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Immigrants and the Native-born in
Canada**

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Social Capital Profiles: Immigrants and the Native-born in Canada

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Research on social capital and minority status has intensified recently. Against this background, the current paper studies the social capital of immigrants in Canada, and compares that with that of the native-born Canadians, using a large-scale Canadian survey with a heavy focus on social capital (General Social Survey, cycle 17). The study is conducted in two steps. First, using Principal Component Analysis, 15 different dimensions of social capital have been identified; the variables heavily associated with each of those components have been then collapsed into one composite index. Second, using the 15 resultant composite indexes, social capital profiles of immigrants and non-immigrants are generated. The results show three clusters of indexes: those on which there is no major difference between the two sub-populations; those in which immigrants score higher; and those with higher scores for the native-born. The theoretical as well as policy implications of these particular profiles are discussed.

Introduction

The issue of the social capital of immigrants in immigrant-receiving countries has recently attracted some attention (see, among others, Portes, 1995a; 1995b; Massey et. al., 1998; White and Kaufmann, 1997; Zhou and Bankston, 1994; Fernandez Kelly, 1995). This special attention is the product of three developments. First, since the early 1990s there has been a rising interest in the concept of social capital, which has been used to refer to the resources embedded in communities (Bourdieu, 2001[1983]; Coleman, 1988; 1990; Putnam, 1993; 1995; 2000). Second, relying on such communal resources has been found to be particularly important for the immigrants who are now increasingly coming from developing countries and face new challenges not experienced by previous waves of immigrants (Portes, 1995a). Third, the population of immigrants has been fast rising globally, with most states simultaneously sending and receiving immigrants now, making the number of people living in countries where they were not born about 2 percent of the world's population (Borjas, 2000; Massey et. al., 1994; 1998; Papademetriou, 1998). In other words, the increase in the number of immigrants worldwide, the heavier reliance of immigrants on communal resources, and the close connection between the latter and social capital, have brought to foreground the issue of the social capital aspect of immigrants' lives.

Canadian research on the social capital of immigrants has been growing, but it is still far from giving a thorough picture. Some of the existing studies have immigration status only as a secondary variable among many others (see, for instance, Helliwell,

1996; 1998). Those with a heavier emphasis on immigrants suffer from the limitations of their data, which tends to focus on few immigrant groups or only on certain regions (Ooka and Wellman, 2003; Hagan et. al., 2003). Yet a third group of studies use more comprehensive data but have narrowly focused on only certain aspects of the multi-faceted and much broader concept of social capital (see, for instance, Nakhaie, 2007; Nakhaie et. al., 2008; Kazemipur, 2006a; Breton, 1997). The few who have given social capital a full multi-dimensional treatment have mostly relied on the theoretically-based dimensions suggested by Putnam (2000), without offering any empirical verification for them.

One thing still missing in the literature generated so far is a big and thorough picture of the social capital profile of immigrants as compared to that of the mainstream population. The least that can be done in this direction is to compare immigrants and non-immigrants along the dimensions of social capital suggested by Putnam (2000), including trust, voting, political engagement, religious engagement, donation, and volunteering. There exist two problems with Putnam's conceptualization of social capital, however. First, while he treats social capital as a multi-dimensional concept, he arrives at those dimensions merely on theoretical grounds. Furthermore, he seems to be implicitly assuming an internal consistency among those various dimensions. The problems arising from such an assumption have been well summarized by Lin (1995), who argued that "[s]ocial capital has become too vast, including too many elements at different levels of analysis, to be empirically specified apart from human capital and economic resources (quoted in Kay and Bernard, 2007:42). This state of conceptual confusion and ambiguity has resulted in many contradictory, or at best inconclusive, findings out of social capital studies.

The purpose of this study is to examine the social capital profiles of immigrants and native-born Canadians through the use of a different measurement approach. First, we have made an attempt to arrive at the dimensions of social capital, *empirically*. Then, the two groups of immigrants and non-immigrants have been compared along all those dimensions. This has resulted in different social capital profiles for each of the two sub-populations. We have then discussed the implications of the differences between the two emergent profiles.

A Review of the Relevant Literature

The idea of social capital, although not necessarily the term, seems to have been around for a while. Putnam (2000) reports that the idea has surfaced independently at least six times in the course of the 20th century, and Portes (1998) traces it back to the works of the founders of sociology in the late 19th century, particularly to Marx's concept of 'class for itself' and Durkheim's concept of solidarity. At least one aspect of what we know as social capital today – i.e., the notion of associational activity – was raised even farther back, by Tocqueville (2001[1835]), leading some scholars to refer to the new stream of social capital as the emergence of a 'neo-Tocquevillian' view (Edwards and Foley, 2001). Despite this relatively old history, the recent popularity of the concept

owes much to the works by Bourdieu (2001[1983]), Coleman (1988; 1990), and specially, Putnam (1993; 1995; 2000).

In a now classic work in the social sciences, Putnam (2000) effectively showed an almost four-decade-long decline in American social capital. This decline reflected itself in several different areas, each highlighting a certain aspect of social capital: *civic engagement*, referring to the involvement of individuals in community affairs by virtue of membership in voluntary associations, from neighbourhood through national level; *political engagement*, showing the degree to which an individual is active in political affairs, whether it is membership in political parties or campaigning for an election; *religious engagement*, looking at membership in a church and participation in activities organized by one; *workplace engagement*, referring to membership in trade unions and professional associations; *volunteering* and *donation*, both highlighting the degree to which one is prepared to sacrifice his or her time and money for the purpose of others' betterment; *informal connections*, pointing to the frequency of involvement in socialization activities; and, finally, *trust* and *reciprocity*, revealing one's underlying beliefs and feelings towards other members of his or her community. Putnam believed that the erosion of social capital endowments in the U.S. robs Americans of the warm and caring social environment in which everyone is reasonably sensitive towards, and adequately involved in, his or her community.

