ASSESSING THE ROLE OF SOCIAL CAPITAL IN THE COMMUNITY DEVELOPMENT FIELD: A MULTI-LEVEL ANALYSIS

by

HYOUNG YONG KIM

(Under the Direction of Kevin L. DeWeaver)

ABSTRACT

A multi-level and dimensional approach to social capital is applied for this study. This approach is particularly suitable for addressing the conceptual issues of social capital because it is a differentiated phenomenon that varies in its levels and components. The present study is thus the first empirical test of the three competing models of social capital that can be applied to the field of community development. In a multi-level framework, 1) the effect of individual-level social capital (bonding, bridging, and linking) on community development action is tested (network dynamic model), 2) it is examined whether neighborhood-level social cohesion has an independent effect on residents' community development action (collective efficacy model), and 3) cross-level interaction tests the hypothesis that neighborhood-level social cohesion accounts for the way in which individual-level social capital are related to community development action (synergy model). In addition, the mediation and moderation models specify the associations. The empirical model of the study is thus designed to increase the explanatory power of each of social capital construct, using hierarchical linear and nonlinear models.

The results generally support the network dynamic and collective efficacy hypotheses, concluding that both individual-level social capital and neighborhood-level social cohesion are

significant predictors of the outcome, but there are substantial differences in the magnitude of the effect. Specifically, bridging and linking types of social capital produce stronger effects on residents' community development action than any other variables, and the effect of neighborhood-level social cohesion is small and partially mediated by individual-level bonding capital. Also, neighborhood-level social cohesion does not explain the extent to which individual-level social capital exerts influence on its outcome.

The research findings imply several lessons for social work. The key features of social capital are social relationships accruing to individuals rather than communities. While bonding networks have beneficial effects on the organization of the poor, strategies that extend the boundary of networks and cultivate institutional involvement are more critical to creating opportunities of resource mobilization. Given the findings of this study, the author suggests some ways of promoting community development through investment in social capital. In particular, social workers' awareness of bridging and linking capital is very important to the success of their intervention. Social workers thus need to take a leadership role in efforts to expand diverse social connections.

INDEX WORDS: Social capital, Social cohesion, Bonding capital, Bridging capital, Linking capital, Community development action, Network dynamic, Collective efficacy, Synergy.

ASSESSING THE ROLE OF SOCIAL CAPITAL IN THE COMMUNITY DEVELOPMENT FIELD: A MULTI-LEVEL ANALYSIS

by

HYOUNG YONG KIM

B.A., Yonsei University, 1995

M.A., Yonsei University, 2000

M.A., University of Georgia, 2005

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2006

ASSESSING THE ROLE OF SOCIAL CAPITAL IN THE COMMUNITY DEVELOPMENT FIELD: A MULTI-LEVEL ANALYSIS

by

HYOUNG YONG KIM

Major Professor: Kevin L. DeWeaver

Committee: Thomas P. Holland

Kristina Jaskyte

Electronic Version Approved:
Maureen Grasso
Dean of the Graduate School
The University of Georgia
Dec 2006

ACKNOWLEDGEMENTS

I would like to deliver the best appreciation to Dr. Kevin DeWeaver, my committee chair and academic mentor, for having believed in my potential as a researcher. His expert knowledge and guidance were the foundation for my doctoral research and his encouragement and patience were the impetus for completing this dissertation. I know that my gratitude to him is beyond my words of appreciation, but hope that his efforts will be rewarded as we continue to develop our relationship of trust. Likewise, I wish to thank Dr. Thomas Holland, for his academic advice and support for this very conceptual research, and Dr. Kristina Jaskyte, especially for her incredible contribution to the refinement of the study variables. Insightful comments and assistance offered by the dissertation committee shall be remembered for many years. My gratitude goes as well to the School of Social Work and the Graduate School for providing me with financial support to dedicate my doctoral study throughout the whole years in UGA.

My sincere thanks go to my Korean friends for their wonderful support and love. I would like to express my special thanks to Dongsoo Kim and his family. They shared with my family every step of studying and living in Athens, and willingly helped us in times of challenge. Without them, things would be a lot different. I wish to express my gratitude to Sunghae Kim and Sangwoo Han for their academic friendship. Even though we'd been together in a very few years, we practiced a number of ideas together that were the best memory of my learning. I thank my fellow school members who constantly gave me encouragement. To Sung Hyun Yoon, Minhong Lee, Sunyung Yoo, and Byungduck Kang, I will not forget what you have shared with me. I also thank Sangyeon Lee for prayers and opportunities for spiritual growth. To

Gyeongsoo Kang, Jongsuk Choi, Hyunju Lee, and Kunkyu Kim. Obviously, I would be very lonely without our friendship.

To my father and mother, thank you for all the support and understanding during the years in the U.S. From the very depths of my heart, I wish you know my gratitude to you for giving me hope, wisdom, strength, and passion. All achievement must be credited to them. To my brother and sister and their families, thank you for believing me even when I was too distracted to nurture our relationships. Finally, but more important, my gratitude to my wife is boundless. I feel so blessed to have HyeRyeong and cannot thank her enough for all that she has done for me. To my daughter, Lynnette, you made me appreciate my life so much more. I love you.

TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS iiv

LIST OF TABLES x

LIST OF FIGURES xii

CHAPTER

1. INTRODUCTION 1

Why Social Capital Matters 4

General Controversies in Research on Social Capital 7

A Multilevel and Dimensional Approach to Social Capital 12

Research Questions 14

Significance of the Study 16

Organization of the Study 18

2. LITERATURE REVIEW: BACKGROUND OF SOCIAL CAPITAL RESEARCH 20

Social Capital Theory 20

Social Capital as Individual Advantage – James Coleman 21

Social Capital as Power Relation – Pierre Bourdieu 23

Social Capital as a Collective Asset – Robert Putnam 27

Comparisons of Three Perspectives 30

Conceptualization of Social Capital 33

Definition of Social Capital 34

Forms of Social Capital....35
Social Cohesion....37
Measurement Issues....38
Empirical Research on Social Capital and Community Development....43
Economic Development....43
Political Development....47
Cultural Development....49
Neighborhood Context and Social Capital....51
3. CONCEPTUAL FRAMEWORK....56
Community Development Field....57
The Goals of the Community Development Field....59
Community Development Action....62
Conceptual Framework of the Study....63
Testing Models and Hypotheses....66
4. RESEARCH METHODOLOGY....70
Data Sources....71
Unit of Analysis....73
Measures....73
Dependent Variable....75
Individual-level Independent Variables....76
Neighborhood-level Independent Variable....79
Data Screening....82
Analytic Procedures....84

5. RESULTS 89
Descriptive Statistics 89
Characteristics of County Level FIPS Codes 89
Characteristics of Individuals 90
Correlates of Social Cohesion and Social Capital 94
Neighborhood Social Composition and Social Cohesion 94
Individual Characteristics and Social Capital 95
Multi-level Analyses: Hierarchical Generalized Linear Models 100
One-Way Random Effect ANOVA Model 102
Random Coefficient Model (Hypothesis 1) 104
Intercepts as Outcomes Model (Hypothesis 2) 111
Intercepts and Slopes as Outcomes Model (Hypothesis 3) 115
Mediating Effect of Social Cohesion and Social Capital (Hypothesis 4) 118
Moderating Effect of Individual SES (Hypothesis 5) 123
Summary of Results 126
6. DISCUSSION AND CONCLUSION 131
Research Findings and Discussions 132
Study Limitations 137
Implications and conclusions 140
REFERENCES 145
APPENDIES
A. Definitions of Social Capital 172
B. Effective Sample Sizes and 95% Confidence Intervals 173

C. County Level Neighborhood Samples (N=52)..174

LIST OF TABLES

Page

Table 1.1 Controversies in the Social Capital Research 8

Table 2.1 Social Capital Dimensions and Their Attributes.....39

Table 4.1 Operational Definitions.....74

Table 4.2 Community Development Action Index.....76

Table 4.3 Items on the Bonding Capital Measure 77

Table 4.4 Items on Bridging Capital Measure.....78

Table 4.5 Items on Linking Capital Measure 79

Table 4.6 Items on the Social Cohesion Measure.....81

Table 4.7 Number of Missing Values and Imputation on Individual-level Variables.....84

Table 5.1 Descriptive Statistics of County Level FIPS Codes 90

Table 5.2 Descriptive Statistics of Individual Sample 92

Table 5.3 Intercorrelations among the Neighborhood Characteristics 95

Table 5.4 Univariate Mean Differences on Social Capital Measures 98

Table 5.5 Intercorrelation between Individual-level Social Capital Measures 99

Table 5.6 Simple Specification of Two Level Models 102

Table 5.7 One-Way ANOVA Model Predicting Community Development Action 104

Table 5.8 HGLM Predicting Community Development Action: Random Coefficient Model 108

Table 5.9 HGLM Predicting Community Development Action: Intercepts as Outcomes Model 114

Table 5.10 HGLM Predicting Community Development Action: Intercepts and Slopes as Outcomes Model 117

Table 5.11 Unstandardized Coefficients of Neighborhood-level Predictors of Social Capital.....120

Table 5.12 Unstandardized Coefficients of the Mediating Model.....123

Table 5.13 Conditional Effects of SES 124

Table 5.14 Summary of Findings.....130

LIST OF FIGURES

Page

Figure 2.1 Social Ccapital: A Multi-level Concept 34

Figure 2.2 Dimensions of Social Capital: Bonding, Bridging, and Linking 36

Figure 3.1 Community Development Field.....62

Figure 3.2 Conceptual Framework of the Study.....65

Figure 5.1 A Histogram of Community Development Action Measure.....94

Figure 5.2 Coefficient Confidence Intervals: Intercept and Social Capital Slopes 110

Figure 5.3 Effects of Social Cohesion on Community Development Action 114

Figure 5.4 Cross-level Interaction between Social Cohesion and Social Capital.....118

Figure 5.5 Individual-level Interaction between Social Capital and SES.....125

CHAPTER I

INTRODUCTION

An old but newly revisited concept is dominating almost all fields of social science - social capital. This overly popularized term has invoked shared laments over the decline in community spirit, and has simultaneously challenged the unfettered individualism of the modern society. Accordingly, it goes without saying that values rooted in social relations such as trust and reciprocity can restore collective efficacy and ameliorate social condition. Today, the application of social capital can be easily found in many disciplines such as economics, political science, public health, sociology, psychology, and social work.

In general, social capital refers to individual or collective asset that can be mobilized through social relations (Coleman, 1990; Portes, 1998; Putnam, 2000). At least two expectations from the concept are shared. First, social capital works through a third way of thinking facilitated by new political economic circumstances (Boggs, 2002; Fine, 2001; Jessop, 1994; Stokke, 2002; Yan, 2004). The trend of 'new federalism', 'globalization' and 'devolution revolution' has reduced the roles of federal and state governments in providing public goods, and transferred their authority to institutions operating at private and local levels (Linhorst, 2002; Mizrahi, 2001). A general assumption is that social capital as voluntary civic associations and decentralized institutions will fill in gaps left by the states, and further become a prime site of policy and practice for locality governance and development (Putnam, 1993, 2000). Second, social capital is expected to facilitate bottom-up organizing that may reduce the problems in social exclusion and inequalities (Cohen, 2001; Collier, 2002; Isham, 2002; Saegert, Thompson,

& Warren, 2001). In particular, persons in high poverty neighborhoods confront interrelated barriers that stem not only from economic deprivation but also from a cumulative process of isolation and disadvantage in society (Delgado, 2000; Jargowsky 1997; Wilson 1987). Yet social capital rebuilds community-based activism and helps the poor overcome their weakened ability to participate fully in a social life[1]. In that sense, social capital is an asset that improves people's capacity to mobilize collective action (Cohen, 2001; McClenaghan, 2000).

Yet the utility of social capital suffers from several theoretical controversies. One of the biggest threats to social capital theory is the question of analytic unit, which inevitably becomes a sociological concern of power differences in a community (Field, 2003; Fried, 2002; Warren, Thompson, & Saegert, 2001). Although some scholars hold that social capital is a collective asset that has positive effects on all groups based on cooperation and external trust (Fukuyama, 1995; Gittell & Vidal, 1998; Sampson, 2001; Thomas, 2002), others argue that social capital is a metaphor about advantages that produce benefits for a group at the cost of other groups (Burt, 1997; Coletta & Cullen, 2000; Knack, 2002; Portes, 1998). This question is more relevant when we apply the concept to the process-focused community development model. Community development is essentially about transformation of the existing system, and social capital is the mechanism for obtaining power and control over valuable resources (Lopez & Stack, 2001). Therefore, it is critical to examine how those in different social positions acquire and utilize social capital to accomplish specific goals of development. Indeed, social capital can be the

[1] Social inclusion/exclusion research is such an approach that it deals with the multi-dimensional aspects of poverty and the effects of social disorganization on the formation of poor neighborhoods (Levitas, 1998; Walker and Walker, 1997). The focus of social problem is not poverty but a phenomenon of alienation and distance from society. The term, exclusion, thus indicates not only the material deprivation of the poor, but also their inability to exercise fully their social, cultural and political rights as citizens.

sources of social conflict just like religious factionalism and extended family cleavages, and hinder the development of community as a whole (Duncan, 2001). Scholars thus argue that social capital is not an alternative to social capability, and some forms of social capital contribute to reproducing poverty, racism, and injustice (Lopez & Stack, 2001; Portes, 1998; Putnam, 2000).

Accordingly, the purpose of the study is two-fold. First, it separates individual-level social capital from the neighborhood-level social cohesion. That is, a multi-level conceptualization establishes the distinction between social relations (with which certain groups of people receive higher returns than the others) within a community and collective features (that affect people equally in a community) between communities. In this study, the author assumes that social capital is an inherently individual asset rather than a collective asset and simply building social capital in a community does not guarantee the capacity of the poor to organize and to harness the resources accessed by them. Second, it identifies the forms of social capital that are most likely to improve residents' community development action. Social capital is a useful form of capital for community development, but the utility of social capital depends on its convertibility to other forms of capital (Bourdieu, 1986). In particular, this study is to demonstrate the process of capitalization that allows the least well-off people to overcome the unequal distribution of opportunities in a community. A number of social capital studies have answered on its disproportionate effects on minority and low-income families, but they have never come to any firm conclusion.

This chapter introduces the scope and questions of the research. It briefly discusses the ways in which social capital matters to community development. And then, the conceptual

challenges for a vital social capital theory provide the research questions to be addressed in this study. Significance and importance of the study is also presented.

Why Social Capital Matters

The core features of social capital are most applicable in the context of community development. Using a variety of methods, the literature holds that social capital has a positive influence on local economic development (Fukuyama 1995; Green, 2003; Grootaert & Bastelaer, 2002; Midgley & Livermore 1998; Woolcock, 1998), government performance (Narayan & Pritchett, 1999; Putnam, 1993), neighborhood safety (Sampson, Raudenbush, & Earls, 1997; Sampson, Morenoff, & Earls, 1999), collective organizing (Falk & Kilpatrick, 2000; Foley, McCarthy, & Chaves, 2001; Gittell & Vidal, 1998; Tempkin & Rohe, 1998) and public well-being (Cattell, 2001; Campbell & McLean, 2003; Kawachi, Kennedy, Lochner & Prothrow-Stith, 1997).

Social capital has been discussed broadly, but the attraction of social capital for scholars is drawn from its four major functions: information, influence, social credentials, and reinforcement (Lin, 2001). Social capital provides a group of people with useful information about accessible resources, and exerts influence on decision-making by virtue of membership. The returns from social ties include the certification of an individual's social credentials, reinforcement of collective or individual identity and recognition, and provision of public acknowledgement and support. Even though Lin's explanation is inclined to the individual status attainment, these four functions conform quite well to why social capital is a useful concept for community development. Indeed, research found that local community networks and associations provide many opportunities to access resources and services that are embedded in the community, and that the number of feasible choices depends on how the members of the

community have developed accumulated trust and emotional connections (Fafchamps & Minten, 2002; Narayan & Pritchett, 1999; Putnam, 1993, 2000).

These aspects of social capital are underscored by a variety of theoretical constructs of community development. For example, social capital embraces the asset-based approach as opposed to the needs-based approach (Green & Haines, 2002; Kretzman & McKnight, 1993; Saleebey, 1992; Sherraden, 1991). By avoiding the traditional focus on the deficits of the poor neighborhoods, the asset-based community development emphasizes the resources available to the poor through their membership (Cottrell, 1976; Kretzmann & McKnight, 1993). In particular, social capital is a special kind of asset for the poor, since they are more likely to invest and rely on social relations in times of economic hardship. In that sense, the relationship between social capital and community development is direct. Social capital provides a universal access to social support systems, makes investment strategies work effectively, and harnesses the participation of financial institutions that are not yet available for development purposes (Kilpatrick, Field, & Falk, 2003; Silverman, 2004; Warren, et al., 2001).

The community empowerment approach is also compatible with social capital. The key aspect of community empowerment is the existence of active participation, critical consciousness, leadership, cohesion, and collective efficacy in problem solving (Cohen & Dawson, 1993; Cox, 2001; Fuchs, Shapiro, & Minnite, 2001; Jargowsky, 1997; Laverack, 2001). Thus, the practical implication of social capital is clear. Social capital encourages the poor to build collaboration across group boundaries (Edwards & Foley, 1997 Flora, 1998; Silverman, 2004), and strengthens social connections that create partnership in community development programs (McClenaghan, 2000; Warren et al., 2001).

Social disorganization theorists have a similar argument, but from a different perspective. They focus on the sub-cultural forms of structured inequality (Anderson 1990; Coleman, 1990; Sampson et al., 1997; Shaw & McKay, 1969; Stack, 1974; Wilson, 1987, 1996). Wilson (1996) argued that high poverty neighborhoods are less likely to develop social institution, and the deficit of social institution leads to cultural anomie. As a result, poor neighborhoods are characterized by the less effective community norms. Adversely, investing in social capital is one of the strategies for cultural transmission. Social capital promotes the overall cultural underpinnings of a community that builds a sense of community and eventually contributes to voluntary citizen participation for development (Berman, 1997; Rose, 2000).

This study thus departs from the previous literature in three ways. It focuses on social capital effects on residents' community development action that deals with community development as the matter of 1) community asset, 2) empowerment, and 3) cultural transmission. Here, community development action, which is the dependent variable of the study, represents the three major participatory developmental goals that can be achieved by social capital. While community asset is a critical category for resource development in low-income communities, the concern of the study includes the goals of capacity building through which citizens can solve their problems politically and culturally. This participatory community development is the central theme in the current development discourse (Mikkelsen, 2005). Indeed, current foundation-funded and neighborhood based initiatives (e.g., Comprehensive Community Initiatives) are the examples that link activities across these discrete development goals to promote synergistic neighborhood changes (Chaskin, Joseph, & Chipenda-Dansokho, 1997; Gittel & Vidal, 1998; Connell, Kubisch, Chorr, & Weiss, 1995).

In very simple terms, Silverman (2004) highlighted these three areas where social capital make community-based organizations more effective: 1) community development organizations can pay greater attention to social capital that leverages other developmental assets; 2) organizations can expand the role of residents in local governance so that they obtain decision-making power in the policy making process; 3) the goal of cultural inclusiveness should be considered in community development strategies.

General Controversies in Research on Social Capital

Nonetheless, it is not clear what features of social capital are the fundamental explanatory factors in community development because it is a differentiated phenomenon that varies in its components, levels, and contexts (Foley & Edwards, 1998; Mackinko & Starfield, 2001; Portes, 1998). Until now, little effort has been made to identify key social capital factors that enhance the capacity of people to act for community development. Previous literature has relied mostly on Robert Putnam's conceptualization that mainly focused on the normative values of trust and associational life (Gittell & Vidal, 1998; Maloney, Smith & Stoker, 2000). These studies have given attention to the levels of the shared values and civic responsibility, and concluded that social capital is virtually every aspect of social life that represents a community's ability to solve its own problems (Grootaert & Bastelaer, 2002). In fact, many of Putnam's followers have conducted their studies in this self-help approach that locates the problems of poor communities in their weak internal organizations and social norms (Warren, et al., 2001). Yet the weakness of this normative approach lies in its inability to address the various conceptual controversies in social capital and its functions (DeFilippis, 2001; Edwards & Foley, 1997; Lin, 2001; Fine 2001; Portes 1998, Portes & Landolt, 2000; Portes & Mooney, 2002; Skocpol, 1996). Here, the author

describes five controversies regarding the general notion of social capital in community development.

Table 1.1

Controversies in the social capital research

Issue	Controversies	Problem
Causality	Cause vs. effect	Logical circularity, tautology, and spurious relationship
Level of Analysis	Collective vs. individual	Neighborhood effects and accessibility issues
Function	Positive vs. negative	Difficulties to measure relational advantages
Measurement	Structural vs. cognitive	Confounding with norms and trust that exist independently or dependently from networks
Implication	Conservative vs. liberal	The complicated roles of government

First, the causal relationship of social capital and its outcomes has been argued (Edwards & Foley 1998; Lin, 2001; Portes, 1998). Scholarly arguments have emphasized the effects of social capital such as civic trust and voluntary organizations on community development (Putnam, 1993, 1995, 2000), but these explanatory factors can be inferred from its consequences such as good neighborhoods, economic prosperity, democratic relations, and lower crime rate (DeFilippis, 2001; Fine, 2001; Lin, 2000; Portes, 1998). In addition to circular reasoning, many researchers have conceived of social capital in the spurious relation as well (Minkoff, 1997; Portes, 1998; Portes & Mooney, 2002). In particular, social disorganization theorists contend that economic restructuring and its consequent process of neighborhood deficits (e.g., exodus of the middle class from urban cities) have an impact on both the decline in social capital and community development (Anderson, 1990; Shaw & McKay, 1969; Wilson, 1987, 1996). This explanation implies that increasing social problems in poor neighborhoods such as racial

segregation, unemployment, crime, and weakened institutional structure explain why residents of poor neighborhoods are less likely to develop effective community norms and social contacts with others. Once these neighborhood effects are controlled, therefore, the assumed effect of social capital on community development may disappear (Portes & Mooney, 2002).

Second, social capital has been debated in two competing levels: collective versus individual level. Clearly, Robert Putnam and his followers are oriented to the collective perspective that focuses on civic associations and effective norms in a community (e.g., Grootaert & Bastelaer, 2002; Narayan, 2002; The World Bank, 1999). Yet social capital is also realized by a particular relation between individuals (e.g., Burt, 2001; Coleman, 1988; Lin, 2001). Then, what levels of social capital are most relevant in generating community development? While the collective-level analysis explains well how neighborhood factors affect the overall characteristics of social relations in a community, it cannot explore "the outcomes of a complex set of power-laden relationships" (DeFilippis, 2001, p.789). In contrast, the individual-level analysis affirms the importance of the issue of accessibility to social capital but it is not easy to discern relational benefits from the social well-being of a community (Kilpatrick et al., 2003). Hence, both perspectives have not yet dominated in the current study of social capital.

The third controversy is related to the dark side of social capital. Social capital is not intrinsically desirable (Schuller, 2000; Schuller, Baron & Field, 2000). This notion is evident when strong bonds (e.g., gang and ethnic based business) convey benefits on their individual members through distributing resources unequally and making outsiders less trustworthy (Portes & Mooney, 2002). In many instances, strong bonds undermine collective social capital (Portes, 1998, p.309), since they are accompanied by the expense of universalistic rights of others. In addition to this insider/outsider distinction, scholars have dealt with negative consequences of

strong bonds such as excess claims on group members, restrictions on individual freedom, and downward leveling norms (Portes & Sensenbreneer, 1993; Portes & Mooney, 2002). Poverty research thus highlights that having a strong network can constrain poor people from getting ahead (Lopez & Stack, 2001).

Fourth, there are controversies around the measurement of social capital. The measures of social capital include formal/informal, structural/cognitive, horizontal/vertical, embedded/autonomous, and instrumental/altruistic elements. Inconsistent measures of social capital are responsible for contributing to questionable research findings (Onyx & Bullen, 2000). Indeed, the elasticity of the term social capital has produced very different measures that have been applied to all social features, so social capital has failed to have sufficient coherence in its own theoretical meaning. For example, even though norms of trust and reciprocity have been the crucial parts of almost all analytical frameworks of social capital, they still less clear in their viable social capital theories (Schuller, 2000). On the one hand, these cognitive terms cannot be considered without the structure of networks since they are the product of the interactions in network (Krishna, 2002; Lin, 2001), whereas, on the other hand, collective norms can exist independently from the structure of social interaction representing historical and cultural characteristics of the community (Sampson et al., 1997).

Fifth, social capital has contradictory political implications (Fabricant & Fisher, 2002; Labonte, 1999). To conservatives, social capital becomes an effective substitute for governmental services. For example, they link social capital to the communitarian ideas such as anti-tax sentiments and self-help ideas as opposed to a culture of poverty (Midgley & Livermore, 1998), and suggest that social capital re-establishes the “mediating structures” of local associations. Furthermore, they suggest that a society's social capital is enhanced by dismantling

the welfare state because it destroys community spirit[2] (e.g., Fukuyama, 1995). Meanwhile, to those who are on the other end of the political spectrum, social capital means the need for more organizational and political intervention. They believe that social capital in poor neighborhoods are deteriorated or become ineffective, leaving residents isolated from institutional resources and the benefits (Warren et al., 2001), which implies the need for active government interventions (Cohen, 2001). Similarly, Skocpol (1996) and Wacquant (1998) argued that it is the states' responsibility to nurture a stable and progressive environment in which social capital emerges and flourishes, providing historical evidence of positive state-civic society relations where voluntary associations and the welfare state have operated in close symbiosis.

In summary, social capital cannot be understood apart from its multi-level structure, diverse functions, and social meanings and context (McClenaghan, 2000; Saegert, et al., 2001; Zajdow, 1998). Hence, in spite of the similarities in the definition of social capital, researchers express the difficulties of the social capital conceptualization in such words as 'different things to different people' (Osgood & Ong, 2001), 'impossible to separate what is from what it does" (Edwards & Foley, 1997), 'in danger of losing its meaning' (Portes & Landolt, 2000), 'indiscriminate applications' (Woolcock, 1998), "umbrella concept' (Hirsch & Levin, 1999), and "one of a plethora of capitals" (Baron & Hannan, 1994). In short, without vigorous discussion about its conceptual structure, social capital may not be useful (McClenaghan, 1999; Portes, 1998; Woolcock, 2002).

[2] For an example, the state of Utah proposed the Social Capital Enhancement Act, which requires public workers to turn away all first social service requests and then forced those to look first to the private sector (Perkins, Hughey, & Speer, 2002).

Hence, this study posits that the challenge to social capital study is its conceptualization that incorporates the levels and dimensions playing different roles in diverse developmental conditions (Macinko & Starfield, 2001). In order to figure out the ambiguity in its meaning and to distinguish social capital from other correlates in the community, therefore, it is important to use a multi-level and dimensional framework.

A Multi-level and Dimensional Approach to Social Capital

Generally, social capital has been defined at the interpersonal, institutional, and community levels concerning structure (networks) and norms of trust and reciprocity within the networks (Halpern, 2005; Perkins, Hughery & Speer, 2002). Even though this study does not pretend to unify the full complexity of the construct, the author believes that the multifaceted nature of social capital should be incorporated into a framework operating in two ways: levels of analysis and dimensions of social interaction.

This study examines the construct of social capital in the combination of micro-level components, mezzo-level structure, and macro-level environmental factors (Brown, 2000; Halpern, 2005). The components of social capital are essentially individuals who build social networks formally and informally. Mezzo-level structure accounts for how social networks distribute power and resources in a community. Macro-level environmental factors emphasize the neighborhood context that generates community solidarity and motivates people to join in collective action.

The author sees the earlier discussions on social capital at the macro-level as synonymous with social cohesion. Social cohesion is used in such a way as to place the main emphasis upon the development of a well-organized and integrated society. The examples of the social cohesion type definitions of social capital are “features of social organization, such as networks, norms,

and trust, that facilitate coordination and cooperation for mutual benefit (Putnam, 1993, p. 35); the norms and networks that enable people to act collectively (Woolcock & Narayan, 2000, p .226); the project of social interactions with the potential to contribute to the social, civic or economic well-being of a community of common purpose (Falk & Kilpatrick, 2000, p. 103). A group of community development studies has explored the contribution of social cohesion to the neighborhood as a whole, but has generated many questions about its nature of social interaction and its divergence in social networks.

Even though much of earlier research on social capital has studied mainly on this neighborhood-level of social cohesion, recent discussion has shifted to considering different forms of social network at the individual-level. As mentioned earlier, the author agrees that social capital is not embodied in a community but rather is realized by people's social relations (DeFilippis, 2001). That is, the author emphasizes the interaction between residents in their community and considers the structure of social relations. By acknowledging the separate and joint effects of different forms of social network, therefore, this study assumes that social capital has several dimensions that allow individuals to realize capital: bonding, bridging, or linking. Bonding capital refers to social networks that bring together people of a similar sort, while bridging capital indicates social networks of different sorts of people. For linking capital, relationships between different social levels are examined (e.g., individuals-institutions linkages). More specific descriptions of the social capital conceptualization can be found in the next chapter.

Consequently, the author will focus on two important of social capital: multi-level and dimensional effects of social capital. A comprehensive framework of this study thus contains four domains: i) individual-level social capital (bonding/bridging/linking), ii) neighborhood-level

social cohesion, iii) social capital outcome (community development action), and iv) contextual variables in both levels. In short, this study tests whether individuals act for community development because they are the members of a social network with specific group-interests (social capital) or they live in a community with effective collective norms and social trust (social cohesion). Also, by exploring individual and neighborhood contextual factors along with social capital and social cohesion, this study aims to provide a causal explanation of social capital in the process of community development.

Research Questions

This study examines the relation between social cohesion, social capital, and community development action. Literature review has found three broad approaches regarding social capital effects on community development. First, individual-level social capital is examined as the visible manifestation of social support and social leverages (Briggs 1998; Keyes 2001; Keyes, Schwartz, Vidal, & Bratt, 1996; Lin, 2001). Second, a number of previous studies have found that the level of social cohesion at the neighborhood level is associated with local development efforts (Fukuyama, 1995; Knack, & Keefer, 1997; Pargal, Guilligan, & Hug, 2002; Whitely, 2000; Zak & Knack, 2001). Third, a group of development case studies has focused on the synergy effects between bottom-up and top-down levels of social capital and social cohesion, arguing that a failure in either level may preclude the process of community development (Evans, 1996; Ostrom, 1996; Woolcock, 2002).

Unfortunately, despite decades of research using a variety of methods, the debate over whether social capital has an influence on community development remains unsettled, largely due to theoretical and methodological controversies. This study thus aims to test the above three competing models of social capital simultaneously by employing hierarchical linear and

nonlinear models. The study model, in which social capital operates in a multi-level mechanism, will fill the gap with the under-theorized applications of social capital.

1. *What is the role of bonding, bridging, and linking capital in community development?*

Network dynamic model posits that individual-level social capital (bonding, bridging, and linking) is the key characteristic that accounts for community development action, because the association between social capital and community development is dependent upon the nature of social networks (Briggs, 2002; Burt, 2001; Wellman, & Berkowitz, 1998). Also, these scholars agree that social networks can constitute an important advantage for some groups but not for everyone. Thus, research questions in this model are: 1) Does social capital (bonding, bridging, and linking capital) increase the probability of residents' community development action? 2) Does social capital (bonding, bridging, and linking capital) have the same effect on community development action across diverse socioeconomic status groups?

2. *What is the role of the neighborhood social cohesion in community development?*

In the collective efficacy model, social cohesion is a key explanatory factor for community development. The previous findings have revealed that those living in highly cohesive neighborhoods share norms that encourage mutual support and collective action. Also, social cohesion is understood as the possible mechanism mediating neighborhood social composition and community development (Gitell & Vidal, 1998; Narayan & Pritchett, 1999; Putnam, 1993; Sampson et al., 1997). Thus, this study answers the following questions: 1) Does neighborhood social cohesion promote residents' community development action? 2) Does neighborhood social cohesion mediate the relationship between neighborhood social composition (e.g., neighborhood poverty, income inequality, segregation, and stability) and residents' community development action?

3. *What is the relationship between neighborhood-level social cohesion and individual-level social capital?*

A third group of studies has focused on the interaction effects between social cohesion and social capital (Woolcock, 1999; Woolcock & Narayan, 2000), and it has been empirically supported (e.g., Subramanian, Kim & Kawachi, 2002). Woolcock's argument is that social capital itself is not the solution for all problems and dilemmas of unbalanced social capital in bottom-up and top-down level may result in negative outcomes such as amoral familism, anomie, corruption, or inefficiency (Woolcock, 1999). Accordingly, he insists that diverse levels of social capital that function through the involvement of individuals and organizations should be balanced in the realization of collective goals. In particular, synergy between civic groups and institutions in a neighborhood has important impacts of development outcomes, since the capacity of social networks depends on the quality of the social institutions under which they operate (Woolcock, 1999). The hypothesized relation is thus that social capital has positive effects on community development in highly cohesive neighborhoods but not much in less cohesive neighborhoods.

Significance of the Study

This study is significant and important from several reasons. First, this study is one of the first empirical tests of social capital theory that attempts to incorporate various theoretical components of social capital into a framework of community development. Although the concept of social capital is a complex bundle of constructs, few studies have attempted to test empirically the relative effects of neighborhood social cohesion and the network structures of social capital on community development, and it remains unknown to what extent different levels and forms of social capital matter. Furthermore, no studies have looked at social capital in

a large cross-section of neighborhoods and individuals nested in them, with respect to community development action. This approach is thus particularly useful in capturing the competing debates with regards to social capital theory. The analytic strategy of hierarchical linear and nonlinear model addresses the concerns.

Second, while there is still a great deal of concern for community development, social work has complained about the absence of relevant theoretical frameworks and methodology for community development over the past decades (Mizrahi, 2001). This is partly because social work researchers are less committed to community practices, and most of social work researchers targeting macro practices have studied merely service planning or delivery (Figueria-McDonough, 1995; Mizrahi, 2001; Specht & Courtney, 1994). Yet the author believes that the lack of research in community practices is due to the lack of relevant methodology. Community development studies have been conducted mostly in case studies and participatory research, but only few have quantitatively examined communities as the unit of analysis to address macro-level questions such as structural factors of underclass neighborhoods. Despite earlier efforts until 1970s, therefore, current research on community development has failed to specify the effects of neighborhood that are very critical to the study of community development. The main contribution of this research is thus to provide an example of a quantitative research method that assesses the effects of macro and mezzo-level factors in the community, and enables social workers to use it in community assessment and intervention.

Third, this study explores social capital especially for the poor and marginalized. Given previous social capital research, very little has been done to identify the effective forms of social capital for the marginalized population. Yet social capital has value for understanding the problems of social inequality (Fine, 2001; Labonte, 1999; Schuller, Baron, & Field, 2000).

Indeed, social movement theorists view citizen involvement in an organization as a rational action embedded in social classes (Castelloe & Prokopy, 2001), and the concept of social capital is challenged not to be inclined to an interest-based movement (Cox, 2001). This study thus examines how social capital is formed and operates throughout diverse social groups. Then, there would be lots of lessons to be learned concerning social work practices that would support and foster positive connections among the poor and disadvantages, support groups, and organizations.

