Is Social Capital Measurement Still Relevant?

A Roundtable Policy and Social Impact Assessment White Paper

By Milton Friesen

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FOREWORD

SOCIAL CAPITAL AND CANADIAN PUBLIC POLICY SINCE 2005

In Ottawa, Ontario on June 8, 2004, the Policy Research Institute worked with the Social Sciences and Humanities Research Council and Statistics Canada to convene 70 experts for the purpose of evaluating social capital as a vital public policy tool. Their goal was to review then-current practices and options leading to a toolbox of social capital assessment options that could be used to evaluate the outcomes of government programs and policies ("Synthesis Report," 2004). This in turn led to a reference guide that academics, policy evaluators, and senior leaders could use for designing policy as well as evaluating the outcomes of existing policy (Franke, 2005).

During a PLAN 801/802 Ph.D. Seminar at the University of Waterloo (Fall 2012) I began to explore whether the Franke Report had been used, by whom, and if it had been updated. I was unable to find any substantial evidence of use and when I was able to contact some of the individuals involved in the initial report, discovered that there had been no substantial follow-up or engagement. Social capital seems to have disappeared into the mists of policy evaluation after 2005 despite increasing representation in the academic literature.

Given these dynamics, the social capital measurement project as a public policy and research strategy seemed worth pursuing. Indeed, the phenomena associated with social capital have certainly not diminished in importance even if the term or particular focus have fallen out of fashion within policy circles.

As an illustrative effort, I developed a provisional matrix of social capital measurement tools, some gleaned from the Franke Report and others that were either developed since 2005 or which did not show up in the initial report. Along with the matrix, I also wrote a draft report on social capital. Developing this matrix remains an ongoing project (see Appendix 1) and this white paper is a further development of that initial report.

During research on the initial report and measurement matrix, I identified more than 30 interested scholars and senior policy leaders who were interested in and willing to discuss updating the Franke Report. This in turn led to the convening of a preliminary round table intended to ask a basic question: Does measuring social capital still matter? If it does, to whom does it matter and in what ways? This white paper reflects an integration of input in this process.

The need for social capital research remains high and relevant. I hope that this white paper will provide a stimulus for reconvening another expert gathering at a scale comparable to the 2004 Ottawa workshop. Technology, research methods, and societal demands have all changed enough in the last decade to warrant a revisiting of these vital themes. A renewed social capital measurement effort seems central to progress on reliable and consistent social impact measurement in the NGO, government, and philanthropic sectors.

The partial work that follows will, it is hoped, signal the significance of the topic and the many open edges that require collaboration to pursue further.

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IS SOCIAL CAPITAL MEASUREMENT STILL RELEVANT?[1]

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PURPOSE

This paper seeks to explore both the current and potential means for evaluating the role that social capital might yet play in urban policy and community development. In particular, we will evaluate the possibility of an updated assessment of social capital measurement in the context of the following key question:

> ***What are the merits of an updated Social Capital Measurement Report for urban policy makers and community development leaders?***

For at least the past two decades, urban policy makers and social science researchers have made use of the ideas of social capital in order to address important social issues including social inclusion, well-being, crime, and public health. A fundamental challenge has always been how to define, measure, and evaluate social capital. Although focused on the Canadian context, the 2005 Franke Report on social capital ("Measurement of Social Capital") is relevant in a much wider context, yet has not been updated since its release in 2005. As noted above, the question is whether this gap in social capital assessment is worth closing. If it is, how might it be done, by whom, and for whom. In service of that exploration, this working paper will provide a brief overview of social capital and include a structured discussion of three core questions which came out of the October 22, 2013 Social Capital Roundtable hosted by Cardus where the questions were considered in a day-long guided discussion format:

1. What social capital measurement tools are relevant for policy and social impact assessment and at what scale?
2. What is the nature of the cause-effect link between social capital and socio-economic outcomes
3. What are the merits of an updated Social Capital Measurement Report?

1. This white paper is based on an earlier, unpublished paper titled: "Establishing a Baseline for Comparing Social Capital Measurements" which was presented at the 2012 PLAN 801/802 Ph.D. Seminar at the University of Waterloo, School of Planning by M. Friesen. A day-long roundtable discussion enriched and ground the earlier work and I am grateful to participants for their informed and candid reflections on the key questions. Doug Sikkema, Cardus Editorial Assistant, provided roundtable note taking and report copy editing support.

CONTENTS

AN OVERVIEW OF SOCIAL CAPITAL

SOCIAL CAPITAL: ORIGINS AND HISTORY

While it has many definitions, social capital is perhaps best understood as the density and quality of formal and informal human relational networks. This concept has been receiving increasing attention over the last two decades as researchers have sought to define it, understand what it does, and how to measure it over time. These research efforts have included the development of relevant statistical data, social capital indexes, social capital modules in census projects, meta-analysis of social phenomena, and a wide variety of social network structure and process techniques (Franke, 2005).

Organizations such as the World Bank sought to develop an international measure of social capital that could identify the relative abundance or paucity of social capital in communities, regions, and countries beyond traditional economic or health metrics. *Bowling Alone*, one of the most well-known and widely read social capital resources, draws on a broad range of social trend data such as community organization membership, newspaper readership, and political participation to draw conclusions about twentieth century social patterns in the United States (Putnam, 2001). Other social scientists have focused more narrowly on social capital at the individual, family or community level (Claridge, 2004).

The conceptual history of social capital (Farr, 2004) indicates that direct or indirect uses of social capital and related ideas encompass political theory (Tocqueville, 2001), urban sociology (Jacobs, 1992), community development and education (Bourdieu, 1986), civic engagement (Putnam, Feldstein, & Cohen, 2003), medicine (Kawachi, Kim, Coutts, & Subramanian, 2004) and social network research (Borgatti & Foster, 2003). The central concern across these disciplines has been to understand the complexity of human social relations at all scales – both the structure of these relationships as well as the dynamics that take place within these structures. Given the significant increases in data generation (both organic, unstructured data, as well as more structured data generated by formal research methods) it seems that after more than 100 years of exploration, we are just beginning to write the history of social capital research.

Portrait of L. J. Hanifan.
West Virginia State Archive, circa 1961.

As early as the 1860s, the ideas of social cohesion and certain collective capabilities useful for governing, generating economic activity, and fostering cultural expressions were well noted as resources akin to financial capital, but in a social form (Tocqueville, 2001). The idea of social capital was significantly and specifically advanced by Lyda Judson Hanifan, a community and education development worker in West Virginia, who suggested that social capital, like financial capital, could be accumulated through specific organizational efforts centred on rural school houses and regular community gatherings (Hanifan, 1916).