Putnam's arguments seemed so strong and persuasive that a flurry of similar studies in other countries immediately began to emerge (see, among others, Putnam and Goss, 2002; Fukuyama, 1995a; 1995b; Hall, 1999; 2002; Worms, 2002; Offe and Fuchs, 2002; Perez-Diaz, 2002; Rothstein, 2002; Cox, 2002; Inoguchi, 2002). The success of the concept of social capital in shedding light into many other areas of social life – such as education, health, economic development, democracy, etc. – soon turned this concept into an indispensable and powerful explanatory factor for social scientific research, and triggered great enthusiasm among policy-makers. Associated with this great enthusiasm was a pervasive optimism that the absence of social capital has been at the root of many social problems, and that those problems can be done away with simply through the promotion of social capital.

Unsurprisingly, soon the critiques and challenges emerged. Methodological and measurement-related concerns aside, most of the critiques revolved around the linkages between social capital and the three standard sociological variables of class, gender, and race/ethnicity. Those concerned with class argued that social capital is not a so-called independent variable; rather, it is affected by class divisions and income inequalities in society (Wuthnow, 2002). A second group, mostly feminist scholars, critiqued Putnam's argument that the decline of social capital happened simultaneous to the rise in the participation of women in the labour force (Lowndes, 2000; Norris and Inglehart, 2003). A third group, which included Putnam himself, raised concerns about the uneasy coexistence of social capital with racial and ethnic diversity. This latter challenge is the most recent, and seems thus far to be the most serious one.

The first signs of an uneasy relationship between social capital and racial/ethnic/cultural diversity surfaced in a report by Putnam (2003) on the negative correlation between social capital and ethnic diversity in the American states. A similar finding was reiterated in later studies at the neighbourhood level (Putnam, 2007), which led to a controversy in British newspapers (see, for instance, Lloyd, 2006a; 2006b; Ulph, 2006). Several other studies also supported Putnam's main argument not only in America but also in Australia and Europe (see, Coffe and Geys, 2006; Letki, 2008 forthcoming; Alesina and Ferrara, 2000; 2002; Leigh, 2006a; 2006b), as have some Canadian studies (see, for instance, Howe et. al., 2006; Aizlewood and Pendakur, 2005; 2007; Kay and Johnston, 2007c). These works created a flurry of debate in newspapers all over the world, a comprehensive inventory of which can be found on the Saguaro Seminar web site (see, Saguaro Seminar, 2007).

The argument at the heart of these debates can be broken down into a few smaller links of reasoning. First, it is given that social capital operates within a normative environment shared by all those involved. Second, the rapid increase in the number of immigrants to industrial nations, arriving mostly from non-European societies with different ethnic backgrounds and cultural outlooks, is forcefully disturbing the cultural homogeneity of the receiving countries. Third, as a result of this rising cultural homogeneity, social capital is becoming increasingly difficult to promote or even maintain. Fourth, most of the recent immigrants come from societies with lower levels of social capital than their destination countries and therefore, their arrival puts a downward pressure on social capital averages in host societies.

The above concerns have been so pervasive that it even led a 2006 meeting of G8 countries to raise serious doubts about the merits of their Multiculturalism policies: "[S]ome countries are reflecting on how to manage multiculturalism, while others are reflecting on whether or not to accept it as a model at all (Citizenship and Immigration Canada, 2006:18)." This sent a clear signal that the issue was more than just a British or American concern. It also declared the quiet arrival of what Ley (2005) has called a 'Post-Multiculturalist' discourse. As for the solution to this dilemma, two distinct approaches seem to have surfaced. The first one, proposed by the British journalist Goodhart (2004) and supported by others like Etzioni (2004) and Huntington (2004), involves a call to return to a firm and historically-based definition of the native (for Goodhart, 'British') identity, and to encourage immigrants to adopt this identity as a condition of their presence in host societies. The second, promoted by Putnam (2007) and the Nobel Prize winning economist Amartya Sen (2006), acknowledges the long-term benefits of immigration for the host societies, and asks for new and creative definitions of 'we' to be developed so that it also includes immigrants of different ethnic and cultural backgrounds. For proponents of this solution, such new identities are the products of long processes of reasoning and negotiation. Convincing support for the success of such an approach has been provided by several studies on inter-ethnic relationships in other countries, such as India (Varshney, 2001), South Africa (Haile et. al., 2006), Singapore (Eng, 2002; Kadir, 2005; Ooi, 2005), and 19th century America (Costa and Kahn, 2001; 2002; 2004).