Fourth, this study provides a strategy for organizational intervention. Today, there is a major shift from two sectors (government and market) toward three sectors that includes nonprofit and grassroots organizations as service providers (Yan, 2004). This study tests whether linkage to local institutions is critical to mobilizing local residents in community development activities (Cox, 2001; Fabricant & Fisher, 2002; Yan, 2004). Despite weakened social networks and service institutions in poor neighborhoods, social capital may play a role in neighborhood resilience (Mizrahi, 2001). In particular, nonprofit organizations are in a unique position to promote civic participation in poor neighborhoods because they are sensitive to the needs of citizens and more likely to build extended service networks in the neighborhood (Fabricant & Fisher, 2002). Therefore, social capital is the referent for social workers who establish partnership with poor residents and local institutions.

Organization of the Study

This dissertation is organized into six chapters. The introductory chapter presents the statement of research problem and research questions in conception. Chapter II commences by articulating existing social capital theories, and then suggests a working definition and dimensions of social capital. This chapter contains a review of literature that deals with the

effects of social capital on community development regarding economic, political, and cultural development. Chapter III presents the conceptual framework. Based on a multi-level and dimensional framework, this chapter provides three models for testing and their hypotheses. Chapter IV details the methodology. This chapter entails a description of research design, sample, data collection, explication of the operational definition of the variables, and a discussion of the statistical methods. Chapter V describes the results of the hypotheses tested in the study. Chapter VI provides a summary of results, a discussion, limitations, and the implications for research and practice.

CHAPTER II

LITERATURE REVIEW: BACKGROUND OF SOCIAL CAPITAL RESEARCH

This chapter provides a brief description of the intellectual stream of social capital theory and its application to community development. First, it examines existing conceptual issues in the theory of social capital, specifically focusing on those of James Coleman, Pierre Bourdieu, and Robert Putnam. From the review, an attempt is made to identify key aspects of social capital and its structural forms operating in a community. Second, the author suggests a multi-level and dimensional approach to the construct, and conceptualizes social capital as bonding, bridging, and linking capital that are distinguished from neighborhood level characteristics, especially social cohesion. Third, the author highlights the previous findings in the empirical studies and then discusses them in relation to community development.

Social Capital Theory

The common idea of social capital is that one's social ties and communal norms constitute important assets and opportunities through leveraging social, economic, and political resources. In the history of social science, the values inherent in social relationships have long been considered as having collective and individual worth. Although appropriate debates can be found as far back as the works of Tönnies, Tocqueville, Durkheim, Simmel, Marx, and Weber (see Flora, 1998; Portes & Sensenbrenner, 1993; and Woolcock, 1998), in a review of the theoretical perspectives, three modern theoretical perspectives will be examined as the foundation of social capital theory.

Social Capital as Individual Advantage – James Coleman

The first contemporary analysis of social capital at the micro level was provided by an economist, Glenn Loury (1977). Loury said, "It may thus be useful to employ a concept of social capital to represent the consequences of social position in facilitating acquisition of the standard human capital characteristics (p.176)." In his critique of classical economic theories, he argued that poverty emerges not only from individual human capital and market competition but also from poorer connections to social opportunities. His insight was influential in the later studies of social capital, particularly regarding individual goal seeking, but a detailed analysis of the concept was remained for other scholars.

In recent years, most micro-level analyses of social capital are driven by James Coleman who identified several forms of functional but intangible entities within a social structure such as mutual expectations and obligations. Coleman defined social capital as "its function…a variety of different entities having two characteristics in common: They all consist of some aspects of social structures, and they facilitate certain actions of individuals who are within the structure" (1990, 302). According to him, a social structure becomes social capital when it is used to facilitate purposive action. There are two types of social structures that promote social capital. The first is network closure (or dense network), in which everyone is connected, and the second is social organization where individuals share collective interests (Burt, 2001; Lin, 2001).

On his rational choice standpoint, Coleman's primary interest was to explain why people develop trustworthy and close networks that seem not to maximize individual self-interest (Brown, 2000; Flora, Sharp, Flora & Newlon, 1997). Introducing the concept of social capital, he answered that social capital is very useful to draw resources within a collectivity and bring positive consequences to individual rational pursuits (for a diverse rational choice approach, see

Flora, 1998). For example, in his study of high school students, Coleman revealed that family expectations and information channels in private religious schools produced norms and obligations that prevent students from the risks of dropout (Coleman, 1988). That is, Coleman's argument of social capital is a set of effective norms imposed upon its members (e.g., norms of trust and reputation). If social structures lack such norms, social exchanges tend to be inefficient and do not generate any benefit from reciprocal expectations (Coleman, 1988, 1990).

Despite the undeniable merit of the functional approach, Coleman has been criticized for his lack of parsimony by incorporating a number of different entities into the term of social capital (Brown, 2000; DeFilippis, 2001; Flora, 1998; Lin, 2001; Osgood & Ong, 2001; Portes, 1998; Portes & Sensenbrenner, 1993). First, it is a 'fuzzy' definition if the existence of social capital is inferred from its functions (DeFilippis, 2001). If social capital is understood as every form of outcome that resides in a particular social structure, we cannot explain different antecedents that lead to the same outcome, or the same antecedent that has different outcomes (DeFilippis, 2001; Lin, 2001; Portes & Mooney, 2002). As DeFilippis (2001) argued, Coleman's social capital is "not a mechanism, a thing, or an outcome, but any or all of them" (p. 784). In order not to oversimplify the pathways of social capital, causal explanation needs at least three theoretical questions: where social capital comes from, who possesses social capital, and on what social capital affects (Lin, 2001; Portes, 1998). Second, Coleman explained that social capital inheres in the social structure as an outcome of aggregated rational actions, so it is eventually harmonized and normatively neutral. Yet his indifference to the nature of relationships (neither desirable nor undesirable) ignores the negative effects of social capital and individual goal differences (Brown, 2000; Portes & Sensenbrenner, 1993). Since individuals do not necessarily share interests, wealth, power, and values, the motivations for trusting people may vary. This

means that we need to clarify conditions under which social capital constrains individual goal seeking (Portes & Sensenbrenner, 1993).

Consequently, Coleman's rational choice perspective has contributed to the understanding of how trust, information, and norms in a given structure are important for individuals, but has obscured what constitute the actual sources of relational advantage. Therefore, a theory of social capital needs to separate social capital from its functions and account for its forms and structure of social relations. The next approach provides a discussion based on these questions.

Social Capital as Power Relation – Pierre Bourdieu

In contrast to the rational choice perspective that saw social capital as something naturally given in a structure, Pierre Bourdieu, one of the most celebrated modern sociologists, focused on the structuration of social relations (Bourdieu, 1984; Bourdieu, 1986; Bourdieu, 1989; Bourdieu & Wacquant, 1992; Harker, Mahar, & Wilkes, 1990; Field, 2003; Flora, 1998; Lin, 2001, Stokke, 2002). Since his interest was in the reproduction of classes, Bourdieu's theory of social capital is to understand how investment in social relations affects the maintenance of social hierarchy (DeFilipis, 2001). His theory thus enables us to approach the process of social capital formation and its structural dimensions in association with power.

Bourdieu's definition of social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (1986, p.248). The definition has three components: networks, resources and relationships. According to him, an individual's social capital is determined by the size of the networks, the amount of resources (e.g., economic capital) in them, and how successfully the individual can set them in motion (Portes, 1998). Although the size of the network and the volume of the resources in the network are very clear

dimensions of social capital, he places much emphasis on relationships because usable resources are not existent naturally but realized by specific social locations (Foley & Edwards, 2000; Fine, 2001; Lin, 2001). This point, a consideration of accessibility/mobilization, is the reason why Bourdieu's works have been praised by modern network scholars (Portes, 1998; Defilipis, 2001).

In order to understand his theory on social capital further, it is valuable to review his basic theoretical cornerstones[3]: field, habitus and capital. In short, field can be understood as games where players adopt and learn their strategies according to their dispositions (habitus) and resources (capital) (Bourdieu, 1984; Bourdieu & Wacquant, 1992; Harker, Mahar & Wilkes, 1990). As a system of social relations, a field is constituted by various and different social positions (Bourdieu & Wacquant, 1992). Once an individual is located in a field, his/her social position is defined not by class but by the amount of capital he or she possess and the structure of capital in that field, that is, the weight of each form of capital (Bourdieu, 1986, 1989). For example, in the religious field, financial capital does not have as much power as in the economic field because this field does not follow the strategies for material profit and business. Therefore, one form of capital may have an effect only to the extent that it creates profits specific to the field (Bourdieu & Wacquant, 1992, p. 97).

Bourdieu also acknowledged that social positions internalize the pattern of perceptions and actions that people apply in everyday life. In Bourdieu's framework, this intersection between objective and subjective structure is expressed in the term of habitus. Habitus is a set of

[3] These concepts can be defined within a whole theoretical system (Bourdieu & Wacquant, 1992, 96). It is because Bourdieu, as a structural constructivist, attempted to incorporate objectivism and subjectivism in this theory that he wanted to avoid the tendencies to reduce individual behaviors to economic structures or to deduce structures from the constructivistic understanding of individual interactions (Bourdieu, 1990; Filed, 2003). Thus, according to him, social practices are the outcomes of the closely linked set of both structural and cultural conditions.

dispositions through which we assimilate or modify principles according to our social identification (Bourdieu, 1984). It distinguishes each class from what it is not, so middle class people act in certain ways that are quite different from lower class people. In short, each class condition is defined by the amount and relational importance of capital, while habitus operates as a system of differences that maintain current social positions in the field (Bourdieu, 1984).

Finally, by capital, Bourdieu means the resources that make the games of society. Bourdieu expanded the notion of capital beyond its material conception, and included non-economic forms of capital such as cultural, social, and symbolic capital. He contends that one form of capital can be converted into another (Bourdieu, 1986, 1989), and the convertibility of the different types of capital is the basis of the strategies aimed at ensuring the reproduction of capital (Bourdieu, 1986, p. 107). While economic capital is immediately and directly convertible into other forms of capital, cultural and social capital is convertible into economic capital under certain conditions. In particular, social capital is useful only when it provides each of its members with a "credential" that entitles them to credit in the form of nobility (p. 103). Therefore, Lin (2001) categorized social capital theory as another form of the neo-capital theory, and focused on how individuals engage in interactions and networking and produce profits. The following remarks summarize Bourdieu's idea of capital in relation to field and habitus.

> Players can play to increase or to conserve their capital in conformity with the tacit rules of the game and the prerequisites of the reproduction of the game and its stakes… They can work to change the relative value of tokens of different colors, the exchange rate between various species of capital, through strategies aimed at discrediting the form of capital upon which the force of their opponents rests and to valorize the species of capital they preferentially possess. (Bourdieu & Wacquant, 1992, p.99)

Bourdieu's framework allows us to understand how social capital arises as a characteristic of social groups in a particular field, and finally how it contributes to the social hierarchy in that field. According to him, social groups use social capital to solidify their class

positions through facilitating or controlling resources (Bourdieu, 1986; Bourdieu & Wacquant, 1992; Stokke, 2002). Therefore, perhaps the most important connotation in his conceptualization is that social capital represents group interests rather than shared trust or reciprocity from a bounded space. As a result, people are likely to act either together or against each other, showing the potential negative aspects of social capital. In some cases, social capital generates social cohesion but in other cases it may be linked to social conflict (Flora, 1998). For example, as Edwards and Foley (1998) pointed out, the use of a linguistic Ebonics facilitates social capital in African American communities but conversely social exclusion in White communities. It is thus relevant to say that social capital is essentially context dependent. He considered that social capital is dependent on what makes up a field, so the role of social capital is understood only in the specific goals of the field. Each field operates with its own composition of capitals and social capital is one of the factors that is constituted by, and constituted of the struggles over scarce resources in the field (Stokke, 2002). This means that the acquisition of social capital requires specific investment strategies that are usable only in that field (Field, 2003; Stokke, 2002). Thus, social capital research should examine the larger structural factors that shape the dominant principles in the context (Field, 2003; Siisiäinen, 2000). In particular, the convertibility of social capital into other forms of capital is the key in its contribution to the field. Bourdieu's conception of social capital provides a refined framework in a more critical perspective. This view moves social capital debates from the functional approach to the conflict approach, in which structural processes create and reify social class differences (Bourdieu, 1986). In his theory of social capital, therefore, Bourdieu did not take into account social capital as a community value, such as civic engagement and social cohesion, which may be important in

understanding today's social capital debates. In the next section, Robert Putnam who considers social capital as both a structural and a cultural phenomenon of community will be discussed.

Social Capital as a Collective Asset – Robert Putnam

Social capital as a collective asset may not be different from the previous works on the concepts of community capacity, collective efficacy, community empowerment, and sustainable development (Labonte, 1999). To those who are concerned with these community concepts, active participation in civic life is an end in itself and the debate on social capital is not far from it. A number of studies have adopted this collective asset approach, examining the effects of social capital on a variety of community outcomes such as economic growth and public health (Foley, et al., 2001; Gittell & Thompson, 2001; Grootaert & Bastelaer, 2002; Kawachi, et al., 1997; Kennedy, Kawachi, Prothrow-Stith, Lochner, & Gupta, 1998; Knack & Keefer, 1997; Krishna & Uphoff, 2002). Indeed, there are features of community in which social capital is rooted and each community has a specific system of social interaction where residents build relationships with various collectives. The following discussion is based on the debates on the collective asset perspective.

Putnam (1993, 1995, 2000) considered social capital as the property of the community. Putnam defined social capital as "features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit (Putnam, 1993, p. 35). Stated simply, his argument is that communities with strong associational life are more likely to build a community capacity to develop, but communities with poor social capital are not. In his book, *Making Democracy Work*, a research study on civic engagement in Italy (1993), he found that a high level of civic engagement has led to improved governance in Northern regional governments, whereas poor civic associations in Southern regions have discouraged economic

and political development. In the later book, *Bowling Along*, Putnam applied this conceptual framework to the U.S (2000), and concluded that 1) Americans are less involved in civic society due to the changes in technology and the media, especially television, and generational effects; 2) social capital is still decisive to the efficacy of formal institutions, and specifically of institutions of collective action, social cooperation, and collaboration; and 3) the level of social capital is closely linked to the community outcomes such as children's welfare, crime, economic decline, health, and democracy.

Putnam has attracted significant attention from community development scholars and practitioners. Yet his social capital as a panacea for all social problems is essentially vulnerable to many critiques, including whether social capital has actually declined in America[4] (Ladd, 1996), whether social capital, especially voluntary associations, is biased by his elitist stance[5] (Skocpol, 1996), and whether social capital exerts social forces on a community regardless of economic and political context (DeFilippis, 2001; Knack, 2002).

However, the most fundamental problem in Putnam's social capital theory is its scarce attention to inequalities (Fried, 2002; McClenaghna, 2000). Although Putnam acknowledged the dark side of social capital, his argument is essentially that social capital has positive rather than the negative manifestations since social capital in his political rhetoric is a synonym with civic virtue needed for coordination and cooperation (Putnam, 1995). This view covers a range of community and individual factors that institutionalize civic and public associations and its positive outcomes (Aberg, 2000; MaCinko & Starfield, 2001; Norris, 2002; Schuller 2000). On

[4] Putnam's associational life did not count the growth in new forms of associations (McClenaghan, 2000).

[5] Putnam measured social capital with classic associational lifestyle such as leisure behaviors that are not relevant to the associational life of marginalized populations (DeFilippis, 2001).

the one hand, individual factors become social capital if they are well connected with their friends and neighbors, and, on the other hand, community factors become social capital when civic institutions maintain public and private goods. Thus Putnam (2000, p. 20) said, "(social capital) thus be simultaneously a "private good" and a "public good." Some of the benefit from an investment in social capital goes to bystanders, while some of the benefit rebounds to the immediate interest of the person making the investment." Nonetheless, the heuristic value of individual social capital suffers as it aggregates individual networks and norms. Social capital cannot be the sum of individual social capital (Portes & Landolt, 2000), because there are social and structural variations in individuals in the creation of social capital and in its utilization (Fahmy, 2003; Zajdow, 1998). As Lin (2001) suggested, when social capital is divorced from its roots and patterns in individual networking, social capital becomes merely "another trendy term to employ or deploy in the broad context of improving or building social integration and solidarity" (p.9)

Logical circularity is also evident in Putnam's theory, as seen also in Coleman's (DeFilippis, 2001; Lin, 2001; Portes, 1998; Portes & Landolt, 2000). Putnam mentioned the virtuous and vicious circle of social capital, arguing that prosperous cities do well because of their high social capital, and poorer ones decline due to their lack of this civic virtue. Portes (1998) pointed out two flaws under this tautology. First, if social capital is examined retroactively, it is less likely to rule out other controls. In Putnam's conceptualization, social capital does not exist prior to its outcomes, and remains untested in other cases than those considered. Second, the method of explaining all observed differences and eliminating exceptions finally takes the form of a truism (Portes, 1998, p. 20). Putnam argued there was no difference in other variables except for social capital so that social capital is the key factor in

economic development in Italy (Putnam, 1993). But this statement is self evident, as it redefines the essential characteristics of certain consequences and does not theorize the actual factors leading to social capital. Thus, the conceptual pitfall in the collective asset approach is its spurious explanation (Portes & Mooney, 2002). Many differences such as race, socio-economic status, and gender exist in the size of social networks and social interaction. These differences may emphasize the importance of social structure or cultures in explaining social capital (Green & Haines, 2002). For example, Wilson (1987) argued that neighborhoods with high poverty isolate their residents from social contact with mainstream society because the poor seldom have ties with the affluent. This affects not only the nature of social relations but the attitudes toward social norms in the neighborhood. Therefore, the structure of neighborhoods may also explain the different forms of social capital between social groups.

Overall, Putnam's theory has relevance to community development in that collective norms and civic associations are central to the practice for greater communal benefit. Yet this view has limitations. In particular, the positively skewed and self-evident characteristics of Putnam's theory hinder researchers in assessing the role of social capital as a causal factor in development (Edwards & Foley, 1997; Fine, 1998; Portes & Landolt, 2000; Skocpol, 1996).

Comparisons of Three Perspectives

From the above review of three perspectives on social capital, it has become clear that social capital refers to social relationship accruing to individuals, groups, and communities. Even though there is great divergence at the paradigmatic level, the three perspectives are not mutually exclusive but complement one another. Indeed, the controversies may be centered on the level of analysis. Briefly, social capital is defined as; 1) an individual ego's potential to mobilize resources by virtue of their close ties (Coleman); 2) an attribute of social networks in

which available resources are distributed (Bourdieu); and 3) a cultural or normative system of institutions that explain how communities are governed and economically prosper (Putnam).

Many researchers agree that each level of analysis is interrelated in the process of social capital formation (Brown, 2000; Halpern, 2005; Kilpatrick, Field, & Falk, 2003; Silverman, 2001: Woolcock, 1998). Understanding social capital as a multi-level concept, for example, Woolcock (1998) conceptualized social capital for community development by integrating the micro perspective with the macro perspective. He emphasized the interaction of various actors in social relations (network perspective) on the one hand, and organizational integrity to obtain collective resources (institutional perspective) on the other hand. Similarly, Brown (2000) suggested that there are general reciprocal causations across micro and macro levels. According to him, micro level networks are embedded in macro systems such as politics, economy, and culture that construct the fundamental individual motivations for social practices, whereas macro level structures are shaped by the ways that individuals invest in social relations through regulated reciprocity and enforceable trust.

However, the transition of the concept from the individual to the community-level is accompanied by serious conceptual confusion. As reviewed earlier, Putnam's collective asset approach may not be distinguished from its purported effects or its pre-existing causes, nor does it address the issues of unequal distribution of power within and between communities. As far as the debate over community development is concerned, a theory of social capital should figure in the controversies discussed above. From the brief review of the theoretical perspectives, therefore, the author suggests some relevant points that will place social capital in a multi-level process for allocating resources. The following summarizes social capital conceptualization for community development:

1) The component of social capital is essentially individuals that comprise social networks. The rational choice perspective allows us to look at the ways in which an individual and the aggregation of individual actions are motivated to engage in a community in order to advance their individual interests. Structural network perspective, in particular social resource theory, also posits that social capital emerges from the specific (not general) individual relations in a stratified society (Lin, 2001).

2) The core feature of social capital is its structure (network) rather than norms. Although the literature takes cognitive aspects as a key component of social capital (Shuller, Baron, & Field, 2000), norms of trust and reciprocity are not the internal characteristics of social capital. Some argue that norms of trust and reciprocity are just an outcome of individual interactions (e.g., Field, 2003), arguing that it is possible to construct a causal model between norms and social capital.

3) Social capital is rooted in social networks. Yet social capital is largely influenced by the collective features of a neighborhood (i.e., social cohesion) that mediates political, economic, and social environment (Woolcock, 1998; Naryan & Pritchett, 1997; Krishna & Uphoff, 2002; Warren, Thompson, & Saegert, 2001). In particular, the presence of social cohesion at the neighborhood-level can be the outcomes of the history and culture of the society. In short, social cohesion is a pre-existing attribute of community that can be treated as a spatial variable rather than an attribute of social capital (Dasgupta 2000). Social cohesion gives an important referent for social capital by ensuring that cohesive communities have positive consequences on the interaction between individuals and lead to active civic participation (Kilpatrick, et al., 2003).

Conceptualization of Social Capital

This study develops a conceptualization of social capital that maximizes its explanatory utility. Figure 2.1 incorporates the above theoretical constructs into a conceptual diagram. In the figure, several things are inferred: 1) the various actors in social relations, 2) social capital: the structure of the social relations as bonding, bridging, and linking, and 3) social cohesion at the neighborhood level. These are presented via three concentric circles. Individuals are the innermost circle and they are bounded by social network that are embedded in the macro environment.

In conceptual terms, therefore, social capital operates in a social ecology of individuals, interpersonal networks, and communities (Edwards & Foley, 1997; Field, 2003; Flap 2004), and each level operates in different ways and even conflicts with one another. For example, individual social capital might be influenced by the level of social cohesion that determines the total amount of resources in a given community, and social cohesion might be affected by individual social capital that uses a particular group interest strategy.

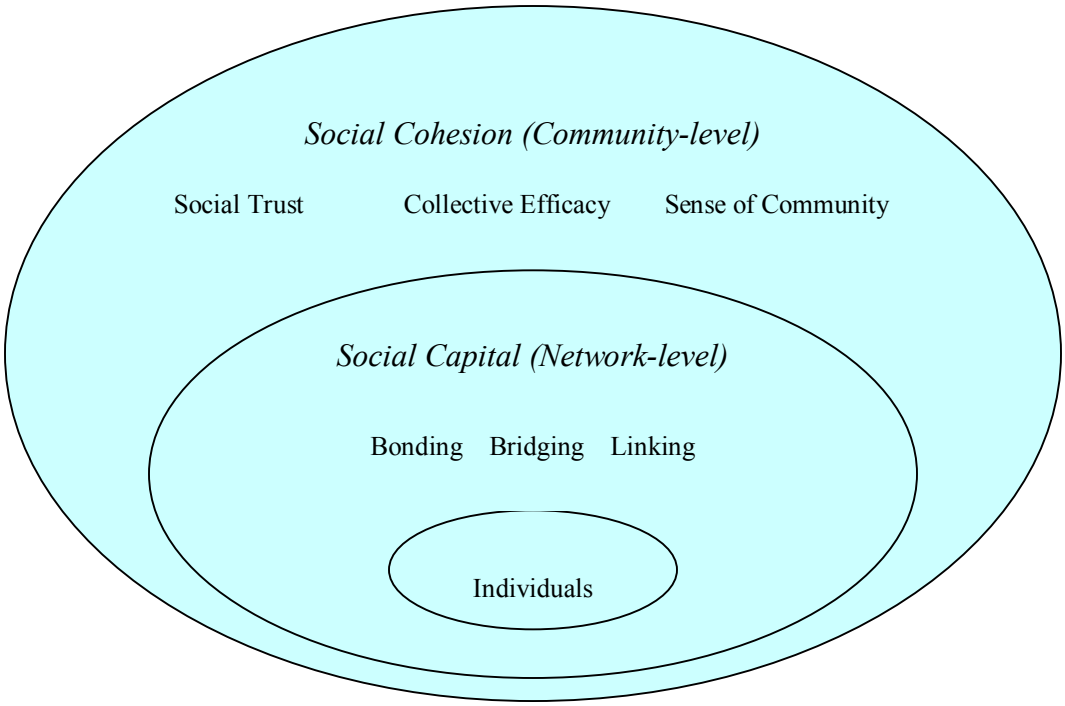


Figure 2.1 Conceptualization of social cohesion and social capital

Definition of Social Capital

There are a number of definitions of social capital (see Appendix A). The most widely accepted definition at the individual-level is "the ability to secure resources by virtue of membership in social network" (Portes, 1998, p.8). Similarly, this study defines social capital as "the extent to which an individual can mobilize resources from their *social relations*". This purposeful definition is heavily indebted to Bourdieu (1986) and is much concerned with the structure of social relations (networks) as the key aspect of social capital. Because available resources in most communities are represented by wealth and power, the opportunities to access these resources are much dependent on the relational positions rather than generalized social cohesion (Bourdieu, 1986; Perkins, Hughey, & Speer, 2002). In other words, the success of a social group in the competitive rivalry depends on how the group develops and maintains the

most effective forms of social relations, and how these forms function for their own interests. Following Bourdieu's perspective, this study suggests that 1) resources are embedded in social networks and 2) the use of resources is determined mostly by the people of power in the field. Thus, it is not the number of overall connections that produce benefits but what the network is and who controls the connections. This point is mixed in discussion of Coleman and Putnam, but obvious in the structural network studies. Therefore, Bourdieu's perspective is much more informative than other perspectives in understanding how social capital empowers poor citizens with the capacity to invert such power relationships.

Forms of Social Capital

There are many dimensional approaches that capture the structural features of social capital (Gittell & Vidal, 1998; Narayan, 1999; Putnam, 2000; Saegert, Thompson & Warren, 2001, Woolcock, 1998, 2001). These studies generally propose three forms of social capital: bonding, bridging, and additionally linking social capital. The present study adopts this distinction suggested by Woolcock (2001, pp13-14). Figure 2.2 captures the intersection of the three forms of social capital.

1) Bonding capital refers to dense and strong ties that facilitate exclusive reciprocity and mutual obligations. The examples are homogenous groups based on bounded solidarity such as family members, close fiends, and ethnic groups. This type of social capital is built on similarity, informality, and intimacy (Healy & Hampshire, 2002; Woolcock, 1998). It provides social and psychological support for its members by creating strong in-group loyalty. Thus, researchers emphasize its "getting by" functions in hard times (Briggs, 1998; Putnam, 2000). Furthermore, bonding capital is critical to foster collective action in distressed communities. However, it is

argued that 'too much' may undermine bridging capital due to strong out-group antagonism such as Ku Klux Klan (Dhesi, 2000; Edwards & Foley, 1998; Portes 1998; Putnam, 2000).

2) Bridging capital indicates social connection to heterogeneous groups that foster social inclusion of diverse population within a broader identity. It represents weak ties such as loose friendships, associates and colleagues, and workmates. Bridging capital is important for the poor to mobilize resources that may not be accessed by their own. While bonding capital tends to convey redundant information, the resources in bridging networks are more likely to enhance individual access to valuable opportunities beyond their race and class. For this reason, bridging social capital has been broadly applied in studies of community development (MackinKo & Starfield, 2001).

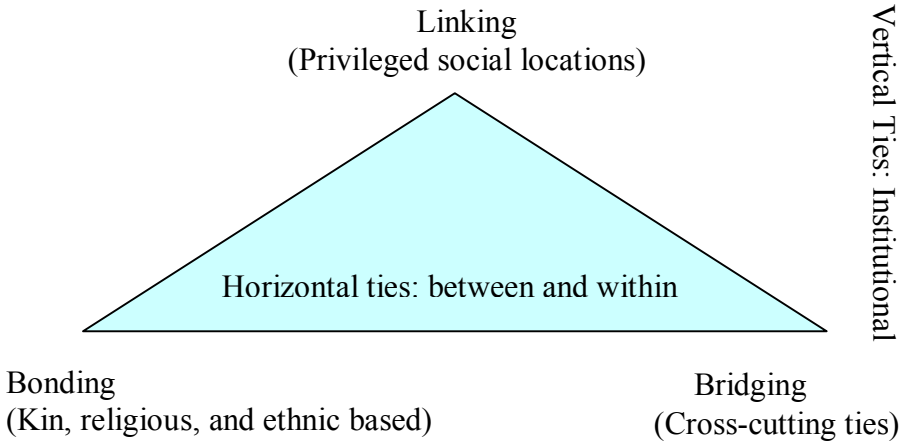


Figure 2.2 Dimensions of social capital: bonding, bridging, and linking

3) Linking capital refers to linkage to the higher level of power (in this study, institutions). Linking can be seen as a subset of bridging, but it is more relevant than bridging to indicate the access to political and financial resources. For example, linkages between a development specialist and a foundation, community cabinets, legislators, and key service

providers are more important to secure funds and to leverage additional investment (Healy & Hampshire, 2002). That is, linking social capital comes from vertical networks, whereas both bonding and bridging are obtained from horizontal networks (Woolcock, 1998).

Social Cohesion

Social cohesion is the referent to the neighborhood characteristic that represents Putnam's collective features of social capital. Kearns and Forrest (2000) defined social cohesion as the need for 1) a shared sense of morality and common purpose; 2) aspects of social control and social order; 3) the threat to social solidarity of income and wealth inequalities between people; 4) the level of social interaction in communities; and 5) sense of belonging to place. While locality is not the focus of social capital in the structural network perspective, the residential neighborhood remains as an important element in the production and maintenance of social interaction. Research acknowledges that neighborhoods can be characterized in large part of social bonds, communal norms, and general trust (Colletta & Cullen, 2002; Putnam, 1993, 2000) and these neighborhood factors are the intermediate factors that facilitate civic participation and social organizations (Forrest & Kearns, 2001; Muntaner & Lynch, 1999; Wilkinson, 1999). In practice, many social capital studies have relied on neighborhood differentiation measured by social cohesion as the integral parts of social capital, and found that social cohesion is vital for community well-being, whereas social problems tend to come at the areas of poor and less cohesive neighborhoods (Sampson, Morenoff, & Gannon-Rowley, 2002).

Social cohesion may vary by its terms. In most research, social cohesion is seen to play out through collective efficacy, social trust, and sense of community (Kearns and Forrest, 2000; Rosenfeld, Messner & Baumer, 2001; Sampson et al., 1997; Sampson & Raudenbush, 1999; Wilkinson, 1996, 1999). In particular, a number of neighborhood effects studies had explored

how collective efficacy affects neighborhood crime, youth development, and health promotion. For example, Sampson and his colleagues (1997) developed a measure of collective efficacy, which is comprised of two subscale of social cohesion and social control, and found that the greater cohesion of the wider community, the lower the rates of crime and disorder (Sampson & Raudenbush, 1999). Social cohesion has been also studied in the form of social trust (see Kawachi and Wilkinson's research). These studies are mostly population based health studies (e.g., Gold et al., 2002; Kawachi et al., 1997), national or international-level economic studies (e.g., Knack, 2002; Whiteley, 2000), and regional or community development case studies (e.g., Dhesi, 2000; Silverman, 2001). Social trust is considered as a precondition of social capital by providing a sense of confidence that others will respond as expected and will act in mutually supportive ways. In contrast to bounded solidarity, or particularized trust, social trust leads to the emergence of social integration and normative expectations that concern for the well-being of one's community. Sense of community is another key feature of social cohesion. The socio-ecological literature argued that collectively-held values largely affect neighborhood conditions that allow people to come together for a common good (Chaskin, Brown, Venkatesh, & Vidal, 2001).

Measurement Issues

Social capital has numerous measures and attributes. Even network indicator alone includes the type (e.g., bonding/bridging/linking, formal/informal, inclusive/exclusive), quantity (e.g., size, strength, density, diversity), and quality (e.g., prestige, reciprocity). Although each measurement may cause debates about the essential form of social capital in a specific

community[6], the conceptual inconsistency is partly resolved by separating the structure of social relations from their contents. Table 2.1 shows these aspects of network measurement.

Table 2.1

Social Capital Dimensions and Their Attributes

Networks (Structure of Social Relation)	Norms (Content of Social Relation)
Bonding (horizontal, strong, exclusive)	Particularized trust, flexible & uneven reciprocity
Bridging (horizontal, weak, inclusive)	Generalized trust, direct & even reciprocity
Linking (vertical, weak, inclusive)	Institutional trust, generosity

Networks. The focus on the structure of social relation enables us to identify effective networks and positions rather than its outcomes of social capital. This approach has measured social capital with the type of contacts, size, strength of ties, and network resources (Burt, 2001; Zhao, 2002). Even though there is no unanimity about what sorts of structure should be observed and measured, there are at least three ways in measuring its network characteristics. First, many scholars have measured social capital with the types of social relation. Example include informal and formal network (Putnam, 1995; Baum, Palmer, Modra, Murray, & Bush, 2000), civic and institutional associations (Collier, 2002; Onyx & Bullen, 2000; Rose, 2000), and bonding, bridging and linking network (Narayan, 2001; Narayan & Pritchett, 1997; Woolcock, 2000). Putnam (2000) distinguished between informal and formal networks with a composite

[6] Social capital can have very different meanings in different communities because social relationships and values are deeply rooted in local circumstances, and people experience them in very different ways (Filed, 2003; Silverman, 2001). There is thus little consistency in the names given to similar measures, and little consensus on the level of social capital. Also, few social capital indicators, scales, or indices have been tested (Mackinko & Starfield, 2001).

index representing participation in a range of civic and political activities. In the broad concept, informal networks are measured by families and friendship, while formal networks are often measured by civic or public institutions (Baum et al., 2000). Yet this distinction does not imply any important characteristics in social relations. Instead, recent research favors the above forms of bonding, bridging, and linking as types of social network.

Second, the size, strength, and density are basic indicators of network structure (Flap, 2002; Burt, 2001; Zhao, 2002). It is assumed that the larger the network size, the more social capital can be mobilized (Flap, 2002). Strength and density also may affect overall stocks of social capital. Granovetter's (1973, 1985) distinction between strong and weak ties is the most articulated social network view. He argued that efficient networks are decided by the strength of ties, and recognizes that weak connections are more useful sources of new information because strong ties usually possess the same information within those networks. The measure of network size and density are relatively well developed so that social capital research can gain much from it. For example, Black and Hughes (2000) measured the density of networks by asking the frequency of meeting of those with the same occupation and interests, and Krishna and Sharder (1999) used overlapping group memberships. However, these measures have not been used comprehensively in the study of social capital.