The connections between education and community building in a social capital context would be advanced decades later through formal sociological scholarship (Bourdieu, 1986). Urbanists in the 1960s also observed the wide variation in community development outcomes that occurred as a result of the function and structure of social capital in specific urban locations (Jacobs, 1992). In time, a particularly important intersecting of physical, mathematical, and social systems led to network-based explorations of the patterns of social interaction (Simon, 1962). By the late 1980s and early 1990s scholarly discussion of social capital had intensified significantly and continues to do so in the present context of civic engagement (Fabbrini, 2011; Putnam et al., 2003), health and medicine (Kawachi et al., 2004), and highly formalized social network research (Borgatti & Foster, 2003). One result of such research has been the proliferation of tools and methods designed to measure both social capital and the increased well-being often associated with it (Alexandrova, 2012; Diener & Seligman, 2004; Franke, 2005; Richey, 2007).

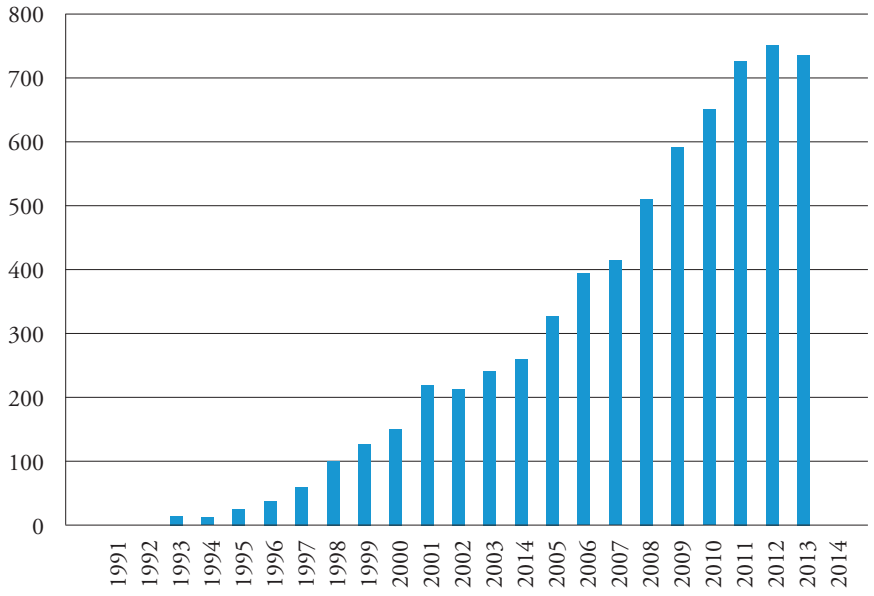
The preceding brief history is only intended to demonstrate that social capital has a long conceptual history while the term itself, though occurring a century ago, began to grow in academic circles in the 1980s (Farr, 2004) and in popular culture since 2000 (Watts, 2004). Since there are so many diverse thinkers and practitioners who have been involved in this development, it is not hard to explain the dozens of definitions of social capital in the literature.

Interest in social capital persists, however, because of how vital it is for understanding social dynamics in an increasingly crowded and connected world. When policy makers have to decide where to apply limited resources to solve deep challenges such as poverty, inadequate levels of education, or public security issues, it is often very useful to know the social dynamics and how the policy may affect those dynamics. Social processes cannot be engineered the same way that a designer might approach building a bridge. The dynamics of relational patterns are more complex and therefore more difficult to understand. If we can begin to clarify how cooperative or antagonistic a given neighbourhood may be, it is more likely that decision making can be improved, even if the causal arrows in social settings look like a plate of spaghetti (Putnam, 2001).

The Web of Science citation data shows the uptake academically of social capital themes from 1991-2001 (Ostrom & Ahn, 2003, p. xii) and a current search (divided by dotted line in graph) shows how that growth continued beyond the 2005 Franke Report right to the present. The cumulative number of citations over the last 22 years is 6566.

Year	Number of Citations
1991	2
1992	3
1993	15
1994	12
1995	27
1996	37
1997	61
1998	102
1999	127
2000	150
2001	220
2002	213
2003	239
2004	262
2005	326
2006	393
2007	414
2008	509
2009	592
2010	648
2011	726
2012	751
2013	737

- Shaded area indicates Ostrom *Foundations* data.
- Web of Science (now Web of Knowledge Reuters Thomson) used
- Unshared Web of Science "social capital" refined to *articles*



SOCIAL CAPITAL: WHERE IS IT GOING?

While there are dozens of definitions of social capital, all of them have some concern with human relational patterns, the dynamics of those patterns, and how they assist or inhibit human action at individual and institutional levels. Many complex factors interact with social capital themes. For example, the emerging phenomena of mass data, including significant quantities of unstructured, organic data generated by sensors, video, audio, social media and other technologies pose several challenges for understanding social capital. These include developing consistent formal measurement approaches and how the flow of organic, unstructured data influences more structured data. Can new forms of measurement emerge from the flow of unstructured data that comes to us via video, mobile phone, environmental sensor, transactional and other forms of data? Does it make social capital measurement more complex and less useful? How does this data relate to other complex phenomena in the social realm? These and many other questions will be integral to the future of social capital research,

policy development and front-line use.

As an example, Elinor Ostrom notes that frequency of face-to-face interactions does have a bearing on social capital formation: "In field settings, enabling individuals to engage in face-to-face discussions for only a few meetings will usually not increase the probability of improved outcome, but repeated opportunities will" (Ostrom, 2011, p. 15). These dynamics will not be unaffected by rapid changes in virtual ties and exchanges.

Neighbourhood level dynamics are an important context for social capital where neighbourhood is understood as the context where most of our interactions occur. A neighbourhood is where we live, experience family, work, pay property taxes, pay rent, buy food, seek entertainment, drive our cars, walk, and so on. Neighbourhood in the context of social capital is thus not only about geography, but about the role that our location plays in connectedness. We may have distant or virtual relationships, but our location remains significant. Cell phone use data reveals that the amount of time we spend talking to people decreases with geographic distance, even though the technology is not limited by geography (Jukka-Pekka Onnela, Arbesman, González, Barabási, & Christakis, 2011)

Quality of life is interdependent with the quality of our relationships in a particular geographic location. Do we know the people around us? Do we talk to them? Trust them? Collaborate with them? Ignore them? These are not easy phenomena to measure rigorously or extensively, but we continue to work at them from many angles. In fact, social capital is a general term that speaks to a wide range of specific phenomena related to trust, social networks, and institutional interactions (Ostrom & Ahn, 2003).

