option, how often they see family members not living with them, how often they see their close friends, and how often they talk to their neighbour was considered as 1.

*Bridging social capital:* Positive response to any sub option, pertaining to friends who speak a different language, have a different religion, have different ethnicity, are ten years older or ten years younger, and/or have much more or less education was considered as 1.

*Social networking:* Positive response to any sub option, service club, recreational club, or any other organization was considered as 1.

#### Social Capital: Method-2

“Scores” were given to the various options of a question in descending order based on the most frequent interaction having the highest numerical weight.

*Citizenship:* If Canadian citizen = 1, otherwise = 0

*Duration of stay in Canada:* In actual number of years

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