Canadian research on the interplay of social capital with race, ethnicity, and immigration has recently picked up, but is still very thin and mostly inconclusive (Helliwell, 1996; 1998; Heath, 1997; Policy Research Initiative, 2003; a special issue of the *Journal of International Migration and Integration* in 2004; Kazemipur, 2006a; 2006b; Kay and Johnston, 2007a; 2007b; 2007c; Kay and Bernard, 2007; Eisenberg, 2007; Soroka, et. al., 2007a; 2007b; Curtis and Perks, 2007; Aizlewood and Pendakur, 2007; Abraham, 2007; Mitchell, 2007; Veenstra, 2007). Some studies have found partial support for the problematic relationship between social capital and rising number of immigrants and ethnic/racial minorities (see, for instance, Kay and Johnston, 2007c), while others are alluding to the possibility that the situation in Canada (and possibly Sweden as well) might be posing an exception to the trends seen elsewhere (Banting and Kymlicka, 2004; Kazemipur, 2006a; Duncan, 2005). This particular state of Canadian research on the issue suggests, if nothing else, that the Canadian case certainly deserves more attention, as it has the potential for making a useful contribution.

Against this background, the present study involves an attempt to address one of the many issues raised above, that is, the overall social capital profiles of the immigrant and native-born sub-populations in Canada. Such a comparison allows us to develop insight into whether or not there are any major differences between the two groups; and, if there are, in which areas. This is a particularly timely task, as any policy-making attempts to deal with the issue of social capital and diversity has to start from a big picture showing where each group and each segment of the population stands in terms of social capital coordinates.

In this study, we have tried to address the issue through a two-step process. First, an attempt has been made to disentangle the blanket concept of social capital, in order to empirically arrive at the dimensions it consists of. This has generated 15 distinct dimensions of social capital, based on which we have created 15 different composite indexes of social capital. Then, immigrants and native-born Canadians have been compared along those 15 dimensions. This has revealed three different areas of social capital in Canada; those in which immigrants and the native-born Canadians show no major difference; those in which immigrants fall behind; and those in which the native-born show some deficit. The emergence of this unique set of patterns should be of utmost relevance and importance for Canadian policy-makers, who are busily involved in incorporating social capital into the social programs, as it allows for much more precision in policy targeting.

Data and Methodology

In this study we have utilized a 'social-capital-rich' source of data, cycle 17 of the Canadian *General Social Survey (GSS)*, a survey conducted in 2003 via a long questionnaire administered to about 25,000 Canadians. This survey was specifically designed to capture different aspects and components of social capital, from trust in others to voting in elections, and from number of friends to participation in demonstrations, and so on. The numerous social capital variables included in this survey greatly facilitates the development of a perspective on the structure of the relationships between the various ingredients of social capital.

Table 1 includes a listing of all the variables used in this analysis. Assuming that the above variables do not behave entirely independently from each other, and understanding that many of them may have been influenced by a few common underlying forces, we have tried to examine the internal structure of this host of variables by employing a statistical procedure called Principal Component Analysis (PCA). As a data reduction technique, PCA helps us overcome the complexity of a conceptual picture by reducing a large host of variables down to a few underlying 'components' – what we have called 'dimensions' here (for elaborate discussions on how PCA works, see Tabachnick and Fidell, 2001; Hair et. al., 2006; Johnson and Wichern, 2002). The resultant dimensions have been then used to compare the social capital profiles of immigrants and native-born Canadians.

Before getting into the details of the statistical operations, it will be useful to have a bird's eye view of whole process by looking at the series of steps involved. First, the non-interval variables have been converted into a series of dummy variables (for the logic behind this practice, see Hair et. al. 2006). Second, PCA is used in order to find the broader groupings of the 45 social capital variables. The choice of PCA, as opposed to Common Factor Analysis (CFA), was made on the basis of the fact that the former considers the total variance rather than the common or shared variance which is used by the latter (Tabachnick and Fidell, 2001). This allows for a more thorough reduction of data, as well as for the entirely different dimensions with no or little correlations amongst themselves to surface. This is reflected in the 15 PCs which emerged in the study.

Table 1: The Social Capital Related Variables Included in the Principle Component Analysis

Past year: member/participant in union/professional association
Past year: member/participant in political party/group
Past year: member/participant in sports/rec organization
Past year: member/participant in cultural organization
Past year: member/participant in religious affiliated group
Past year: member/participant in school group/neighbourhood association
Past year: member/participant in service club/fraternal organization
Past year: member/participant in any other type of organization
How frequently participate in group activities and meetings
Past month: have you done a favour for a neighbour?
Past month: any neighbours done a favour for you?
Did you vote in the last federal election?
Did you vote in the last provincial election?
Did you vote in the last municipal or local election?
Past year: searched for information on political issue
Past year: volunteered for political party
Past year: expressed view by contacting newspaper/politician
Past year: signed a petition
Past year: spoke out at a public meeting
Past year: participated in a demonstration or march
How frequently do you follow news and current affairs?
Past month gave help: teaching, coaching, practical advice
Frequency of religious attendance of the respondent
Importance of religious/spiritual beliefs to how live life
How many other friends (neither relatives or close friends)
Past month: how often did you see your friends
In general, people can be trusted
How trustworthy: people in your family
How trustworthy: people in your neighbourhood
How trustworthy: people in your workplace or school
How trustworthy: strangers
Confidence in police
Confidence in judicial system
Confidence in health care system
Confidence in school system
Confidence in welfare
Confidence in government
Confidence in bank
Confidence in major corporation
Confidence in business people
Past year: did unpaid volunteer work for any organization
On average how many hours per month did you volunteer?
Past year: donate money/goods to organization or charity
While in grade/high school, participated in organized team sport
While in grade/high school, belonged to a youth group

Each of those dimensions had several variables that were highly associated with the dimension, allowing us to use them for the purpose of creating composite indexes. Third, using the guidelines offered by Hair et. al. (2006) for creating 'summated scales,' we then collapsed the variables which were highly correlated with each of the 15 dimensions to make 15 composite indexes. The value of each of those composite indexes is equal to the sum of the value of each variables multiplied by its corresponding weight (or factor loading); these values have then been standardized by dividing them by the maximum value that they could potentially take, so that the scores for all composite indexes vary between 0 and 1. Fourth, the average values of each of the 15 composite indexes for immigrants and non-immigrants were separately calculated. Fifth, a series of ANOVA tests were run to see if the differences in the values reported are statistically significant.