Our society seems to have accepted that our civic engagement is declining and that we don't do as much to contribute to the common good as we used to. In other words, social capital has been declining. A core challenge to this posture is the possibility that community organizing and participation has changed and taken on new forms that our standard measures are simply not picking up, thus generating what appears to be a decline. As an example, if you measured transportation activity based on miles ridden on a horse at the dawn of the age of the automobile, you would see a dramatic decline in those miles and could conclude that people are travelling and moving around less than they used to. The reality would be that people have switched modes and are actually travelling more miles, not fewer.

Data about social connections is captured most easily through online and mobile technologies. When paired with commercial data (such as transactions information) important themes can be identified based on consumption and participation in these spaces. While a significant amount of this information is the possession of private companies and organizations (eg. banks and businesses) and is thus locked behind proprietary and privacy doors, social capital research could doubtless make good use of this information. Yet even if it were available to researchers, there are aspects of social connectedness not captured by this data – not all (and perhaps very little) of the deeper dynamics of social capital formation, growth, and decline are not technological at all. Have the long-held grounds of social capital generation (groups, associations, common places, common causes, and so on) been eroded or displaced by pervasive technology?

The directions that research and policy development take will need to be framed by a perspective on how the dynamics of technology and society are playing out at local levels, including whether social technologies are helping or hindering the formation and perpetuation of social capital across generations. In a Canadian context, it is vital that these considerations include social bonding dynamics among new Canadians. The social networks that exist within and across immigrant populations and the general population may well be one of the most significant trends that Canadian society will face in coming decades.

What social capital measurement tools are relevant for policy and social impact assessment?

Accepted research methodologies in sociology can be used to examine various aspects of social capital, including standard social survey instruments (Statistics Canada, 2009). The complexity of the subject of social science research is significant and emerging technologies such as GPS data logging, spatial analysis, and significant flows of unstructured data are leading to new methodologies (Schaick & Spek, 2008). Established methods of researching social capital remain essential as benchmarks against which network analysis (Newman, 2010), spatial and pattern analysis (Harris, Sleight, & Webber, 2005), cell phone and social media data trail analysis (J.-P. Onnela et al., 2007), and others can be compared. Understanding new data and linking that data with social and spatial dynamics will lead to the emergence of a clearer picture of cultural and social changes in given geographic areas. Social capital is difficult to measure, but this is not a sufficient justification for abandoning the attempt. Quite the contrary. Ostrom and Ahn argue that:

> Social capital, with only a decade of history of empirical applications and attempts at measurement, does exhibit serious problems of measurement. But the concept is firmly placed in the context of major empirical and theoretical puzzles related to economic and political development. It would not be wise at all to dismiss the concept on the ground that it is difficult to measure. (Ostrom & Ahn, 2003, p. xxxiv)

VIABLE CANDIDATES FOR SOCIAL CAPITAL BENCHMARK MEASUREMENT

The seven measurement approaches (Table 1) were selected from a much larger group of possible measures (see Appendix 1). They have been selected as representative of the various ways that social capital measurement is understood depending on context, scale, purpose, and scope. The 2005 Franke Report reflects the rudimentary outlines of a social capital taxonomy that has not realized its full potential in subsequent years. If work could be extended in this direction, the potential value and impact are significant from a wide range of angles.

World Bank (SOCAT)	International and national comparison within an economic context
International Social Survey Program	International and national within a more general census environment
Canadian Index of Wellbeing	National measure of wellbeing that supplements GDP measurement
Social Capital Index	Community level expandable to regional and national contexts – empirical focus
Social Capital Measurement Tool (SCMT)	Census Tract level analysis developed at McMaster University and deployed in Hamilton for a one-off project with possible extension
UCLA Loneliness Scale	Measurement of single phenomena that could be understood as key to social capital levels
Socio-spatial Correlation	Measurement of a proxy phenomenon that is easier to gather data about but which correlates to social capital levels – behavioural and empirical

Table 1

WORLD BANK SOCIAL CAPITAL ASSESSMENT TOOL (SOCAT)[2]

The SOCAT is an assessment tool that is available online and has been used in a wide variety of research projects aimed at assessing the relative strength of social cohesion in given communities. Study areas are identified and then profiles are created to generate a measure of social assets between and among people. Questionnaires are used to gather the data including household profiles, organizational entities and their characteristics. Lines of inquiry include both the nature and quality of relationships and the ability of people to mobilize and work together to meet their common needs.

The merits of the SOCAT include its ability to be deployed across a wide range of social and cultural situations internationally. This provides local researchers with a wider context of comparison. An ability to compare relative levels and types of social capital from country to country or from a comparable region in one country to a comparable region in another country improves the reach and value of the research conducted. For these reasons, the SOCAT is used internationally to make policy and international development decisions based on social conditions in given areas (Franke, 2005).

The instrument is available free online as a download on the World Bank website and is designed to gather three levels of social capital data. The first is the *micro* scale, which explores the predisposition of people to engage in collective projects; behaviour at an individual level. The second is the *meso* scale, which examines social network capabilities via the structure of those networks and their function in social support and service delivery roles. The third is the *macro* scale, which explores values related to political, cultural, social realities within which the examined networks operate, the general conditions of which the micro and meso scales are subsets.

2. Website of World Bank: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTTSOCIALCAPITAL/0,,contentMDK:20193059~menuPK:418220~pagePK:148956~piPK:216618~theSitePK:401015,00.html

The SOCAT has often been used in case-study development in a specific area for given research projects. This factor suggests good alignment with Census Tract level research and the quantitative and qualitative elements are both present. By example, *The Legatum Prosperity Index*[3] is an international project with an objective of providing support for factors of well-being and growth beyond the GDP. The index measures the correlation between social capital levels and government regulation levels. Their research is used to present an argument that increased government regulation results in lower levels of social capital. Where social capital is high, start-up costs are correspondingly low owing to less need for formal regulation and quicker market developments. The data is drawn from the World Development Indicators (World Bank) and the Gallup World Poll[4] and World Values Survey[5] so that the Prosperity Index represents another form of social qualities research undertaken by the global organizations such as the World Bank and would support the SOCAT themes. The behaviours the index examines include donating, helping strangers, volunteering, and the nature of social support people experience.

