

WORKING PAPER SERIES

Assessing Community Capacity in Rural America: Some Lessons from Two Rural Observatories

by
Alex Marre and Bruce Weber

RPRC Working Paper No.07-02

August 2007

Rural Poverty Research Center

<http://www.rprconline.org/>

RUPRI Rural Poverty Research Center
214 Middlebush Hall
University of Missouri
Columbia MO 65211-6200
PH 573 882-0316

RUPRI Rural Poverty Research Center
Oregon State University
213 Ballard Hall
Corvallis OR 97331-3601
PH 541 737-1442



**Assessing Community Capacity in Rural America:
Some Lessons from Two Rural Observatories***

Alexander W. Marre and Bruce A. Weber[†]

* This paper was written with financial support of the RUPRI Rural Poverty Research Center. Core funding for RPRC has been provided by the office of the Assistant Secretary for Planning and Evaluation (ASPE) of the U.S. Department of Health and Human Services. We are grateful to Bill Reimer for very thoughtful comments on a earlier version of this paper.

[†] Alexander Marre is graduate research assistant in the Department of Agricultural and Resource Economics at Oregon State University. Bruce Weber is professor in the Department of Agricultural and Resource Economics at Oregon State University and Co-director of the RUPRI Rural Poverty Research Center.

I. Introduction

Building community capacity is a central concern of both policymakers and community residents. Both want to understand why some communities are more successful in achieving positive social, economic and environmental outcomes, and how to increase the capacity of communities to achieve these outcomes. This is particularly true in communities that face the most difficult economic challenges: central cities of large metropolitan areas and remote rural communities. Most attempts to define, assess and build community capacity, however, have been undertaken in urban neighborhoods. While there is much to learn from these studies of urban places, there are distinctive characteristics and dynamics of rural communities that introduce unique challenges to the assessment and building of community capacity.

Two efforts to study rural communities and assess their “capacity” in rural North America are reviewed in this paper: the New Rural Economy (NRE) Rural Observatory of the Canadian Rural Revitalization Foundation and the social capital community assessments of rural Central Oregon communities in the Ventures Program funded by the Northwest Area Foundation. The NRE Rural Observatory, initiated in 1998, is a university-based research effort that involves contractual commitments with 23 rural communities in Canada – selected to represent the diversity of rural places in Canada along several dimensions – to monitor social and economic change and governance in these places. The Ventures Program, initiated in 1999, is a foundation/community partnership program that establishes long-term (10-year) commitments in 5 rural areas in the Western United States in order to encourage poverty-reduction strategies that will

yield long-term impact. The project included assessments of community life in each of the participating communities using the Social Capital Community Benchmark Surveys.

This paper reviews literature on community capacity and related concepts, then examines the New Rural Economy Rural Observatory and community social capital assessments of Central Oregon Ventures program for lessons that can inform the understanding of these concepts in the rural United States. Drawing on publications and reports from these programs and input from the principals, the paper focuses on the criteria used to select rural communities, local participation in project design and data collection, and the measures used to assess community capacity in the projects. The goal is to generate knowledge leading to policies supportive of sustainable rural places.

II. Community Capacity, Social Capital and Collective Efficacy

Community Capacity

A widely used definition of community capacity is that proposed by Robert Chaskin who defines it as “the interaction of human capital, organizational resources and social capital existing within a given community that can be leveraged to solve collective problems and improve or maintain the well being of that community” (2001).

Community capacity, he argues, can “operate through informal social processes and/or organized effort” (Chaskin, 2001). The term community capacity is widely used among those who are concerned about community development or involved in social work and social service delivery.

In asking why some communities succeed and others fail, our approach is to adopt a framework that views a community outcome to be a function of the resources at the

community's disposal to achieve that outcome. Such a framework for studying communities views communities as production units that produce a particular outcome or meet a certain goal. A community might have three types of inputs: human capital, social capital and other resources such as physical capital and financial resources. Each community coordinates these resources towards meeting, or producing, a goal. Community capacity in this framework is analogous to technology. That is, each community has some knowledge or 'know-how' to coordinate these inputs (community resources) to produce the output (community goal).