Third, the amount of resources and accessibility is a frequently used measure in network analysis (Gagg & Sinjders, 2004; Lin, 2001). Lin (2001) defined social capital as "access to social resources" and identified three elements of social capital: embedded resources, accessibility, and use (mobilization). Embedded resources can be measured by the range and variety of resources, best possible resources in the networks, and the average of resources. In addition, contact statuses such as occupation and authority can be included in the measure of

embedded resources. Accessibility is measured by the indicators of network locations, bridges, and strength of tie that facilitate access to better embedded resources. That is, accessibility accounts for the possibility to measure the distance from a resource. There are two methods commonly used to measure accessibility to network resources. The most frequently used method is the name-generators. It is the method to nominate the name of an individual's contacts and relationship, and computes the relative advantage in the access to resources. But this method tends to elicit stronger than weaker ties, since it identifies just individual actors rather than what the individual represents. As an alternative method, position generator, thus use a sample of ordered structural positions salient in a society and asks respondents to indicate contacts. This method has advantages in measuring the range of accessibility to different hierarchical positions, extensity of the resources, and prestige of accessed social capital (Lin, 2001).

Norms. Social capital is often taken to be represented by the contents of social relations: norms of trust and reciprocity. These cognitive measures have been used in many studies (Dorsey & Forheand, 2003; Kawachi et al., 1997), yet these measures are somewhat limited because they might not be meaningful without a consideration of the structure of social relations. In fact, the literature found several types of trust related to the structure of social relation. Bonding network creates particularized trust as its members frequently interact with other members (Uslaner, 1999), while bridging network is more likely to be associated with generalized trust that enables public goods to be more accessible to outsiders (Dasgupta 1988; Putnam, 1998). Reciprocity also varies according to network types. While reciprocity among family members is an ongoing process and enables uneven levels of exchange such as intergeneration transfer of goods, reciprocity among others in a local community is less flexible and directive than family and bonding networks (Stone & Hughes, 2000). Thus, it is hard to

measure normative differences between different types of networks and this difficulty results in few measures subjected to standard psychometric testing (Fine, 2001; Macinko & Starfield, 2001).

Measures of Social Cohesion. The aggregation of individual cognitive measures has been used to measure social cohesion. As reviewed earlier, social cohesion at the neighborhood level is far different than social capital at the individual level (Cattell, 2001). When the concern is extended to the community level, social networks are not sufficient to understand social cohesion because networks are differentially invoked and impede social organization if their interests are not shared with others (Sampson, 2001, p. 95). Also, it is not easy to measure the structure of social relations within and between communities. Yet social cohesion can be approached as a community's cultural conditions (Knack & Keeper, 1997; Krishna, 2002; Putnam, 1993; Schuller, 2000). For example, generalized social trust and sense of community enforces the process of social integration and social control, and a high level of reciprocity maintains social interaction in a community by creating an obligation or sanction for the behaviors for common good. That is, social cohesion is much closer to collective norms than the structure (Black & Hughes, 2000; Cox, 1997; Macinko & Starfield, 2001). In the previous research, the most common measure of social cohesion has been social trust that is easily obtained from simple survey method (Kawachi, et al., 1997; Schuller, 2000; Veenstra, 2000). For example, the World Value Survey has three variables to measure aggregate social capital (social cohesion). The questions in the survey are about trusting members of one's own family, trusting fellow nationals, and trusting people in general. The General Social Survey (GSS) also measures social capital with social trust. The measure of social capital in GSS is a single item of "generally

speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?"

In summary, this study posits that social capital should be approached by social networks for the empirical investigation, while social cohesion is more likely the aggregation of collective norms that occur as people relate to each other as citizens.

Empirical Research on Social Capital and Community Development

This section reviews the empirical findings in the social capital research. There is a vast literature that describes how social capital secures economic success, lowers crime, increase civic participation, collective action, and local voluntarism. As mentioned earlier, however, there is no generalized pathway along which social capital may affect various outcomes in development (Woolcock & Narayan, 2000). This study thus focuses on the discrepancies in the previous findings from the three components of community development: economic, political and cultural development.

Economic Development

The proposition that social capital supports local economic prosperity is the most frequently promised argument in the literature (Fafchamps & Minten, 2002; Green, 2003; Narayan & Pritchett, 1999; Putnam, 1993). First of all, the literature has examined how social trust influences the level of economic performance. High level of social trust promotes business networking, equipment sharing, faster information flows, easier access to credit and investors, and cost effective transactions (Fukuyama, 1995; Knack, & Keefer, 1997; Pargal, Guilligan, & Hug, 2002; Whitely, 2000; Zak & Knack, 2001). For example, Fukuyama (1995) examined the conditions in which traders are more likely to succeed in business. He listed these conditions to reduce transactions costs, moderate self-interest, and promote fair economic transactions. In all

cases, he found that the presence of a high degree of social trust helps traders find appropriate buyers and sellers, negotiate a contract, comply with government regulations, and enforce the contract in the event of fraud. In short, economic organizations can function well when individual members establish mutual trust. Knack and Keefer (1997) empirically tested this hypothesis at the national level. Their results showed that social trust is positively associated with income growth and investment's share of GDP. In particular, social trust effect was very large, and the impact of social trust on growth is much higher in poor countries than in well developed countries. The mediating mechanism of social trust has been also supported. According to Zack and Knack (2001), lack of formal institutions and economic inequalities are associated with lower economic growth rates through their lower level of social trust. However, merely having high levels of social trust does not necessarily lead to economic prosperity. Narayan's studies (Narayan, 1999; Narayan & Nyamwya, 1996) concluded that the reason why many Latin American and African countries were unable to lift the poor out of poverty is their low level of connection to outside resources rather than social capital. He argued that poor indigenous groups are often characterized by high levels of social trust and solidarity, but social capital effects are not enough to reduce their high levels of poverty unless they rebuild resources and change power relation that are necessary to shift the rules of the game.

Second, the effect of group membership in economic development is a more practical point of social capital (Fafchamps & Minten, 2002; Putnam 1993, 2000; Olson, 1982; Knack & Keefer, 1997; Maluccio, Haddad, & May, 2000; Narayan & Prichett, 1999; Rupasingha, Goetz & Freshwater, 2002). Since the contacts among stakeholders in a community form the foundation for community development projects, group membership influences rules governing the projects and cultivate local development efforts such as providing loans, establishing infrastructure, and

subsidizing finance for businesses. As Fafchamps and Minten (2002), Isham (2002), Maluccio, Haddad, and May (2000), and Narayan and Pritchett (1999) showed, social capital characterized by involvement in civic and professional associations is a significant determinant of effective community development programs and local business. Fafchamps and Minten (2002) also examined the effects of local networks on the performance of agricultural traders in Madagascar. They found that traders with more networking with other traders, suppliers, and customers earn higher margins, and a large part of the effect on business performance comes from the accumulation of social capital rather than other strategies.

Yet the effects of group membership are also complicated. What types of groups are valuable to create economic prosperity? One possible distinction is the typology of Putnam's and Olson's conceptualization. Putnam (1993, 2000) focused on the group associations that share social goals and civic identities, whereas Olson (1982) examined group membership that represents their disproportionate rights over others such as lobbying/professional organizations. There are conflicting evidences of the relationship between these two types of group membership and economic performance. For example, Rupasingha and his colleagues (1999) found that both types of group membership have a significant positive effect on the rate of per capita income growth in U.S. counties[7]. Adversely, Knack and Keefer (1997) found that neither type of group membership is significant predictor of national economic performances. Even Putnam-type groups had a negative association with the amount of financial investment. Interestingly, in contrast to Knack and Keefer's findings, Casey (2003) demonstrated that there were positive

[7] Olson-type groups include labor unions, business associations, professional, and political associations, while Putnam-type groups include bowling centers, public golf courses, membership in sports and recreation, civic and religious association (Rupasingha et. al, 1999)

relationship between civic associations (Putnam type) and economic growth rate, whereas economic associations (Olson type) were negatively correlated with economic growth.

The above review lends support to the conclusion that not all types of social capital are equally valued, and aggregate level of social trust and group membership may not fully examine the effects of social relations (Annen, 2003; Foley & Edwards, 1998). Thus, recent social capital theory specifies 'bonding', 'bridging' and 'linking' forms of social capital and examines the role of each form of social capital on economic development (Edwards & Foley, 1997; Narayan 1999; Woolcock 2000).

For example, many ethnographic studies confirmed that it is bonding capital that accounts for economic success through effective use of family connections to obtain money, skills, and support (Gittel & Thompson, 2001; Portes, 1998). Coleman's example of the New York diamond market is the case in which trust in close networks create more efficient and profitable transactions (Coleman, 1988, 1990). Bonding capital has also potential for low income families. Dominguez and Watkins (2003) found that bonding capital allows welfare mothers to access to labor markets, helps to conserve existing resources, and gives survival techniques providing family supports such as childcare. While bonding capital provides a foundation for social support, bridging capital increase the opportunities for social mobility (Briggs, 1998). In fact, to the extent that poor communities lack broader connection, they remain isolated and weak (Warren, Thompson, and Saegert, 2001). Yet the more extensive networks, the more the advancement of poor neighborhoods (Briggs, 1998; Kozel & Parker, 1998). Therefore, poor communities can address the problems of poverty by building bridging capital that will recruit greater resources into poor communities. Another important form of social capital is linking capital that represents strong partnership with institutions in poor communities

(Martinez-Fernadez, 1999; Sampson, 2001). Investigating public housing projects, Keyes et al. (1996) found that linking networks is a significant contributor to the creation of new a nexus for nonprofit housing developers, connecting each private investor's economic self interest. Sampson (2001) also revealed that low income communities high in institutional integrity were better able to maintain social controls that foster public safety.

Political Development

Social capital promotes collective action for community development that may be more important than the actual attainment of economic resources. Here, collective action refers to the residents' organization to confront the barriers, prejudice, and inequalities that have eroded its power in the poor. Indeed, community development research argued that collective action is an inevitable process to empower community groups and make them self-reliant (Rubenson, 2005; Rubin, 2000; Wilkinson & Quarter, 1995).

It is well established that bonding capital leads to collective action and helps people to pursue explicit goals of their common interests (Alesina & La Ferrera, 2000; Briggs, 1998). Research has reported that communities that have high levels of homogeneity and informal social interaction are more likely to organize themselves (Krishna & Uphoff, 2002; Putnam, 1993; Uphoff, 1993). Then, bonding capital forms an atmosphere conductive to collective benefits and provides the cultural will to solve community problems collaboratively (Gitell &Vidal, 1998; Putnam, 1993, 1995, 2000). For instance, Isham and Kahkonen (2002) found that collective demand for service is more likely to be expressed in high social capital neighborhoods in which households are accustomed to working together, leaders are accountable, and all stakeholders have a voice.

Yet it is necessary to distinguish between the modes of participation, counting for the incentives of collective action across social positions (Lopez & Stack, 2001). Indeed, bonding capital represented by homogeneity may reduce incentives for political participation due to less competing interests, whereas heterogeneous social groups can be more likely to engage in conflicts over resources and lead to higher levels of political participation (Rubenson, 2005). As results, the empirical findings are complicated. A study revealed that bonding capital is a primary part of local political participation among Whites, but not much among Blacks and Latinos (Fuchs, Shapiro, & Minnite, 2001). Isham and Kahkonen (2002) also found that neighborhood trust is negatively correlated with community participation. Similarly, Krishna and Uphoff (2002) found that the collective action for community development was largely affected by political competition and network-diverged social capital (bridging capital) but not by Putnam's social capital measured by voter turnout, newspaper readership, and number of associations. Cohen (2001)'s study also concluded that the poor use social capital just to guarantee adequate food, safe housing, and disposable income, but not to obtain the political power to force a reallocation of needed resources. Thus, the value of bonding capital should be tested in relation to social segregation that researchers consider in engaging diverse social units in collective action (Collier, 2002; Isham & Kahkonen, 2002; Ostrom, 1996)

Bridging and linking capital are also relevant to understand political development in poor neighborhoods (Collier, 1998; Foley, McCarthy, Chaves, 2001; Levi, 2001; Olson, 1982; Woolcock, 1998). Bridging capital leverages valuable human resources and creates coalitions with them for effective collective action. For example, Foley, McCarthy, and Chaves (2001) found that congregation was one of the most important sources of locality development in poor neighborhoods, since it provided social connections to those who are legislators, bankers,

businessmen, administrative and political clout and other development professionals. Such associational acquaintance leads to higher decision-making power (Figueira-McDonough, 2001). Leverages are not confined to the inter-personal networks. It should be considered how potential formal links to community organizations, extra-community institutions, and government create supports for poor residents' collective action. Dhesi (2000)'s study on a North Indian village showed that formal institutions in conflict with informal institutions would severely constrain residents' collective actions. Levi (2001)'s study is the other example that showed how labor unions worked collaboratively with community based organizations, providing their pension funds to finance affordable housing. Rose (1998) found that weak public institutions and deep cleavages between citizens in Russia had lead to political instability, corruption, inequality. Thus a continuous purposive action to make a positive relation with institutions will harness the level of organizing and guarantee successful community development. That is, the more continuous bridges are to the institutions, the greater was the potential for the community to receive support, information, and organize (Figueira-McDonough, 2001; Warren, 1981). The literature has thus pointed out the importance of institutional linkages with such terms as Collier's (2002) government social capital, Grootaert's (1999) formal institutions, Uphoff's (1993) top-down efforts, and Evans's (1995, 1996) capacity of the public institutions. All the concepts emphasize the roles of an institution that influence people's ability to cooperate for positive outcomes of development.

Cultural Development

Social capital promotes cultural practices through which local residents identify the members of the community, interact with them, and act together to build a more supportive community (Lopez & Stack, 2001). However, as Wilson (1987) argued, sub-cultural conditions

in poor neighborhoods make residents isolated from each other. For example, low levels of obligation and expectation in the neighborhood culture weaken informal social interactions and lead to cultural anomie.

In that sense, social capital highlights its role of shared cultural actions as the critical intervening mechanism of the poor neighborhoods (Sampson, et al. 1997). For example, collective consciousness facilitates the overcoming of institutional barriers and voluntary activities that facilitate generating diversified resources (Lopez & Stack, 2001). Putnam (1993) also argued that social capital induces people to collaborate and instill in people public spiritedness (p.90). Thus, the literature has emphasized the function of social capital in poor neighborhoods that facilitates social support and voluntary community services (Briggs 1998; Edin & Lein, 1997; Gittel & Vidal, 1998; Keyes 2001; Keyes, Schwartz, Vidal, & Bratt, 1996; Kozel & Parker, 1998).

Historically, poor people have relied on social relations for assistance when other forms of capital were lacking, and have developed support networks in which survival oriented activities persist (Briggs, 1998; Warren, Thomson, & Saegert, 2001). Strong ties, mutual trust, and common understandings (bonding capital) within poor communities provide the foundation of social support, as people build dense relations to cope with everyday challenges (Briggs, 1998). A number of studies find evidences between bonding capital and social support in poor neighborhood: those who are well connected to their kin and close friends are more likely to find new job when they were laid-off (Aguilera, 2002; Zhao, 2002); religious institutions play a broader social role to improve community welfare and foster voluntary activities to help others (Foley, McCarthy, & Chaves, 2001).

The positive relationship between bridging capital and social support has also consistently been found in the literature. Studies conclude that the level of diversity and size of network had a considerable impact on the likelihood of finding jobs and attaining promotion than strong bonding networks (Zippay, 2001; Auilera, 2003). Fernandez & Kelly (1994) observes in her analysis of adolescent childbearing that bonding networks reduce access to information and option available but the network members with different social statuses (bridging) affects positively the use value of social capital for their children. In addition, the literature about volunteering has produced a lot of supporting evidence for the effectiveness of bridging capital, revealing that extensive social networks and multiple organizational memberships increase the chances of volunteering (Becker & Dhingra, 2001; Fahmy, 2003; Wilson, 1996). Wilson (1996) found that formal social interaction is the most powerful variable, and informal social interaction and number of friends has a moderate effect on volunteering. Becker and Dhingra (2001) also concluded that social networks and organizational identity within these congregations draw people into volunteering in congregation but are not connected to volunteering in other settings.

Neighborhood Context and Social Capital

The literature found several contextual factors that have implication for the creation, distribution, and maintenance of social capital (Rankin& Quane, 2000; Sampson, 2001). Researchers studying neighborhood context have examined how structural and ecological factors impact the interaction between residents in a neighborhood. While those structural factors posit that concentrated poverty and inequality increases the risk of social isolation (Wilson, 1987), ecological factors emphasize the environment in which residents make some patterns of local activities, including residential stability, home ownership, and density (Massey & Denton, 1993). Among those contextual effects, this study considers the following four factors.

Neighborhood poverty. Neighborhood poverty is closely related to social capital (Cattell, 2001; Rankin & Quane, 2000; Wilson, 1987). Research considers that persons in high poverty neighborhoods confront interrelated barriers in order to make interactions with others and institutions, whereas neighborhood affluence is a significant predictor of social capital (Rankin & Quane, 2000). On the one hand, the increasing social isolation of the inner city neighborhoods is a product of the economic restructuring accompanied by low wages, job insecurity, and inadequate social services (Wilson, 1987). In particular, the exodus of the middle class has contributed to a decline in social support resources (Jargowsky, 1997). On the other hand, since poverty is the state of social exclusion, poor neighborhoods are characterized by low level of participation in formal organizations due to their lack of experience, low education, and lack of task-orientation (Figueira-McDonough, 2001; Rothman, 1979). To this list, Rankin and Quane (2000) added mistrust as a characteristic of poor communities. According to them, poverty links to deficits in community norms, social networks, and social cohesion that in turn inhibit residents from making social ties with other residents. All of these may be important factors of resident interaction, which reinforces the commonality in a community (Lyon, 1987; Wilkinson; 1991). In short, scholars concluded that the decline of social capital is an outcome of the growing concentration of poverty in urban neighborhoods. By excluding the poor from the social, economic, political and cultural systems, concentrated poverty is the great constrainer of social interaction.

Income inequality. Research has found a strong association between income inequality and social capital (Gold, Kennedy, Connell, & Kawachi, 2002; Kawachi, Kennedy, & Wilkinson, 1999; Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997; Kennedy, Kawachi, Prothrow-Stith, Lochner, & Gupta, 1998; Wilkinson, 1996, 1999). These findings imply that

income inequality leads to social disorganization through the breakdown of social cohesion and normlessness (Cattell, 2001; Kennedy et al., 1998). For example, Wilkinson's (1996, 1999) income inequality and social cohesion model hypothesized that the growing gap between the rich and poor is mediated through the undermining of social cohesion and that decreased social cohesion is in turn associated with increased mortality. His empirical results showed that social cohesion rather than political change is the major determinant of population health. Wilkinson insists that income inequality affects health through perceptions of place in the social hierarchy, and that such perceptions produce negative emotions such as shame and distrust that foster antisocial behavior, reduced civic participation, and less social cohesion within the community. In this way, perceptions of social inequality produce psychosocial risk factors that are closely associated with the quality of social relations and influence on population health. So far, public health studies found evidence of this inverse relationship between income inequality and social cohesion, using states variations (e.g., Kawachi, et al., 1997 and Kennedy, et al., 1998). Yet some studies argued that disinvestment in social cohesion may not be one of the psychosocial results on which income inequality exerts its effects, because income inequality is the product of historical and sociopolitical processes that may operate through structural factors (James, Schulz, Olphen, 2001). Thus, there are some mixed results in which the effects on social capital are mediated through other structural factors such as residential segregation or that show no relationship between social capital and income inequality (Veenstra, 2002).

Racial segregation. A key factor of neighborhood effects proposed by a number of studies is racial segregation (Jargowsky, 1997; Massey & Denton, 1993; Rubenson, 2005). These studies found that White/Black segregation may be as great as economic deprivation in determining many outcomes. As Massey and Denton (1993) mentioned, racial segregation

explains the economic and social deprivation found in inner city black neighborhoods. It concentrates poverty because cities reduce services to these neighborhoods as they become increasingly segregated. In short, segregation creates social isolation and deters social interaction between groups. While useful resources are occupied by those in power, segregation deters access to opportunity such as public services and policy involvement, and consequently helps to perpetuate inequality and discrimination in the community (Jargowsky, 1997; Massey & Denton, 1993). Therefore, research has considered that local network heterogeneity is a predictor of neighborhood social capital because it has the potential to enhance social integration (McCulloch, 2003). The greater the tolerance and the trust among the diverse population groups, the more a locality is able to respond to collective problems (Breton, 2001; Gittell & Vidal 1998, Putnam 2000). It is also notable that social isolation may help to consolidate specific groups' attitudes and behaviors. Strong bonding among immigrant community economies is one example. By limiting opportunities for outsiders, this type of isolation helps community members get by with relatively low costs and easy access to restricted markets (Portes, 1998; Woolcock & Narayan 2000; Zhou, 1992).

Residential stability. The ecological perspective literature asserts that residential stability is a persistent determinant of neighborhood characteristics (Drukker, Kaplan, Feron & Van Os, 2003; Magdol & Bessel, 2003). In particular, community lost theorists laid the foundation for community level social capital, arguing that massive out-migration from rural communities to industrialized cities has disrupted existing social networks in both places. According to them, the modernization process caused a high rate of residential mobility and resulted in weakened social controls over collective life (Wellman & Leighton, 1988). Meanwhile, residential stability affects individuals who share in common neighborhood life. Research found that residential

instability and low rates of home ownership are durable correlates of individual behaviors (Sampson et al., 2002; Sampson, et al., 1997). Some studies demonstrated a strong relationship between social cohesion with residential stability (e.g., Drukker, Kaplan, Feron & Os, 2003), and others found that frequent migration is negatively associated with social capital.

CHAPTER III

CONCEPTUAL FRAMEWORK

Loss of community along with industrialization, privatization, globalization, and great disparities in the market economy has attracted considerable attention to community development from both scholars and practitioners. Accordingly, community development has appeared as a crucial area of macro intervention in social work, and has introduced several themes such as conflict style organizing, grassroots civic action, neighborhood based services, and current endeavors of Community Development Corporations (CDCs) and Comprehensive Community Initiatives (CCIs). However, at least regarding theory and research, community development remains a slippery social science. This skepticism may be due to its plurality of context and methodological complexity. Also, to the extent that community development lacks theory and research, its connection with social capital is not clearly defined. Hence there is a need to identify a coherent framework of community development in which social capital contributes to its specified goals.

In this chapter, therefore, the logic of the community development field will be reviewed first. The structure, power, and share meaning in the community development field will guide this section, and the discussion allows for more targeted development efforts-community development action. A conceptual framework of a social capital model is developed to conceptualize and examine the relations among the study variables. Three testing models are inferred in the conceptual framework and then the hypotheses of the study are presented. The following presents a brief review of these explorations.

Community Development Field

Community development is lacking in theory. Despite the process and strategies articulated by classic theorists such as Ross (1955), Rothman (1979), Biddle and Biddle (1965), and Christenson and Robinson (1984), the theory of community development has not developed in a coherent manner and in turn has failed to provide a general framework based on empirical research (Bhattacharyya, 2004; Harrison, 1995; Lyon, 1988; Pigg, 2002). The limitations of community development theory are related to the following issues.

First, community development is studied in so many disciplines such as anthropology, economics, psychology, human geography, sociology, and social work that each interprets community development with its own academic language: there is no consensus about the key factors underlying community development. Second, there has been more interest in practice than in theory (Green & Haines, 2002). Most texts of community development tend to focus on process and skills, and provide several models that are based on the wide spectrum of practice wisdom and strategies. For example, Rothman's three models of locality development, social planning, and social action have exerted a profound influence on the field of community organizing, but his framework does not spell out the theoretical explanation about community changes (Rothman, 2001). Third, community is no longer a simple concept (Lyon, 1988). In any urbanized and industrialized society, the function of place has weakened as work, residence, school, and recreation are far from one another. Some argue that community of interest is getting more influential for the definition of community, but this concept is so broad that it includes such things as all types of organizations and associations. Otherwise, an alternative conceptualization of community is any form of social integration that has been lost in a mass society. In this way, community development may pertain to small towns, ethnic neighborhoods,

interest groups, or commitment to community lifestyle, with no limit to its scope. Fourth, there is the confusion about development as well. Literature has dealt with numerous examples of developmental goals such as increasing the amount of economic capital (Rubin, 2000), providing services that actually help people (Hawken, 1993), promoting people's interdependence (Burkey, 1993), increasing the capacities to organize and participate in voluntary organizations (Weil, 1996), facilitating local decision making (Chaskin, et al., 1997), and transforming systems (Mizrahi, 2001). In the past decade, empowerment has become a central goal in development (Pigg, 2002). Even though the basic developmental goals include sustained growth, social equity, and civic empowerment, it is hard to draw any fixed goal of development without regard to a community's history, culture, needs, and way of life (Christenson & Robinson, 1984). In short, community development is not well-defined in its explanatory theory and is used more in practice theory in social work.

Yet these limitations do not mean that community development does not have any theoretical framework. Rather, the ambiguity of community development theory means that there are considerable variations in the application of community development with different teleological orientations. For example, the ecological approach targets promoting symbiotic exchanges between all affected units in a spatial area, whereas the conflict approach aims to address power differences, especially concerning economic exchanges. The anthropological perspective on cultural process focuses on group-based shared emotion and bond, but the system perspective has emphasized the material structure of relations between social organizations. These kinds of differences in approaches reflect basic splits within its theoretical paradigms, and each approach has contributed to the multidisciplinary nature of community development (Lyon, 1989). Acknowledging that there is little reason to describe multiple approaches here, this

section describes the goals and frameworks that are applicable to community development of the study.

The Goals of the Community Development Field

This study defines community development as the promotion of solidarity and agency, following Bhattacharyya (2004). While solidarity, a shared identity and a code for conduct or norms, serves to define "community" in a distinctive and intrinsic manner by distinguishing a community from all other types of social relations, agency is the goal of "development", implying that community residents make decisions and deal effectively with problems and challenges. Here, agency means the capacity of people to strengthen their linkages within the community and the power to change the community so that the community can act as a unit (Bhattacharyya, 2004, pp.11-13). Similarly, the nineteenth edition of the *Encyclopedia of Social Work* defined community development as "planned action to address the common concerns of people who share a geographic locality, cultural and philosophical solidarity, or essential social and economic relations" (Harrison, 1995, p.555). This definition indicates that community development activities aim not only to enhance the effective structure and functioning of community systems, but also to empower community members so that they can participate in the decision making processes.

Bhattacharyya's (2004) definition can serve as a tool to select frameworks that are most relevant for community development, and draws three comprehensive theoretical frameworks that concern structure, power, and shared meaning (Hustedde & Ganowicz, 2002).

First, structure is the pre-condition of solidarity and agency, which refers to the relationships between social organizations. System theory (Warren, 1978), community as interactional field theory (Kaufman, 1959; Wilkinson, 1991), and network theory (Wellman &

Leighton, 1979; Burt, 2001) are the most influential explanation regarding the structure of community development. For example, community as interactional field theorists argue that the goal of community development is to improve the structure of social interaction (Kaufman, 1959; Wilkinson, 1991,1988). While ecological perspectives see community as spatial aggregates of geographic phenomenon, Kaufman and Wilkinson emphasized people as independent actors beyond a specified environment. Rather than a static geographical region, they looked at community as the results from the relationships between individual actors and organizations. Therefore, Kaufman (1950) considered community field as "a process of interrelated actions through which residents express their common interest in the local society" (p.10). Wilkinson (1991) also agreed to this structural interpretation of community and argued that:

> The community field has actors, associations, and activities, as any social field does; but the interest that guides this field is an interest in structure rather than in specific goals such as economic development or service improvement. The structural interest in the community field is expressed through linking, coordinating action, actions that identify and reinforce the commonality that permeates the differentiated special interest fields in a community (Wilkinson, 1991, p.90).

Thus, the question in community development is how a community field develops an effective structure of linkages that represent common interests (Wilkinson, 1991). And this is the point where community as interactional field theory is connected to social capital theory, because both pay attention to the dynamic processes of interactions between individuals and communities.

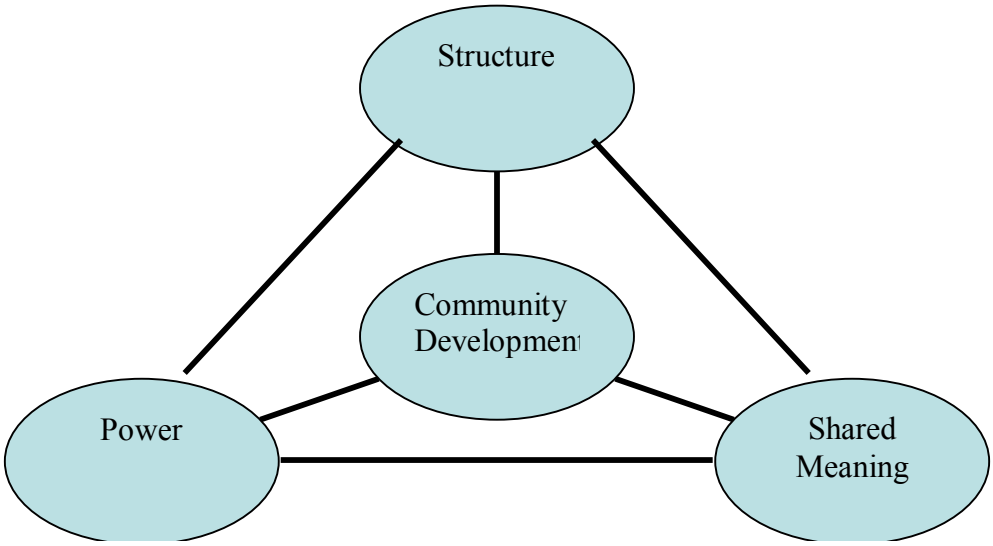
Second, power is closely related to creating agency. The conflict approach is better suited to pointing out the issue of power, which is fundamentally about who controls the access to resources (Castells, 1977; Harvey, 1973). It has been asserted that an increasing concentration of wealth is accompanied by an increasing concentration of political power (Fabricant & Fisher,

2002; Figueira-McDonough, 2001; Rothman, 2001; Zimmerman & Rappaport, 1988), whereas the poorest neighborhoods are characterized by the decline of collective power as well as economic deprivation (Cohen & Dawson, 1993; Fuchs, Shapiro, & Minnite, 2001; Jargowsky, 1997; Putnam, 2000). Similarly, Rothman (2001) argued that if power is concentrated in the hands of a few, the community will be politically anti-democratic, morally reprehensible, socially disruptive, and economically perilous (p.7). If the goal of community development is to build agency, power differences are a reality of community life where economic and social differences must be addressed (Hustedde & Ganowicz, 2002). Thus, community development studies must understand competing interests among social groups, and how such interests position a group's interests over other community interests.

Third, shared meaning, a key concept of symbolic interactionism, has substantial relevance to solidarity. It provides insight about how people develop a shared vision about their future (Hustedde & Ganowicz, 2002). For example, symbolic interactionism is applied to community studies by socio-cultural ecologists who demonstrate how community is socially constructed regarding sentiments and local images. For example, Hawley's human ecology suggested that culture is one of the key types of adaptive mechanisms of human populations. Unlike classic ecological theory, he explained that mutual bonding with the perception of commensalism serves communities with the purpose of gaining strength and reducing competition (Hawley, 1950; Lyon, 1988).

Taken together, structure, power, and shared meaning are integral aspects for community development field. Even though the main issues of community development in this framework are debatable, these three factors can be generally applied to the mechanism of community changes (Figure3.1). Therefore, social capital application to community development should

recognize how these three factors work in the creation of solidarity and agency. Indeed, Temkin and Rohe (1998) classified previous models of neighborhood change into ecological, sub-cultural, and political economy and argued that "social capital model combines ecological and sub-cultural approaches to neighborhood change and places those theories within a larger sociopolitical context" (p. 67).



Source: Hustedde, Ronald J. and Ganowicz, Jacek (2002), "The basics: What's essential about theory for community development practice? Journal of the Community Development Society, 33(1), p. 3.

Figure 3.1 Community Development Field

Community Development Action

The author agrees with the community as interactional field theory in that community is the place where diverse social groups interact and struggle to obtain scarce resources. Thus, the basics of community development is improving the ties of sentiment, association, and coordinated action among the poor and disadvantaged so that they may act as a unit to deal effectively with problems and challenges (Christenson and Robinson, 1984; Cottrell, 1977; Green & Haines, 2002; Hawley, 1950; Wilkinson 1977, 1991). Wilkinson (1988) thus argued

that community development is accomplished by "a purposive action which is oriented in a positive way toward the structure of the community field" (p.53). Yet, conceptually, the community development field is composed of an array of activities that encompass the complexity of community life and a broad range of interests (Hustedde & Ganowicz, 2002; Pigg, 1999; Sharp, Flora, & Killacky, 2003). In other words, community development field differs from other social fields in that it is organized around diverse social interests rather than a specialized purpose. The theory hence directs attention to the mechanism that incorporates diverse interests and assets in social fields to make up an effective community field (Wilkinson, 1991).

Therefore, the empirical investigation of this study will focus on a multifaceted and process focused community development action that creates the place where residents' interest-based actions are expressed and coordinated. Consequently, community development action in this study refers to the economic, political, and cultural actions that strengthen the structure of the community field through mobilizing assets for successful community development (Green & Haines, 2002; Kretzmann & McKnight, 1993; Turner, 1999).

Conceptual Framework of the Study

The social capital model for community development includes three related domains (Figure 3.2). Based on the literature discussed in the previous chapter, the model separates social capital from its sources and effects: neighborhood social composition, social cohesion, and individual characteristics (source); bonding/bridging/lining capital at the individual-level (social capital); and community development action (outcome).

In this conceptual model, three broad approaches to the potential relationships between social capital and community development are combined. First, the network dynamic model

focuses on social capital at the individual-level (bonding, bridging, and linking capital) (Briggs, 2002; Burt, 2001; Cattell, 1995; Dominguez & Watkins, 2003; Granovetter, 1973; Lin, 1999; Portes, 1998; Sharp, Flora, & Killacky, 2003; Wegener, 1991; Zhao, 2002). Second, a number of collective efficacy studies have found that the level of social cohesion in a local community is associated with a number of positive community outcomes (Browning & Cagney, 2002; Fawcett et al., 1995; Kawachi, et al, 1997; Narayan & Pritchett, 1999; Sampson, et al., 1997; Wilkinson, 1996). Third, a group studies have focused on the synergy effects between bottom-up and top-down such as civic-governmental collaboration or interaction between individual-level social capital and neighborhood-level social cohesion (Woolcock, 1999; Subramanian, et al., 2002). The conceptual model includes two additional pathways for testing. According to collective efficacy and network dynamic models, it considers mediation and moderation, respectively. Each model emphasizes conditional effects on the relationship between social capital and community development action. In sum, the author tests these five models in the following ways.