Results

Dimensions of Social Capital

The results of the PCA show that we can effectively reduce the complexity and the congestion of the data. Table 2 shows that the 45 social capital variables can be organized in 15 broader groupings. Each of the resultant PCs have an Eigen value of at least 1, and together capture about 56 percent of the total variance of the variables (the proportion of total variance captured by each principal component is reported in Appendix 1). The fact that a certain set of variables are put in one particular group indicates that those variables are not entirely separate from each other, and are driven by a common underlying force pushing all of them in a certain direction. Here, those common forces – or, in statistical terms, principal components (PCs) – are called *dimensions* of social capital.

	Component														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
people can be trusted	0.68														
how trustworthy: people in your family (very)	0.49														
how trustworthy: people in your neighbourhood (very)	0.72														
how trustworthy: people in your workplace or school (very)	0.69														
how trustworthy: strangers (very)	0.75														
Confidence in police		0.38													
Confidence in judicial system		0.58													
Confidence in health care system		0.63													
Confidence in school system		0.63													
Confidence in welfare		0.64													
Confidence in government		0.62													
Voted in the last federal election			0.88												
Voted in the last provincial election			0.88												
Vote in the last municipal or local election			0.78												
past year: member/participant in religious affiliated group				0.78											
Frequency of religious attendance of the respondent				0.84											
Importance of religious/spiritual beliefs to how live life				0.63											
Past year: member/participant in any other type of organization					0.33										
Past year: did unpaid volunteer work for any organization					0.82										
Average number of hours of volunteering per month					0.82										
Past year: member/participant in political party/group						0.86									
Past year: volunteered for political party						0.87									
Past month: have done a favour for a neighbour							0.88								
Past month: any neighbours has done a favour for							0.87								
Past year: searched for information on political issue								0.57							
Past year: expressed view by contacting newspaper/politician								0.57							
Past year: spoke out at a public meeting								0.58							
Past month gave help: teaching, coaching, practical advice								0.36							
Confidence in bank									0.73						
Confidence in major corporation									0.74						
Past year: member/participant in sports/rec organization										0.74					
Frequency of participating in group activities and meetings										0.50					
While in grade/high school, participated in organized team sport										0.57					
Past year: signed a petition											0.68				
Past year: participated in a demonstration or march											0.73				
Number of friends (neither relatives or close friends)												0.57			
Past month: frequency of seeing friends												0.72			
Past year: member/participant in cultural organization													0.52		
Past year: member/participant in school group/neighborhood association													0.67		
Confidence in business people														0.39	
Past year: donated money/goods to organization or charity														0.46	
While in grade/high school, belonged to a youth group														0.66	
Past year: member/participant in union/professional association															0.45
Past year: member/participant in service club/fraternal organization															0.50
Frequency of following news and current affairs															0.54

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Let's start with the first cluster of variables, that is, those variables that have the highest correlation with the first PC. As is easily noticeable, all those variables have to do with trust: trust in people in general, in family members, neighbours, co-workers, and strangers. The values reported for each of those variables indicate the degree of association between that variable and the common force that is pushing all of them

forward. Those values can vary from -1 to +1, where 0 signifies a total lack of correlation and an absolute value of 1 indicates a perfect correlation. The fact that all the values reported for the first cluster are positive indicates that all the trust variables go hand in hand with one another. This is to say that if, for instance, a person tends to find the general public trustworthy, he or she tends to also trust family members, neighbours, co-workers, and even strangers, although of course in varying degrees.

The second cluster has to do with confidence in main institutions: the education system, health care system, welfare system, government, judiciary, and police. The underlying commonality in all these institutions, at least in the Canadian context, is that they are all related to the government. Here again, the numbers reported for all variables are positive, meaning that confidence in each of the six institutions is positively correlated with confidence in the rest of them.

The third principal component has to do with voting. The three variables clustered under this component are indicators of whether or not the respondents have voted in the last federal, provincial, and municipal elections. Again, the variables are positively correlated, and strongly so, indicating that the tendency to vote in elections does not vary much by the level in which the election is held.

The fourth principal component has captured three variables that are all related to religion: the importance of religious/spiritual beliefs, the affiliation with a religious group, and the frequency of attending religious functions. The positive and strong correlations reported for all these variables are something that makes sense intuitively, that is, those who value spirituality and religion are more likely to be affiliated with a religious group and also to attend religious events.

The fifth principal component shows an interesting combination of variables. The essence of the component is about volunteering, i.e., whether or not one has done volunteer work and the amount of time devoted to such work. However, these two variables are also correlated with a third one, that is, membership in organizations other than the ones captured by other variables in the analysis (i.e., political, religious, sport, and cultural organizations, service clubs and fraternal organizations, labour unions, as well as neighbourhood associations). The inclusion of this variable in the volunteering component would mean that these not-otherwise-specified groups are the type of organizations that need the volunteer energy of their membership or, alternatively, these organizations attract a certain group of people who are more willing to volunteer. Also, this type of volunteering can be considered a general-purpose volunteering, different from the ones done for specific purposes such as supporting a political party, captured under the next PC.