Communities, then, may differ in at least two ways. First, communities could differ in their endowments of inputs or resources. Alternatively, one community may have more “capacity” than another: it may have a particularly effective way of arranging their inputs, or marshalling their resources together to achieve their goals. If this “technological know-how” can be taught, then there are lessons to be learned from the successful community that may be replicated in failing communities. Both explanations, of course, may co-exist at the same time, explaining differences in the ability of communities to achieve an objective.

Lyons and Reimer (2006) examine the different ways that the community capacity concept has been developed in various literatures. One is the view that community capacity is a condition, some static resource to be used as the community wishes. A second, different view is of community capacity as a process. Most definitions of community capacity see it as a dynamic process, with changes in conditions and/or ways in which the community uses its resources.

Lyons and Reimer (2006) argue that defining community capacity as a condition discourages an examination of the way it works. For example: "If a community is seen to have high levels of leadership and therefore high levels of capacity...we become insensitive to the way in which that leadership is exercised, including who might be excluded in the process" (Lyons and Reimer, 2006). We want to learn why some communities succeed and others fail. Therefore, a dynamic, process-oriented view of community capacity will inform what information we collect.

The broad concept of community capacity requires a multidimensional set of measures. Chaskin (2001) examines community capacity in four selected metropolitan areas, proposing a model for measuring community capacity that develops measures across a large number of domains. Using key informants and case studies, they develop domains of community capacity related to the sense of community, commitment levels, problem-solving ability and access to resources, as well as engagement in organizations and networks, and community intentions and strategies (Ziembroski, 2004, p. 5).

Social Capital¹

Economists and sociologists interested in local development are less likely to frame their analyses in terms of "community capacity", focusing instead on the narrower concepts of social capital and collective efficacy.^{1,2} Economists have entered this arena primarily through their contributions to discussion of social capital, a concept that builds on and broadens economists' traditional focus on physical and human capital as inputs to production of goods and services. (Durlauf and Fafchamps, 2006; Castle, 2002) Social capital has been viewed by economists both as an individual asset (Glaeser et al., 2002,

Shideler, 2004; Karlan, 2005) and – following Coleman (1990) and Putnam (2002) – as a community asset (Rupasingha et al., 2006).

Social capital is measured with a small set of indicators, and sometimes characterized by a single index constructed from a set of indicators. As noted above, it can be considered an individual asset or a community asset, and has been measured at both the individual and the community level.

At the individual level, it has been measured with answers to a set of questions designed to elicit values and attitudes. Data sets commonly used to determine social capital include the General Social Survey (GSS), the Panel Study of Income Dynamics, and other household surveys. The GSS for example, has questions related to “trust”, “fairness”, and “helping” that have been used to measure social capital. Social capital measures derived from these questions have been found to be related statistically to economic growth (Knack and Keefer, 1997), civic involvement (Brehm and Rahn, 1997) and communication infrastructure (Fisman and Khanna, 1999) in cross-country studies. Economists also attempt to assess individual’s trust levels with the “Trust Game” (Karlan, 2005). Sometimes the survey results are used to predict individual outcomes (academic performance, use of credit, criminal behavior). At other times, individual data are aggregated to develop a collective (average) measure of social capital for a nation or region (as in Knack and Keefer, 1997) which is then used to predict national or regional outcomes.

Social capital is also measured at the national, state, regional or community level from aggregate measures of structural characteristics. (population size, density of

associations, percentage of population that is native-born or of various races/ethnicities or living in a rural area). These community measures can be used to predict either individual outcomes (Guiso et al., 2002; Hofferth and Iceland, 1998) or to predict community outcomes (Rupasingha et al., 2000). Rupasingha et al. (2006) use information from a variety of secondary sources to construct a county-level measure of social capital. They use this variable to explain variations in county growth rates (Rupasingha et al., 2000) and changes in poverty (Rupasingha and Goetz, 2003).

Collective Efficacy

Sampson and Raudenbusch (1997) define collective efficacy as “social cohesion among neighbors combined with their willingness to intervene on behalf of the common good” (p.918). Collective efficacy is usually defined in terms of effectiveness in achieving a community goal.