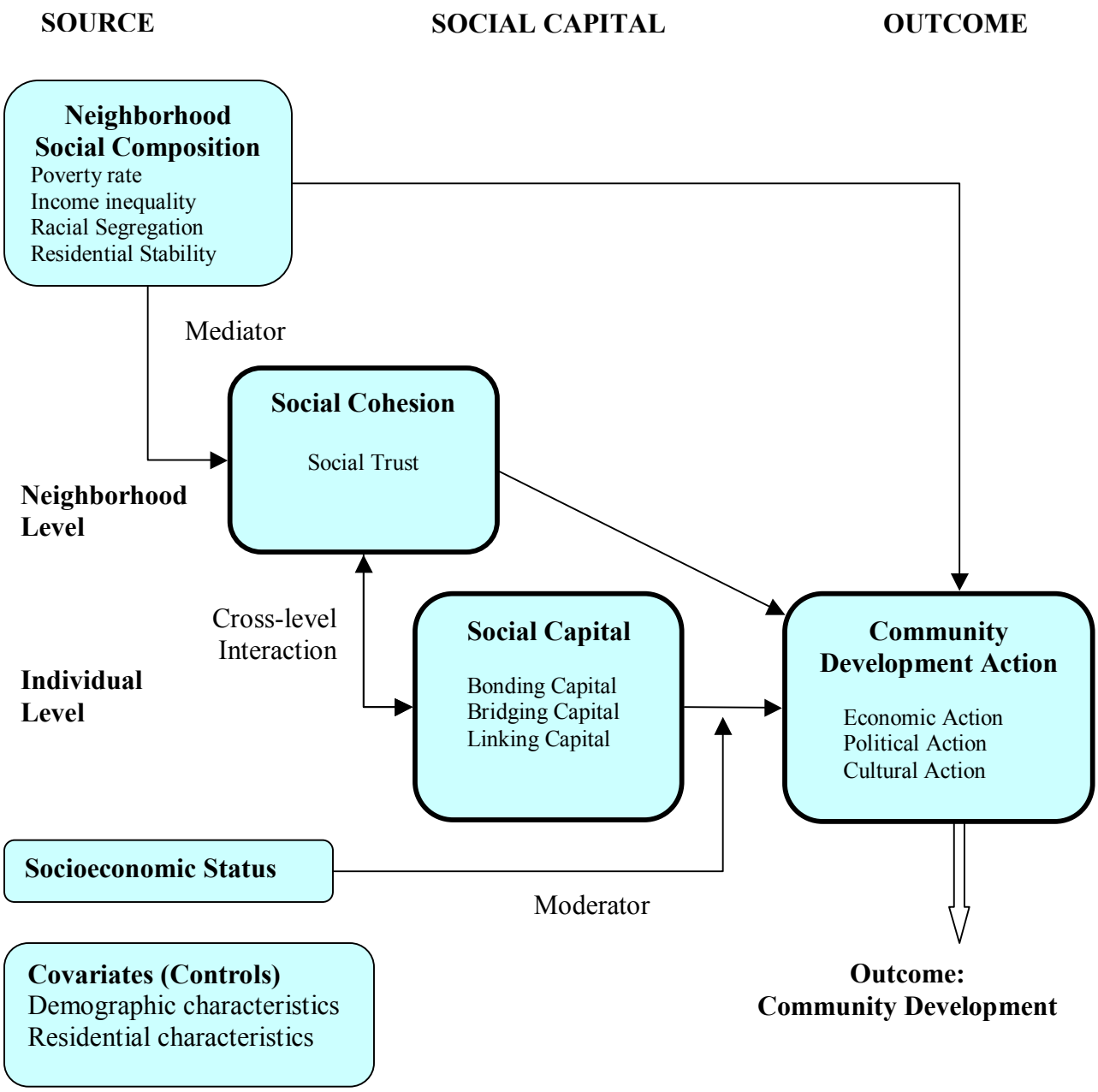


Figure 3.2 Conceptual Framework of the Study

Testing Models and Hypotheses

Network Dynamic Model. The question of this model is whether individual-level social capital is the visible manifestation of community development action. That is, repeated interactions in social networks improve the accessibility to key information and resources of community development action. The author's interest is to answer which form of social capital (bonding, bridging, or linking) is the most important predictor of community development. If bonding is the driving force behind the motivation of individual participation, community development action should be strongly associated with informal interactions within close networks. If bridging is the key structural mechanism, the incidence of community development action should be strongly associated with network diversity. Also, if linking capital provides much more motivation of participation, residents' involvement in formal institutions should be the most significant predictor of community development action. Thus,

Hypothesis 1

The level of social capital (bonding, bridging, and linking) will be positively associated with the number of residents' community development action.

Collective Efficacy Model. The test for social cohesion is the dominant model of social capital developed by collective efficacy theorists. The basic premise of this approach is that social or cultural characteristics of neighborhood explain variations in community development action. The literature suggested that social cohesion, controlling the other social compositional variables of the neighborhoods, not only enhances participation in developmental activities but also facilitates individual credits and compliance with rules and customs. It is thus hypothesized that social cohesion is associated with residents' community development action. Adversely, communities lacking in social cohesion are less effective in establishing and maintaining norms

to participate in community development events compared to communities with higher levels of social cohesion.

Hypothesis 2.

Higher levels of social cohesion will be associated with higher number of residents' community development action.

Synergy Model. This study puts forward a model of social capital that operates as an interacting mechanism with neighborhood social cohesion. In this synergy model, a cross-level interactional term is included to address whether social capital is more or less effective in particular circumstances. This model supposes that the level of neighborhood cohesion affects the forms of social interactions in that neighborhood. For example, high level of bonding capital positively affect community development action in a highly cohesive neighborhood, but it may negatively affect community development action when it combined by lower level of social cohesion in highly segregated neighborhoods.

Hypothesis 3

There will be cross-level interaction effects between the level of social cohesion and the level of social capital (bonding, bridging, and linking) on the number of the residents' community development actions. That is, the level of neighborhood social cohesion will moderate the relationship between social capital and community development action, so that social capital and community development action will be more strongly related when the neighborhood is more cohesive.

Mediation Model. Collective efficacy model highlights some important theoretical aspects of social cohesion and its relation to other neighborhood level factors (Sampson, et al., 1997; Wilkinson, 1997). As mentioned in chapter II, previous studies revealed that

neighborhood poverty is largely responsible for the level of social cohesion in communities. These findings explained that neighborhood social composition such as poverty and income inequality affect social norms that form social interactions within the community. Furthermore, it may provide a precise specification of the mediating structure of this study, increasing the potential explanatory power between social capital and community development action. In particular, bonding capital in poor neighborhood may not play a crucial role in increasing the number of community development action. Also, poverty may lead to a decrease in bridging capital and linking capital as well as decrease in community development action. That is, there might be some vicious circles in the relationship between neighborhood poverty, social capital, and community development action. Thus, the hypothesis is as follows:

Hypothesis 4

Social cohesion and social capital will mediate the negative association between the level of neighborhood deprivation and the number of the residents' community development action.

Moderation Model. Bourdieu's theory conceptualized social capital as a group resource determined by one's social position and investment strategy. Therefore, the last hypothesis of the study is to test whether social capital interacts with social position in the community. This model is quite different from the previous social capital research that focuses on the functional utility of social capital. These studies have neglected the issue of social cleavages that might affect the likelihood to mobilize social capital, and implicitly discounted the significance of power relations. In short, social class is an extremely important variable in defining the nature of social interactions. Also, the experience of resource dependency and deprivation acts as a force that undermines collective efficacy. For example, Stanton-Salazar (1995) found that students of

higher SES reported a higher number of ties to school-based institutional agents and a higher degree of help-seeking behavior than those of lower SES. Other studies demonstrated that SES has an effect on individual efficacy, mental health, quality of life, and even mortality at the individual level, and that this relationship is largely mediated by social capital (Drukker & Os, 2003; Veenstra, 2000). Therefore, some forms of social capital are by no means always positive or effective for the different groups. It is argued that social capital provides better rewards to individuals in higher social positions than those in lower social positions (Burt, 1992). Yet it is also reasonable to argue that lower social position people are more dependent on social capital because of their lack of other resources, while power elites often exploit social capital to achieve their own ends rather than public ends that serve collective interests. Thus,

Hypothesis 5

Individual-level socioeconomic status will moderate the relationship between social capital and community development action, so that social capital effect on community development action for the lower socioeconomic groups will be different from that for the higher socioeconomic groups.

CHAPTER IV

RESEARCH METHODOLOGY

A correlational design is used for this study in a large sample of individuals who were nested in 52 neighborhoods. Correlational design is the conventional approach to studying social capital empirically (Capenter, 2002), and is very useful when a study tries to describe the characteristics of a large population and analyze multiple variables simultaneously. However, the greatest obstacle to research social capital in this way has been the lack of multi-level data sets with representative community samples. Since national surveys (e.g., General Social Survey) have been designed to analyze individual-level characteristics (Rubenson, 2005), they tend to have few higher level (geographical) units such as zip code and cities, and consequently comparisons across communities are difficult to satisfy statistical requirements. Even though some data from national surveys represent broad regions of the U.S, they tend to contain few respondents from any given locality (DeLeon & Naff, 2004; Rubenson, 2005).

Fortunately, the Social Capital Community Benchmark Survey (SCCBS) provides a data set for multi-level studies of social capital (Saguaro Seminar, 2001). It includes interviews with people drawn from 41 different sub-national representative samples with detailed geographic codes. Guided by the framework presented in the previous chapter, this study thus addresses the research questions using SCCBS that includes enough neighborhood-level samples that also measures individual-level social capital. The neighborhood samples from SCCBS give us a unique opportunity to assess neighborhood social cohesion, individual social capital, and cross level interaction effects between them in a hierarchical model.

This chapter in the next details the methodology in regard to data sources, the measures, imputation methods, and the analytic plan for the hypothesis testing.

Data Sources

Empirical tests of the hypotheses were conducted primarily using data from Social Capital Community Benchmark Survey (SCCBS). The SCCBS was developed at the Saguaro Seminar funded by the Ford Foundation, a project at the John F. Kennedy School of Government at Harvard University. This cross-sectional survey was conducted by TNS Intersearch interviewers using telephone (random digit dialing) during July to November of 2000. The author was allowed to use the data under the confidentiality agreement with the Roper Center, since some geographically sensitive fields were required for this study.

This survey collected data from 41 U.S. communities sample (N=26,200) across 29 states as well as a national sample (N=3,003). Each sponsoring organization in 41 communities decided what specific areas were to be surveyed, how many interviews to conduct, and if specific areas or ethnic groups need to be over-sampled. In most cases, the survey area was conducted on a city or a cluster of contiguous counties, and consisted of at least 500 interviews. Probability Proportionate to Size (PPS) sampling was used to select proportionate sample of sub areas in terms of gender, age, education and racial groups[8]. It indicates that all members of that population had an equal change of being selected, reproducing the population distributions on these four demographic characteristics.

---

[8] Some community samples used stratified disproportionate oversampling: City of Boston, Delaware, Greater Greensboro (NC), Cuyahoga County (OH), Metropolitan Rochester (NY), Newaygo County (MI), North Minneapolis (MN, and National Sample. For example, the national data sample included two-times over-sample of Hispanics (n=500) and African-Americans (n=500).

Appendix B contains the effective sample sizes and 95 percent confidence intervals by each community. Overall, 95 percent confidence intervals produce that the sample statistics are within plus or minus 2.1(National sample) ~ 5.8 (Boston sample) percentage points of the population parameters. The SCCBS achieved an adjusted cooperation rate of 42.3% (Saguaro Seminar, 2001).

The SCCBS is suitable for addressing the questions of this study for two reasons. First, the survey provides a rare database of high-quality and comprehensive social capital variables. The survey asked quantitative characteristics of individuals, including extensive information about collective norms, social interaction, civic participation, network diversity, sense of community, and community services. Furthermore, the data conducted item diagnostics of the extensive information and developed several social capital indices. For example, bridging capital can be inferred by inter-racial trust index and diversity of friendship index, while bonding capital can be measured by faith based engagement index and informal socializing index (Saguaro Seminar 2000). Second, the data include nine geographical codes so that researchers can link social capital data with other neighborhood data sources. These geographical codes (e.g., Census Track, Block, FIPS, and MSA) enable the researcher to examine the context of social capital in regard to social composition and ecological factors. The data thus allows for more sophisticated tests of the relationship between social capital and other social indicators of the neighborhood.

Additional data for neighborhood social composition were obtained from the 2000 U.S. Census (the 2000 Census Summary File 3). Based on prior literature, four neighborhood-level social composition variables (neighborhood poverty, income inequality, racial segregation, and residential stability) were drawn to control for neighborhood conditions.

Unit of Analysis

The unit of analysis of the study is both individual and neighborhood, but the focus of this study is individual while neighborhood delineates the context in which individuals interact with each other. Meanwhile, the neighborhood-level unit of the study is ascertained at the county level, in order to obtain enough individual-level sample size in each neighborhood and to merge with county-level social composition measures. Although a number of studies on neighborhood effects have mostly taken census track as proxy for neighborhood (Figueira-McDonough, 2001; Sampson et al., 2002), any smaller unit than county-level was not feasible for this study.

This study's neighborhood sampling procedure was accomplished using the Federal Information Processing Standard Code (FIPS, county codes). Every county in the U.S. has a unique FIPS code that is used by the U.S. Census Bureau. Thus, out of the large number of geographical codes in SCCBS, the author selected 52 FIPS codes that had at least 100 respondents in each code. Thus, the neighborhood sample of the study is 52 counties, where a total of 22, 383 respondents were surveyed (Appendix C). While the 52 FIPS codes are not nationally representative, they cover all major census regions (Northeast, Midwest, South, and West), small and large urban/rural regions, and diverse demographic trends.

Measures

The operational definitions for the study variables and data sources are described in Table 5.1. All study variables except for neighborhood social composition variables are latent variables that were measured by the composite of multiple variables.

Table 4.1

Operational Definitions

Variables	Operational Definition & Data Source
Dependent Variable	
Community Development Action	The dependent variable of the study is community development action that is composed of economic, political, and cultural action. First, economic action is measured by financial contribution to secular charities. Second, political action is derived from the initial measure of Protest Index, which is designed to measure diverse political participation. Third, the cultural action construct is designed to incorporate residents' voluntary community services (11 items): SCCBS, 2000
Independent Variables	
Social Cohesion	Social Trust Index is used for social cohesion. It is composed of general interpersonal trust, trust neighbors, coworkers, fellow congregants, store employees and local police (7 items): SCCBS, 2000
Bonding Capital	The bonding capital construct is derived from the initial measure of Informal Social Interaction Index that measures interpersonal interaction in close relationships (5 items): SCCBS, 2000
Bridging Capital	The bridging capital construct is measured by the Diversity of Friendship Index that indicates the size of heterogeneous networks (11 items): SCCBS, 2000
Linking Capital	Formal Organization Involvement Index is used for linking capital. The author adapted the index to eleven types of development related institutional connections (11 items): SCCBS, 2000
Neighborhood Social Composition	
Neighborhood Poverty	Poverty rate in 1999. It is calculated by the number of population below poverty level divided by the population for whom poverty status is determined. %: U.S. Census 2000 Summary File 3.
Income Inequality	Gini Coefficient, 0~1: U.S. Census 2000 Summary File 3, Obtained from the Income Surveys Branch, U.S. Census Bureau.
Racial Segregation	Dissimilarity Index, 0~100: U.S. Census 2000 Summary File 3, Obtained from the Population Study Center, U of Michigan.
Residential Stability	Residents who live five years or more, %: U.S. Census 2000 Summary File 3.
Individual-level Controls	
Socioeconomic Status	Education and household income in 1999: SCCBS, 2000;
Demographic Status	Age, gender, race, marital status, employment status: SCCBS, 2000;
Residential Status	Years in community and home ownership: SCCBS, 2000

Dependent Variable

The dependent variable of the study is community development action that is composed of 11 items measuring economic, political, and cultural action, respectively. This construct is operationalized in the following ways. First, financial contribution to non-religious charities is included in the index. Financial contribution has been identified as one of the most significant factors contributing to the community development at all levels (Gittell & Thopmson, 2001; Tuner, 1999). In SCCBS, the question is "During the past 12 months, approximately how much money did you and the other family members in your household contribute to all non-religious charities, organizations, or causes?" Second, four political participation items are included. These items measure participation in non-electoral forms of political events: 1) involvement in local action for reform, 2) attending political meetings or rallies, 3) joining in any demonstrations, protests, boycotts, or marches, and 4) signing petitions. Third, six items that indicate voluntary community services are used to measure cultural action discussed in the preceding section. These items are 1) worked on a community project, 2) served as an officer or a committee of a local organization, 3) volunteered for health care or fight disease, 4) volunteered youth program, 5) volunteered to help poor or elderly, and 6) volunteered for health care or fight disease.

Each item is a dichotomous nominal variable, where "yes" is equivalent a resident participating in the activity. The community development action index assigns a score of "1" to respondents who participate in the above activities in past 12 months. In order to obtain only reliable respondents, at least 7 out of 11 responses should be given for a score on community development action to be computed. This index is thus count-level measure, indicating the

number of community development actions an individual has participated in the same time period.

Table 4.2 shows the results of item analyses that are conducted on the community development action items. Alpha coefficient is used to describe the internal consistency of the index extracted from dichotomous questionnaires. Also, corrected item-total correlation is computed between each item on the scale and the total score, excluding the item of interest from the total score in order not to produce spuriously positive correlations. All the correlations are moderate (r=.34 to 52) except for one item: "participated in demonstrations, boycotts, or marches" (r=.28). The 11 community development action items exhibit sufficient level of reliability (coefficient alpha= .77).

Table 4.2

Community Development Action Index

Community development action (in the past 12 months)	Corrected item-total correlation	Coefficient Alpha
Financial contribution to non-religious charities	.34	
Worked on a community project	.52	
Served as an officer or a committee of a local organization	.41	
Belonged to any group that took local action for reform	.43	
Attended a political meeting or rally	.39	.77
Participated in demonstrations, boycotts, or marches	.28	
Signed a petition	.35	
Volunteered for health care or fight disease	.42	
Volunteered youth program	.46	
Volunteered to help poor or elderly	.52	
Volunteered for neighborhood or civic group	.51	

Individual-level Independent Variables

Bonding Capital. The SCCBS provides two measures of bonding social capital: Informal Social Interaction Index and Faith-based Social Capital Index. In this study, Informal Social Interaction Index is used, which is the frequency of the following questions in the past twelve

months: 1) having friends visit home; 2) visiting with relatives; 3) socializing with co workers outside of work; 4) hanging out with friends in public places; and 5) playing cards and board games. Reponses are coded from 0 (never did this) to 60 (more than once a week) for each item. Then, the index is calculated as the mean of the standardized responses to the 5 questions[9]. As shown in Table 4.3, each of the five items is correlated with the total score from .34 to .55, representing moderate correlation. The internal consistency of the Informal Social Interaction Index is low but acceptable (a coefficient alpha of .68).

Table 4.3

Items on the Bonding Capital Measure

Informal Social Interaction Index	Corrected item-total correlation	Coefficient Alpha
Frequency: had fiends over to your home	.55	
Frequency: hung out with friends in a public place	.49	
Frequency: socialized with co-workers outside of work	.42	.68
Frequency: played cards or board games with others	.39	
Frequency: visited with relatives.	.34	

Bridging Capital. Diversity of friendship index is used to measure bridging capital. This measure is obtained from the questions on traits of respondents' social ties in the case of personal friends. These questions capture important information about relationships that the respondents identified as important to them, including the presence of a race bridge among the friendships. It thus represents the heterogeneous range of social networks maintained by respondents. This index is composed of 11 simple dichotomous questions of the different kinds of personal friends the respondent has. The questions are "Do you have personal friend: 1) who owns a business; 2)

[9] Standardized scores were obtained as follows: having friends visiting home = (Q1-11.67)/17.91; visiting with relatives = (Q2- 25.02)/22.38; socializing with co-workers = (Q3- 14.08)/18.42; hanging out with friends = (Q4-15.51)/19.60; and playing cards= (Q5-11.67)/.17.91.

who is a manual worker; 3) who has been on welfare; 4) who owns a vacation home; 5) with different religious orientation; 6) who is white; 7) who is Latino or Hispanic; 8) who is Asian-American; 9) who is black or African-American; 10) who is gay or lesbian; and 11) who is a community leader. The index is scored by the simple count of diverse friendship (0~11). Each item correlates with the total score moderately (greater than r=.30), and the index produces sufficient coefficient alpha of .73 (Table 4.4).

Table 4.4

Items on Bridging Capital Measure

Diversity of Friendship Index	Corrected item-total correlation	Coefficient Alpha
Has personal friend who owns a business	.44	
Has personal friend who is black or African-American	.41	
Has personal friend who is gay or lesbian	.42	
Has personal friend who owns a vacation home	.40	
Has personal friend who is Asian	.38	
Has personal friend who is a manual worker	.39	.73
Has personal friend who is Latino or Hispanic	.36	
Has personal friend with different religious orientation	.37	
Has personal friend who is a community leader	.35	
Has personal friend who has been on welfare	.33	
Has personal friend who is white	.32	

Linking Capital. The SCCBS does not provide direct information about linking capital. But the data includes a total of eighteen types of formal organizational involvement questions. Among those organizations, I found eleven development-related institutional involvement items: 1) charity or social welfare organization; 2) professional, trade, farm or business association; 3) Hobby, investment, or garden club; 4) youth organization; 5) neighborhood association; 6) service or fraternal organization; 7) self help program; 8) parent association or other school support group; 9) organization affiliated with religion; 10) seniors groups; and 11) church member. Linking capital is measured by the count of involvement in these eleven categories. As

shown in Table 4.5, corrected item-total correlation and internal consistency of these dichotomous questions are low (coefficient alpha=.65). These items may differ in content from the each other in that a participant in an organization does not necessarily participate in other organizations. However, these items represent an important aspect of linking: the size of organizational connections.

Table 4.5

Items on Linking Capital Measure

Formal Organizational Involvement Index	Corrected item-total correlation	Coefficient Alpha
Charity or social welfare organization	.42	
Youth organization	.32	
Neighborhood association	.31	
Self-help program	.30	
Parent association or other school support group	.30	
Organization affiliated with religion	.30	.65
Church member	.30	
Professional, trade, farm or business association	.30	
Service or fraternal organization	.28	
Seniors groups	.27	
Hobby, investment, or garden club	.27	

Individual-level Controls. Individual-level control variables are considered for the study. Individual characteristics play a central role in any model of social capital, since they affect the types of social networks. Those characteristics include gender, age, race, marital status, and socioeconomic status. In this study, socioeconomic status index is constructed from the sum of education and income level. The minimum score is 2 (less than high school education and less than $20,000 total 1999 household income), and the maximum is 10 (college graduate and greater than $100,000).

Neighborhood-level Independent Variable

Social Cohesion. Social trust index is used for the measure of social cohesion at the neighborhood-level, which is the most popular measure to obtain the neighborhood-level social capital (Putnam, 2000; Sampson et. al., 1997). In this study, the index is generated from the aggregates of individual responses within each neighborhood, assuming that respondents can serve as judges of their neighborhood. Social trust index is a composite mean of six items. Respondents are asked "how much you can trust: 1) general people; 2) people in your neighborhood; 3) co-workers; 4) fellow congregants; 5) employees where you shop; and 6) the police in your local community?" The response scale is a four-point scale ranging from 1= Trust them a lot to 4= Trust them not at all. The index is calculated as the mean of the standardized responses to the questions[10]. At least three of these answers should be provided for a score to be calculated. Table 4.6 presents a summary of item analysis for Social Trust Index. The corrected item-total correlations range from .49 to .63, and the index shows satisfactory internal consistency (coefficient alpha = .80)

[10] Each item was standardized so that had a mean of 0 and standard deviation of 1, using the formula of (individual trust item score – mean)/ standard deviation. Thus, standardized general trust = (general trust-1.99)/.96, standardized trust neighbor = (trust neighbor-1.75)/.89, standardized trust co-workers = (trust co-workers-1.68)/.85), standardized trust fellow congregants = (trust fellow congregants-1.38/.68), standardized trust employee = (trust employee-2.02)/.87, and standardized trust police = (trust police-1.74)/.90.

Table 4.6

Items on the Social Cohesion Measure

Social Trust Index	Corrected item-total correlation	Coefficient Alpha
Most people can be trusted vs. you can't be too careful	.49	
Trust people in your neighbors	.63	
Trust people you work with	.60	.80
Trust people at your church or place of worship	.53	
Trust people who work in the stores where you shop	.58	
Trust local the police in your local community	.50	

Neighborhood Social Composition Variables. All neighborhood social composition variables are obtained from the 2000 U.S. Census. The selection of these variables is informed from prior studies (e.g., Drukker & Os, 2003; Sampson, et al., 1997; Sampson et al., 2002). First of all, neighborhood poverty is considered for the study models, which indicates the percentage of persons living below the poverty line. Many studies have listed socioeconomic deprivation as the most important neighborhood effect on individuals. A common way to measure socioeconomic deprivation is to calculate factor scores from a number of indicators such as percentage of poverty rate, unemployment rate, social security, mean income, and immigrants concentration (c.f. Drukker & Os, 2003), yet the concern of this study is to examine separately the contextual effect of neighborhood poverty from other neighborhood social composition variables.

Second, the Gini Coefficent, a commonly used summary measure of income inequality, is used for measuring income inequality. The Gini Coefficient is calculated from the Lorenz Curve, which is a graphical representation of the cumulative share of total income according to income intervals. The value of the Gini Coefficient rages from .0 + 1.0 with 0.0 indicating a completely equal income distribution.

Third, the Dissimilarity Index measures racial segregation for the sample neighborhoods, which is provided by the Populations Study Center at the University of Michigan. The Dissimilarity Index is the most commonly employed measure of segregation in social research (Massey, White, & Phua, 1996) that represents spatial unevenness in the distribution of a racial group population. The index rages from 0 to 100, with 0 representing perfect integration and 100 representing absolute segregation when the two groups are totally separated. The measure in this study compares the distribution of racial groups of the census track to the distribution at the county level. A limitation of the dissimilarity index is that it can compare only two groups. Thus, in this study, the measure is average score of dissimilarity between white and other racial/ethnic groups.

Finally, residential stability is measured by calculating the percentage of persons living in the same house for the past 5 years (e.g., Sampson et al., 1997).

Data Screening

SCCBS dose not have a great deal of missing data, but several alternative procedures are instituted to correct for the missing data. As a general rule, variables containing missing data on 5% or fewer of the cases can be ignored (Meyers, Gamst & Guarino, 2006). Therefore, no imputation method is applied for most demographic variables if there were only a few missing data. However, major study variables and some demographic variables that contain some amount of missing data are considered for imputation. First, listwise case deletion is used for race variable. This approach does not result in significant sample losses and statistical power. Since a few subjects account for a substantial amount of missing data and the data are missing at random, simply deleting subjects with missing data will not bias the analytic sample (Meyers, Gamst & Guarino, 2006; Newton & Rudestam, 1999).

Second, mean and median substitution is used for age and education, respectively. This is the most common and conservative of the imputation method, assuming that the average of the missing values would be equal to the average of the valid values. In the case of education, median value of sub-racial group is considered for substitution (e.g., 2 (high school graduate) for Hispanic, 3 (some college) for White, African American and other, and 4 (college graduate) for Asian).

Third, Expectation Maximization (EM) estimation was used impute missing data for the measures of household income variable. Currently, Missing Value Analysis in the SPSS software program provides EM imputation, using a maximum likelihood approach to estimate missing values. This method is superior to other approaches such as deleting cases or means substitutions, but still there is a tendency to over-fit the missing values because missing values are predicted from other independent variables (Raudenbush & Bryk, 2002).

Outliers are also identified by an inspection of the frequency distribution and histogram. Cases with Z scores exceeding ± 2.5 are considered as outliers for deletion. For example, outlier examination of the age variable suggests that there are at least three outliers as possible candidates for deletion (age of 118, 115, and 114). Also, multivariate outliers are checked with Mahalanobis distance values for each case in our data file. These distance measures identify twelve cases that equal or exceed a chi-square criterion at alpha .001. Finally, at the individual level, a total of 21,871 cases (approximately 97.7% of the 22,383 individual respondents) are remained in the analytic model, providing information about all socio-demographic, social capital and outcome variables.

Table 4.7

Number of Missing Values and Imputation on Individual Level Variables (N=22,383)

Variables	Missing Cases		
	N	%	Imputation
Age	583	2.6	Mean substitution
Gender	0	0	-
Race or ethnicity	501	2.2	Listwise deletion
Marital status	173	.8	-
Employment status	69	.3	-
Years resident in the neighborhood	23	.1	-
Home ownership	118	.5	-
Education	310	1.4	Median by racial sub-group
Household income	2,366	10.6	EM algorithm
Bonding capital	42	.2	EM algorithm
Bridging capital	0	0	-
Linking capital	0	0	-
Community development action	32	.1	EM algorithm

Analytic Procedures

As noted earlier, social capital has a multi-level structure where individuals are nested within larger geographical units. The multi-level data introduce certain statistical challenges. In particular, researchers must address the problems of interdependence of observations within clusters (Bryk & Raudenbush, 1992). In short, all people in the same neighborhood have the same value on the neighborhood variables, which violates the assumption of the traditional ordinary least square analysis (independence for observations). There are a number of empirical strategies for handling multi-level data structure. Earlier studies have tended to opt for dummy variable models (Steenbergen & Jones, 2002), but a more appropriate model for multi-level data is a hierarchical linear model (HLM) (Raudenbush, Bryk, Cheong, & Congdon, 2004).

While dummy variable model is inadequate in how the higher-level unit variables impact lower-level units because dummy variable just indicates subgroup differences, HLM improves estimation of individual outcomes by using all of the information to provide each higher-level

unit with another prediction equation for individuals. For example, HLM allows multiple neighborhood characteristics and capture the neighborhood variance in the individual outcome through the inclusion of random effects. Furthermore, the nature of relationships in the lower-level units (e.g., individual) have variability across higher-level units (e.g., neighborhood), and HLM tests hypotheses about how variables measured at higher-levels affect relations occurring at the lower-level (Hofmann, Griffin & Gavin, 2000). That is, HLM allows for modeling of multi-level dependence, reducing potential bias and inefficiency in parameter estimates and increasing the explanatory power (Raudenbush & Bryk, 2002).

In this study, therefore, the hierarchical linear and nonlinear models and its statistical package HLM 6.0 are used to fit the multi-level data. It is assumed that the individual-level dependent variables are explained by both neighborhood and individual-level functions of independent variables. This represents a hierarchical model with two equations that are estimated simultaneously: the within-neighborhood and the between-neighborhood equations. The within-neighborhood model regresses individual outcomes on individual-level variables within each neighborhood, while the between-neighborhood model regards parameters from the within-neighborhood equations as a function of the neighborhood-level variables. HLM is powerful in estimating cross-level effects, including the effects of neighborhood variables on both the average level of outcomes within the neighborhood, and on certain interesting structural relationships within neighborhood (Garner & Raudenbush, 1991).

A brief overview of the procedure for testing the hypotheses using HLM is as follows. First, the hierarchical linear model begins with level-1 model. Specifically, the within-neighborhood model regresses the dependent measure on individual-level variables. The within neighborhood (Level 1) model employed in this study can be expressed as follows.

(1) $Y_{ij} = \beta_{0j} + \beta_{1j}BON + \beta_{2j}BRI + \beta_{3j}LIN + \beta_{4j}IND + r_{ij}$

Where Y_{ij} is the individual's scores on each the index of community development action; β_{0j} is the intercept; $\beta_{1j,}\beta_{2j,}\beta_{3j....}$ are sets of partial regression coefficients of the individual variables in j neighborhood; BON represents bonding capital; BRI is bridging capital; LIN is linking capital; IND reflects individual characteristics (e.g., gender, age, race, education, income); and r_{ij} is the unique contribution of each individual i in neighborhood j (level 1 random effect). Here, the intercept β_{0j} is the mean score in a neighborhood effect after the effects of individual level parameters are adjusted.

Second, the level-2 (between neighborhood level) model is tested. This model captures the impacts of neighborhood effects on individual community development action. The following equations indicate that each level-1 intercept is the function of four neighborhood social composition variables, social cohesion, and error term.

(2a) $\beta_{0j} = \gamma_{00} + \gamma_{01}POV + \gamma_{02}INQ + \gamma_{03}SEG + \gamma_{04}RES + \gamma_{05}SOC + u_{0j}$

(2b) $\beta_{1j} = \gamma_{10} + u_{1j}$

(2c) $\beta_{2j} = \gamma_{20} + u_{2j}$

(2d) $\beta_{3j} = \gamma_{30} + u_{3j}$

(2e) $\beta_{4j} = \gamma_{40} + u_{4j}$

In this equation, the γ represent the fixed level-2 parameters, and the average scores for the study area: γ_{00} is the fixed effect of intercept, and $\gamma_{01,}\gamma_{02,}\gamma_{03...}$ are the regression coefficients for the effect of neighborhood-level variables on the adjusted neighborhood outcomes; POV stands for neighborhood poverty; INQ stands for income inequality; SEG is racial segregation; RES is residential stability; SOC denotes neighborhood social cohesion; and u_{0j} is error. All

neighborhood level regression equations model each of the within neighborhood regression coefficients as a function of between neighborhood-level independent variables and error terms.

Third, since another interest is cross-level interaction, alterative equations are included. In this model, both slope and intercept at the level-1 were allowed to vary, and a level-2 variable, social cohesion, is used to predict the level-1 slope. The equations for this model were as follows.

(3a) $\beta_{0j} = \gamma_{00} + \gamma_{01}POV + \gamma_{02}INQ + \gamma_{03}SEG + \gamma_{04}RES + \gamma_{05}SOC + u_{0j}$

(3b) $\beta_{1j} = \gamma_{10} + \gamma_{10}\,(SOC) + u_{1j}$

(3c) $\beta_{2j} = \gamma_{20} + \gamma_{20}\,(SOC) + u_{2j}$

(3d) $\beta_{3j} = \gamma_{30} + \gamma_{30}\,(SOC) + u_{3j}$

(3e) $\beta_{4j} = \gamma_{40} + u_{4j}$

The full hierarchical model is achieved by substituting the expressions for Equation 2 or 3 into Equation 1. Raudenbush and Bryk (2002) referred to this as the combined model. Consequently, this multi-level approach allows for the assessment of independent effects of both neighborhood-level and individual-level predictors on the outcomes. In addition, this procedure also allows for testing cross-level interactions (social cohesion and social capital). These analyses provide a means for evaluating the causal significance between the levels of social capital and social cohesion. This ensures that the effects of social capital are not spurious, while providing useful information about their comparative magnitude.

It is important to note here that the dependent variable in this study is not a continuous but a categorical variable (discrete in nature). The measure of community development action is

the count measure that showed a high number of zeros in the data[11]. Thus, the models that this study estimates are hierarchical generalized linear model (HGLM), a specialized approach to the categorical dependent variables, including dummy, ordinal and count dependent variables. Fortunately, the recent version of HLM (6.0) allows for an estimation of Poisson models for count data.

For interpretation, unstandardized regression coefficients (b), standard errors, t-values, and event ratios will be presented for all analyses and p-values of 0.05 will be reported as statistically significant. However, due to a large sample sizes, a number of significant effects can be detected even when that effect is very small. It is possible to have so much power that small effect sizes can be distinguished. Thus, the interpretation of event ratios may help us understand the meaningful results of the statistics.

[11] The count level measure violates several underlying assumptions of linear model: first, count data is not continuous but discrete; second, it is truncated at zero by definition; third, it is not normally distributed but typically displays a distinct asymmetry. For these reasons, analytical approaches of linear model are not appropriate for this study.