The sixth principal component highlights engagement with political parties. This is different from general political engagement, which is captured by some other variables. Under this component, there are two variables with high and positive correlation scores: membership in political parties, and volunteering for them. Obviously, compared to simple voting, membership in a political party signifies a much

higher level of commitment to a party and, hence, the sacrifice of time and energy to promote the cause is perfectly understandable.

Neighbourliness is probably the best description of what the seventh component illustrates. The two variables included under this component are whether or not one has done and received a favour from his/her neighbours. The strong and positive correlation scores indicate that when one of these two variables is present, the other is very likely to also be present. In other words, there is a reciprocal and mutual element in one's relationship with their neighbours.

The eighth principal component attracts four variables: searching for information on political issues, expressing views by contacting newspapers and politicians, speaking out at public meetings, and providing help by teaching, coaching, and giving practical advice. The central element in all these variables seems to be the act of exchange of information, mostly on political and social issues. This can include both the acquiring and the dissemination of information. While the last variable does not specifically talk about the political nature of the advice given and the teaching done, it seems that the eagerness to acquire information on political issues has a spill-over effect into other areas of life that might be less political in nature.

The ninth principal component is somewhat related to the second one, confidence in institutions, though with a major difference. While the former looks primarily at public institutions, the latter involves private-sector and for-profit organizations such as banks and major corporations. This distinction is quite interesting, as it indicates that these two sets of variables are not necessarily correlated with each other, and each is capturing a different strand of the confidence phenomenon.

The tenth principal component incorporates the respondent's current membership and/or participation in sports and recreational activities as well as their engagement in such activities back in their school years. The positive correlation between these two indicates that involvement in these kinds of activities at a younger age has a lasting effect on the likelihood of similar engagement in later years. Also, both of these variables are correlated with the frequency at which people participate in group activities and meetings. This speaks, indirectly, to the point made by Uslaner (1999) regarding the significance of being a part of sports clubs in teen years for generating and promoting social capital in adult years.

The eleventh principal component involves two variables, signing petitions and participating in demonstrations, both of which have to do with the expression of dissent over political and social issues. One might find a lot of similarities between this and two other components – the sixth one on engagement with political parties, and the eighth one on the exchange of political information. A closer examination of the variables included under each of the three components, however, shows that while the sixth one is looking at activities organized through political parties and the eighth one includes activities revolving around getting and giving of information, the eleventh component looks mostly at irregular political activities which are temporary in nature and do not

create a commitment on the part of the doer to continue their engagement for a prolonged period.

The essence of the twelfth component seems to be what Putnam calls informal networks, that is, socialization and time-spending with friends. The two variables included in this component are the number of friends one has, and the frequency with which people see their friends. Understandably, having a larger social network demands more time to be spent with those in the network. .

The thirteenth principal component demonstrates an unusual combination of variables: participation in cultural activities, and membership in school groups and/or neighbourhood associations. From a certain angle, this sounds similar to the tenth component which showed the high correlation between involvement in sports clubs at school and participation in group meetings and activities. This clearly points to some sort of continuity between group involvement at school and involvement with society at large at a later time. It seems, however, that in addition to the correspondence between group involvement at a younger age and its likelihood at an older age, there is also a connection between the nature and type of groups involved in at a young age and that of adult years. For instance, involvement in school team sports tends to lead to a similar involvement later, and involvement in cultural activities at school is more strongly associated with involvement in civic organizations later.

Confidence in business people, donating money for charity purposes, and belonging to a youth group at school are heavily loaded on the fourteenth component. Membership in youth groups seems to be nurturing a caring for others and, hence, can lead to a higher level of generosity in form of donating money. Money donation, as opposed to, say, volunteer work, is typical for those with more money than time; and that perfectly fits those who run their own businesses. The possible connection between the membership in youth groups and involvement in business – if the above proposition happens to be valid – remains an area open for further investigation.

The last principal component combines three variables: membership in labour unions, participation in service clubs and fraternal organizations, and the frequency of following news and current affairs. A common element in the first two variables is the self-centered nature of the organizations, as both service clubs and labour unions are to support the participant members, sometimes even at the expense of other members of society. Since both of these organizations require a heavy level of bargaining at regular intervals, the members do need to be aware of the overall circumstances, gains and losses by similar organizations. This could be the potential link between the former two variables with the frequency of following news and current affairs.

To summarize, 15 different components surfaced, each looking at a particular facet of social capital, and they were used to calculate 15 composite indexes. To make the discussion of these composite indexes easier, we have proposed the following names for them: 1) Trust; 2) Confidence in public institutions; 3) Voting; 4) Volunteering; 5) Religious engagement; 6) Neighbourliness; 7) Political party involvement; 8) Political

sensitivity; 9) Confidence in private-sector institutions; 10) Engagement in recreational activities; 11) Informal social networks; 12) Irregular political activism; 13) Cultural-communal engagement; 14) Donation; and 15) Social engagement for self-interested purposes.

Social Capital Profiles of Immigrants and the Native-born

As mentioned in the methodology section, the results of the PCA have been used to develop 15 different indexes of social capital, using the factor loadings of the variables which were highly correlated with each principal component (the algorithms used in calculating these composite indexes are included in Appendix 2). Below, the average values of those indexes for immigrants and non-immigrants are reported and discussed.