INTERNATIONAL SOCIAL SURVEY PROGRAM (ISSP)

Another possible measurement choice is the ISSP, a module that is generally appended to other national census or statistical research instruments. The OECD uses this and the ISSP is an attempt to create a standard data collection structure allowing comparisons not only longitudinally within countries but also laterally and longitudinally at an international level. The 2004 Cycle 17 of the General Social Survey(GSS) in Canada used the ISSP module and this contextual alignment with my current research focus is important. The module could be re-deployed in a custom survey at a Census Tract level allowing for a high degree of contextual comparison including a very well established national benchmark. Oversampling with the GSS Cycle 17 questions would form the basis for comparisons across the three Census Tracts. Alternately, a custom questionnaire created from relevant social capital questions across cycles is also possible and may prove a more robust way of focussing specifically on key themes.

Re-deployment of the GSS at a statistically significant Census Tract level also has potential value as a tool that other research projects with local interests could make use of with the credibility of an established national and international social research instrument. Interest in social capital research has changed over time with the focus on social capital at a Ministry level changing into new forms such as community sustainability, resilience, and social innovation. The themes within the GSS that relate to social capital include patterns in voting, volunteering, civic engagement, donating, identification of social supports, levels of trust, health, and time use. The formal network structures that comprise the context and instrumentality of social capital are less well identified in the GSS. Exploring themes such as the holes in networks (Comet, 2007), the degrees of bonding, bridging and linking capital (Kawachi et al., 2004), and unseen social capital (Wong, 2008) are limited when using the GSS.

CANADIAN INDEX OF WELL-BEING

A recent addition (2005) to the social research and measurement landscape, the Canadian Index of Well-being (CIW), seeks to measure eight domains that are deemed important in assessing the overall well-being of Canadians. This is intended to go beyond economic indicators of prosperity. The eight domains include community vitality, democratic engagement, education, environment, population health, leisure and culture, living standards and time use.[6] These eight domains (each with eight sub-domains) are combined to form a single index that can be monitored over time and compared to changes in the GDP or other national and international measures.

Social capital is not measured directly and the alignment with established social capital measures such as the General Social Survey may make comparisons difficult. However, the degree of overlap with social capital themes would suggest that the index may provide a solid comparison for the General Social Survey at a national level. Of particular interest is a subset of the overall CIW framework, the Subjective Well-being Survey. This instrument is deployable at any scale, including the Census Tract level, and shares scalability with the GSS approaches in that local project data can be compared to other base-

3. The Legatum Prosperity Index website: http://www.prosperity.com/
4. Gallup World Poll: http://www.gallup.com/strategicconsulting/worldpoll.aspx Their objective is to cover 160 countries, 98% of people in the world, for all of the current century.
5. World Values Survey: http://www.worldvaluessurvey.org/
6. Canadian Index of Wellbeing website: https://uwaterloo.ca/canadian-index-wellbeing/our-products/framework

line or larger-scale data sets. The City of Guelph has made use of the instrument in partnership with the Tamarack Institute as a way of assessing the social well-being of their citizens and where it might be improved.[7] This tool identifies social cohesion and connectedness to place as central drivers of well-being and measures these values reliably over time, which is vital for long-term success in carrying out other planning and community-related projects. The orienting themes that comprise the CIW are community vitality, democratic engagement, education, health, leisure and culture, living standards and time use (Michalos, Smale, Labonte, & et. al., 2011).

SOCIAL CAPITAL INDEX (SCI)

The SCI developed in Australia (Onyx & Bullen, 2000) asks a series of questions about altruism, community participation, and expressions of initiative at work and at home. The context for the SCI has been New South Wales in Australia and a dedicated website includes case studies, explanation of data, social capital resources and other useful leads and comparisons. Trust, safety, community participation and tolerance of diversity are among the factors that are explored in this index. Further research on the broad acceptance of the SCI reveals that there are more than 50 citations linking to the 2000 journal publication. These citations are useful for assessing this instrument and the possible contexts where it has been used by others. As early as 1995, academics and government practitioners in Australia and New Zealand began to discuss how they might develop or make use of instruments to rigorously research and gain insight into Third Sector organizations and institutions using social capital themes. They developed the SCI as an instrument designed to gather research data about social capital (Onyx & Bullen, 2000). The development of this approach in the mid-1990s was motivated by an interest in seeking an "empirical test of the theoretical components of social capital" (Onyx & Bullen, 2000, p. 23). They reviewed existing instruments, definitions, and applications of social capital theories and developed social and well-being questions with a Likert response scale from 1 to 4. They are willing to supply the full instrument upon request. The value of this instrument for ongoing work derives from the context that gave rise to it – academic rigour, practitioner input, and broad civic institutional interest in how the intangibles of relational strength and type.

Communication with Australian researchers indicates that, much like Canada, there was significantly less interest in social capital at a national level after 2005. It is unclear why this was the case. Instead, the focus has shifted to "community engagement, co-production, citizen access to public sector information, and regional development"[8] along with national research (260,000 people in 3,000 congregations) on congregations as repositories of social capital.[9]

SOCIAL CAPITAL MEASUREMENT TOOL (SCMT) – HAMILTON

A recent issue of *Social Indicators Research*[10] was devoted to reporting on various social capital related research projects carried out in Hamilton, Ontario by McMaster University social science researchers. The focus of these studies has been on the social and health dynamics that have informed the current state of well-being in the City and how what has been learned can inform government and community level policy development and action (Kitchen, 2012). The SCMT was developed specifically for the Hamilton context and grows out of community development work carried out by the Hamilton Community Foundation, Neighbourhood Development Strategy (City of Hamilton), Hamilton Roundtable for Poverty Reduction, and Clean Air Hamilton. It is a six question dependent variable subset of the Hamilton Household Quality of Life Survey (1,002 completes) and asks respondents about four perceptions: safety, trust, help from friends, and multiculturalism, as well as their engagement in two actions: volunteering and voting (Kitchen, 2012, p. 220). Each respondent ranks their perceptions on a four-point scale ranging from 0-3 with 0 denoting a negative response. There is also a 13 question independent variable question set that gathers basic demographic, tenure, housing, marital status, and other personal data.