CAHPTER V

RESULTS

This chapter presents the results in three sections. It begins with descriptive statistics of sample characteristics, and then proceeds to examine the variance in the dependent variable. Bivariate analyses are included in the second. This section reports on the inferential statistics regarding the association between neighborhood-level characteristics and the association between individual-level characteristics. Of particular importance are the results of multi-level modeling tests in the third section. A series of hierarchical linear and nonlinear models are conducted to predict community development action, followed by the description of results in each statistical model. Finally, a summary of results for each hypothesis is presented. The statistical analyses in the study are conducted with Hierarchical Linear and Nonlinear Modeling (HLM) 6.0.

Descriptive Statistics

Characteristics of County Level FIPS Codes

Descriptions of the neighborhood variables and their means, standard deviations and ranges are listed in Table 5.1. The sample consisted of 52 counties, which varied widely in population and social composition variables. The range of total population size was 25,303 to 9,519,338 (Median = 469,301). On average, seventy-five percent of the residents were White, and the remaining were African American (14%), Hispanic (9%), and Asian (4%). Household income averaged $45,558 with a rage of $33,706 to $70,819. The means and standard deviations of four measures of neighborhood-level social composition were provided. The average

neighborhood poverty rate was around 11 percent, and the average income inequality index, GINI coefficient, was .45. About half of the residents were living in the same house for at least five years. Regarding racial segregation, dissimilarity index scores reflected important asymmetries between white and minorities. The index described that dissimilarity scores between White and African American ranged from 23.2 to 86.3. Dissimilarity between White-Hispanic (13.0 to 63.1) and White- Asian (5.9 to 51.1) were more moderate and run a narrower range than that of White-African American (See Figure 5.1). Finally, social cohesion measure ranged from -.27 to .38. Since neighborhood-level social cohesion was measured by the aggregation of individual responses about social trust, this measure produced less variance between neighborhoods than the variance within neighborhoods.

Table 5.1

Descriptive statistics of County Level FIPS Codes (N=52)

Characteristic	Mean	SD	Minimum	Maximum
Total population	953,787	1,560,437	25,303	9,519,338
White, %	74.66	15.76	35.88	97.82
African American, %	13.93	13.14	.23	54.07
Hispanic, %	8.97	10.94	.59	44.58
Asian, %	3.92	5.73	.12	30.89
Median household income, $	45,558	7,873	33,766	70,819
Neighborhood poverty, %	11.03	3.60	3.61	19.67
Gini coefficient	.45	.03	.37	.54
Residential stability, %	49.00	5.52	38.08	59.15
Racial segregation (Dissimilarity)				
White-African American	53.79	16.33	23.20	86.30
White-Hispanic	42.20	13.41	13.00	63.10
White-Asian	35.40	9.33	5.90	51.10
Social cohesion (Social Trust Index)	.03	.16	-.27	.38

Characteristics of Individuals

The total number of individual observations nested within 52 neighborhoods was 22,383. Since data screening procedures deleted 512 cases because of missing data and outliers, the final

individual sample size was 21,871 (97.7% of 22,383 respondents in 52 FIPS codes). Descriptive statistics for the sample is provided in Table 5.2. Age was centered about its mean, 44 years with a standard deviation of 16. Approximately 58 % of the respondents were female and 42% were male. 71% of respondents were White, followed by African American (13%), Hispanic (9%), and Asian (3%). 49% were married, and 27% were never married. A total of 67% were employed at time of survey.

Approximately 32 % of respondents, including students, retired, homemakers, and people afflicted with a disability were classified as not-in-labor force. Regarding residence years in the neighborhood, more than 27% of respondents reported that they lived for one to five years and 26% of respondents lived in the neighborhood for more than 20 years. Percentage of home ownership was 67%. Percentages of respondents by education were distributed by less than high school (7%), high school diploma (25%), some college (33%) and college degree (36%). The percentage of household income in 1999 for the total sample was as follows: less than $20,000 (15%), 20,000-30,000 (15%), 30,000-50,000 (26%), 50,000-75,000 (20%), 75,000-100,000 (12%), and over $100,000 (13%).

Table 5.2 also includes mean, standard deviation, and range for standardized social capital measures. For the total sample, the initial bonding capital scale had a range of -.97 to 2.18, with higher scores indicating a more informal interaction within close networks. The mean of this scale was -.01 with a standard deviation of .66. The initial bridging capital scale had a range of 0 to 11, indicating the number of bridging networks each respondent had. The mean number of bridging networks was 6.34, with a standard deviation of 2.66. The initial linking capital scale had a lower mean of 2.73, with a standard deviation of 2.15. This measure also indicates the number of institutional membership that raged from 0 to 11. Even though bridging

Table 5.2

Descriptive statistics of individual sample (N=21,871)

Characteristic	N	%	M(SD)	Range
Age			44.35 (16.47)	18~99
Gender				
Male	9,056	41.4		
Female	12,815	58.6		
Race or ethnicity				
White	15,455	70.7		
African American	2,932	13.4		
Hispanic or Latino	2,041	9.3		
Asian	627	2.9		
Marital Status				
Never married	5,810	26.7		
Married	10,800	49.7		
Divorce/widowed/separated	5,133	23.6		
Employment				
Employed	14,620	67.0		
Years resident in the neighborhood				
Less than one year	1,477	6.8		
One to five years	5,958	27.3		
Six to ten years	3,341	15.3		
Eleven to twenty years	3,717	17.0		
More than twenty years	5,662	25.9		
All my life	1,694	7.8		
Home ownership				
Own	14,666	67.4		
Education				
Less than high school	1,554	7.1		
High school/GED	5,382	24.6		
Some college	7,158	32.7		
College degree	7,777	35.6		
Household income				
Income less than $20,000	2,883	13.2		
20,000~30,000	3,183	14.6		
30,000~50,000	5,965	27.3		
50,000~75,000	5,166	23.6		
75,000~100,000	2,277	10.4		
Over $100,000	2,397	11.0		
Social capital				
Bonding Capital			0 (1.00)	-1.47-3.32
Bridging Capital			0 (1.00)	-2.38-1.75
Linking Capital			0 (1.00)	-1.27-3.84
Community development action			3.13 (2.58)	0-11

and linking capital measures were count variables, all three social capital measures were normally distributed within the +1.00 to -1.00 range for skewness and kurtosis. In the study, these measures were standardized so that had a mean of 0 and standard deviation of 1, in order to examine the comparable effects of each measure on community development action.

Descriptive statistics were also obtained for community development action. It ranged from 0 to 11, and the mean number of community development action was 3.12 with standard deviation of 2.58. A histogram illustrates the distributions of the dependent variable. As shown in Figure 5.1, this variable was strongly positively skewed. Initially, 16.3 % of the respondents reported that they had never participated in any community development action in the last year, and 18.1% reported one event a year (mode). The results showed that approximately 80% of the respondents had generally participated in community development action less than five events a year. Since a count variable measures how many times something has happened, count data is usually truncated at zero and displays a distinct asymmetry.

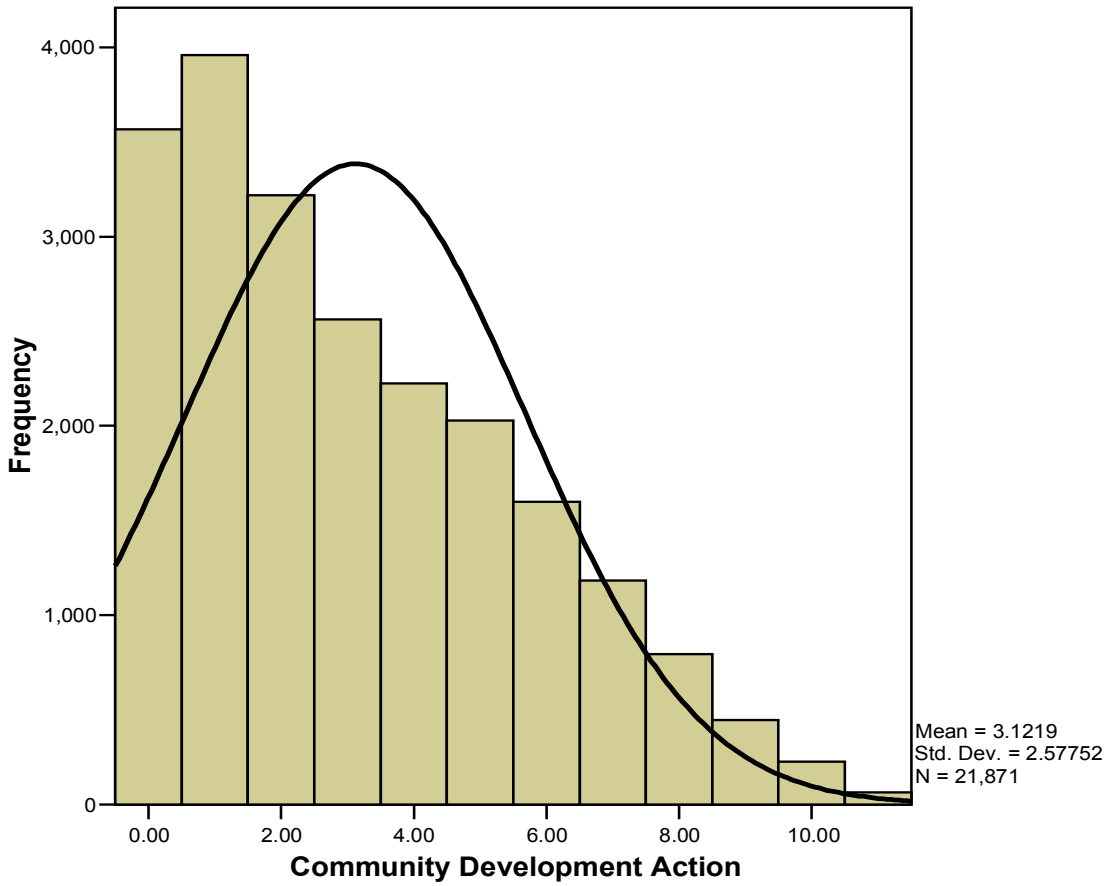


Figure 5-1 A Histogram of Community Development Action Measure

Correlates of Social Cohesion and Social Capital

Neighborhood Social Composition and Social Cohesion

This section presents the results from the Pearson correlation coefficients to examine inter-relationships among the neighborhood characteristics. Using the Bonferroni approach to control for Type I error across the 28 correlations, a p value of less than .002 (.05/28=.0019) was required. As results, Table 5.3 shows that 15 out of the 28 correlations were statistically significant and were greater than .42. In particular, the social cohesion measure was significantly correlated with neighborhood social composition measures in the predicted

direction. It was negatively linked to neighborhood poverty(r=-.61, p<.001), income inequality(r=-.60, p<.001), White-African American segregation (r=-.68, p<.001), and White-Hispanic segregation (r=-.64, p<.001). It was positively related to White homogeneous neighborhood(r=.75, p<.001). These correlations were all strong in magnitude, indicating that neighborhood social composition matters in building social cohesion.

Also, poverty rate was positively and significantly related to income inequality (r=.69, p<.001) and was negatively linked to the percentage of White in the neighborhood (-.55, p<.001). Both neighborhood poverty rate and income inequality had stronger relationships to White-African American segregation than any other race or ethnic segregation. The remaining correlation coefficients were moderate and not statistically significant. The measure of residential stability was not related to any other neighborhood social composition and social cohesion.

Table 5.3

Intercorrelations among the Neighborhood Characteristics (N=52)

	1	2	3	4	5	6	7
1. Poverty rate	-						
2. Income Inequality	.691*	-					
3. Residential Stability	-.088	-.174	-				
4. Population-White, %	-551*	-.650*	.308	-			
5. Segregation W-B	.442*	.635*	.021	-.682*	-		
6. Segregation W-H	.332	.386	-.219	-.658*	.678*	-	
7. Segregation W-A	.327	.477*	.167	-.409	.605*	.354	-
8. Social cohesion	-.608*	-.597*	.238	.745*	-.677*	-.644*	-345

*p<.002

Individual Characteristics and Social Capital

Before testing a series of hypotheses proposed for this study, the author examined the mean differences in social capital measures by individual characteristics. These characteristics

included age, gender, race or ethnicity, marital status, employment status, residence length, home ownership, education, and household income. Table 5.4 shows the results of one-way ANOVAs. All comparisons produced statistically significant differences at the .01 level, with very small effect size of η^2 = from .0003 to .081. The effect size range indicates that each demographic characteristic explained only .03% to 8% of variation in social capital measures.

Age groups differed in the mean of bonding, bridging and linking capital. The youngest group (18-34) had the highest level of bonding capital (M=.35), the lowest level of linking capital (M=-.25), and relatively low level of bridging capital (M=-.05). Conversely, the middle age groups (35-49 and 50-64) reported relatively high level of bridging (M=1.0 and 1.2, respectively) and linking capital (M=1.2 and 1.3, respectively), but low level of bonding capital scale. Elderly people (over 65) reported the lowest level of bonding (M=.-24) and bridging capital (M=-.31) but moderate level of linking capital.

Gender also had a statistically significant effect on the level of social capital. Females reported higher level of bonding and linking capital but lower level of bridging capital than males. Comparisons of race or ethnic groups indicated that White people had more bonding (M= .05) and bridging capital (M=.06) than any other minority group. Interestingly, results show that African Americans had the highest level of linking capital (M=.18), but the levels of the other two social capital measures were low (M=-.09). Hispanic or Latino population had the lowest level of all three social capital measures (M=-.24, -34, -40).

The effect of marital status on social capital measures was also interesting. Never-married respondents reported high level of bonding capital (M=.27) but low level of bridging (-.04) and linking (-.26). Conversely, divorced/separated/widowed respondents had the highest level of bridging (M=.05) and linking (M=.13), but lowest level of bonding capital (M=-.11).

But the effect size of marital status was very low (less than 2%). Also, the employed were more likely to have higher levels of all social capital measures than the unemployed (M=.03, .12, .03).

The effect of residence years in the neighborhood on social capital measures was somewhat complex. Overall, longer residence years were positively related to bridging and linking capital than residence years less than five years. But respondents who answered "all my life" were relatively lower level of bridging and linking capital. This may reflect the population of the 65-over age group who reported low levels of social capital measures. Home ownership also had significant mean differences on social capital measures.

Finally, the association between socioeconomic status and social capital measures were rather stronger than the association between the other individual characteristics and social capital measures. The results show that those who had higher education and income level reported higher levels of community development action. For the total sample, individual-level education factor explained only a small amount of variation in bonding (η^2=.013), but approximately 8% of variation in bridging (η^2=.081) and linking (η^2=.075). Household income factor also explained 5-6% of the variation in bridging (η^2=.062) and linking (η^2=.054), compared to very small amount of bonding (η^2=.005).

Table 5.4

Univariate Mean Differences on Social Capital Measures

	Social Capital Measures		
	Bonding	Bridging	Linking
Individual Characteristics	Mean (SD)	Mean (SD)	Mean (SD)
Age			
18-34	.35 (1.09)	-.05 (.97)	-.25 (.91)
35-49	-.10 (.94)	.10 (1.01)	.12 (1.02)
50-64	-.23 (.84)	.12 (1.00)	.13 (1.03)
65+	-.23 (.94)	-.31 (.98)	.08 (.99)
Gender			
Male	-.03 (1.01)	.02 (.99)	-.06 (.99)
Female	.02 (1.00)	-.02 (1.01)	.04 (1.00)
Race or ethnicity			
White	.05 (.98)	.06 (.96)	.03 (.96)
African American	-.09 (1.06)	-.09 (1.04)	.18 (1.13)
Hispanic or Latino	-.24 (1.02)	-.34 (1.15)	-.40 (.96)
Asian	-.17 (.95)	-.33 (1.02)	-.26 (.94)
Marital Status			
Never married	.27 (1.11)	-.04 (.99)	-.26 (.90)
Married	-.06 (1.00)	-.07 (1.04)	.02 (1.03)
Divorce/widowed/separated	-.11 (.91)	.05 (.98)	.13 (1.01)
Employment			
Employed	.03 (.98)	.12 (.97)	.03 (1.01)
Others	-.06 (1.03)	-.23 (1.02)	-.05 (.98)
Years in the neighborhood			
Less than one year	.07 (1.08)	-.05 (1.03)	-.28 (1.04)
One to five years	.01 (1.00)	-.05 (1.01)	-.16 (.95)
Six to ten years	-.01 (.99)	.03 (.99)	.05 (1.01)
Eleven to twenty years	-.01 (.99)	.08 (.98)	.10 (1.00)
More than twenty years	-.06 (.98)	.02 (1.00)	.14 (1.00)
All my life	.13 (1.03)	-.07 (.97)	.01 (.99)
Home ownership			
Rent	.07 (1.07)	-.11 (1.04)	-.29 (.93)
Own	-.04 (.96)	.06 (.97)	.14 (1.01)
Education			
Less than high school	-.35 (.99)	-.75 (1.01)	-.59 (.80)
High school/GED	-.02 (1.06)	-.26 (.99)	-.28 (.90)
Some college	.11 (1.03)	.10 (.95)	.02 (.97)
College degree	-.02 (.91)	.24 (.93)	.29 (1.02)
Household income			
Income less than $20,000	-.16 (1.05)	-.43 (1.07)	-.35 (.92)
20,000-30,000	-.04 (1.05)	-.28 (1.01)	-.26 (.94)
30,000-50,000	.04 (1.00)	-.01 (.98)	-.06 (.98)

50,000-75,000	.02 (.96)	.15 (.94)	.14 (.99)
75,000-100,000	.05 (.98)	.23 (.92)	.25 (.99)
Over $100,000	.07 (.95)	.38 (.87)	.38 (1.01)

Note: All F-test results were statistically significant at the level of .001, except for bridging capital by gender, which was significant at the level of .01.

In summary, the results confirmed that social capital is not a uni-dimensional construct. While the average level of bonding capital was high among young people who have never been married and whose residential years were less than five years, the average levels of bridging and linking capital were high among middle age groups, homeowners, and those with long residential years.

The mean differences by the socioeconomic status were higher in bridging and linking capital but not much in bonding capital. Yet the pattern was similar across the socioeconomic status groups. Respondents with low education reported having fewer informal socializing (bonding), diverse friendships (bridging) and institutional linkages (linking) than residents of those with higher education. Household income effect on social capital was much apparent. The poor reported that they were much less likely to build bonding, bridging, and linking capital. Even though these bivariate findings do not reveal any causal relationship, it can be concluded that social capital was related to individual characteristics, but different with respect to the forms of social capital. As shown in Table 5.5, overall, zero-order correlations between social capital measures were small in magnitude, though these correlations were statistically significant.

Table 5.5

Intercorrelation between Individual-Level Social Capital Measures (N=21,871)

	1	2
1. Bonding Capital	-	
2. Bridging Capital	.245*	-
3. Linking Capital	.125*	.353*

* p<.001

Multi-level Analyses: Hierarchical Generalized Linear Models

The multi-level analysis in this study is a six-stage strategy in accordance with Raudenbush and Bryk (2002). In the first stage, a fully unconditional model decomposes variance in the dependent variable across levels of analysis. The presence of significance between-group variance in the outcome variable is the pre-requirement for testing the multi-level hypotheses. The second stage is a random coefficient regression model to test Hypothesis 1 (network dynamic model). At the level-1 analysis, relationships between three individual-level social capital measures and community development action are estimated separately for each neighborhood unit, and it is investigated whether the association differed at the level-2 (neighborhood-level). While each of individual sociodemographic and socioeconomic characteristics remains as fixed effects, social capital measures are allowed to have random effects. The third stage is the intercepts as outcomes model to test Hypothesis 2 (collective efficacy model). Here, community development action is to be predicted by neighborhood-level social cohesion, controlling for individual level predictors. The key feature of this model is that only the intercept parameter in the level-1 model is assumed to vary at level-2. Fourth, the intercepts and slopes as outcomes model illuminates how the differences among neighborhoods influence the relationship between social capital and community development action (synergy model). Specifically, neighborhood-level social cohesion is expected to have influences on the effects (slopes) of social capital measures on community development action.

While the above stages examine whether social capital or social cohesion had an independent effect on community development action, the last two stages add mediation and moderation models to the analysis. Fifth, each social cohesion and social capital measure is

added to the original intercepts as outcomes model, assuming to mediate the association between neighborhood social composition and community development action, and, finally, individual-level socioeconomic status is added as an interaction term that moderates the association between social capital and the outcome.

Table 5.6 describes the equations for the study models. In this study, all HGLM models are run allowing for a Poisson distribution with equal exposure[12] which would be a reasonable choice for the count data analysis. The results report unstandardized coefficients, robust standard errors, t-values, event ratios and its 95% confidence intervals. Coefficient estimates are reported, based on a unit-specific model which would be used when a researcher is interested in how a change in a level-2 variable can be expected to affect a particular neighborhood mean rather than the overall population mean (Raudenbush & Bryck, 2002). Also, all level-1 independent variables are centered on the group mean, whereas level-2 variables are centered on the grand mean.

[12] Equal exposure means that the time interval during which the event could accumulate (one year) would be the same for each neighborhood.

Table 5.6

Simple Specification of Two Level Models

Model	Level 1	Level 2
One way ANOVA model	$Y_{ij} = \beta_{0j} + r_{ij}$	$\beta_{0j} = \gamma_{00} + u_{0j}$
Random coefficient model	$Y_{ij} = \beta_{0j} + \beta_{1j}$ (social capital) $+ r_{ij}$	$\beta_{0j} = \gamma_{00} + u_{0j}$ $\beta_{1j} = \gamma_{10} + u_{1j}$
Intercepts as outcomes model	$Y_{ij} = \beta_{0j} + \beta_{1j}$ (social capital) $+ r_{ij}$	$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (social cohesion) $+ u_{0j}$ $\beta_{1j} = \gamma_{10} + u_{1j}$
Intercepts and slopes as outcomes model	$Y_{ij} = \beta_{0j} + \beta_{1j}$ (social capital) $+ r_{ij}$	$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (social cohesion) $+ u_{0j}$ $\beta_{1j} = \gamma_{10} + \gamma_{11}$ (social cohesion) $+ u_{1j}$

Note: γ_{00} = mean of the intercepts across neighborhoods
γ_{10} = mean of the slopes across neighborhoods (Hypothesis 1)
γ_{01} = slope of the level 2 predicting β_{0j} (Hypothesis 2)
γ_{11} = slope of the level 2 predicting β_{1j} (Hypothesis 3)
r_{ij} = level 1 residual variance
u_{0j} = variance in intercepts
u_{1j} = variance in slopes

One-Way Random Effect ANOVA Model

The one-way ANOVA model (fully unconditional model) investigated the amount of variance in the dependent variable by partitioning the total variance into within group and between group components. It was assumed that there would be significant variation between neighborhoods in the dependent variable. This is conceptually equivalent to the one-way ANOVA, which examines the group membership effect. That is, this model included an intercept term that was the mean of outcome score for all the neighborhoods (γ_{00}) and level-1 error term (r_{ij}), and level-2 random effect that captured the between group variability (u_{0j}: the variance of the neighborhood means, which have a mean of zero and variance τ_{00}).

Level 1: $E(Y_{ij}| \beta_j) = \lambda_{ij}$

$\text{Log}(\lambda) = \eta$

$\eta_{ij} = \beta_{0j} + r_{ij}$

Level 2: $\beta_{0j} = \gamma_{00} + u_{0j}$

Table 5.7 shows the HGLM estimates of these components. Intercept (γ_{00}), or the grand mean coefficient of community development action for all the neighborhoods was 1.142. The intercept coefficient is log event rate, so can be interpreted by the event ratio estimate, which was 3.13 ($e^{1.142}$ =3.13) with confidence interval of 3.04 -3.22. In other words, we can expect 95% of the neighborhood means of community development action to fall within this range. Concerning the random effect associated with unit j (u_{0j}), the intercept variance between neighborhoods was .00778. This variance component estimates were very small, but significant at the .001 level. Importantly, the variance component yields Intraclass Correlation (ICC), which is the parameter measuring the proportion of the variance explained by the neighborhood-level. ICC can be calculated by the formula $\tau_{00}/(\tau_{00}+\sigma^2)$.

Thus, in this sample data, ICC was .00778/(.00778+2.10597) =.0036, suggesting that only 0.4 percent of the variance in the dependent variable can be attributed to the neighborhood-level. It concludes that most of the variability in community development action was at the individual-level versus at the neighborhood-level (because of a very large size of individuals compared to a very small size of neighborhoods). However, even though this small magnitude of ICC was not within the typical range, scholars argue that there should be caution in interpreting small ICCs. Usually, ICC does not exceed 20 percent and sometimes large effect sizes at the level-2 tend to translate into small proportion of variance in individual outcomes explained by neighborhood membership. Thus, if the between neighborhood variance is found to be small, this would not preclude the possibility that neighborhoods characteristics will matter (Duncan & Raudenbush, 1999; Sampson & Bartusch, 1998).

Table 5.7

One-Way ANOVA Model Predicting Community Development Action (in logits)

Fixed Effects	Coefficient	SE	t-ratio	Event Rate Ratio
Intercept (γ_{00})	1.142	.014	83.140***	3.133 (3.048,3.220)
Random Effects	Variance	df	χ^2	
Intercept variance (u_{0j})	.00778	51	314.779***	
Level-1 variance (r_{ij})	2.10597			

Note. *** p<.001. N=21,871; j=52. Estimates were from a Poisson model estimated using restricted maximum likelihood in HGLM.

Random Coefficient Model (Hypothesis 1)

The second model was a random coefficient regression model that investigated the influence of social capital on community development action at the individual-level and tested whether this association differed across neighborhood level. In short, it considered each neighborhood having its own OLS regression equation, and then examined how much coefficients vary across neighborhoods. In this study, level-1 regression model included intercept and slopes of three forms of social capital along with individual controls (age, gender, race or ethnicity, marital status, employment status, residence length, home ownership and SES).

Level-2 regression model did not include predictor. Instead, the level-2 equation provided chi-square tests for the four residual variance components. These chi-square tests examined whether the variance in the intercepts and slopes of three forms of social capital across neighborhood were significantly different from zero. In sum, the random coefficient regression model provided three primary pieces of information. First, it tested the significance of the pooled level-1 slopes (Hypothesis 1). Second, the model tested whether there was significant variance surrounding the pooled level 1 intercept (u_{0j}), and, third, it tested variance of level-1 slopes (u_{10j} u_{11j} u_{12j}). Thus, the significance of the second and third tests was the preconditions

for hypothesis test 2 and 3, respectively. The below equation specified a hierarchical nonlinear regression model.

Level-1: $E(Y_{ij}| \beta_j) = \lambda_{ij}$

$\text{Log } (\lambda) = \eta$

$\eta_{ij} = \beta_{0j} + \beta_{1j}(\text{AGE}) + \beta_{2j}(\text{FEMALE}) + \beta_{3j}\text{LACK}) + \beta_4 (\text{HISPN}) + \beta_5(\text{ASIAN}) +$

$\beta_{6j}(\text{MARRIED}) + \beta_{7j}(\text{EMPLOYED}) + \beta_{8j}(\text{YEARS}) + \beta_{9j}(\text{OWN}) + \beta_{10j}(\text{SES}) +$

$\beta_{11j}(\text{BONDING}) + \beta_{12j}(\text{BRIDING}) + \beta_{13j}(\text{LINKING}) + r_{ij}$

Level-2: $\beta_{0j} = \gamma_{00} + u_{0j}$

$\beta_{2j} = \gamma_{10}$

.

.

.

$\beta_{10} = \gamma_{100}$

$\beta_{11} = \gamma_{110} + u_{11j}$

$\beta_{12} = \gamma_{120} + u_{12j}$

$\beta_{13} = \gamma_{130} + u_{13j},$

Table 5.8 provides the results of a random coefficient model, which predicted community development action as a function of individual-level independent variables. The coefficients in the table are the log difference in outcome rates for each additional unit of the independent variable. The size of the effect is indicated by the event ratio[13] (same interpretation with odds

[13] HGLM is assumed in estimating a rate or ratio. For interpretation, an event ratio of 1 suggests no effect. An event ratio greater than 1 points to a positive effect of the independent variable on community development action, whereas an event ratio less than 1 indicates less likelihood of the event (Raudenbush & Bryk, 2002).

ratio). Comparisons to the variance estimates from the fully unconditional model provide the proportion of explained by the independent variables in this model.

The estimate of the individual level variance in this random coefficient model was 1.197 and the estimated variance in the one-way random ANOVA model was 1.451. The proportion of variance explained by level-1 independent variables can be obtained by the formula: [σ^2 (ANOVA model) - σ^2 (Random Coefficient Model)] / σ^2 (ANOVA model) = (2.10597-1.19715)/2.10597 = .432. When a set of individual level predictors of community development action were entered into the model, the within neighborhood variance (σ2) were reduced by 43%. Similarly, it concludes that the proportion variance explained the random coefficient model was about 43 percent of the variance in the community development action within neighborhoods.

Regarding the coefficients, the average neighborhood mean (γ_{00}) was .985 with standard error of .017 ($p<.001$). Taking the anti-log of the coefficient, now the mean event rate of community development action is 2.68 (95% CI= 2.59-2.77). This model suggests that several individual characteristics were significantly related to community development action. The average slope of age, African American, Hispanic, Asian, married were negatively related to community development action within neighborhoods, while female, employed, residence length in current neighborhood and SES were positively related to community development action. The effect of age was significant ($p<.001$), but the impact was small. For a 10 year increase in age, a resident's mean community development action decreased only by the factor of .980 ($e^{-.002*10}$ =.980, only 2 percent change in the probability), holding other variables constant.

Also, being a female increased the expected number of community development action by a factor of 1.06, holding all other variables constant ($p<.001$). Instead of factor change in the outcome, these amounts of factors indicate probability change of 2 percent and 6 percent,

respectively. Of individual characteristics, race or ethnicity exerted relatively large negative effect on community development action. In fact, the coefficient of African Americans was -.08. This means that they scored an average of 7.7 percent lower ($e^{-.080}$ =.923) on the community development action than their White residents with other demographic backgrounds like their own ($p<.001$). Hispanic and Asian also reported that their community development action were 15 percent lower than White ($p<.001$ for both).

Being a married decreased the expected number of community development action by 2 percent ($p<.05$), and employed respondents had a predicted mean community development action 4 percent more than the remained respondents of unemployed, students, house keepers, retired, etc., holding all other variables constant ($p<.01$). The results show that residential years significantly predicted the outcome ($p<.001$), but there was only 1 percent increase in the likelihood of community development action, controlling for other demographic factors. Home ownership was not significant at all. One of the largest effects of socio-demographic factors was SES ($p<.001$). One unit increase in SES significantly increased the probability of community development action up to 8 percent. This result was consistent with the previous studies in that education and income predict the number of community participation (e.g., Rankin & Quane, 2000).

Table 5.8

HGLM Predicting Community Development Action: Random Coefficient Model

	Random Coefficient Model			
Fixed Effects	Coefficient	SE	t ratio	Event ratio
Individual Level				
Intercept	.985	.017	59.282***	2.680 (2.590,2.768)
Age	-.002	.000	-7.125***	0.998 (0.997,0.998)
Female	.057	.007	8.507***	1.059 (1.045,1.073)
African American	-.080	.012	-6.412***	0.923 (0.901,0.946)
Hispanic	-.164	.018	-9.174***	0.849 (0.820,0.879)
Asian	-.166	.033	-5.037***	0.847 (0.794,0.904)
Married	-.022	.009	-2.457*	0.978 (0.961,0.996)
Employed	.042	.012	3.522**	1.043 (1.019,1.068)
Years in the neighborhood	.013	.004	3.664***	1.013 (1.006,1.021)
Home ownership	.007	.009	0.867	1.007 (0.990,1.047)
SES	.079	.002	31.773***	1.082 (1.077,1.087)
Bonding capital	.058	.006	10.065***	1.059 (1.047,1.072)
Bridging capital	.181	.006	31.396***	1.198 (1.185,1.212)
Linking capital	.356	.006	56.153***	1.428 (1.410,1.446)
Random Effects	Variance	df	χ^2	
Intercept mean (u_{0j})	.01252	51	630.822***	
Bonding capital slope (u_{11j})	.00061	51	85.449**	
Bridging capital slope (u_{12j})	.00028	51	55.084	
Linking capital slope (u_{13j})	.00116	51	125.650***	
Level-1 effect (r_{ij})	1.19715			

Note. * p<.05 ** p<.01 *** p<.001. N=21,871; j=52. Estimates were from a Poisson model estimated using restricted maximum likelihood in HGLM. 1) All individual level predictors are group mean centered and constrained to have equal variances across sites. 2) Social capital is group mean centered and allowed to vary across sites. Neighborhood-level predictor for the slope is grand mean centered. 3) This random coefficient model accounts for 43% of the variation within neighborhoods in community development action.

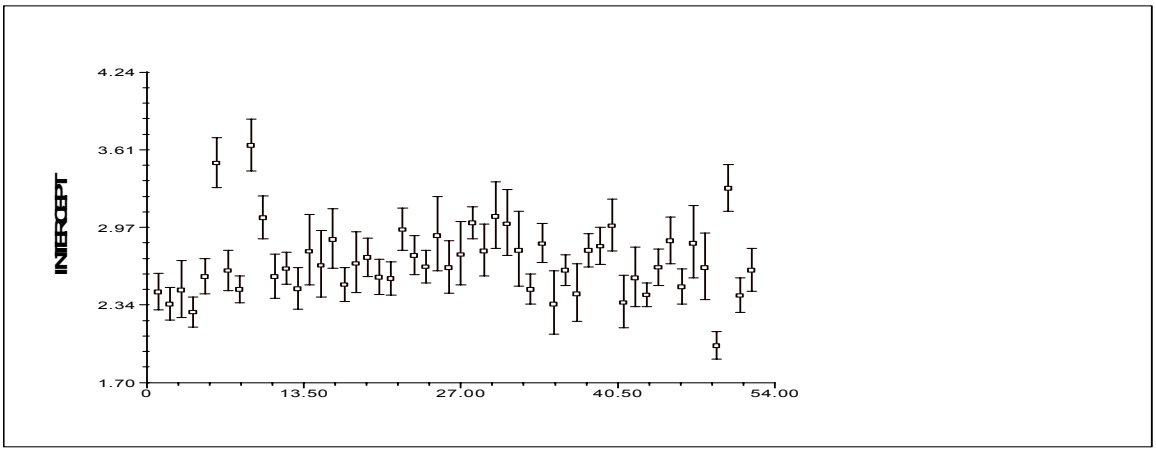
The key to understanding community development action lies with the causal factors of social capital measures. Supporting hypothesis 1, bonding, bridging, and linking capital were significantly associated with community development action (p<.001), controlling for all demographic variables. Since all social capital measures were standardized, the event ratio in the table showed the amount of event ratio for a standard deviation change. Regarding bonding

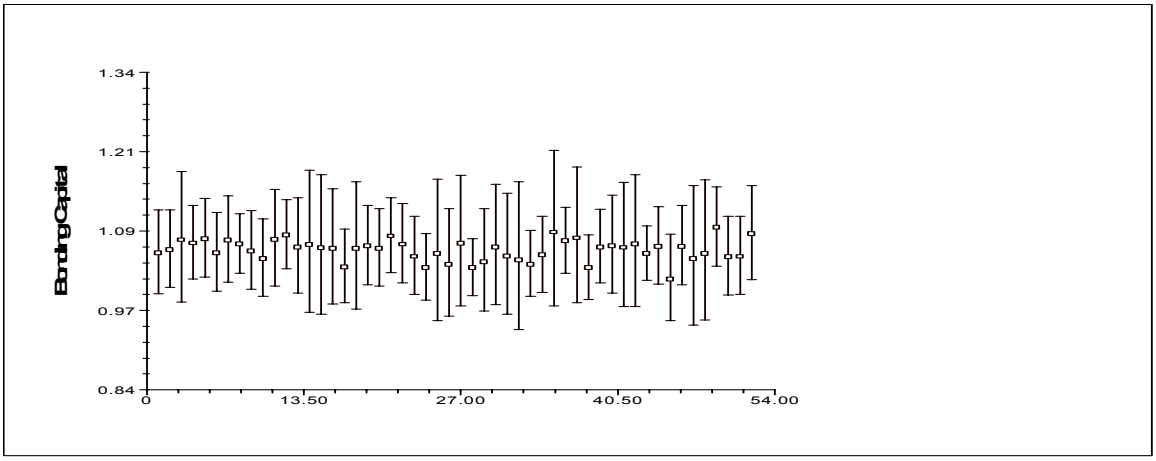
capital, the coefficient of .058 suggested the event ratio of 1.059 ($e^{.058*1}$ =1.059), which indicated a 6 percent increase in the likelihood of community development action per a standard deviation increase. Bridging capital had larger effect on community development action, which indicated 20 percent increase ($e^{.181*1}$ =1.198) per a standard deviation, holding all other variables constant. Most importantly, linking capital was the biggest predictor of community development action within neighborhoods. For a standard deviation increase in linking capital, the probability of community development action increased by a factor of 1.428 ($e^{.356*1}$ =1.428), holding all other variables constant. Equivalently, for every one standard deviation increase on the linking capital, the expected event of community development action increased by 43%.