Table 3 shows the average values of each of the 15 social capital dimensions for immigrants and native-born Canadians, as well as the difference between the two values and the information on the statistical significance of the difference. The table is divided into three different areas: the social capital dimensions included in the top area are those for which there are no consistent patterns and no statistically significant differences between the two groups; the middle section is where the native-born Canadians score consistently and significantly higher than the immigrants; and, the bottom area is where they score consistently and significantly lower.

Composite Indexes	Mean Score: Native-born	Mean Score: Immigrants	Mean Difference: Native-born MINUS Immigrants	F	Sig.
Self-Interest Social engagement	0.723	0.730	-0.007	2.771	0.096
Cultural-Community participation	0.171	0.172	-0.001	0.055	0.814
Political party activism	0.040	0.038	0.003	1.048	0.306
Political Information acquiring and sharing	0.416	0.437	-0.022	3.576	0.059
Confidence in private institutions	0.620	0.607	0.013	3.008	0.083
voting	0.714	0.509	0.205 (*)	882.964	0.000
Trust	0.635	0.603	0.032 (*)	70.945	0.000
Volunteering	0.155	0.131	0.025 (*)	28.485	0.000
Neighbourliness	0.620	0.553	0.067 (*)	83.452	0.000
Group activity	0.642	0.619	0.023 (*)	15.001	0.000
political expression	0.174	0.133	0.041 (*)	81.244	0.000
social networks	0.350	0.326	0.023 (*)	49.934	0.000
Donation-Youth-Business	0.722	0.687	0.035 (*)	47.210	0.000
Confidence in public institution	0.602	0.639	-0.037 (*)	26.977	0.000
Religion	0.361	0.424	-0.062 (*)	192.777	0.000

(*) Significant at 0.001 level

The social capital dimensions with no statistically significant differences between immigrants and non-immigrants are: cultural-community participation, political party activism, self-interested social engagement, confidence in private institutions, and political information acquisition and sharing. Out of these, the differences on the first two

are simply too small to clear the bar even with a more relaxed threshold of statistical significance. The other three, however, would have made the cut had we decided to settle for a 90% confidence level instead of the current 95%. In the latter case, the results would show immigrants' higher level of engagement in trade unions and political sensitivity, combined with a lower level of confidence in private institutions such as banks and large corporations. This particular combination could be alarming, as it might imply immigrants' vulnerability in economic areas in the absence of any external force (e.g, unions, and government). This is a likely scenario, particularly given the higher confidence that immigrants have expressed in public institutions (the third area).

More interesting, though, is the middle area of the table, that is, the social capital dimensions in which immigrants fall behind. This includes dimensions such as voting, trust, volunteering, neighbourliness, group activity, political expression, social networks, donation/youth/business. Immigrants' lower scores in some of these are easily understandable and hardly worrying. The lower voting score, for instance, can easily be related to the fact that immigrants are not allowed to vote for the first few years of their presence in Canada (until they receive their Canadian citizenship), their lack of familiarity with the Canadian political system, and the thinness of their knowledge of election candidates. The smaller size of the immigrants' networks could also be a product of their migration, at least for the first few years. Lower engagement in formal volunteer activities and donation might also have to do with their lesser exposition to such activities – as opposed to informal actions done for family and kin – in their home countries. Their lower scores on trust and also on neighbourliness should receive more attention, though, as these two dimensions are more directly related to the nature of immigrants' experiences and social interactions in their new homes and with the majority population. They are also noteworthy because of the anecdotal information on the prevalence of neighbourly relationships in many developing countries from which most immigrants have come, and also because of the strong correlation that the previous research has shown between trust and many other aspects of social capital.

The bottom area of Table 3 points to the two social capital dimensions in which immigrants score higher than the native-born: confidence in public institutions, and religious engagement. The higher confidence in public institutions such as education, health care, and judiciary system is hardly surprising, given that most immigrants come from societies with either corrupt or dysfunctional public institutions. If nothing else, the functioning of such institutions in Canada demonstrate a higher degree of stability, more accountability, and less corruption, all of which are good reasons for immigrants to express more confidence in them. Having a basis for comparison allows immigrants to see the merits of Canadian public institutions in a way that might not be easily grasped by native-born Canadians. The higher engagement of immigrants in religious activities is also a reflection of the more religious cultures they may have come from, compared to a more secular population here in Canada, but it also is an indication of their need to be around those with whom they feel some affiliation, in terms of faith, language, or culture.

Discussion

The above findings have two important implications, one theoretical in nature, the other policy-related. The theoretical implication is derived from the results of PCA, which revealed 15 separate dimensions for social capital, at least in the Canadian context. More important, as it was shown in the case of immigrants and native-born Canadians, those dimensions, contrary to the implicit assumption of Robert Putnam, do not always go hand-in-hand with each other. In other words, improvement of social capital in certain dimensions might be accompanied with its deterioration in others. This can be a potentially important finding for the purpose of clarifying the empirical structure of what is known as social capital.

The second implication of the findings of the present study involves the social capital profiles of immigrant and native-born Canadians, and the areas in which they show disparity. As is obvious from the patterns which emerged, immigrants seem to be adding to the overall stock of social capital in Canada in the areas of confidence in public institutions – such as judiciary, government, police, welfare system, education, and health care – and involvement in religious activities. This is a positive phenomenon by itself. However, when taken alongside the emergent patterns for other dimensions it may mean a slightly different thing, something a bit more alarming.