The study area included three different parts of the City: southwest mountain, central and lower city and includes roughly 18 Census Tracts with six in each, with 1,002 completes across the number of Census Tracts. The sets of questions, both the dependent and independent variables, are promising candidates for redeployment at a finer grained level of analysis. The benefits of this approach are the ability to integrate research results with existing efforts and organizations while also con-

7. A Plan for Well-being in Guelph: http://tamarackcommunity.ca/downloads/index/Guelph_Wellbeing_Plan_Report.pdf
8. Correspondence with Sharon Zivkovic, Australian social science researcher, (February 1, 2013).
9. Correspondence with Sharon Zivkovic, Australian social science researcher (February 1, 2013): http://www.theage.com.au/opinion/society-and-culture/in-spite-of-the-scandals-religious-groups-still-lead-the-way-on-public-good-20121206-2ay69.html
10. *Social Indicators Research* (2012) 108 DOI 10.1007/s11205-012-0060-6

tributing new levels of detail in the analysis of social patterns in the City of Hamilton. Spatial use considerations were not included in this tool and would need to be added as well, for example: place of work, time of work, time off, social visits, shopping, and other generators of movement in urban areas. The limitations of the tool are the narrow scope of indicators selected and unclear integration with larger data sets such as the GSS. As has been identified in other settings, the most marginalized areas of society are prone to be measured inadequately given the degree of informal support and connection that is often relied upon – including among immigrant populations (Wong, 2012).

An additional qualitative research resource is the quality of life assessment that was undertaken as a qualitative research project that did not involve the SCMT but which explored instead the contextual variances in perceived quality of live among the three different areas studied and which are based on three levels of Socio-economic status (SES) across those areas (Eby, Kitchen, & Williams, 2012). These qualitative themes include questions related to housing, diversity, crime, community engagement, physical environment and transportation. Four focus groups were used to generate the textual data and findings were compared with existing community development themes. These approaches and structures are potentially useful for contextual development of the three Census Tracts selected for spatial analysis comparisons.

UCLA LONELINESS SCALE

A simple and important indicator of the presence or absence of social capital is the relative loneliness of individuals. This is a perceptual measure and as such is prone to respondent reliability to a significant degree (Bernard, Killworth, Kronenfeld, & Sailer, 1984). However, the UCLA Loneliness Scale is the most widely used measure of loneliness (Russell, 1996) and the reliability of this scale is high. EBSCO notes 51 other citations of Russell (1996) and at least 2 of these are directly related to reliability and re-assessment, both being affirmative of the scale established by Russell (Ditommaso, Brannen, & Best, 2004; Vassar & Crosby, 2008). Given that social isolation is an important feature explored by social capital research, the UCLA Loneliness Scale provides a reliable way of gathering data directly from individuals on a phenomena that is relevant to social capital. The challenges of integration with other standards such as the GSS or SOCAT make the scalable use of the instrument less likely.

SOCIO-SPATIAL CORRELATION

Network science has increased its capacity to understand both the shape (topology) of a wide range of networks (including social networks) and the dynamics of networks, which is a far more complex phenomena that quickly exceeds any known computational capability for even modest networks (Newman, 2010). Though still in its infancy, growth in dynamic network analysis will be a significant support for real-time dynamic analysis of social capital. One proposal for determining the validity of this approach involved examining the potential correlation between spatial use in urban areas and social capital. This idea is currently being tested and examined to determine if such correlations are meaningful and reliable (Friesen, 2013).

MEASUREMENT IN POLICY AND COMMUNITY DEVELOPMENT

As difficult as measuring social connectedness is (and certain demographics like children, low income, and new immigrants can be particularly challenging), the importance of understanding these dynamics and their changes over time are increasingly clear. The City of Hamilton has invested in the Hamilton Neighbourhood Survey, which is a 10 year longitudinal project involving 2000 residents. Also in Hamilton, the community of Waterdown is researching the experiences, behaviours and relationship trends of young people by utilizing the Search Institute's 40 Developmental Assets.[11] These are not listed as social capital projects per se but are examining the same cluster of phenomena using different terminology and framing. Finding ways to efficiently acquire substantive qualitative and rigorous quantitative data will be essential for long-term public investment in research costs. Singular studies are of less value given the dynamics of relational patterns but are often necessary given their lower costs (as compared to multi-year longitudinal studies). Where cost and complexity are high, repeatability and extension are generally compromised. There is a need to find new ways to collect the relevant data consistently and economically.

Social impact is often overlooked given the difficulty of measuring it. When schools are closed due to declining student populations, decisions based on operating costs, number of students and local demographic trends are relatively easy measures to make decisions around. The impact of closures or school changes on the local community (including those who are not in school or don't have school aged children in their households) is not typically considered in any rigorous or consistent way. Anecdotally, school and city officials appear to be open to such information if it were consistently and regularly available but in the absence of such information, they typically default to the 'hard numbers' of operating costs and attendance.

This issue highlights the tensions that exist between the dominant cultural narratives of economic progress and the sometimes less visible and less easily quantified requirements of social well-being. Social capital implies forms of well-being that are not economic in nature but are being noted increasingly as critical to successful neighbourhoods, cities, and societies. Sustainable cities will need to consider not only environmental sustainability in a natural sense but must include social sustainability in terms of what is required for flourishing across generations. While technology can assist with some aspects of environmental sustainability, human behaviour at individual and collective levels will profoundly shape our future as it has our past (Owen, 2010).

Social capital research is an attempt to see the dynamics of the social landscape from a local to an international scale. While this is no small task, that it matters for our future seems obvious enough. Many disciplines from anthropology to political science are mature travellers in this space. What is needed is a deeper integration across disciplines and practices that lead to coherent and comprehensive images of dynamic social patterns. Traditional survey instruments and approaches may not be as useful in collecting dynamic data as they have been in solidifying historic data (reading what has already taken place).

Local conditions, if they are clearly understood, can inform city, regional, provincial, and national policies and decision making processes. Economics is deeply intertwined with social dynamics but is an adequate sole measure. Political analysis helps us to read patterns and understand dynamics across wide swaths of human society and within given structures and institutional forms but requires pre-existing civil society resources. The complexity of social dynamics is far from linear and cannot be understood using linear assumptions or single variable analyses. Fostering thriving cities is not a matter of choosing local or national, city or neighbourhood, but is in all cases a *both-and-plus*: it is *both* a local issue *and* a city issue *plus* a whole range of other important variables. Simplistic analysis of complex phenomena will not result in effective strategies or enriched collaborations. The effort of understanding and measuring social capital will deepen our appreciation of the complexity we are part of and add to our range of skills in understanding those dynamics.

Centralized control is seen as less and less effective, particularly where that central authority takes over functions suited to local decision making and investment. Though the formal term *subsidiarity* is not broadly used, the concept of supporting communities to do for themselves what they can addresses a number of concerns simultaneously: local resources and capacities are developed (social capital is built), these capabilities go beyond simply adding money into the mix and instead consider the capacity of local systems to make use of resources such as money, and the larger entity is saved the burden of doing what it can't do well (deliver local solutions and strategies). By analogy, a sledge hammer is large and powerful but rather less useful in doing delicate final finishing work. Research on social capital can help decision makers understand more fully what is present in local settings in the face of challenges or opportunities that are being considered.