Sampson and colleagues, in their commonly cited work on collective efficacy, work from the premise that “social and organizational characteristics of neighborhoods explain variations in crime rates that are not solely attributable to the aggregated demographic characteristics of individuals. We propose that the differential ability of neighborhoods to realize the common values of residents and maintain effective social controls is a major source of neighborhood variation in violence” (op. cit.). They measure collective efficacy from answers to two questions in a household survey in Chicago neighborhoods. A five-point Likert scale was used on questions characterizing “Informal social control” and “Social cohesion” at the neighborhood level. Since answers

to these questions were highly correlated, they combined the two scales into a single measure of “collective efficacy”.

III. Applied Research on Capacity in Rural Communities

We now turn to applied research on community capacity in rural areas. Two ongoing studies are particularly instructive: the New Rural Economy (NRE) project pursued by the Canadian Rural Revitalization Foundation (CRRF) and the “social capital community benchmark Survey” (SCCBS) assessment in three counties in central Oregon supported by the Northwest Area Foundation (NAAF). The NRE project is an ambitious research effort begun in 1998 focused primarily on rural communities in Canada. We will use the NRE project's model of capacity to organize this section and discuss the methodology and results of this ongoing study.

Background on the NRE Rural Observatory

The NRE project is an effort led by the Canadian Rural Revitalization Foundation (CRRF) to study how diverse rural communities in Canada fare in the 21st century economy. A network of rural researchers, policy-makers, and citizens, the CRRF focuses its efforts on building strong rural economies. As such, they seek to address the following issues:

(1) the need for jobs and wealth generating activities; (2) the need for institutional flexibility within the private sector, and within social and governing organizations in rural Canada; (3) the need for urban and rural people to help each other find ethical, environmental and economic solutions to the problems of sustainability and rural dependence; (4) the need for continuing learning to enable rural populations to participate actively in the economic life of their country.³

The NRE project contributes to these aims by providing "data collection and analysis at macro-, meso- and micro-levels; annual conferences and workshops; and the establishment of a research infrastructure across the country" (Reimer, 2004a). More specifically, the primary research objective of the NRE is to explain variations in success for rural communities in a new economy that is characterized by "complexity, increased exposure to global trade, volatile economies, and faster, cheaper communication" (Reimer 2002a). Aiding in the project are 23 institutional partners that make up the research infrastructure, including 11 universities, 8 research centers, and various government departments and non-governmental organizations (NGOs).

Data used for the NRE's research products comes from a variety of sources. Census and taxfiler data are resources used extensively by the NRE. Reports use data from the census sub-division level (CSD) to examine rural communities across Canada (see Reimer (1999) as an example). The primary weakness of the census data is that it "excludes a large amount of social, institutional and quality of life information that is critical to assessing the situation in rural areas" (Reimer, 2002a). To remedy this, the NRE project uses data collected from 32 rural, Canadian communities. Historical data as well as information about formal and informal institutions in each community were collected for each research site. Household data was collected from approximately 2,000 households in twenty of the communities. Budget requirements limited the ability of the project to collect data from all 32 communities. As a result of combining these two major categories of data, the NRE project now has a database connecting household information to local site characteristics and global processes. It is heterogeneous enough

to make comparisons across communities, but also includes valuable information about the institutions and quality of life in those communities.

A unique aspect of the NRE project is the way in which they selected communities to observe. The thirty-two rural, Canadian communities were randomly chosen to ensure comparisons across the following five dimensions (Reimer, 2000): (1) exposure to the global economy, (2) stability of the local economy, (3) adjacency to large metropolitan centers, (4) level of community capacity, and (5) outcomes. These five dimensions come from an underlying conceptual framework based on previous studies of rural areas.

The first dimension, exposure to the global economy, recognizes how rural communities are increasingly affected by global economic conditions. "For rural areas, this has meant increased exposure to international competition, a decrease in place-specific support programmes and an increase in labour mobility" (Reimer, 2002a). Communities, therefore, are chosen that reflect high to low exposure to the global economy. Local economic stability, the second dimension, was selected because an unstable local economy will likely make community planning difficult, especially in those communities that are resource dependent. The third dimension, adjacency to large metropolitan centers, is meant to differentiate communities that have access to urban centers versus isolated communities. Reimer (2002a) notes: "Advances in transportation and communication have helped to integrate rural areas with urban centres but, except for outmigration, the major effects are felt only by those communities that are relatively adjacent to those centres." Community capacity, the fourth dimension, acknowledges the

role of "skills, abilities, formal and informal social networks; health, education, and service institutions; and an ability to mobilize resources as important conditions for economic and social development" as key to a community's success. Finally, dimension five looks at the outcomes of communities so as to provide a good comparison of leading and lagging communities.