The reason for the potentially alarming nature of the above combination is that most of the social capital dimensions in which immigrants fall behind are either those which involve social interactions with the host population – e.g., trust, neighbourliness, social networks, group activities, volunteering, etc. – or engagement with private sector – confidence in private institutions such as banks and major corporations. Social interaction is a two-way street, and cannot happen in the absence of a genuine effort by the non-immigrant population. Moreover, in most cases, such interactions need to be initiated by the native-born, as a message to newly-arrived immigrants that they are welcome and accepted in their new home countries. Lower levels of confidence in the private sector can also be viewed as related to immigrants' experiences in the job market, housing market, with loan applications, etc. As someone with no easily recognizable credit history here in Canada, an immigrant can find him/herself fighting an uphill battle, with defeat being the most likely outcome. This uncertainty in the economic sector, and lack of genuine interactions in the social arena, might explain the heavier engagement of immigrants in self-interest-based social engagements such as membership in trade unions, as an antidote to the feeling of economic insecurity, and also their heavier engagement in their religious communities, as an antidote to their social isolation.

The good news is that immigrants' higher confidence in public institutions can be seen as providing a hint as to the type of measures that need to be taken to mitigate the social capital deficits in other areas. Future studies should investigate the reasons behind immigrants' more positive attitude towards the public sector, and try to find equivalent measures in the other two areas, social and economic.

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**Appendix 1: Principal Component Analysis
Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.747	8.326	8.326	3.747	8.326	8.326	2.635	5.856	5.856
2	2.877	6.392	14.719	2.877	6.392	14.719	2.301	5.113	10.968
3	2.433	5.408	20.127	2.433	5.408	20.127	2.286	5.081	16.049
4	1.988	4.417	24.544	1.988	4.417	24.544	1.962	4.359	20.408
5	1.775	3.944	28.488	1.775	3.944	28.488	1.936	4.303	24.712
6	1.720	3.821	32.309	1.720	3.821	32.309	1.666	3.702	28.413
7	1.484	3.298	35.607	1.484	3.298	35.607	1.659	3.686	32.099
8	1.435	3.189	38.796	1.435	3.189	38.796	1.608	3.573	35.672
9	1.305	2.901	41.697	1.305	2.901	41.697	1.483	3.296	38.968
10	1.191	2.646	44.342	1.191	2.646	44.342	1.412	3.137	42.105
11	1.094	2.431	46.773	1.094	2.431	46.773	1.326	2.947	45.052
12	1.061	2.358	49.131	1.061	2.358	49.131	1.309	2.908	47.960
13	1.033	2.296	51.428	1.033	2.296	51.428	1.230	2.734	50.695
14	1.027	2.282	53.709	1.027	2.282	53.709	1.210	2.689	53.384
15	1.018	2.263	55.972	1.018	2.263	55.972	1.165	2.589	55.972
16	.973	2.162	58.135						
17	.953	2.117	60.252						
18	.933	2.074	62.326						
19	.924	2.054	64.380						
20	.896	1.992	66.372						
21	.870	1.933	68.305						
22	.861	1.913	70.218						
23	.837	1.860	72.078						

24	.814	1.808	73.887					
25	.782	1.739	75.625					
26	.750	1.667	77.293					
27	.743	1.652	78.944					
28	.728	1.617	80.562					
29	.706	1.568	82.129					
30	.698	1.552	83.682					
31	.692	1.538	85.219					
32	.633	1.406	86.625					
33	.624	1.386	88.011					
34	.593	1.318	89.330					
35	.568	1.261	90.591					
36	.562	1.248	91.839					
37	.551	1.225	93.064					
38	.500	1.110	94.174					
39	.474	1.054	95.228					
40	.432	.960	96.188					
41	.399	.887	97.075					
42	.362	.803	97.878					
43	.351	.779	98.658					
44	.348	.773	99.431					
45	.256	.569	100.000					

Extraction Method: Principal Component Analysis.

Appendix 2: Composite Indexes

The following are a series of SPSS syntax commands used to calculate the composite indexes. Each index is equal to the respondent's scores on the specific variables associated with each component, multiplied by the corresponding factor loading. The values have been then divided by the maximum values that could be acquired for each index, so that all index scores get reported as a fraction of 1, or the theoretical maximum. This standardized the scores so they vary between 0 and 1.

- COMPUTE Trust =

$$\frac{(\text{trt_q110_rec} * 0.684) + (\text{trt_q310_rec} * 0.486) + (\text{trt_q330_rec} * 0.721) + (\text{trt_q390_rec} * 0.695) + (\text{trt_q400_rec} * 0.752)}{(1 * 0.684) + (4 * 0.486) + (4 * 0.721) + (4 * 0.695) + (4 * 0.752)}$$
 .
- COMPUTE Confidence_in_public_institution