11. Paul Johnson, Director of Neighbourhood and Community Initiatives. Used with permission.

If social capital is better understood as a cluster of various phenomena, we stand to gain deeper insight into what leads to the formation of resources for social collaboration and collective action. If decision makers had greater clarity about the social impact of a given decision or policy direction—not just the financial, legal, or economic impact—there is at least a possibility that better decisions would be made. Such accountabilities are possible where clarity is increased. Institutions, cultural practices, family structures, educational approaches and any number of other collective activities that may contribute to the formation of social capital could be more directly and effectively supported if we had a greater awareness of their impact. We pay attention to indicator species in environmental studies more as we recognize their pivotal role in higher order outcomes. For example, we don't eat if there are not enough bees in the world and it doesn't matter whether you like bees or not – they matter to food production.

Ironically, if we do not understand such processes well, our very well intentioned interventions can end up doing more harm than good. Blood-letting used to be a cure for all manner of ailments until we eventually understood that the cure actually contributed to a weaker state for the patient. Once that was understood, blood-letting as a strategy to foster health was given up.

The dynamics of social capital make it difficult to measure. The various forms of social capital, including bonding (within a group), bridging (connecting across same class groups) and linking (connecting across different classes of groups or institutions) capital are over-simplifications that further research and policy work can enrich. Improving our ability to understand and foster social capital will require major advances in our research and policy approaches.

PRELIMINARY CONCLUSION ON MEASUREMENT

One of the challenges of social capital measurement is establishing consistency in what is being measured, how it is being measured, and how broadly those measurements apply. If the sample size is not random and representative, the results are not generalizable. This may not be important for community leaders but foundations, researchers, and policy makers at senior levels are often interested in finding more general and reliable comparisons. They may also have the resources for more intricate measurement approaches. However, if the approach is too onerous, it will be impossible for community leaders to use in the course of their development work. National scale surveys such as those related to the ISSP are more common as are very localized ethnographic type studies. What isn't examined as consistently and comprehensively are city-scale or Census Tract level social patterns that could play a very critical role in measuring changes in relational patterns over time, a type of analysis that would be valuable to policy and community development leaders.

What is the nature of the cause-effect link between social capital and socio-economic outcomes?

As with other complex phenomena, a single variable focus can be misleading. Greater insight and value is derived from the ranges and types of interactions that have led to current conditions and how changing those interactions may change outcomes. In that context, in this section we will consider how understanding social capital can lead to important insight about socio-economic outcomes.

Social capital is not reducible to networks of connections between individual people; it is dependent upon them. By extension, if we are interested in understanding how social position and economics interact and possibly how they can be changed, the dynamics of social networks and their structures become very important. Networks and social capital are very close cousins indeed. In the Appalachian region of Ohio, regional economic development was advanced through changing local clusters of disconnected food producers into a much more interconnected network of shared and complimentary service offering led to notable increases in overall economic output (Krebs & Holley, 2004). At a city-wide level, ingrown social networks in the form of interlocking company directorates and community clubs did far worse at responding to major economic crisis than social networks (both personal and institutional) that were more diverse and open (Safford, 2009).

Conventional wisdom recognizes that diversity of all kinds can lead to greater innovation. Much like a surfer who decides to put wheels on a small board and use it on sidewalks creates a new sport and culture, innovation arises when difference is brought together in meaningful or valuable new hybrid forms. In the language of social capital, there is a mix of bridging capital (linking outside of the core group) and bonding capital (linking inside the core group). New information, new insight, new opportunities arise from the bridging capital which may then be acted on by the core and lead to changes in how the core functions. That core can be a household, a small business, a charity or a large corporation.

As this socio-economic exploration considers research, policy, and activist angles of social capital, a series of questions arise that reveal the complex dynamics of the phenomena that arise from our networks of relationships.

First, from a research vantage point, it may be valuable to consider whether we can begin by at least describing the phenomena without attaching various values to what is described. We may, for example, observe that there is a high level of bonding among many small clusters of people in a given geographic area. If the area was economically depressed, we may move toward a values proposition by arguing that this local clustering is responsible for resistance to change or innovation. This resistance could take the form of persistent failures for educational reform, employment programs or other investments. If the clusters represent an area of high wealth, it may be that the resistance is interpreted as a valuable conserving force that secures capital and perpetuates ownership and control. The various value-driven interpretations possible require clear and reliable descriptive insight, particularly if the impact of changes over time are in mind.

This introduces a second feature, which is the role that our physical location plays in the formation, perpetuation, and change in social capital. While not a fully developed area of research, the notional idea of "geographic capital" comes out in work on innovation clusters, creative class research, and related areas. One example is cell phone use patterns. While mobile devices provide a platform that enables global communication, we tend to talk most to people who are physically close to us. Cell traffic intensity diminishes with increases in physical distance (J.-P. Onnela et al., 2007). At least in part, we may consider that socio-economic "solution" finding will need to be geographically rooted to be successful over the long term.

Third, money and relationships are in constant and dynamic tension. Decades ago, Jane Jacobs noted that not all money is good money. She wasn't speaking with a moral voice. Her observation was that there is a linkage between money and relationships. Good money is the kind that the local human structures can absorb and make use of, where the right amounts in the right way are used in a timely and suitable way by local people, groups and organizations (Jacobs, 1992, "Gradual Money and Cataclysmic Money" 291–317). An adjacent question concerns the degree to which relationships determine financial status. Do the relational patterns of people in any given socio-economic bracket keep the money in the network or keep it out of the network as the case may be? How does that happen and how can it be changed if that is desired? It is likely that a richer understanding of the phenomena of social capital (not only historic but current and dynamic) will enable researchers, policy makers and activists to see more clearly the degree to which money acts in codifying and entrenching the status quo.

The extent to which social networks and civic participation interact is a fourth arena for further exploration. The animating work of Putnam was based on a sense that civic participation has been declining in recent decades (Putnam, 2001). The sets of observations made via the data of civic memberships, newspaper reading, and other accepted indicators of wider civic responsibility examine the outcome of social networks. A key question is the extent to which relational patterns foster or impair civic engagement. How do the social networks citizens are part of – at home, work, in the community, etc. – influence what kinds of civic engagement citizens choose and the degree to which those activities are pursued. It may well be that understanding relational patterns that underpin the activities will lead to different conclusions about the type and intensity of various forms of social capital. We might ask: Have the expressions of civic engagement changed or is there in fact a net decline?