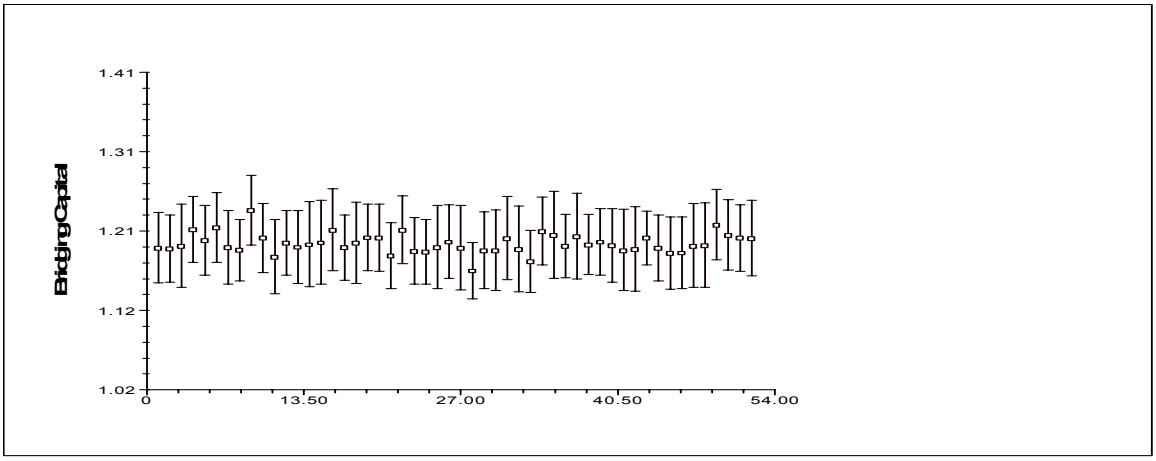
Regarding the variance-covariance components, the results included the test statistics for the hypotheses about four variance components. The estimated variance among the means was $u_{0j=}$.013 (χ^2=629.236, df=51, p<.001), concluding that significant mean differences existed among the 52 neighborhood and this was the pre-condition for Hypothesis 2 test. In other words, there remained level-2 variance that would be estimated by level-2 predictors. Importantly, the estimated variances of the slopes of bonding and linking capital were significant (u_{11j}= .001, χ^2= 86.017, p<.01; u_{13j} =.001, χ^2= 126.630, p<.001). Again, this inferred that the relationship between bonding/linking capital and community development varied significantly across the neighborhoods, supporting precondition for Hypothesis 3 test.

Figure 5.2 explores these results in greater detail. It shows coefficient confidence intervals between neighborhoods based on the estimated empirical Bayes (EB). The graphs suggest that there were significant variation in the level-1 coefficients of intercept, slopes of bonding and linking capital, but no variation in bridging capital coefficient. This means that it is

needed to examine the effects of level-2 variables on these three coefficient estimates in the next step.







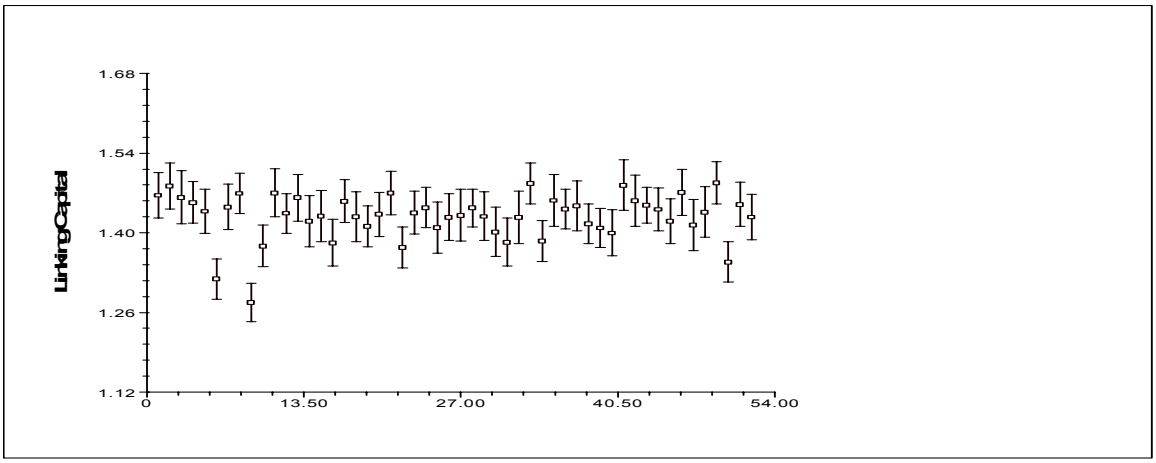


Figure 5.2 Coefficient Confidence Intervals: Intercept and Social Capital Slopes

Intercepts as Outcomes Model (Hypothesis 2)

The next model was the intercepts as outcomes model, which estimated the variability in the intercept across the level-2 units. In other words, it examined neighborhood effects on community development action, controlling for individual characteristics. Given that the previous model demonstrated significant variance in the intercept term, this model tested what characteristics of neighborhoods explained this variance in community development action. In this study, the estimate of neighborhood poverty (γ_{01}), income inequality (γ_{02}), residential stability (γ_{03}), racial segregation (γ_{04}), and social cohesion (γ_{05}) provided a direct test of hypothesis 2.

Level-1: $E(Y_{ij}| \beta_j) = \lambda_{ij}$

$$\text{Log } (\lambda) = \eta$$

$$\eta_{ij} = \beta_{0j} + \beta_{1j}(AGE) + \beta_{2j}(FEMALE) + \beta_{3j}LACK) + \beta_4 (HISPN) + \beta_5(ASIAN) +$$

$$\beta_{6j}(MARRIED) + \beta_{7j}(EMPLOYED) + \beta_{8j}(YEARS) + \beta_{9j}(OWN) + \beta_{10j}(SES) + r_{ij}$$

Level-2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(POV) + \gamma_{02}(GINI) + \gamma_{03}(RES) + \gamma_{04}(SEG) + \gamma_{05}(COH) + u_{0j}$

$\beta_{2j} = \gamma_{10}$

.

.

.

$\beta_{10j} = \gamma_{100}$

Table 5.9 shows the results with unstandardized coefficients, robust standard errors, and event ratio for the dependent variable. The results produced three significant neighborhood effects: poverty rate, income inequality, and social cohesion. The proportion explained by neighborhood predictors can be obtained in the similar way in the random coefficient model. Comparison between the intercept variance in one way ANOVA model and the intercept variance in this model produced .31 [τ_{00} (ANOVA) – τ_{00} (Intercept as outcome model)/ τ_{00} (ANOVA) = .00778-.0054/.00778 = .31].

Thus, inclusion of neighborhood predictors accounted for 31% of the between neighborhoods variance. Indeed, as shown in the previous random coefficient model, the variances between neighborhoods hardly changed from the fully unconditional model (the intercept variance rather increased from .00778 to .01252), though it explained the 43% of the variance within neighborhoods. Yet the intercept as outcomes model shows that it is only with the additional inclusion of neighborhood-level variables that explain true contextual differences between neighborhoods, rather than the aggregate individual-level demographic and socioeconomic effects.

As shown in Table 5.9, the coefficients for neighborhood poverty, income inequality, residential stability, racial segregation, and social cohesion on the log of the expected number of community development action were estimated. Neighborhood poverty rate appeared to have negative effect on community development action ($p<.01$). The coefficient revealed that the

number of community development action would be decreased by a factor of .012 ($e^{-1.237*3.6}$ =.012) per one standard deviation increase of poverty rate (SD=3.60). This amount of factor change means a reduction of 98.8 percent in the likelihood of community development action.

The results support Wilson's (1987) account of poor neighborhood and social disorganization. Adversely, income inequality had significant positive effect on community development action ($p<.01$). The coefficient of income inequality was 1.798. Thus, the likelihood of community development action would be increased by 6 percent for a one standard deviation (SD=.03) change in income inequality ($1-e^{.1.798*.03}$ =.055). Since the model adjusted for individual characteristics, including race and SES, the significance of the poverty rate and income inequality indicates some interesting contextual effects. Namely, community development action appeared to be less occurred in poor neighborhoods but if poverty rate was controlled for, it was more likely to happen in more conflicting neighborhoods. The other two neighborhood social composition variables, residential stability and racial segregation, had no significant relationship with community development action.

The major finding in this model was the statistical significance of neighborhood social cohesion in predicting the number of community development action (Hypothesis 2). Even though its strength of association was small, one standard deviation increase in social cohesion (SD=.16) was associated with a 4 percent increase in community development action ($1-e^{.259*.16}$ = .0423). Figure 5.3 presents the relationship between neighborhood-level social cohesion and individual-level community development action. The slope of the lines represents the distance between residents at the 25^{th}, 50^{th}, and 75^{th} percentile in the neighborhood poverty rate. As shown, the effect of social cohesion on community development is consistent and positive, regardless neighborhood poverty status.

Table 5.9

HGLM Predicting Community Development Action: Intercepts as Outcomes Model

		Intercepts as Outcomes Model		
Fixed Effects	Coefficient	SE	t ratio	Event ratio
Intercept	1.084	.012	93.427***	2.957 (2.889,3.027)
Neighborhood level				
Poverty, %	-1.237	.439	-2.819**	0.290 (0.120,0.701)
Income inequality	1.798	.558	3.220**	6.038 (1.965,18.550)
Residential stability	-.395	.239	-1.654	0.674 (0.417,1.089)
Racial segregation	-.001	.001	-.909	0.999 (0.996,1.002)
Social cohesion	.259	.112	2.321*	1.296 (1.035,1.623)
Random Effects	Variance	df	χ^2	
Intercept mean (u_{0j})	.00540	46	212.533***	
Level-1 effect (r_{ij})	1.86199			

Note: * p<.05 ** p<.01 *** p<.001. N=21,871; j=52. Estimates were from a Poisson model estimated using restricted maximum likelihood in HGLM. 1) Demographic and socioeconomic variables (age, gender, race or ethnicity, marital status, employment status, residence years, homeownership, and SES) within neighborhoods were controlled. 2) Neighborhood-level predictor for the slope is grand mean centered. 3) This intercepts as outcomes model accounts for 31% of the variation between neighborhoods in community development action.

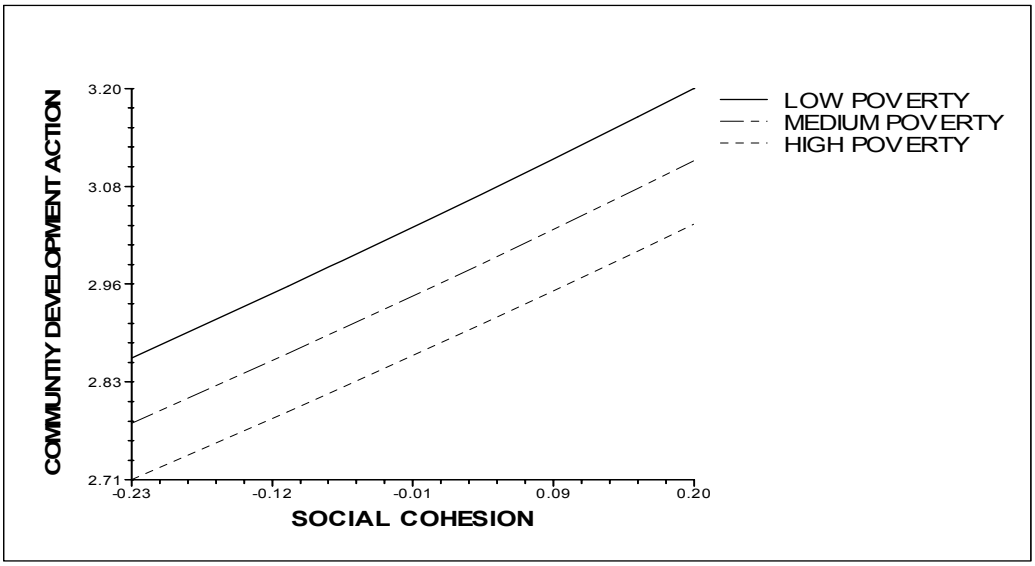


Figure 5.3 Effects of Social Cohesion on Community Development Action

Intercepts and Slopes as Outcomes Model (Hypothesis 3)

The next step was to model the variability in slopes as well as intercept. The random coefficient model found significant variability in bonding and linking capital coefficients across neighborhoods. Then, significant variances in the level-1 slopes of bonding and linking capital would be explained by the neighborhood-level variables. Specifically, it was tested that more cohesive neighborhoods are more likely to have greater bonding and linking capital effects on community development action than less cohesive neighborhoods (cross-level interaction, hypothesis 3). The HGLM model took the following form for cross-level investigation. Social cohesion was included as a predictor of β_{11j} and β_{13j}, and the slope variance (u_{11j} and u_{13j}) would decide whether there were still systematic variances in these parameters that could be modeled by any additional neighborhood-level predictors.

Level-1: $E(Y_{ij}| \beta_j) = \lambda_{ij}$

$$\text{Log}(\lambda) = \eta$$

$$\eta_{ij} = \beta_{0j} + \beta_{1j}(\text{AGE}) + \beta_{2j}(\text{FEMALE}) + \beta_{3j}\text{LACK}) + \beta_4(\text{HISPN}) + \beta_5(\text{ASIAN}) + \beta_{6j}(\text{MARRIED}) + \beta_{7j}(\text{EMPLOYED}) + \beta_{8j}(\text{YEARS}) + \beta_{9j}(\text{OWN}) + \beta_{10j}(\text{SES}) + \beta_{11j}(\text{BONDING}) + \beta_{12j}(\text{BRIDING}) + \beta_{13j}(\text{LINKING}) + r_{ij}$$

Level-2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{POV}) + \gamma_{02}(\text{GINI}) + \gamma_{03}(\text{RES}) + \gamma_{04}(\text{SEG}) + \gamma_{05}(\text{COH}) + u_{0j}$

$\beta_{2j} = \gamma_{10}$

.

.

.

$\beta_{10j} = \gamma_{100}$

$\beta_{11j} = \gamma_{110} + \gamma_{111}(\text{COH}) + u_{11j}$

$\beta_{12j} = \gamma_{120}$

$\beta_{13j} = \gamma_{130} + \gamma_{131}(COH) + u_{13j}$

Table 5.10 displays the results. The fixed effects of social capital were positively related to the dependent variable. But the significance of neighborhood social cohesion coefficient disappeared, controlling for the effect of individual-level social capital variables and cross-level interactions. Neighborhood poverty still remained as a significant predictor of community development action and income inequality also produced positive association, controlling the other variables. Regarding the slopes, there were not so much changes in their magnitude from the previous models. The variance components imply that significant variance was still left to be explained in the mean intercepts and slopes ($p<.001$), suggesting that other characteristics of neighborhood may help to explain this variation more.

The hypothesis of cross-level interaction was not supported. Neither bonding capital nor linking capital interaction term with social cohesion was significant at the .05 level. Even more, the interactions were not in the predicted direction. The result indicated that the association between social capital and community development action was not modified by neighborhood social cohesion. These results were depicted graphically in Figure 5.4. It plotted the predicted relationships between all three social capital measures and community development action for the highly cohesive neighborhoods and lowly cohesive neighborhoods. Low cohesion represented the 25th percentile and high cohesion represented the 75th percentile in neighborhood social cohesion. As shown, the slopes of each social capital measure were not different across the level of social cohesion. Only difference can be found in the intercepts of the social capital measures. It revealed that neighborhood-level social cohesion affected mostly the intercept of bonding capital on community development action.

Table 5.10

HGLM Predicting Community Development Action: Intercepts and Slopes as Outcomes Model

	Intercepts and Slopes as Outcomes Model			
Fixed Effects	Coefficient	SE	t ratio	Event-ratio
Intercept	.983	.013	72.887***	2.673 (2.601,2.746)
Individual-level				
Bonding capital	.058	.006	10.054***	1.059 (1.047,1.072)
Bridging capital	.180	.006	30.448***	1.197 (1.182,1.212)
Linking capital	.359	.007	54.269***	1.431 (1.412,1.450)
Neighborhood-level				
Poverty, %	-1.144	.347	-3.297**	0.318 (0.159,0.640)
Income inequality	1.111	.402	2.763**	3.037 (1.354,6.817)
Residential stability	-.194	.172	-1.131	0.824 (0.583,1.163)
Racial segregation	-.001	.001	-0.649	0.999 (0.997,1.002)
Social cohesion	.244	.127	1.931	1.277 (0.990,1.647)
Cross level				
Bonding x Social cohesion	-.009	.042	-.221	0.991 (0.911,1.077)
Linking x Social cohesion	-.015	.040	-.395	0.984 (0.909,1.066)
Random Effects	Variance	df	χ^2	
Intercept mean (u_{0j})	.00857	46	417.346***	
Bonding capital slope(u_{11j})	.00068	50	88.383**	
Linking capital slope(u_{13j})	.00105	50	122.688***	
Level-1 effect (r_{ij})	1.19840			

Note: * p<.05 ** p<.01 *** p<.001. N=21,871; j=52. Estimates were from a Poisson model estimated using restricted maximum likelihood in HGLM. 1) Socio-demographic variables (age, gender, race or ethnicity, marital status, employment status, residence years, homeownership, and SES) within neighborhoods were controlled for. 2) Social capital is group mean centered and allowed to vary across sites. Neighborhood-level predictor for the slope is grand mean centered.

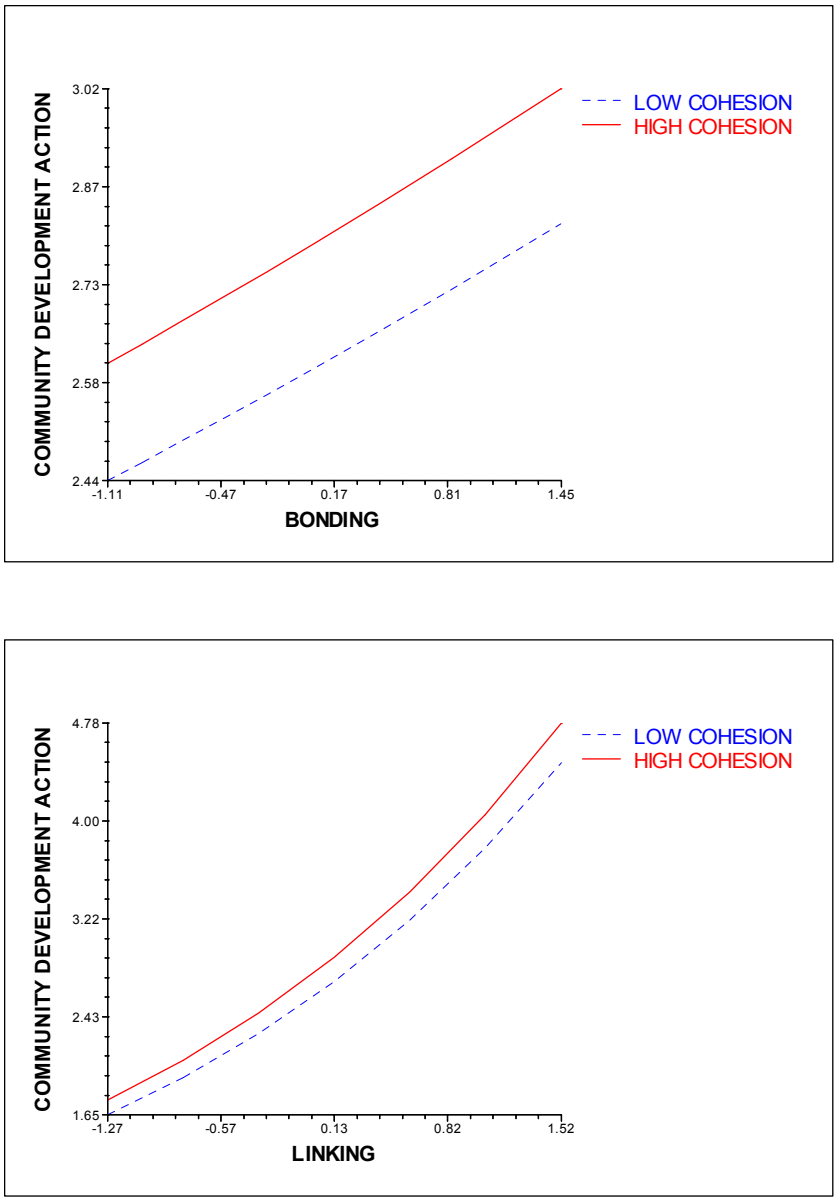


Figure 5.4 Cross-level Interaction between Social Cohesion and Social Capital

Mediating Effect of Social Cohesion and Social Capital (Hypothesis 4)

The next analysis was to assess potential mediating effects of social capital as proposed by the collective efficacy theory. It was hypothesized that the association between neighborhood social composition (poverty rate, income inequality, residential stability, and racial segregation) and community development action was mediated by neighborhood social cohesion and

individual-level social capital measures. Additionally, it was hypothesized that the significant effect of social cohesion on community development action was mediated by individual-level social capital measures.

For a mediating model to be supported, the following conditions should be evident. First, independent variables should be associated with the mediators. Second, independent variables should be associated with the outcome, community development action. Third, the inclusion of the mediators should render the direct effect of independent variables on community development action insignificant. That is, when neighborhood-level social composition variables and mediators were accounted for together, the coefficients for neighborhood social composition were supposed to be significantly reduced.

To test the first condition, social cohesion and social capital measures were regressed on the neighborhood social composition variables. Table 5.11 reveals that neighborhood poverty had a significant negative effect on social cohesion, but income inequality was not associated with social cohesion. Residential stability and racial segregation has an effect on social cohesion. Bonding capital was significantly associated with social cohesion and bridging capital was predicted by poverty rate, income inequality, and residential stability. But linking capital was not significantly related to any neighborhood social composition variable due to large standard errors.

Table 5.11

Unstandardized Coefficients of Neighborhood-Level Predictors of Social Capital

Fixed Effects	Soc. Cohesion[a]	Bonding[b]	Bridging[b]	Linking[b]
Intercept	.270	.004***	-.007	.012
	(.285)	(.012)	(.527)	(.018)
Neighborhood level				
Poverty, %	-1.576**	1.081	-1.157*	-1.096
	(.544)	(.578)	(.503)	(.833)
Income inequality	-.002	.032	1.437*	1.415
	(.654)	(.578)	(.634)	(.815)
Residential stability	.544*	.399	-1.031***	-.006
	(.261)	(.223)	(.245)	(.290)
Racial segregation	-.007***	-.002	.001	-.001
	(.002)	(.002)	(.001)	(.002)
Social cohesion		.423**	.221	-.239
		(.145)	(.130)	(.173)
Random Effect				
Intercept mean (u_{0j})		.00635***	.00653***	.01594***
Level-1 effect (r_{ij})		.89499	.88489	.85312

Note: * p<.05 ** p<.01 *** p<.001. N=21,871; j=52. a. All variables in the equation was neighborhood-level. Thus the coefficients were obtained from the simple OLS regression analysis, without individual-level controls. b. The coefficients were the results from HLM analyses. Here, 1) Individual-level socio-demographic variables (age, gender, race or ethnicity, marital status, employment status, residence years, homeownership and SES) within neighborhoods were controlled for. 2) Social capital is group mean centered and allowed to vary across sites. Neighborhood level predictor for the slope is grand mean centered.

The mediation models were tested, as shown in Table 5.12. Model 1 presented the maximum possible effects of neighborhood social composition on community development action, controlling individual-level characteristics. This model satisfied the second condition for mediation. Neighborhood poverty, income inequality, and racial segregation were significant predictors of community development action. Neighborhood poverty and racial segregation were inversely associated with the outcome, whereas income inequality was positively associated with the outcome.

Model 2 is the estimates from the previous results on the Table 5.9 (intercepts as outcomes model). As discussed in the above, social cohesion was a significant and positive predictor of the outcome, independently of the neighborhood social composition variables. Furthermore, the inclusion of social cohesion into the model reduced the initial negative coefficients for poverty rate and racial segregation. For poverty rate, the initial coefficient was 1.634, but now it was -1.237. In terms of event ratio, the effect of poverty was reduced from the factor of .19 ($e^{-1.634}$ =.19) to the factor of .29 ($e^{-1.237}$ =.29). The significance of racial segregation effect disappeared in this model, though the difference between the two models was very small (event ratio of .997 vs. .999). The mediation test statistic (Sobel test)[14] produced significant mediation effect of social cohesion on racial segregation (t=-1.97, p<.05). The same test for neighborhood poverty failed to enough evidence of mediation but approached to significance. In sum, model 2 partially supports the mediation hypothesis for social cohesion. Neighborhood poverty, income inequality, and racial segregation variables were significant predictors of the outcome, and social cohesion mediated some of theses relationships.

Model 3, 4 and 5 added three individual-level social capital measures as a mediating factor of these relationships. For social capital to be a mediator, the coefficients of the neighborhood social composition variables must be significantly reduced. But results show that all the coefficients were still significant. Model 3 describes that the coefficient for social cohesion was smaller than it had been without a control for bonding capital (.259 to .219). Since social cohesion was a significant predictor of bonding capital, it is evidenced that bonding capital

[14] The t statistic was obtained from Sobel test which is designed to see whether a mediator carries the influence of an independent variable to a dependent variable. The formula is a*b/square root of ($b2*sa^2 + a2*sb^2$), where "a" represents the coefficient for the association between independent variable and mediator; "b" represents the coefficient for the association between the mediator and the dependent variable; "s" represents standard error.

mediated the association between social cohesion and community development action (t= 2.89, p<.01).

When bridging capital was included (Model 4), the coefficient for social capital measures remained virtually invariant (-1.237 to -1.228 for poverty rate; 1.798 to .796 for income inequality; .259 to .260 for social cohesion). Therefore, bridging capital measure was not the mediator in this proposed relationship. Interestingly, the coefficients for poverty rate and income inequality were substantially reduced when linking capital was added in the model (Model 5), even though linking capital was not predicted by neighborhood factors. The coefficient of neighborhood poverty rate was reduced from -1.237 to -1.042, a difference of .195 (16% reduction). The income inequality coefficient diminished from 1.798 to 1.109, a difference of .689 (38% reduction), when linking capital was controlled. It seems that linking capital is confounded with neighborhood context, but the test for mediation was not significant (t= -1.32 for poverty rate, 1.73 for income inequality, both p>.05).

Overall, the results partially supported the mediation hypothesis of social capital. Social cohesion partially mediated the relationship between neighborhood social composition (neighborhood poverty and racial segregation) and community development, and bonding capital mediated the relationship between social cohesion and community development. Possibly, linking capital mediated the effect of neighborhood income inequality on community development action, since the association between income inequality and the outcome were greatly reduced when controlling for linking capital.

Table 5.12

Unstandardized Coefficients of the Mediating Model

Fixed Effects	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	1.086***	1.084***	1.072***	1.038***	1.001***
	(.012)	(.012)	(.012)	(.011)	(.013)
Neighborhood level					
Poverty, %	-1.634**	-1.237**	-1.296***	-1.228**	-1.042*
	(.436)	(.439)	(.330)	(.443)	(.384)
Income inequality	1.736**	1.798**	1.850***	1.796**	1.109*
	(.522)	(.558)	(.472)	(.562)	(.463)
Residential stability	-.273	-.395	-.360	-.380	-.280
	(.247)	(.239)	(.247)	(.241)	(.177)
Racial segregation	-.003*	-.001	-.002	-.002	.000
	(.001)	(.001)	(.001)	(001)	(.001)
Social Cohesion		.259*	.219*	.260*	.260*
		(.112)	(.097)	(.113)	(.110)
Individual level					
Bonding capital			.152***		
			(.007)		
Bridging capital				.324***	
				(.007)	
Linking capital					.418***
					(.006)
Random Effect					
Intercept mean (u_{0j})	.00592***	.00540***	.00582***	.00616***	.00797***
Level-1 effect (r_{ij})	1.86180	1.86199	1.79552	1.60701	1.28917

Note: The numbers in the parentheses are standard errors. * p<.05 ** p<.01 *** p<.001. N=21,871; j=52. Estimates were from a Poisson model estimated using restricted maximum likelihood in HGLM. 1) Socio-demographic variables (age, gender, race or ethnicity, marital status, employment status, residence years, homeownership, and SES) within neighborhoods were controlled for. 2) Social capital is group mean centered and allowed to vary across sites. Neighborhood-level predictor for the slope is grand mean centered.

Moderating Effect of Individual SES (Hypothesis 5)

A model for conditional effects was constructed to determine if individual-level socioeconomic status moderates the associations found in the previous hypotheses tests. This model introduced the level-1 interaction terms between social capital measures and SES, controlling for other individual demographic and residential characteristics.

Table 5.13 reports that there were significant interaction effects at the level-1. The effect of social capital measures on community development action was moderated negatively by SES ($p<.001$ for all three measures). The presence of negative interaction effects means that the magnitude of the social capital effect on community development action declined as an individual's socioeconomic status increased. That is, social capital was more effective on community development action for low socioeconomic status people. Alternatively, the effect of an individual's SES on community development action decreased as his or her social capital increased.

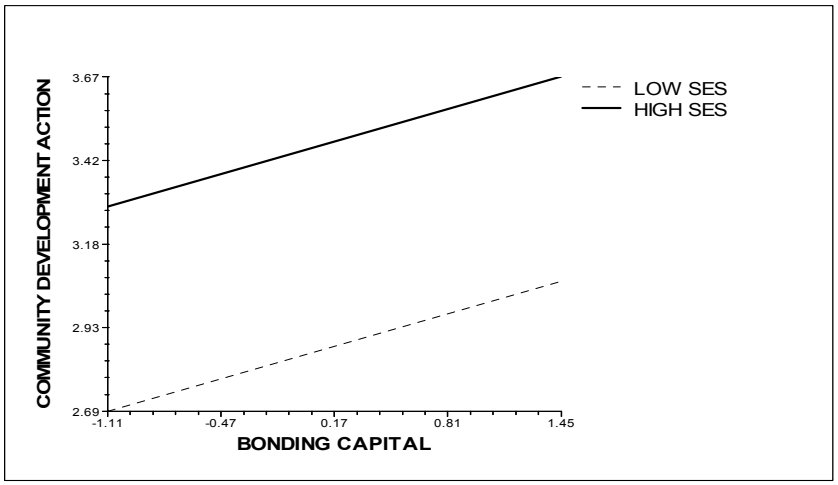
Table 5.13

Conditional Effects of SES

	Model 1		Model 2	
Fixed Effects	Coefficient	SE	Coefficient	SE
Intercept	.981***	.012	.964***	.013
Individual level				
SES	.079***	.002	.100***	.003
Bonding capital	.056***	.006	.136***	.014
Bridging capital	.180***	.006	.282***	.018
Linking capital	.357***	.007	.589***	.018
Bonding capital x SES			-.012***	.002
Bridging capital x SES			-.016***	.002
Linking capital x SES			-.034***	.003
Neighborhood level				
Poverty, %	-1.290**	.453	-1.432**	.461
Income inequality	1.725**	.574	1.813**	.596
Residential stability	-.426	.233	-.528*	.243
Racial segregation	-.001	.001	-.000	.001
Social cohesion	.325**	.118	.366**	.125
Random Effect				
Intercept mean (u_{0j})	0.00581***		.00651***	
Level-1 effect (r_{ij})	1.20323		1.18952	

Note: 1. Other individual-level socio-demographic variables (age, gender, race or ethnicity, marital status, employment status, residence years, and homeownership) within neighborhoods were controlled for. 2. Social capital is group mean centered and allowed to vary across sites. Neighborhood level predictor for the slope is grand mean centered.
* p<.05 ** p<.01 *** p<.001

However, the conditional impact of individual SES was very small. To illustrate this, the predicted number of community development action for two hypothetical SES group are presented in Figure 5.5. Both have mean values on all individual level characteristics, except that one respondent has low socioeconomic status (25th percentile) and the other has high SES (75th percentile). As seen in Figure 5.5, there was not much difference in slopes between low SES group and high SES group, suggesting substantially insignificant interaction effects. In fact, the anti-log of the coefficient of the interaction between bonding capital and SES was .988 ($e^{-.012}$ = .988), the interaction between bridging capital and SES was .984 ($e^{-.016}$=.984), and the interaction between linking capital and SES was .967 ($e^{-.034}$ =.967). These coefficients are too small to offset the changes in the main effects of social capital measures and SES.