$$= \frac{(\text{trt_q640_rec} * 0.631) + (\text{trt_q650_rec} * 0.635) + (\text{trt_q660_rec} * 0.640) + (\text{trt_q670_rec} * 0.621)}{((0.631 * 1) + (0.635 * 1) + (0.640 * 1) + (0.621 * 1))}$$
.
- COMPUTE Voting =
$$\frac{((\text{pe_q110_rec} * 0.877) + (\text{pe_q120_rec} * 0.881) + (\text{pe_q130_rec} * 0.780))}{((1 * 0.877) + (1 * 0.881) + (1 * 0.780))}$$
.
- COMPUTE Religion =
$$\frac{((\text{ce_q114_rec} * 0.781) + (\text{religatt_rec} * 0.843) + (\text{rl_q105_rec} * 0.632))}{((1 * 0.781) + (4 * 0.843) + (4 * 0.632))}$$
.
- COMPUTE Volunteering =
$$\frac{((\text{ce_q240_rec} * 0.334) + (\text{vcg_q300_rec} * 0.822) + (\text{vcg_q310_rec} * 0.815))}{((0.334 * 1) + (0.822 * 1) + (0.815 * 22.5))}$$
.
- COMPUTE Political_Party_Activism =
$$\frac{((\text{ce_q111_rec} * 0.862) + (\text{pe_q230_rec} * 0.870))}{((1 * 0.862) + (1 * 0.870))}$$
.
- COMPUTE Neighbourliness =
$$\frac{((\text{dor_q228_rec} * 0.879) + (\text{dor_q229_rec} * 0.868))}{((0.879 * 1) + (0.868 * 1))}$$
.
- COMPUTE Political_information_acquiring_sharing =
$$\frac{((\text{pe_q220_rec} * 0.574) + (\text{pe_q250_rec} * 0.576) + (\text{pe_q290_rec} * 0.581) + (\text{q110gd_rec} * 0.357))}{((1 * 0.574) + (1 * 0.567) + (1 * 0.581) + (1 * 0.357))}$$
.
- COMPUTE Confidence_private_institution =
$$\frac{((\text{trt_q680_rec} * 0.728) + (\text{trt_q690_rec} * 0.738))}{((0.728 * 1) + (0.738 * 1))}$$
.
- COMPUTE Group_Activity =
$$\frac{((\text{ce_q112_rec} * 0.742) + (\text{ce_q330_rec} * 0.502) + (\text{yer_q110_rec} * 0.570))}{((0.742 * 1) + (0.502 * 4) + (0.570 * 1))}$$
.
- COMPUTE Political_expression =
$$\frac{((\text{pe_q260_rec} * 0.676) + (\text{pe_q300_rec} * 0.726))}{((0.676 * 1) + (0.726 * 1))}$$
.
- COMPUTE Social_network =
$$\frac{((\text{scf_q100_rec} * 0.566) + (\text{scf_q120_rec} * 0.722))}{((0.566 * 20) + (0.722 * 4))}$$
.
- COMPUTE Cultural_Community_participation =
$$\frac{((\text{ce_q113_rec} * 0.519) + (\text{ce_q115_rec} * 0.671))}{((0.519 * 1) + (0.671 * 1))}$$
.
- COMPUTE Donation_Youth_Business =
$$\frac{((\text{trt_q700_rec} * 0.387) + (\text{vcg_q340_rec} * 0.462) + (\text{yer_q120_rec} * 0.656))}{((0.387 * 1) + (0.462 * 1) + (0.656 * 1))}$$
.

- COMPUTE Self_Interest=
((ce_q110_rec*0.455)+(ce_q116_rec*0.502)+(pe_q310_rec*1.609))/((0.455*1)+(0.502*1)+(1.609*3)).

General Information

• What are PMC Working Papers?

PMC's working paper series is related to the broad mandate of the Metropolis Project. This initiative is designed to: (1) speed up the dissemination of research results relevant to the interests and concerns of Metropolis researchers, policy-makers, NGOs; (2) fulfill a commitment made in the application to SSHRC/CIC for a renewal grant for the Prairie Metropolis Centre; and (3) populate the Virtual Library on the PMC web site.

• Will these be considered "official" publications?

The inclusion of a manuscript in the working paper series does not preclude, nor is it a substitute for its subsequent publication in a peer reviewed journal. In fact, we would encourage authors to submit such manuscripts for publication in professional journals (or edited books) as well.

• What subject content is acceptable?

The Working Paper Series welcomes research reports and theoretical discussions relevant to the mandate of the Metropolis Project, providing insight into the policy concerns not only of immigration and integration, but also ethnocultural diversity. Examples of these areas include: socioeconomic, political, cultural, and educational integration of migrants and refugees; impacts on the host society; language; transnationalism; spatial distribution; gender roles and family; ethnic, cultural, and religious diversity; multiculturalism; media and communication; social cohesion-inclusion; racism and discrimination-exclusion; employment equity-anti-discrimination; youth; identity; citizenship; temporary migration; immigration and demographic planning; justice and security; settlement programs and policy; and population health.

• Who may submit papers?

Paper submissions are open to Metropolis researchers, policy-makers and service providers. Submissions from non-affiliates will be examined on a case-by-case basis.

• How do I submit a paper?

All submissions must include an electronic copy of the paper.

By post please send a hard copy of your paper and an electronic copy on disk or via email to:

Editor, Working Paper Series

Prairie Metropolis Centre

Suite 2-060 RTF Building, 8303-114 Street, University of Alberta

Edmonton, AB T6G 2E1 Canada

By email please send to: lenise@ualberta.ca with a subject heading of:

Working Paper Series Submission

• What happens when I submit a paper?

The Prairie Metropolis Centre will acknowledge receipt of the paper via email within 10 working days. The series editors will review your submission to ensure that it falls within the mandate of the Metropolis Project and that it is properly referenced and documented. If these standards are met, the paper will then be referred to the appropriate Domain Leader for review and advice. Once the review is completed the author will be contacted with the results. Note: Authors of papers accepted for inclusion in the PMC Working Papers Series may be asked to make revisions, in which case they will be asked to provide the Centre with 2 hard copies of the final version of the paper and an electronic copy.

For format and style guidelines please visit PMC web site at:

<http://PMC.metropolis.net/WorkingPapers/index.htm>

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