A final consideration in exploring socio-economic dynamics involves the role of disruption in social capital formation and change. In the business and organizational design world, creative destruction is understood generally as a disruption of normal patterns of work or thinking that lead to higher performance when the disrupted elements reform. Other terms that explore this space include *catagenesis* – a state where failure is only partial and leads to new approaches that would not have been considered in the business as usual context (Homer-Dixon, 2007). In a social capital context, this is a very relevant set of considerations and may be understood as asking the question: Do some forms of disruption break up social networks that are characterized by having a level of bonding capital that is too high in relationship to bridging capital? It may well be that creative destruction (or catagenesis) functions as a re-wiring of social capital that decreases bonding capital while increasing bridging capital. Natural disasters, economic crisis, and other forms of community stresses are contexts where the dynamics of this interplay are often felt in practical terms. A certain amount of "pulling together" occurs in a crisis and it is common to hear people talk about how their neighbours pulled together to meet sudden new needs. There is much to be explored but it would be important to ascertain whether the net result of such crisis leads to more or less social capital and the types of social capital that are formed or lost.

The socio-economic factors of social capital are clearly important. It is, for example, possible to imagine that a community with a new major employer increases average income while experiencing a decrease in community social capital as certain sharing and collaborating bonds are lost due to lower levels of interdependence.

WHAT ARE THE MERITS OF AN UPDATED SOCIAL CAPITAL MEASUREMENT REPORT?

It would seem unlikely given the current government policy environment and change in driving theme trends that a social capital measurement similar to the work represented by the 2005 Franke report could be repeated. However, there are very significant reasons to continue to pursue measurement and understanding of social capital themes as noted above. In particular, it is worth noting that the phenomena to which social capital refers is not a matter of trend interest but is a persistent social phenomena that is integral to human social interactions at all points in time, including both the present and future.

Three current needs have emerged in the course of reviewing social capital measurement instruments, carefully examining the 2005 Franke report, and gleaning insight from the Cardus Fall 2013 Social Capital Roundtable. These three needs include advancing work on measuring social capital more effectively and across scales (particularly the middle space that includes neighbourhoods and Census Tracts), ongoing work in translating social capital research from leading academic journals into policy and practice spaces, and applying social capital insight at local levels among non-specialized leaders and community organizations.

Within the so-called public square, social capital is an important indicator of relative activity. Ongoing measurement of it will enable a degree of comparative ability over time leading to deeper insight about social dynamics and the factors that contribute to those dynamics. Social capital refers to the fundamental features of social dynamics at a wide range of scales.

MEASURE

The complex phenomena of social capital will be of much less use to us if we are unable to measure it. While it would be a mistake to go too far in comparing social phenomena to electricity, there is at least an analogous role for considering that we were able to make increasing use of electricity as we came to understand it more. At some point in the future, social capital may turn out to refer to a key aspect of social physics that underpin both wider societal dynamics and person-to-person interactions and relationships.

Being able to measure something in our science-informed culture lends a degree of credibility and trust owing to identification of dependable and comparable actions. It is important that scientific discussions of social capital avoid the errors of reductionism while at the same time being understood as knowable phenomena. During the Social Capital Roundtable, one participant noted that qualitative results capture the attention of people, but that the quantitative results and approaches motivate people and organizations to invest. A consistent metric allows for determinations of effectiveness over time, providing at least a preliminary answer to our questions about what inputs or changes led to what results.

Measurement of social capital also ensures that the phenomena are attended to in policy and public good decision making processes. When the group we want to talk about exceeds a certain small threshold, we need the larger story telling capability of broad data to communicate what is happening. Anecdotes work at some scales but begin to falter as the group being studies gets larger. Large group data can motivate people to do something about a particular challenge or to design approaches to mitigate what falters and fuel what is doing well. Consistent measure also allows for comparison over time and from place to place. Would it be possible to develop, over time, a suite of social capital instruments calibrated so that research can be meaningfully generalized? It would seem possible, though much work remains to be done.

TRANSLATE

Formal research and even policy development papers and resources require a degree of translation if they are to result in actual change. Social capital entered popular vocabularies through books such as *Bowling Alone,* although the book is read far less than it is cited or referenced. Political arenas and policy strategy discussions may need a wider range of terms and concepts to translate social capital meaningfully.

Amid a very contested and dynamic space of policy discussion or the pragmatic day-to-day demands of community level leadership, translation involves finding ways of getting the forms, measurements, and dynamics of social capital into conversations. Community leaders could very much use the information that sound social capital measurement might provide.

This translation would need to be active and ongoing as a one-time encounter is not likely to lead to lasting attention. It is perceived that the work of translation would support the ground level intuition of front line and policy leaders who have an intuitive sense that social resources are neither equally distributed nor static – they vary significantly with local context and circumstance.

If translation is not linked to useable tools for measuring or understanding social capital, the long-term value and impact will be minimized. The 2005 Franke report, which is little known even among scholars and policy development leaders who are working in, on, and around the phenomena, is a good example of the problems of poor translation. Continuing the work of translating that report into terms that resonate with the social and policy climate currently will be required to fund (both financially and intellectually) measurement and translation of what has happened since 2005.

APPLY

The way in which culture is changed occurs in diverse ways at all scales. One aspect of that change is related to actually working, deciding, creating, and leading differently. Applying social capital research and policy insights driven by improved measurement must continue to serve active application in personal, community, and organizational settings.

What specific strategies, skills and practices generate or erode social capital? Many challenges do not exist at a single scale. For example, if social isolation is increasing, at a personal scale, some people are suffering from chronic loneliness. A simple solution might suggest that they find some people with whom to interact and new social capital might be formed. However, various institutional and structural patterns may be in place that prevent free and equal interactions that are sufficient for such need. There is a personal dimension involved in social isolation, but there is more to it than that.

Application involves making use of measurement, theory, policy development, pilot projects, learning, and various strategies to keep these functions active and interacting. Finding various ways forward (not a single solution) will require us to risk new approaches and to trust that there is sufficient coherence for such investment to be worthwhile over the long term.

In Vancouver, the application level feedback from community and charity leaders was that social isolation was at a critical level in the City. The Vancouver Foundation was surprised at this and commissioned additional research to explore the signal more formally. They discovered that a lack of meaningful connectedness *was* a substantial and evident problem (Vancouver Foundation, 2012). That insight led to a strategic decision to continue to small grants to neighbourhood and street level initiatives – a very specific application.