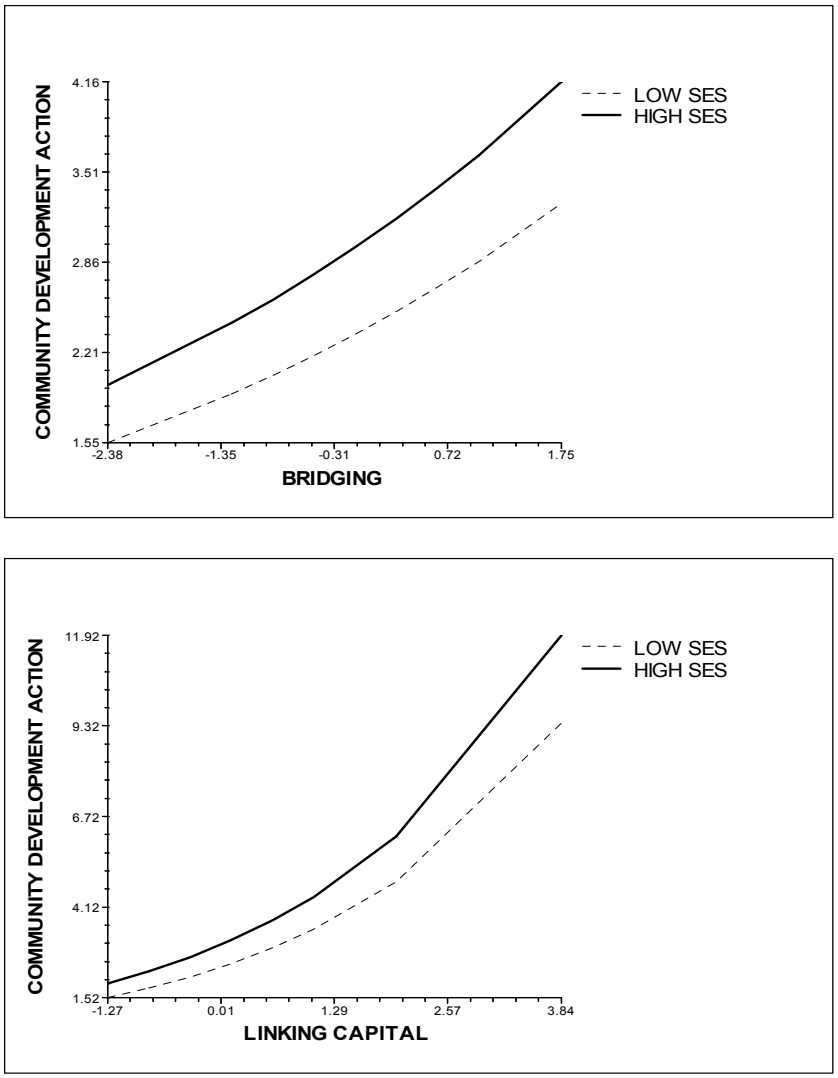


Figure 5.5 Individual-level Interaction between Social Capital and SES

Summary of Results

Results from this study conclude that both social cohesion and social capital were significant predictors of residents' community development action, but there were substantial differences in the magnitude of the effects. Five hypotheses were tested. Each of the study hypotheses and results are listed below.

Hypothesis 1

It was hypothesized that the level of social capital would be positively associated with the number of community development action, controlling for individual characteristics. There was a statistically significant and positive relationship between each social capital measure and the outcome variable. The regression coefficient of bonding capital was statistically significant ($p<.001$), positive in direction, and small in magnitude (event ratio = 1.059). Bridging capital was statistically significant, positive in direction, and moderate in magnitude (event ratio = 1.198). The results suggest that linking capital heavily influenced community development action. Linking capital exerted the strongest influence on people's community development action (event ratio =1.428). That is, individuals who have more institutional linkages are much more likely to participate in community development action than those who have higher levels of bonding and bridging capital.

Hypothesis 2

It was hypothesized that the level of neighborhood social cohesion would be positively associated with the number of community development action, after controlling for individual and neighborhood characteristics. There was a statistically significant ($p<.05$), positive relationship between neighborhood social cohesion and resident's community development action. Yet the regression coefficient of social cohesion was small in magnitude. Regarding the effects of neighborhood-level social composition factors, as expected, community development action was inversely related to poverty rate and positively related to income inequality. That is, as the poverty rate of a neighborhood increased, the number of community development action decreased. And as the income inequality of a neighborhood increased, the number of community development action increased.

Hypothesis 3

It was hypothesized that the level of neighborhood social cohesion would moderate the relationship between social capital and community development action, so that social capital and community development action would be more strongly related when a neighborhood was more cohesive. This hypothesis was not supported. The cross-level interactions between neighborhood-level social cohesion and individual-level social capital measures were not significant ($p>.05$), indicating that possibly these variables exerted independent effects on the number of community development action.

Hypothesis 4

It was hypothesized that the association between neighborhood-level social composition and community development action was mediated by social cohesion and social capital measures. The results produced partial evidence to support the mediation hypothesis. Social cohesion mediated the relationship between racial segregation and community development action, but its mediating effect was small. Rather the effect of neighborhood poverty on community development action was substantially reduced by the inclusion of social cohesion, though there was no statistical significance. Furthermore, the effect of social cohesion on community development action was mediated by bonding capital. Bridging capital failed to produce a significant mediating effect, though it was predicted by a set of neighborhood factors. Linking capital was not associated with neighborhood factors at all, but there was a great reduction in the neighborhood poverty and income inequality effects on community development.

Hypothesis 5

It was hypothesized that the association between social capital and community development action was moderated by individual-level socioeconomic status. This hypothesis was supported. The interaction terms between all three social capital measures and individual SES were statistically significant ($p<.001$) and negative in direction. But the coefficients were very small so that it was hard to conclude the interaction effects were substantial in spite of statistical significance.

In summary, the findings from the multi-level analyses confirm and solidify both network dynamic and collective-efficacy models. However, the network dynamic model provided more supporting evidences for community development action, in that individual-level social capital produced independent effects on the outcome regardless of social cohesion and the effect of social cohesion was partially explained by individual-level bonding capital. In particular, the assumption that more cohesive neighborhoods had a strong positive association between social capital and community development action was not supported. Then, in spite of some limitations, this study lends more support to the network dynamic model of social capital than collective efficacy or Putnam's collective asset approach in the context of community development. The next chapter provides more detailed interpretation of the findings and discussions.

Table 5.14

Summary of Findings

	Predictors	Results
Hypothesis 1	Level-1 bonding capital	Supported
	Level-1 bridging capital	Supported
	Level-1 linking capital	Supported
Hypothesis 2	Level-2 social cohesion	Supported
Hypothesis 3	Cross-level interaction between bonding and social cohesion	Not supported
	Cross-level interaction between bridging and social cohesion	Not applicable
	Cross-level interaction between linking and social cohesion	Not supported
Hypothesis 4	Mediating effect of social cohesion	Supported
	Mediating effect of bonding capital	Supported
	Mediating effect of bridging capital	Not supported
	Mediating effect of linking capital	Not supported
Hypothesis 5	Interaction between bonding and SES	Supported
	Interaction between bridging and SES	Supported
	Interaction between linking and SES	Supported

Note: The dependent variable is the number of community development action.

CAHPTER VI

DISCUSSION AND CONCLUSION

This chapter discusses major findings, limitations, and implications of the study. Despite a proliferation of literature addressing the issue of social capital, much previous research produced ambiguous results in searching for the most effective form of social capital in community development. Much of the empirical research on social capital has been under developed and has relied on very global measures of social trust. But few efforts to explore individual-level networking as the independent or mediating factor have been undertaken. The present study was thus the first empirical test of the three competing models of social capital in the context of community development, based on 52 county-level samples in the U.S. The primary purpose of this investigation was to extend the understanding of social capital by employing a multi-level framework. In this framework, 1) the effect of individual-level social capital (bonding, bridging, and linking) on community development action was tested, controlling for individual characteristics, 2) it was examined whether neighborhood-level social cohesion had an independent effect on residents' community development action, and 3) cross-level interaction tested the hypothesis that social cohesion account for the way in which individual-level social capital are related to community development action. In short, three related social capital processes (social capital, social cohesion, and the interaction between them) were tested in a series of multi-level models. In addition, the mediation and moderation models specify the associations.

A set of analytic models led to many results. The first two central hypotheses were generally supported, but the third hypothesis was not accepted. Mediation and moderation models were partially backed by empirical evidence. The importance of the findings of this study will be discussed below, followed by a summary of limitations and implications.

Research Findings and Discussions

The findings from bivariate analyses were mostly consistent with the previous studies. At the neighborhood-level, social cohesion was closely related to neighborhood social composition variables. Residents seem to respond to neighborhood poverty, income inequality, and racial segregation with less interpersonal trust (social cohesion). It was not a new finding because the relationship has been evidenced by a number of collective efficacy studies. Instead, this study questioned whether social cohesion was just a proxy for individual-level social networking and interactions. Thus, the results advanced the empirical tests of this study in the next questions. How much variance in social capital exists between neighborhoods? Then, is the variance in social capital between neighborhoods explained by social cohesion? That is, places may vary both in the mean scores of social capital measures and the relationships between social capital and community development action can be accounted for neighborhood social cohesion.

At the individual-level, the data demonstrated statistically significant differences in social capital measures by age, gender, race or ethnicity, SES, and other demographic characteristics, which were also consistent with earlier studies (e.g., Rankin & Quane, 2000). In particular, socioeconomic status was the most significant factor related to the level of bonding, bridging, and linking capital. However, complex relationships with individual characteristics and relatively weak inter-correlations among the social capital measures indicated that social capital

was not in uniformity nor had one dominant form. Therefore, this study suggests that different forms of social capital should be considered.

Major Finding 1

The results of this study provide support for the network dynamic perspective appearing in the literature. From the random coefficient model in which the main effects of social capital was investigated (Table 5.8), the results showed that all of bonding, bridging, and linking capital were significantly associated with community development action, after controlling for the individual characteristics. The effects of social capital measures were much stronger than the effects of any other individual characteristics. In particular, bridging and linking capital produced the largest coefficients. For instance, one standard deviation increase in linking capital and bridging capital raised the predicted event of community development action by 43% and 20% respectively. This nontrivial effect of linking and bridging capital can be highlighted by the fact that the effects of other individual characteristics were mostly less than 10% of changes in the predicted event. Thus, strategies that extend the boundary of networks and actively cultivate institutional linkages may be critical to creating a general participation in community development. This study also demonstrated significant variation in the slopes of bonding and linking capital, as evidenced by the significant random effect. It means that the associations between these two forms of social capital and community development action were not similar across neighborhoods. Yet the investigation of possible neighborhood-level influences on the differences was not found.

Major Finding 2

The results of this study also showed that much more variation in community development action was found at the individual-level than at the neighborhood-level. It may

cause a serious issue related to the interpretation of the neighborhood effects because no variability at the neighborhood-level renders the reason to look at the neighborhood effects meaningless. However, the results presented some significant neighborhood effects, suggesting that neighborhood itself has enough explanatory power to predict the level of community development action.

Social cohesion had an independent and positive effect on community development action. The results supported the collective efficacy model in that less cohesive society leads to less community development action. Also, neighborhood poverty rate and income inequality were significantly related to residents' community development action, whereas none of racial segregation and residential stability were statistically significant. Interestingly, the effects of poverty and income inequality on community development action were opposite to each other. Residents of poor neighborhoods had fewer incidents of community development action, possibly because of lack of information and available resources. Yet income inequality was positively related to the residents' community development action. The results may support a conflict perspective, which suggests that competitive struggles in communities lead to more group-based participation in community development events. In essence, the motivations for engaging in community development are very different, and this is the reason why individual-level social capital analysis is necessary.

Major Finding 3

One of the most important findings in the study was that social cohesion did not moderate the relationship between social capital and community development action (see Table 5.10). In other words, regardless of how a neighborhood builds a strong interpersonal trust in a neighborhood, community development action is consistently dependent on the individual-level

social capital. As seen in the Figure 5.4, the effects of social capital were separated by a comparison between two levels of social cohesion. There was no evidence that the three forms of social capital affected individuals greater in the more cohesive neighborhoods than they did individuals in less cohesive neighborhoods. The only difference detected was in the average level of bonding capital. While the study demonstrated that social cohesion exerted a significant independent effect on community development action, it did not moderate the relationship between the social capital and community development action.

Major Finding 4

In this study, social capital and social cohesion were expected to mediate the relation between neighborhood social composition variables and residents' community development action. This study produced partial evidence regarding the mediating effects of social capital and social cohesion. Supporting the collective efficacy theory that emphasizes the mediating effects of social cohesion on neighborhood social composition, the current study produced the results consistent with the previous studies (e.g., Sampson et al., 1997). It showed that social cohesion mediated the association between neighborhood social composition and community development action, and bonding capital mediated the association between social cohesion and community development. That is, individual bonding capital is the pathway through which social cohesion influence residents' participation in communities. Then, it can be possibly assumed that bonding capital forms a sub-set of social cohesion (Kearns & Forrest, 2000).

This study failed to find the expected mediating effect of bridging and linking capital. The negative relationship of neighborhood poverty and income inequality with bridging capital did not demonstrate the intervening mechanism connected to community development action.

Although linking capital significantly reduced the coefficients of neighborhood poverty and income inequality, it was not directly associated with the neighborhood factors.

Major Finding 5

Does socioeconomic status moderate the relationship between social capital and community development action? Three interaction terms of social capital by SES produced statistically significant coefficients, suggesting that there is moderating influence of SES on this association. All interaction terms displayed negative coefficients, indicating that the effects of social capital were greater for those residents whose socioeconomic status was low. It confirms Warren and his colleague's assertion (2001) that the poor are more likely to rely on social capital because of their lack of other valuable resources. Low SES residents (e.g., the poor) used their social capital more effectively than the others, especially through membership in networks and institutions, to gain access to community development initiatives.

Summary

In summary, the results propose a consideration of multi-level structure of social cohesion and social capital that plays an important role in community development. As described, social cohesion in this study was a key element of neighborhood-level collective efficacy and it had positive and significant effect on the community development. The differential effects were also found for the three forms of social capital. The results revealed that most important components of social capital were resident's use of diverse and institutional networks. Thus, individuals with higher levels of bridging and linking capital are more likely to participate in community development activities.

However, the study results demonstrated that collective efficacy theory is insufficient for capturing the key features of social capital. Although the neighborhood is an important unit of

analysis in investigating social interactions, some portion of its effects was mediated by individual-level social networking. In fact, social cohesion was similar to the concept of bonding, and indeed mediated by bonding capital. Also, the effects of neighborhood social cohesion and bonding capital were not as big as the effects of bridging and linking capital on community development action. That is, one must consider the bridging and linking forms of social capital as the key mechanism of resident's participation in community development. In addition, the significant interaction between social capital and individual-level SES has theoretical relevance for Bourdieu's social capital theory that emphasized the relative abundance of capitals. The resource that the poor can share with others was social capital rather than economic and human capital, and this reflected stronger relationship between social capital and community development action among the low SES groups than the relationship among the high SES groups.

Consequently, even though the current study assessed the multi-level structure of social capital that estimates the effects of neighborhood and individual-level factors simultaneously, it lends support to the argument that one's social network matter more than the overall collective efficacy of the neighborhood.

Study limitations

The strength of the study includes the use of a large and national representative data that allows this study to use a design that nests individuals within neighborhoods. However, secondary data analysis is inevitably vulnerable to some threats. Generally, the author's lack of knowledge of the whole process of survey design and data collection may limit the findings of the study with possible problems in sampling, implementation, and overall quality of data.

The major limitation is the lack of validity of the study measures obtained from the data. In particular, the study is limited in the measure of community development, because the dependent variable did not properly account for the actual community development outcomes such as services and investment in community development organizations. Instead, the measure for community development (community development action) was obtained from asking about any participation in community related events in the past 12 months. Since the secondary data, SCCBS, was designed for other purposes rather than community development, most of the items were just proxies for the different types of community development activities. Another issue of the dependent variable is that it did not measure the frequencies of community development actions. Since the scale was based on the simple count of each activity, someone who had been working constantly for just one event but not involved in other events was rated low in the dependent variable, regardless of the period and the number of participation. This may cause errors in the analyses and weaken the results.

Second, the study defined neighborhood as a county-level unit (FIPS code). To identify a geographical place as a neighborhood has been a common method in social science and virtually all quantitative studies of neighborhood effects, in particular social area analysis in 1970s (e.g., census tracts as proxies for neighborhoods). However, an administrative designation of such geographic neighborhood unit may be limited because it is unlikely that they reflect distinct areas in which ecological and social variables are formed. Therefore, future studies need to develop strategies to define neighborhoods in the logic of the social networks and interactions and make inferences about the cultural and structural features such as social status, family status, and ethnic status (Lyon, 1998; Sampson et al., 2002). The study is also limited in its use of FIPS code too. The results might be different when the neighborhood units were obtained from

smaller units such as census track or block. In this study, as mentioned earlier, some FIPS codes were too large to call it "neighborhood" (e.g., Los Angeles County). Thus, there should be caution in interpretation of possible neighborhood-level influences.

Third, secondary data analysis limited the scope of this study due to the availability of the variables of interest. The study is thus not an exhaustive study of social capital, and there seems to be less clarity on how it is related to its sources and outcomes. For example, more social, political, and economic context need to be viewed as antecedents to the types of social capital. And more network constructs in social capital such as density, prestige, and accessibility should be used in the analysis (Macinko & Starfield, 2001). Accordingly, the evidence presented in this study does not mean that similar effects exist for other measures of social capital.

Finally, the study did not examine social capital effects on different types of community development action. Initially, the effects of social capital were assessed in the relation to economic, political, and cultural action, respectively. But the results showed similar patterns with one another so that the outcome variables were merged into one variable for simple interpretation. Yet if the future studies introduce more comprehensive measures of community development and contextual factors, meaningful associations may be drawn further.

Therefore, the results presented here have some limitations in which the author measured variables and specified the model of causation. However, under circumstances where such data were available at the individual and neighborhood-level, this study offered a useful example to explore the association between social capital and community development.

Implications and conclusions

Implications for theory and research

The author believes that the biggest contribution of the study is to theory and research through the documentation of a multi-level perspective on social capital. This study illustrated a wide array of social capital construct in the complex contexts and related them to the field of community development. The implications for theory and research are as follows.

First, the study demonstrated that network is the key feature in understanding social capital. That is, social capital inheres in social relations rather than a static place (Cattell, 2001; Coleman, 1990). It suggests that future research should explore precisely the concept defined by network perspective that may have relatively strong theoretical foundation of social capital. In particular, Bourdieu's analysis of social capital can provide a more detailed framework of the complex process structuring social networks, while network analysis conceptually based on Granovetter's strength of ties may allow us to identify social ties that are effective in community development. That is, it is very important to see how diverse groups compete for access to resources in a community where social capital structures power relations. Also, future studies need to specify the effective types of social networks in other areas. Generally, strong ties can provide social support, self-esteem, identity, and perceptions of control, while weak ties such as diverse networks, formal association, and other connections among socially dissimilar groups are important in social advance. Both strong and weak ties are essential components of social capital (Cattell, 2002), but the effects are context dependent. For instance, in this study, weak ties are more effective in the creation of outcomes in community development than strong ties.

Second, future research must be conducted to understand fully the association between social capital and neighborhood poverty. In particular, the focus should be kept on the

deterioration of institutional resources that influence network patterns and forms of social capital created. Although the current study found some associations between neighborhood poverty and social capital, questions still remain concerning what factors are at play with poverty. For example, deinstitutionalization and resource deterioration may influence the formation of social capital (Wilson, 1987), and the effects of poverty could be compounded by the lack of human capital, racial composition, and immigrant concentration. Therefore, further explanation is needed as to what factors in neighborhood poverty account for social capital that facilitate social inclusion and participation in community development.

Third, future research on social capital needs to be better theorized about linking capital. While bonding and bridging capital have been studied broadly by a number of studies, little attention has been given to linking capital. One exception was Foley, McCarty, and Chaves (2001) who emphasized linking capital as a means to build inter-faith coalitions among congregational organizations. As the current study revealed that linking capital was the most significant factor of community development action, people in high levels of poverty neighborhoods need to build more linking networks. However, it is also true that high poverty neighborhoods already demonstrate a higher probability of having institutional linkages, since the poor are more likely to involve in governmental programs and nonprofit organizations for public services (Sampson & Morenoff, 1997). Indeed, high poverty neighborhoods have more social service institutions and voluntary support groups that are great sources of linking capital. Therefore, the question of the next study should delineate the actual dynamics around linking capital that increase accessibility to social mobility (Anderson 1990; Briggs, 1998).

Implications for social work practice

This study has implications for social work practice; especially for community development corporations (CDCs) and community based nonprofit organizations (CBOs). Although it is very simple idea that more social interactions will create better outcomes in a community, the social capital model is more practical than any other model (Temkin & Rohe, 1998). In short, promoting bonding, bridging, and linking capital will address the isolation experienced by the poor.

However, in debating the effects of social capital, social workers need to consider its utility that may not solve the problems in communities. Although a number of scholars look to social capital as a resource to help the poor, it is not necessarily the features of social capital. For instance, at the disaster of Hurricane Katrina, it was argued that concentrated poverty was closely associated with a downward spiral of social disorganization in New Orleans. Yet the people left in storm were not the evidence of the eroded social capital in the city. Many researchers found that a great deal of social capital may exist among those living in the poor communities (Cohen, 2001; Duncan, 2001; Silverman, 2001; Saegert et al. 1998). Instead, on the one hand, the hurricane exposed the way in which the nation's racial divide and the cumulative disparity distribute community assets. It is notable that the most powerful force of racism is to bind people exclusively and to limit the boundary of social interactions that people experience. As results, some people figured out a way to protect their families from the disaster, but others were most susceptible to the risk. On the other hand, the disaster revealed that human relationships reflect constraints as well as opportunities. The features of social relations among them were often characterized by depression, suffering, and hopelessness. Therefore, at least it was certain that the consequences of poor neighborhood cannot be attributed neither to their lack of social relations nor to the weak social cohesion of the community.

Therefore, the author believes that social capital should still focus exclusively on an economic and political dimension of communities. It is because understanding how social groups can work to alleviate poverty in poor communities are the great challenges of development (Woolcock & Narayan, 2000). The following is thus the implications that can be drawn from the results.

First of all, bonding capital is important to invest in the organizational capacity of the poor and social inclusion of the local residents, and eventually exerts beneficial effects on consensus building for community development. For instance, in pursuit of a set of communal goals, bonding capital is the most valuable process in developing solidarity as a central goal. Informal and close local networks help the poor to organize self-help and mutual support groups through strengthening interpersonal relationships (Healy & Hampshire, 2002). Furthermore, this process creates the infrastructure of long term relationships among community members who will transcend social divides with diverse interests and resources (Hardcastle, Wenocur, & Powers, 1997). Therefore, practices to develop bonding social capital can serve participatory community development that facilitates involvement of stakeholders in the community.

Second, the negative association between bridging capital and neighborhood poverty indicates that social work intervention may be more critical to develop diverse networks for providing the poor with more opportunities and resources they need. It should be accompanied by a series of intervention that can foster resource exchange across social groups. That is, there is no substitute for a more equitable distribution of resources (Cattell, 2001). As this study revealed that the effects of poverty were much harsher than any other factors, the poor need more bridges that enhance the capacity to mobilize more and better services for the poor. Social

workers should thus construct a coordinated plan of action as an organizer, advocate, communicator, and facilitator (Midgley & Livermore, 1998).

Third, social work practices in advocacy and social action can be approached effectively by linking capital. Poverty in neighborhoods is marked by a deteriorated social infrastructure, with absent networks of formal institutions (Naparstek & Dooley, 1997). Here, linking social capital connects the poor to formal institutions, establishing residents' participation in the developmental interventions. However, as Kretzmann and McKnight (1993) recognize, many formal institutions do not function as neighborhood assets and not reflect the resident's needs and interests. It is partly because most institutions operate in direction and control by other forces outside the neighborhood and neighborhood residents are often excluded from local decision making. Jack Rothman also argued that lack of experience among the impoverished population result in their mistrust of organizations (Figueria-McDonouhg, 1995). Therefore, social workers should conduct first social institutional analysis to identify the range of resources, and leads the poor to better communication with institutions and diverse stakeholders. And then, social workers should take the responsibility to leverage resources for low-income residents (Alex-Assensoh, 2002; Eberts & Scott, 2000). As advocates or social activists, social workers should pay special attention to the potential for mediating role (Hardina, 2003). Although social capital cannot be a substitute for adequate financial resources and public services, it can affect the power and political interests of the stakeholders and make better use of such resources through involving them in the community interventions. Also, inter-organizational partnership has the advantage of facilitating the provision of services or programs. This eventually reinforces the ability of a neighborhood to create a supportive and caring culture (Breton, 2001).

REFERENCES

Aberg. M. (2000). Putnam's social capital theory goes east: A case study of Western Ukraine and L'viv. *Europe-Asia Studies, 52(2),* 295-317.

Aguilera, M. B. (2002). The impact of social capital on labor force participation: Evidence from the 2000 Social Capital Benchmark Survey, *Social Science Quarterly,* 83(3): 853-874.

Alesina & La Ferrera (2002). Who trusts others, *Journal of Public Economics*, 85(2), 207-234

Alex-Assensoh, Y. M. (1997). Race, concentrated poverty, social isolation, and political behavior, *Urban Affairs Review*, 33 (2), 209-227.

Alex-Assensoh, Y. M. (2002). Social capital, civic engagement, and the importance of context. In S.L. McLean, D.A. Schultz, and M.B. Steger (Ed.), *Social Capital: Critical Perspectives on Community and "Bowling Alone*" (pp. 203-217). New York: New York University Press.

Anderson, E. (1990). *Streetwise: Race, Class, and Change in an Urban Community*. Chicago, IL: University of Chicago Press.

Annen, K. (2003). Social capital, inclusive networks, and economic performance, *Journal of Economic Behavior & Organization*, 50(4), 449-463.

Baron, S., Field, F. & Schuler, T. (2000). *Social Capital: Critical Perspectives*. New York: Oxford University Press.

Baron, J. & Hannan, M. (1994). The impact of economics on contemporary sociology, *Journal of Economic Literature*, 32, 1111-1146.

Baum, F., Palmer, C., Modra, C, Murray, C and Bush, R. (2000). Families, social capital and health. In I. Winter (Ed.) *Social Capital and Public Policy in Australia* (pp. 250-275). Melbourne, Australia: Australian Institute of Family Studies.

Berman, S. (1997). Civil society and political institutionalization. *American Behavioral Scientist*, 40 (5), 562-574.

Bhattacharyya, J. (2004). Theorizing community development. *Journal of the Community Development Society*, 34 (2), 5-34.

Biddle, W. & Biddle, L. (1965). *The Community Development Process: The Rediscovery of Local Initiative*. NewYork: Holt, Rinehart, and Winston.

Biggart, N. W. & Castanias, R. P. (2001). Collateralized social relations: The social in economic calculation. *American Journal of Economics and Sociology*, 60 (2), 471-500.

Black, A.W, & Hughes, P (2000). Social capital and the quality of life in cities. Proceedings of the Second International Conference on Quality of Life in Cities, Singapore, 2, 565-74.

Blalocok, H. M. (1985). *Causal Models in the Social Sciences*. Hawthorne, NY: Aldine de Gruyter.

Becker, P. & Dhingra. P (2001). Religious involvement and volunteering: Implications for civil society. *Sociology of Religion,* 62, 315-35.

Boggs, C, (2002). Social capital as political fantasy. In S.L. McLean, D.A. Schultz, and M.B. Steger (Ed.), *Social Capital: Critical Perspectives on Community and "Bowling Alone"* (pp. 183-200). New York: New York University Press.

Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste.*

Bourdieu, P. (1986) The forms of capital. In J. G. Richardson (Ed.), *Handbook of Theory and Research in the Sociology of Education* (pp.96-111). New York: Greenwald Press.

Bourdieu, P. (1989). Social space and symbolic power. *Sociological Theory, 7(1*), 14-15.

Bourdieu, P. & Wacquant, L.J.D. (1992). *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press.

Breton. M. (2001). Neighborhood Resiliency. *Journal of Community Practice, 9(1),* 21-36.

Browning, C.R. & Cagney, K.A. (2003). Moving beyond poverty: Neighborhood structure, social process, and health. *Journal of Health and Social Behavior*, 44, 552-571.

Bridger, J. C. & Luloff, A.E. (1999). Toward an interactional approach to sustainable community development." *Journal of Rural Studies 15(4),* 377-387

Briggs, X. S. (1998). Brown kids in White suburbs: Housing mobility and the multiple faces of social capital, *Housing Policy Debate,* 9, 177-221.

Briggs, X. S. (2002). Social capital and segregation: race, connections, and inequality in America. Working Paper 02-011. Cambridge: Harvard University.

Brown, T. (2000). Theoretical Perspectives on Social Capital. Retrieved April 12, 2004, from the http://hal.lamar.edu/~BROWNTF/SOCCSAP.HTML

Burkey, S. (1993). *People First: A Guide to Self-Reliant Participatory Rural Development*. New Jersey: ZED Book Ltd.

Burt, R.S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge: Havard University Press.

Burt, R.S. (1997). The contingent value of social capital. *Administrative Science Quarterly*, 42, 339-365.

Burt, R.S. (2001). Structural holes versus network closure as social capital. In L. Lin, K. Cook, & R. Burt (Ed.) *Social Capital: Theory and Research* (pp. 31-56). NY: Aldine de Gruyter.

Campbell, C. (2000). Social capital and health: Contextualising health promotion within local community networks. In S.Baron, J. Field & T. Schuller (Eds). *Social Capital: Critical Perspective* (pp. 182-196). New York: Oxford University Press

Campbell, C. & McLean, C. (2003). Social capital, local community participation and the construction of Pakistani identities in England: Implications for health inequalities and policies. *Journal of Health Psychology,* 8(2), 247-262,

Carpenter, J. P. (2002). Measuring social capital: adding field experimental methods to the analytical toolbox. In J. Isham, T. Kelly, & S. Ramaswamy (Ed.). *Social Capital and Economic Development*. Northampton, MS: Edward Elgar Publishing.

Castelloe, P. & Prokopy, J. (2001). Recruiting participants for community practice interventions: Merging community practice theory and social movement theory. *Journal of Community Practice*, 9(2), 31-48.

Castells, M. (1977). *The urban question: A Marxist approach*. Cambridge, MA: The MIT Press

Cattell, V. (2001). Poor people, poor places and poor health: The mediating role of social networks and social capital. *Social Science and Medicine*, 52, 1501-1516.

Chaskin, R.J., Brown, P., Venkatesh, S., & Vidal, A. (2001). *Building Community Capacity*, New York: Walter de Gruyter, Inc.

Chaskin, R.J., Joseph, M.L. & Chipenda-Dansokho, S. (1997). Implementing comprehensive community development: Possibilities and limitations. *Social Work*, 42(5), 435-444.

Christenson, J.A. & Robinson, J.W. (1980), *Community Development in America*. Ames, IW: Iowa State University Press.

Cohen, C. J. (2001). Social capital, intervening institutions, and political power. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Cohen, C.J. & Dawson, M.C. (1993). Neighborhood Poverty and African American politics. *American Political Science Review*, 87(2), 286-302.

Coleman, J. 1988. Social capital in the creation of human capital. *American Journal of sociology 94*, p 95-120.

Coleman, J. 1990. *Foundations of Social Theory*, Cambridge, MS: Harvard University Press.

Colletta, N. & Cullen, M. (2002). Social capital and social cohesion: case studies from Cambodia and Rwanda. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.279-309). New York: Cambridge university press.

Collier, P. (1998). Social capital and poverty. Social Capital Initiative, Working Paper No.4. Washington, DC: World Bank

Collier, P. (2002). Social capital and poverty: A microeconomic perspective. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.19-41). New York: Cambridge university press.

Connell, J.P, Kubisch, A.C., Chorr, L.B & Weiss, C.H. (Eds) (1995). *New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts*. Washington DC: Aspen Institute.

Cottrell, L.S. (1976). The competent community. In B.H. Kaplan, R.N. Wilson, & A.H. Leighton (Eds.), *Further Explorations in Social Psychiatry* (pp. 195-211). New York: Basic Books.

Coulton, C. J. (2000). Restoring communities within the context of the Metropolis. In J. G. Hopps & R. Morris (Ed.). *Social Work at the Millennium*. New York: The Free Press.

Cox, E.P. (1997) Building social capital, *Health Promotion Matters*, 4, 1-4

Cox, E.P. (2001). Community practice issues in the 21st century: Questions and challenges for empowerment-oriented practitioners. *Journal of Community Practice*, 9(1), 37-55.

Dasgupta, P. (2000). Economic progress and the idea of social capital. In P. Dasgupta & I. Seragilden (Eds), *Social Capital: A Multifaceted Perspective* (pp. 325-424). Washington DC: The World Bank

DeFilippis, J. (2001). The myth of social capital in community development. *Housing Policy Debate*, 12(4), 781-806.

Delgado, M. (2000). *Community Social Work Practice in an Urban Context: The Potential of a Capacity-Enhancement Perspective*. New York: Oxford University Press.

DeLeon, R.E & Naff, K.C. (2004). Identity politics and local political culture: Some comparative results from the Social Capital Benchmark Survey. *Urban Affairs Review*, 39(6), 689-791.

Dhesi, A. S. (2000). Social capital and community development. *Community Development Journal, 35(3*), 199-214.

Dominguez, S. & Watkins, C. (2003). Creating networks for survival and mobility: Social capital among African American and Latin American low income mothers. *Social Problems*, 50(1), 111-133.

Dorsey, S. & Forehand, R. (2003). The relation of social capital to child psychosocial adjustment difficulties: The role of positive parenting and neighborhood dangerousness. *Journal of Psychopathology and Behavioral Assessment*, 25, 11-23

Drukker, M & Os, J. (2003). Mediators of neighborhood socioeconomic deprivation and quality of life. *Society of Psychiatry* , 38, 689-706

Drukker M., Kaplan C., Feron F., & Os, J. (2003). Children's health-related quality of life, neighborhood socioeconomic deprivation and social capital: A contextual analysis. *Soc Sci Med*, 7, 825–41

Duncan, C. M. (2001). Social capital in America's poor rural communities. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Eberts, P. R. & Scott, M. E. (2000). Social capital and Community Development: In Erie Canal Corridor Communities. Retrieved April 8, 2004, from http://www.cardi.cornell.edu/canal/index.cfm.

Edin, K., & Lein, L. (1997). Maki*ng ends meet: How single mothers survive welfare and low-wage work*. New York: Russell Sage Foundation

Edwards, B. & Foley, M. (1997). Social capital and the political economy of our discontent. *American Behavioral Scientist*, 40(5), 669-678

Edwards, B. & Foley, M. (1998). Civil society and social capital beyond Putnam. *American Behavioral Scientist*, 42(1), 124-139.

Etzioni, A. (1988). *The moral dimension: Toward a new economics*, New York: Free Press.

Evans, P. (1995). Embedded Autonomy: States and Industrial Transformation. Princeton, N.J.: Princeton University Press.

Evans, P. (1996). Government action, social capital and development: Reviewing the evidence on synergy. *World Development*, 24, 1089-1103.

Fabricant, M. & Fisher, R. (2002). Agency based community building in low income neighborhoods: A praxis framework. *Journal of Community Practice*, 10 (2), 1-21.

Fafchamps, M.& Minten, B. (2002). Social capital and the firm: evidence from agricultural traders in Madagascar. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.125-154). New York: Cambridge university press.

Fahmy, E. (2003). Civic capacity, social exclusion & political participation in Britain: Evidence form the 1999 poverty & social exclusion survey. Retrieved by August, 20, 2004. from http://www.psa.ac.uk/journals/pdf/5/2003

Falk, I. & Kilpatrick, S. (2000). What is social capital? A study of a rural community. *Sociologia Ruralis*, 1(40), 87-110.

Fellin, P. (1998). Development of capital in poor, inner-city neighborhoods. *Journal of Community Practice, 5(3)*, 87-99.

Figueira-McDonough, J. (2001). *Community Analysis and Praxis: Toward a Grounded Civil Society*. Philadelphia, PA: Tayler & Francis Group

Field, J. (2003). *Social Capital*. New York: Routledge.