What did Vancouver do with their study on isolation? They gained insight about the social dynamics of their city, including that a lot of people didn't engage because they thought that they had nothing to offer. The Foundation shifted to strong support of block parties, getting together with neighbours. Such a breakdown is an "indicator" species that suggest there are bigger problems at work in the social environment. By extension, as social capital discussions and research are introduced strategically in communities and at municipal levels of government, it is expected that community leaders will discover what they already know – that bridging the gaps will involve many and diverse applications of insight gained from social capital explorations.

A final matter for considerations of application is the significant level of immigration in Canada, particularly in large urban areas. Newcomers require significant levels of new relationship building to foster work, family, friendship and neighbourhood connections. If a given geographic area has a known level of social capital, the strategies used to foster connections could be adjusted accordingly. The balance of bonding (finding people similar to us) versus bridging (finding difference – ideas, culture, ethnicity, etc.) would be better understood and applications could be more intelligently applied. Although technology can provide a degree of sorting – helping find relevant information more quickly – certain social aspects of relational resource building cannot be realized digitally. Social capital remains, for the most part, a function of physical proximity and relational engagement, something that can be supported by technology, but which cannot be substituted. Whether with newcomers or long-term citizens, technology alone has not solved the application problem as social isolation appears to have increased, rather than decreased, with expanded technological reach in communications (Holt-Lunstad, Smith, & Layton, 2010; McPherson, Smith-Lovin, & Brashears, 2006; Pantell et al., 2013)Applications of social capital appear to be best suited to in-person settings over time.

CONCLUDING ASSESSMENT

There is a great deal of work yet to be done on social capital. If Elinor Ostrom and T.K. Ahn are right, measuring the phenomena will occur over decades or longer. We must not be dissuaded by the difficulty of the task, the complexity of the field, or the complications inherent in attending to this rich social phenomenon. Globally, we are experiencing human migration at unprecedented scales. Economics, cultural shifts, technological intrusions, resource scarcity, massive health issues and many other deep factors will both shape and express themselves through changing fortunes in social capital. It is critical that efforts to understand these changes empirically grows along with the challenges.

There are three possible approaches that might be taken:

1. **Wishful Thinking:** notionally support the active academic conversation to enable it to move forward with irregular interactions at a policy level. As the academic conversation matures and deepens, something will eventually jump the gap and find its way into policy – the longer attention span of academics will at some point carry the day;

2. **Direct Engagement:** actively organize to ensure that the process above is pursued intentionally and richly through conferences, funding strategies, rich multiple exploratory projects, development of an institutes and organizations ecosystem, and effective education programs that include community level organizers;

3. **Abandon:** do nothing and accept that the conversation has evolved and moved in other directions such that formal social capital pursuits are drawn on as historical resources with a certain limited utility but not a substantive future.

It is hopefully clear that neither the first nor last option is satisfactory. The full story of social capital as a critical aspect of the sciences of society that in turn can inform our significant governance and policy needs remains to be written. We have made a start, but the real journey lies ahead.

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APPENDIX I: SOCIAL CAPITAL MATRIX

Social Capital Matrix (simplified version)
Indicates Instrument Explained above

Social Capital Instrument	Author/Organization	Year
Active Citizen Composite Index	European Commission	unclear
British social capital data collection	Ruston (2001)	2000
Canadian Community Health Survey (CCHS)	Statistics Canada	2000
Canadian Index of Well-being	Canadian Index of Well-being	2005
ESSIL Survey (Quebec)	Turcotte and Charbonneau (2002)	2002
International Social Survey Programme (ISSP) ISSP		1984
General Social Survey (GSS) - US	United States - National Opinion Research Center	1972
General Social Survey (GSS) - Canada	Statistics Canada	1994
Impact Reporting and Investment Standards	IRIS	2008
Global Impact Investing Network	GIIN	2008
McCarty et al Technique - Canadian Version	Boase (2004)	2004
Name Generator - US GSS	US General Social Survey on Social Networks	unclear
Personality and Relational Skills	Eight separate personality/relational scales	1965-96
Position Generator - Canadian Version	Erickson (Lin, Dumin)	2004
Position Generator - Lin and Dumin	Nan Lin	2004
Resource Generator - Canadian Version	Boase and Wellman (2004)	2004
Resource Generator - Snijders and van der Gaag	van der Gaag research	1999
Social Capability	Temple/Johnson (1998); Adelman/Morris (1967)	1998 1967
Social Capital Assessment Tool (SOCAT)	World Bank	2002
Social Capital Community Benchmark Survey	Roper Center UConneticut/Harvard Saguaro Seminar	2000
Social Capital Impact Assessment (SCIA)	Saguaro Seminar (Harvard)	2000
Social Capital Measurement Tool	McMaster University / Hamilton	2012
Social Capital Index - Onyx and Bullen	Onyx and Bullen (1998)	1998
Social Capital Indicators (SCI)	United Nations: Siena Group for Social Statistics	2005
Social Isolation - UCLA	University of California – Los Angeles	1996
Tanzania Social Capital and Poverty Survey (SCPS)	Narayan and Pritchett (1997)	1997
The Prosperity Index	Legatum Institute	2012
World Values Survey	Knack and Keefer (1997) ; Inglehart (1997)	1981
Integrated Community Sustainability Plan (ICSP)	Ling, Dale and Hanna (Royal Roads University)	2007
Ozarks Regional Social Capital Survey	Michael Stout, John B. Harms, Tim Knapp	2010
Special Eurobarometer 223/Wave 62.2 Social Capital	Eurobarometer - Eurpoean Commission	2004
Internet Social Capital Scales (ISCS)	Dmitri Williams	2006
Social Capital for Corporate Social performance	Boutilier Centre for Innovation in Management SFU	2005
PRI Conceptual Framework	Policy Horizons Canada (formerly PRI)	2005
Community Engagement - Measurement Tools	Tamarack Institute	NA
Social Capital Framework and Indicators	Australian Bureau of Statistics	2004
Canadian Institute for Advanced Research (CIFAR)	Private non-profit institute	2005
The Social Capital Foundation (TSCF)	Patrick Hunout	2002
European Values Study (EVS)	European Values Study (EVS)	late 1970s
Interlocking Directorates	Mizruchi	1988
Advocacy Evaluation	Harvard Family Research Project	2009
Better Life Index	OECD	2003-2013
Social Progress Index	SKOLL World Forum – MIT/Washington	2013
eFrame	European Framework for Measuring Progress	2011