Fine, B. (2001). *Social capital versus social theory: Political economy and social science at the turn of the millennium*, New York: Routledge

Fisher, R & Karger, H.J. (1997). *Social Work and Community in a Private World: Getting Out in Public*. New York: Longman.

Fisher, R. (1994). *Let the People Decide: Neighborhood Organizing in America*. Boston: Twayne Publishers.

Flap. H. (2004). Creation and returns of social capital: A new research program. In H. Flap & B. Volker (Eds), *Creation and Returns of social capital: A new research program*, (pp.3-24). New York: Routledge.

Flora, J.L. (1998). Social capital and communities of place. *Rural Sociology, 63(4),* 481-506.

Flora, J.L., Sharp. J., Flora, C. & Newlon, B. (1997). Entrepreneurial social infrastructure and locally-initiated economic development in non-metropolitan U.S. *Sociological Quarterly*, 38(4), 623-645.

Foley, M & Edwards, B. (1998). Beyond Tocqueville: Civil society and social capital in comparative perspective. *American Behavioral Scientist*, 42(1), 5-20.

Foley, M. W., McCarthy, J. D., & Chaves, M. (2001). Social capital, religious institutions, and poor communities. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Forrest, R. & Kearns, A. (2001). Social cohesion, social capital and the neighborhood. Urban Studies, 38 (12), 2125-2143.

Fried, A. (2002). The strage disappearance of Alexis de Tocqueville in Putnam's analysis of social capital. In S.L. McLean, D.A. Schultz, and M.B. Steger (Ed.), Social Capital: Critical Perspectives on Community and "Bowling Alone" (pp. 21-49). New York: New York University Press.

Fuchs, E.R., Shapiro, R.Y. & Minnite, L.C. (2001). Social capital, political participation, and the urban community, In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 290-324). New York: The Russell Sage Foundation.

Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. New York: Free Press.

Gagg, M. & Snijders, T. (2004). Proposals for the measurement of individual social capital. In H. Flap & B. Volker (Eds), *Creation and Returns of social capital: A new research program*, (pp.199-218). New York: Routledge.

Garner, C.L. & Radenbush, S.W. (1991). Neighborhood effects on educational attainment: A multilevel analysis. *Sociology of Education* 64, 251-262

Garner, C.L., & Raudenbush. S. (1991). Neighborhood effects on educational attainment: A multilevel analysis, *Sociology of Education,* 64: 251-262

Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley, University of California Press.

Gittell, R. & Thompson, J. P. (2001). Making social capital work: social capital and community economic development. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Gittell, R. & Vidal, A. (1998). *Community Organizing: Building Social Capital*. Thousand Oaks, CA: SAGE.

Gold, R. Kennedy, B. Connell, F. & Kawachi, I. (2002). Teen births, income inequality and social capital: Developing an understanding of the causal pathway, *Health and Place*, 8, 77-83.

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology, 78*, 1360-1380.

Granovetter, M. S. (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology, 91*, 481-510.

Green, G. P. (2003). Civic involvement, organizational ties, and local economic development, Journal of the Community Development Society, 34(1), 1-17

Green, G. P. & Haines, A. (2002). *Asset Building & Community Development*, Thousand Oaks, CA: SAGE.

Grootaert, C. & Bastelaer, T. (2002). Introduction and overview. In C.Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.1-18). New York: Cambridge university press.

Grootaert, C. (1999). Social capital, household welfare, and poverty in Indonesia. Local Level Institutions Working Paper 6.Washington, D.C: The World Bank

Gutierrez, L., Parsons, R. & Cox, E. (1998). *Empowerment in Social Work Practice: A Sourcebook*. Pacific Grove, CA: Brooks/Cole Publishing.

Halpern, D. (2005). *Social Capital*. Malden, MA: Polity Press

Hardcastle, D.A., Wenocur, S., & Powers, P. R. (1997). *Community practice: theories and skills for social workers*. Oxford University Press: New York

Hardina, D. (2003). Linking citizen participation to empoweremtn practice: A historical overview. *Journal of Community Practice,* 11, 11-38

Harvey, D. (1973). *Social Justice and the City*. Baltimore, MD: The Johns Hopkins University Press

Hawken, P. (1993). *The Ecology of Commerce*, New York: Harper Business.

Hawkins, R. L. (2002). How single mothers leave welfare for economic self sufficiency: the role of psychosocial characteristics, human capital, and social capital, Doctoral dissertation, Brandis University.

Hawley, A. H. (1950). *Human Ecology: A Theory of Community Structure*. New York: The Ronald Press Company.

Healy, K. & Hampshire, A. (2002). Social Capital: a useful concept for social work? *Australian Social Work, 55 (3)*. 227-238.

Harrison, W.D. (1995) Community Development, *Encyclopedia of Social Work 19th*, p.555-562.

Harker, R., Mahar, C., & Wilkes, C. (Eds.). (1990). *An Introduction to the Work of Pierre Bourdieu: The Practice of Theory*. London: Macmillan

Hirsch, P.M & Levin, D.Z. (1999). Umbrella advocates versus validity police: A life cycle model. *Organization Science*, 10, 199-212.

Hoffmann, D.A., Griffin, M.A., & Gavin, M.B. (2000). The application of hierarchical linear modeling to organizational research. In K.J. Klein & S.W. Kozlowski (Ed.). *Multilevel Theory, Research, and Methods in Organizations* (pp. 467-511). San Francisco, CA: Jossey-Bass

Hustedde, R.J. & Ganowicz, J. (2002). The basics: What's essential about theory for community development practice? *Journal of the Community Development Society,* 33(1), 1-19.

Isham, J. (2002). Can investments in social capital improve local development and environmental outcomes? In J. Isham, T. Kelly, & S. Ramaswamy (Ed.). *Social Capital and Economic Development* (pp. 159-175). Northampton, MS: Edward Elgar Publishing.

Isham, J. & Kahkonen, S. (2002). How do participation and social capital affect community based water projects? Evidence form Central Java, Indonesia. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.155-187). New York: Cambridge university press.

James, S.A., Schulz A.J. & Olphen, J. (2001). Social capital, poverty, and community health: An exploration of linkages. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 165-188). New York: The Russell Sage Foundation.

Jargowsky, P. A. (1997). *Poverty and Place: Ghettos, Barrios, and the American City*. New York: Russell Sage Foundation.

Jessop, B. (1994). Post-Fordism and the state. In Amin, A, (Ed.). *Post-Fordism*, pp. 251-279. Oxford: Blackwell.

Kaul, M. L. (2000). Serving oppressed communities: the self help approach. In J. Rothman, J.L. Erlich, & J. E. Tropman, (Ed.) *Strategies of Community Intervention* (pp. 278-284). Itasca, IL: Peacock Publishers

Kaufman, H. F. (1959), Towards an interactional conception of community. *Social Forces, 38(1)*:8-17

Kawachi, I., Kennedy, B. P. , Lochner. K., & Prothrow-Stith, D. (1997). Social capital, income inequality, and Mortality. *American Journal of Public Health, 87(9),* 1491-1498.

Kearns, A. & Forrest, R. (2000). Social cohesion and multilevel urban governance, *Urban Studies*, 37 (5-6), 995-1017.

Kennedy, B.P., Kawachi, I., Prothrow-Stith, D.P., Lochner, K. & Gupta, V. (1998). Social capital, income inequality, and firearm violent crime. *Social Science and Medicine*, 47(1), 7-17.

Keyes, L, Schwartz, A, Vidal, A. & Bratt, R. (1996). Networks and nonprofits: Opportunities and challenges in an era of federal devolution. *Housing Policy Debate 7(2*). 21-28.

Keyes, L. (2001). Housing, social capital, and poor communities. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Khinduka, S. K. (1998). *Community Development: Potentials and Limitations*. Belmont, CA: Wadsworth Publishing Company.

Kilpatrack, S., Field, J. & Falk, I (2003). Social capital: An analytical tool for exploring lifelong learning and community development. *British Educational Research Journal*, 29 (3), 417-433.

Kirst-Ashman, K. K. & Hull, G. H. (2001). *Generalist practice with organizations & communities.* Belmont. CA: Wadsworth/Thomson Learning.

Knack, S. (2002). Social capital, growth, and poverty: A survey of cross-county evidence. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.42-82). New York: Cambridge university press.

Knack, S. & Keefer, P. (1997). Does social capital have an economic pay-off? A cross country investigation. *Quarterly Journal of Economics. 112*(4),1251-1288.

Knoke, D. (1990). *Political Networks: The Structural Perspective*. New York: Cambridge University Press.

Kozel, V. & Parker. B (2000). Integrated Approaches to Poverty Assessment in India. In M. Bamberger, (Eds), *Integrating Quantitative and Qualitative Research in Development Projects*. Washington, D.C.: World Bank

Kretzmann, J. & McKInght, J. (1993). Building Communities from the Inside Out: A Path toward Finding and Mobilizing a Community's Assets. Evanston, IL: Northwestern Universtiy.

Krishna, A. (2002). *Active Social Capital*. New York: Columbia University Press.

Krishna, A. (2004). Putting social capital to work: Agency and Development. In S. Prakash and P. Selle (Eds). *Investigating Social Capital: Comparative Perspectives on Civil Society, participation, and Governance* (pp.207-231). Thousand Oaks, CA: SAGE Publications.

Krishna, A. & Uphoff, N (2002). Mapping and measuring social capital: A conceptual and empirical study of collective action for conserving and developing watersheds in Rajasthan, India. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.85-124). New York: Cambridge university press.

Krishna, A. & Shrader, E. (1999). Social capital assessment tool. Prepared fro the conference on social capital and poverty reduction. Social capital initiative working paper 22. Washington, DC: The World Bank

Labonte, R. (1999). Social capital and community development: Practitioner emptor. *Australian and New Zealand Journal of Public Health*, 23(4), 430-433.

Ladd, E. C. (1996). The data just don't show erosion of America's social capital. *The Public Perspective*, 1, 5-6.

Laverack, G. (2001). An identification and interpretation of the organizational aspects of community development. *Community Development Journal*, 36 (2), 134-145.

Levy, M. (2001). Capitalizing on labor's capital. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Lin, L. (1999). Social networks and status attainment. *Annual Reviews, 25*, 467-487.

Lin, L. (2001). Building a network theory of social capital. In L. Lin, K. Cook, & R. Burt (Ed.) *Social Capital: Theory and Research*. NY: Aldine de Gruyter.

Linhorst, D.M (2002). Federalism and social justice: Implications for social work. *Social Work*, 47(3), 201-208.

Livermore, M. & Neustrom, A. (2003). Linking welfare clients to jobs: Discretionary use of worker social capital. *Journal of Sociology and Social Welfare*, 30, (2). 87- 103

Lochner, K., Kawachi, I., Kennedy, B.P. (1999). Social capital: A guide to its measurement. *Health & Place*, 5, 259-270.

Lopez, M. L. & Stack, C. B. (2001). Social capital and the culture of power: lessons from the field. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Loury, G. (1977). A dynamic theory of racial income differences. In P.A. Wallace & A.M La Mond (Eds), *Women, Minorities, and Employment Discrimination* (pp. 153-186). Lexington, MA: Heath.

Lynch, J.W., Simth, D. Kaplan, G.A., & House, J.S. (2000). Income inequality and mortality: Importance to health of individual outcome, psychosocial environment, or material conditions. *British Medical Journal*, 320, 1200-1204.

Lyon L. (1987). *The Community in Urban Society*. The Dorsey Press, Chicago, Illinois.

Lyon L. (1988). Choosing the best approach to the community. In R. L. Warren & L. Lyon (Ed.). *New Perspectives on the American Community* (pp. 87-96). Belmont. CA: Wadsworth Publishing Company.

Macinko, J. & Starfield, B. (2001). The utility of social capital in research on health determinants. *The Milbank Quarterly, 79(3*), 387-427.

Magdol, L., & Bessel, D. R. (2003). Social capital, social currency, and portable assets: The impact of residential mobility on exchanges of social support. *Personal Relationships*, 10, 149-169

Maluccio J., Haddad, L., & May, J. (2000). Social capital and household welfare in South Africa. *Journal of Development Studies, 36,* 54-81

Maloney, W.A, Smith, G. & Stoker, G. (2000). Social capital and associational life. In Baron, S., Field, J., & Schuller, T. (Ed.), *Social Capital: Critical Perspective* (pp. 212-225). New York: Oxford University Press.

Massey, D. S., White, M.J. & Phua.V. (1996). The dimensions of segregation revisited, *Sociological Methods and Research,* 25, 172-206

Massey, D.S.& Denton, N.A. (1993). *American Apartheid: Segregation and the Making of the Urban Underclass.* Cambridge: Havard University Press.

McClenaghan, P. (2000). Social capital: exploring the theoretical foundations of community development education. *British Educational Research Journal, 26(5),* 565-583.

Midgley, J. & Livermore, M. (1998). Social capital and local economic development: Implications for community social work practice. *Journal of Community Practice, 5*, 29-40.

Mikkelsen, B. (2005). *Methods for Development Wok and Research: A New Guide for Practitioners*. Thousand Oaks, CA: Sage Publications

Minkoff, D. (1997). Producing social capital: National social movements and civil society. *American Behavioral Scientist*, 40 (5), 606-619.

Mizrahi, T. (2001). The status of community organizing in 2001: Community practice context, complexities, contradictions, and contributions. *Research on Social Work Practice*, 11(2), 176-189.

Muntaner, C. & Lynch, J. (1999). Income inequality, social cohesion, and class relations: A critique of Wilkinson's Neo-Durkeimian research program. *International Journal of Health Services*, 29 (1), 59-81.

Naparstek, A.J. & Dooley, D. (1997), Community Building, *Encyclopedia of Social Work*, 19th supplement, 77-89.

Narayan, D. & Pritchett, L. (1999). Cents and Sociability: Household income and social capital in rural Tanzania. Economic Development and Cultural Change, 47 (4), 871-897

Narayan, D. & Nyamwaya, D. (1996). Learning from the poor: A participatory poverty assessment in Kenya, Washington DC: The World Bank.

Narayan, D., & Cassidy, M. F. (2001). A dimensional approach to measuring social capital: development and validation of a social capital inventory. *Current Sociology, 49(2*), 59-102.

Narayan, D. (2002). Bonds and bridges: social capital and poverty. In J. Isham, T. Kelly, & S. Ramaswamy (Ed.). *Social Capital and Economic Development* (pp. 58-81). Northampton, MS: Edward Elgar Publishing.

Nelson, M.K. (2000). Single mothers and social support: The commitment to and retreat from reciprocity. *Qualitative Sociology*, 23, 291-317.

Norris, P. (1999): *Critical Citizens. Global Support for Democratic Governance*. New York: Oxford Press.

North, D.C. (1990). *Institutions, Institutional Change, and Economic Performance.* New York: Cambridge University Press

Olson, M. (1982). *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities.* New Haven: Yale University Press.

Onyx, J. & Bullen, P. (2000). Measuring social capital in five communities. *The Journal of Applied Behavioral Science, 36(1*), 23-42.

Osgood, M. & Ong, B. N. (2001). Social capital formation and development in marginal communities, with reference to post Soviet societies. *Progress in Development Studies, 1(3),* 205-219.

Ostrom, E. (1996) Crossing the great divide: co-production, synergy and development, *World Development, 24*, pp. 1073-1087.

Palloni, A., Massey, D., Ceballos, M., Espinosa, K. & Spittel, M. (2001). Social capital and interactional migration: a test using information on family networks. The *American Journal of Sociology,* 106(5),1262-1299.

Pargal, S., Gilligan, D. & Huq, M. (2002). Does social capital increase participation in voluntary solid waste management? Evidence from Dhaka, Bangladesh. In C. Grootaert, & T. Bastelaer, (Ed.), *The Role of Social Capital in Development: An Empirical Assessment* (pp.188-211). New York: Cambridge university press.

Perkins, D.D., Hughey, J., Speer, P.W. (2002). Community psychology perspectives on social capital theory and community development practice, *Journal of the Community Development Society,* 33 (10), 33-50.

Pigg, K.E. (2002). Three faces of empowerment: Expanding the theory of empowerment in community development. *Journal of the Community Development Society*, 33(1), 107-123.

Pigg, K.E. (1999). Community leadership and community theory: A practical synthesis. *Journal of the Community Development Society,* 30(2), 196-214.

Portes, A. (1998). Social capital: its origins and applications in modern sociology. *Annual Review, 24*, 1-24.

Portes, A. & Sensenbrenner, J. (1993). Embeddedness and Immigrations: Notes on the social determinants of economic action. *American Journal of Sociology, 98(6),* 1320-1350.

Portes, A. & Landolt, P. (2000). Social capital: Promise and pitfalls of its role in development. *Journal of Latin American Study*, 32, 529-547.

Portes, A. & Mooney, M. (2002). Social capital and community development. In M. F. Guillen, R. Collins, P. England, & M. Meyer (Ed.). *The New Economic Sociology*. New York: Russell Sage Foundation.

Potocky-Tripodi, M. (2004). The role of social capital in immigrant and refugee economic adaptation. *Journal of Social Service Research*, 31 (1), 59-91.

Putnam, R. D. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: University Press.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy, 6 (1)*, 65-78.

Putnam, R. D. (1996). Who killed civic America? *Prospect*, March, 66-72.

Putnam, R. D. (2000). *Bowing Alone: The collapse and revival of American community*. New York: Simon and Schuster.

Raudenbush, S. W., Bryk, A., Cheong, Y. F., & Congdon, R. (2004). *HLM6: Hierarchical linear and nonlinear modeling*. Chicago, IL: Scientific Software International

Raudenbush, S.W. & Bryk, A.S. (2002). Hierarchical linear models: Applications and data analysis methods, Thousand Oaks, CA: Sage Publications.

Rankin, B & Quaine, J. (2000). Neighborhood poverty and the social isolation of inner-city African American families, *Social Forces*, 79 (1), 139-164.

Rodgers, H. R. (2000). *American Poverty in a New Era of Reform*. New York: M.E. Sharpe.

Rose, R. (2000). Uses of social capital in Russia: Modern, pre-modern, and anti-modern. Post-Soviet Affairs, 16(1), 33-57.

Rosenfeld. R., Messner, S. & Baumer, E.P. (2001). Social capital and homicide. *Social Forces*, 80, 283-309.

Ross, M. (1955). *Community Organization - Theory and Principles*. New York:Harper & Row Publishers

Rothman, J. (1996). The interweaving of community intervention approaches, *Journal of Community Practice*, 3, 69-99.

Rothman, J. (1979). Three models of community organization practice: Their mixing and phasing in. In F. Cox. J.L Erlich, J.Rothman &J.E. Tropman (Eds.) *Strategies of Community Organization*. (pp. l25-45.) Itasca: I.F.E. Peacock

Rothman, J., Erlich, J. L., & Tropman, J. E. (Ed). (2001). *Strategies of Community Intervention*. Itasca: I.F.E. Peacock

Rubenson, D. (2005). Community heterogeneity and political participation in American cities. Paper presentation to the 2005 Canadian Political Science Association meeting.

Rubin, H. J. (2000). *Renewing Hope within Neighborhoods of Despair: The Community-based Development Model.* Albany, NY: Sate University of New York Press.

Rupasingha, A., Goetz, S.J. & Freshwater, D. (2002). Social and institutional factors as determinants of economic growth: Evidence from the United States counties. *Regional Science*, 81 (2), 139-155

Rupasingha, A., Goetz, S.J., Freshwater, D. (2000). Social capital and economic growth: a county-level analysis. *Journal of Agricultural and Applied Economics,* 32, 565–572

Rydin, Y. & Pennington, M. (2000). Public participation and local environmental planning. *Local Environment, 5,*153-169.

Saegert, S. & Winkel, G. (1998). Social capital and the revitalization of New York city's distressed inner city housing. *Housing Policy Debate*, 9(1), 17-60.

Saegert, S., Thompson, J.P., & Warren, M. (Ed). (2001). *Social Capital and Poor Communities.* New York: Russell Sage Foundation.

Saguaro Seminar (2001). Social Capital Community Benchmark Survey. Cambridge, MA: John F. Kennedy School of Government, Harvard University

Saleebey, D. (1992). *The strengths perspective in social work practice*. New York: Longman.

Sampson, R.J. (2001). Crime and public safety: Insights from community-level perspectives on social capital. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 89-114). New York: The Russell Sage Foundation.

Sampson, R.J., Raudenbush, S.W., & Earls, F. (1997). Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science, 277*, 918-924.

Sampson, R.J., Raudenbush, S.W. (1999). Systematic social observation of public spaces: A new look at disorder in urban neighborhoods. *American Journal of Sociology*, 105, 603-651.

Sampson, R.J., Morenoff, J., & Earls, F. (1999). Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review*, 64, 633-660.

Sampson, R.J., Morenoff, J., & Gannon-Rowley, T. (2002). Assessing "neighborhood effects": Social process and new directions in Research. *Annual Review of Sociology*, 28, 443-478.

Schmid, H. & Salman, H. (2005). Citizen's perceptions of the neighborhood council: The case of Arab neighborhoods in East Jerusalem. *Journal of Community Practice,* 13(2), 61-75

Schuller, T. (2000). Social and human capital: the search for appropriate technomethodology. *Policy Studies, 21(1),* 25-35.

Schuller, T., Baron, S. & Field, J. (2000). Social capital: A review and critique. In Baron, S., Field, J., & Schuller, T. (Ed.), *Social Capital: Critical Perspective* (pp. 1-38). New York: Oxford University Press.

Sharp. J.S., Flora, J.L. & Killacky, J. (2003). Networks and fields: corporate business leader involvement in voluntary organizations of a large nonmetropolitan city. *Journal of the Community Development Society, 34(1), 36-57.*

Shaw, C.R. & McKay, H.D. (1969). Juvenile Delinquency and Urban Areas. Chicago: University of Chicago Press.

Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. Armonk, NY: M.E. Sharpe.

Siisiäinen, M. (2000), Two concepts of social capital: Bourdieu vs. Putnam, Paper presented at ISTR Fourth International Conference, Trinity College, Dublin, Ireland.

Silverman, R. M. (2001). CDCs and charitable organizations in the urban south. *Journal of contemporary Ethnography, 30(2),* 240-268.

Silverman, R. M. (Ed.). (2004). *Community Based Organizations*. Detroit, MI: Wayne State University Press.

Skocpol, T. (1996). Unravelling from above. *American Prospect*, 25, 20-25.

Solomon, B. B (1985). Community social work practice in oppressed minority communities. S. H. Taylor & R. W. Roberts(Ed.). *Theory and Practice of Community Social Work*. New York: Columbia university press

Solow, R.(2000). Notes on social capital and economic performance, In P. Dasgupta and I. Serageldin, (Eds). *Social Capital: A Multifaceted Perspective* (6-10), World Bank, Washington DC.

Specht, S. & Courtney, M. (1994). *Unfaithful Angels*. New York: Free Press.

Stack, C. (1974). *All Our Kin: Strategies for Survival in a Black Community*. New York: Harper and Row

Stanton-Salazar, R.D. & Dornbusch, S.M. (1995). Social capital and the reproduction of inequality: Information networks among Mexican-origin high school students. *Sociology of Education*, 68,116-135

Steenbergen, M.R., & Bradford S. J. (2002). Modeling multilevel data structures. *American Journal of Political Science,* 45, 218–237

Steger, M. B. (2002). Robert Putnam, social capital, and a suspect named globalization. In S.L. McLean, D.A. Schultz, and M.B. Steger (Ed.), *Social Capital: Critical Perspectives on Community and "Bowling Alone"* (pp. 260-280). New York: New York University Press.

Stokke, K. (2002). Habitus, Capital and Fields: Conceptualizing the Capacity of Actors in Local Politics. Retrieved by May 11th 2005. From http://folk.uio.no/stokke/publications.

Stone, W. & Hughes, J. (2000) What role for social capital in family policy? *Family Matters*, 56, 20- 27.

Suramanian S.V., Kim D.J., & Kawachi I. (2002). Social trust and self-rated health in US communities: A multilevel analysis. *Journal of Urban Health: Bulletin of New York Academy of Medicine*, 79 (4), 21-34.

Taylor, S. H. & Roberts, R. W. (1985). *Theory and Practice of Community Social Work*. New York: Columbia University Press.

Tempkin, K. & Rohe, W.M. (1998). Social capital and neighborhood stability: An empirical investigation. *Housing Policy Debate*, 9(1), 61-88.

The World Bank (1999). *What is Social Capital* ?. Retrieved by March, 18, 2004. from http://www.worldbank.org/poverty/scapital/whatsc.htm

Thomas, E.P. (2002) Local participation in development initiatives: the potential contribution of an understanding of social capital, *Urban Forum 13*, 116-131.

Turner, R.S. (1999). Entrepreneurial Neighborhood Initiatives: Political capital in community development, *Economic Development Quarterly*, 13,

Turner, J. H., Beeghely, L, & Powers, C. H. (2002). *The Emergence of Sociological Theory*. Belmont, CA: Wadsworth

Uslander, E.M. (1999). Democracy and Social Capital. In M.W. Warren (Eds.), *Democracy and Trust*. Cambridge: Cambridge University Press

Uphoff, N. (1993). Grassroots organizations and NGOs in rural development: Opportunities with diminishing states and expanding markets, *World Development*, 21 (4), 607-622.

Veenstra, G. (2000). Social capital, SES and health: an individual-level analysis. *Social Science & Medicine 50*, 619-629.

Veenstra, G. (2002). Social capital and health (plus wealth, income inequality and regional health governance). *Social Science and Medicine*, 54(6), 849-868

Wacquant, L. (1998). Negative social capital: State breakdown and social destitution in America's urban core. *Housing and the Built Environment*, 13(1), 25-40.

Warren, R. (1978). *The Community in America*. Chicago: Rand McNally and Company.

Warren, M. R., Thompson, J. P., & Saegert, S. (2001). The role of social capital in combating poverty. In Saegert, S., Thompson, J. P., &. Warren, M. R (Ed.), *Social Capital and Poor Communities* (pp. 1-30). New York: The Russell Sage Foundation.

Wegener, B. (1991). Job mobility and social ties: social resources, prior job, and status attainment. *American Sociological Review, 56*, 60-71.

Weil, M.O. (1996). Community Building: Building community practice. *Social Work, 41(5)* p.481-499.

Weil, M. O. (1995) Community practice models, *Encyclopedia of Social Work* 19th, p557-594

Wellman, B. and S.D. Berkowitz (Ed). (1998). *Social Structures: A Network Approach*. Cambridge, Cambridge University Press.

Wellman, B & Leighton, B. (1988). Networks, Neighborhoods, and Communities: Approaches to the Study of the Community Question. In R. L. Warren & L. Lyon (Ed.). *New Perspectives on the American Community* (pp. 57-73). Belmont. CA: Wadsworth Publishing Company.

Whiteley, P.F. (2000). Economic growth and social capital, *Political Studies*, 48(3) 433-466.

Whiford, A.B. & Yates, J. (2002). Volunteerism and social capital in policy implementation: Evidence from the Long term care ombudsman program. *Journal of Aging & Social Policy*, 14 (3), 61-73.

Wilkinson, K. P (1991). *The Community in Rural America*., NewYork: Greenwood Press

Wilkinson, K. P (1988). A Field Theory Perspective for Community Development Research, In R. L. Warren & L. Lyon (Ed.) *New Perspectives on the American Community* (pp.51-57). Belmont. CA: Wadsworth Publishing Company.

Wilkinson, R.G. (1996). *Unhealthy societies: the afflictions of inequality.* London: Routledge,

Wilkinson, R.G. (1999) Income inequality, social cohesion, and health: Clarifying the theory. International Journal of Health Services, 29(3), 525-543.

Wilkinson, P. & Quarter, J. (1995). A theoretical framework for community based development. *Economic and Industrial Democracy*, 16, 525-551.

Wilson, W.J. (1987). *The truly disadvantaged*. Chicago: University of Chicago Press.

Wilson, W. J. (1996). *When Work disappears: The World of the New Urban Poor*. New York: Alfred A. Knopf.

Wilson, P. A. (1997). Building social capital: a learning agenda for the twenty-first century. *Urban Studies, 34*, 745-760.

Woolcock, M. (1998). Social capital and economic development : toward a theoretical synthesis and policy framework. *Theory and Society, 27*, 151-208.

Woolcock, M. & Narayan, D. (2000). Social capital: implications for development theory, research, and policy. *The World Bank Research Observer, 15 (2),* 225-249.

Woolcock, M. (2002). Social capital in theory and practice: Where do we stand? In J. Isham, T. Kelly, & S. Ramaswamy (Ed.). *Social Capital and Economic Development* (pp. 18-39). Northampton, MS: Edward Elgar Publishing.

Yan, M.C. (2004). Bridging the fragmented community: revitalizing settlement houses in the global era. *Journal of Community Practice*, 12, 51-69.

Zak, P.J. & Knack, S. (2001). Trust and Growth. *Economic Journal*, 111, 295-321.

Zajdow, G. (1998). Civil society, social capital and the twelve step group. *Community, Work & Family, 1,* 79-89.

Zhao, Y. (2002). Measuring the social capital of laid-off Chinese workers. *Current Sociology, 50(4)*, 555-571.

Zimmerman, M. & Rappaport, J. (1988). Citizen participation, perceived control, and psychological empowerment. *American Journal of Community Psychology*, 16, 725-750

Zippay, A. (2000), The role of social capital in reclaiming human capital: A longitudinal study of occupational mobility among displaced steelworkers, *The Journal of Sociology and Social Welfare*, 28 (4).

Appendix A. Definitions of Social Capital

Level	Definitions
Individual	"Naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace… an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society" Loury (1992, p.100). "Defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure and they facilitate certain actions of individuals who are within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence" Coleman (1990. p.302). "The capacity of individuals to command scarce resources by virtue of their membership in networks or broader social structures" Portes (1998. p.12) "Sum of resources, actual or virtual, that accrue to a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" Bourdieu & Wacquant (1992. p119)
Collective	"Those tangible assets (that) count for most of the daily lives of people: namely goodwill, fellowship, sympathy and social intercourse among the individuals and families who make up a social unit" Hannifan (1920, p.78) "Features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit (Putnam, 1993, p. 35) "The institutions, relationships, and norms that shape the quality and quantity of a society's social interactions… social capital is not just the sum of the institutions which underpin a society. It is the glue that holds them together" World Bank (1999, p.1) " The product of social interactions with the potential to contribute to the social, civic or economic well-beng of a community of common purpose" (Falk& Kilpatrick, 2000, p. 103) "The set of resources that inhere in relationships of trust and cooperation between people" - Warren, Thompson, & Saegert (2001, p.1) "Norms and networks that facilitate collective action" - Woolcock (1998, p.153)

Appendix B. Effective Sample Sizes and 95% Confidence Intervals for Percentage Estimates

	Final Sample	Statistical Efficiency	Effective Sample Size	95% Confidence (±)
Atlanta Metro (GA)	510	0.802	409	4.8%
Baton Rouge (LA)	500	0.820	410	4.8%
Birmingham Metro (AL)	500	0.780	390	5.0%
Bismarck (ND)	506	0.835	422	4.8%
Boston (MA) [city]	604	0.473	285	5.8%
Boulder County (CO)	500	0.802	401	4.9%
Central Oregon	500	0.801	400	4.9%
Charlotte (NC) [14-county region]	1500	0.800	1200	2.8%
Chicago Metro (IL)	750	0.766	574	4.1%
Cincinnati Metro (OH)	1001	0.796	796	3.5%
Cleveland / Cuyahoga Co. (OH)	1100	0.687	755	3.6%
Delaware	1383	0.570	788	3.5%
Denver (CO) (city/cty.)	501	0.762	381	5.0%
Detroit (MI) [Metro - 7 co. area]	501	0.766	383	5.0%
East Tennessee	500	0.805	402	4.9%
Fremont / Newaygo Co. (MI)	753	0.750	564	4.1%
Grand Rapids (MI) [city]	502	0.737	369	5.1%
Greensboro / Guilford Co. (NC)	752	0.789	593	4.0%
Houston / Harris Co. (TX)	500	0.841	420	4.8%
Indiana	1001	0.673	673	3.8%
Kalamazoo Co. (MI)	500	0.801	400	4.9%
Kanawha Valley (WV)	500	0.731	365	5.1%
Lewiston-Auburn (ME)	523	0.804	420	4.8%
Los Angeles Co. (CA)	515	0.733	377	5.0%
Minneapolis (MN)	501	0.688	344	5.3%
Montana	502	0.795	399	4.9%
New Hampshire	711	0.638	453	4.6%
North Minneapolis (MN)	452	0.732	330	5.4%
Peninsula / Silicon Valley (CA)	1505	0.717	1079	3.0%
Phoenix / Maricopa Cty. (AZ)	501	0.698	349	5.2%
Rochester Metro (NY)	988	0.744	735	3.6%
San Diego Co. (CA)	504	0.578	291	5.7%
San Francisco (CA) [city]	500	0.641	320	5.5%
South Dakota (rural)	368	0.769	282	5.8%
Seattle (WA)	502	0.566	284	5.8%
St. Paul Metro (MN)	503	0.740	372	5.1%
Syracuse / Onondaga Co. (NY)	541	0.797	431	4.7%
Winston-Salem / Forsyth Co. (NC)	750	0.778	583	4.1%
Yakima (WA)	500	0.807	403	4.9%
York (PA)	500	0.808	404	4.9%
National sample	3003	0.687	2063	2.1%

Appendix C. County Level Neighborhood Samples (N=52)

Fibs Code	State	County	Respondents (n)
1073	AL	Jefferson	449
4013	AZ	Maricopa	528
6001	CA	Alameda	170
6037	CA	Los Angeles	607
6073	CA	San Diego	525
6075	CA	San Francisco	505
6081	CA	San Mateo	435
6085	CA	Santa Clara	934
8013	CO	Boulder	507
8031	CO	Denver	507
10001	DE	Kent	345
10003	DE	New Castle	698
10005	DE	Sussex	344
13067	GA	Cobb	130
13089	GA	Dekalb	139
13121	GA	Fulton	220
17031	IL	Cook	560
18097	IN	Marion	173
22033	LA	East Baton Rouge	509
23001	ME	Androscoggin	524
25025	MA	Suffolk	599
26077	MI	Kalamazoo	506
26081	MI	Kent	509
26123	MI	Newaygo	670
26125	MI	Oakland	132
26163	MI	Wayne	251
27037	MN	Dakota	164
27053	MN	Hennepin	962
27123	MN	Ramsey	275
33005	NH	Cheshire	195
33011	NH	Hillsborough	190
33015	NH	Rockingham	115
36055	NY	Monroe	712
36067	NY	Onondaga	543
37025	NC	Cabarrus	113
37067	NC	Forsyth	752
37071	NC	Gaston	157
37081	NC	Guilford	755
37119	NC	Mcklenburg	596
38015	ND	Burgleigh	316
38059	ND	Morton	187
39017	OH	Butler	157
39035	OH	Cuyahoga	1117

39061	OH	Hamilton	536
41017	OR	Deschutes	372
42133	PA	York	507
45091	SC	York	135
47093	TN	Knox	138
48201	TX	Harris	534
53033	WA	King	513
53077	WA	Yakima	501
54039	WV	Kanawha	365
total			22383