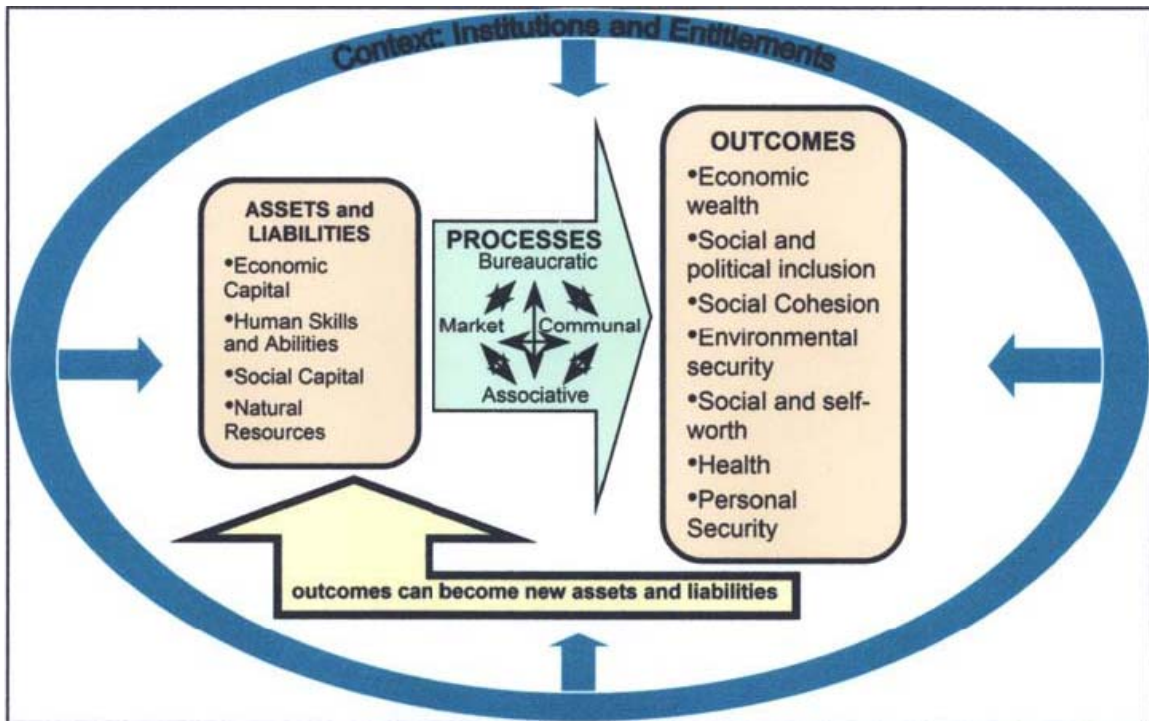
Background on the Central Oregon SCCBS Project

The Social Capital Community Benchmark Survey (SCCBS) "was designed to study the health of American communities" (Rahn). With funding from the Saguaro Seminar at Harvard University, the Ford Foundation, and other foundation groups, a survey instrument was designed and implemented "the results of which were intended to provide foundations and researchers with information on the social connections, attitudes, and dispositions of people living in geographically defined places" (Rahn). During the summer and fall of 2000, the Northwest Area Foundation sponsored surveys in central Oregon, including Deschutes, Jefferson, and Crook counties. The purpose of the study was to assess the health of communities in this region using the concept of social capital.⁴

The NRE Capacity Model

The NRE capacity model is a particularly compelling product of the NRE project (see Figure 1). Its primary benefit is that it is general enough to describe in a dynamic way how communities develop, while at the same time providing a sufficiently specific taxonomy of the forces at work in communities over time. Proof of its usefulness and relevance to the rural observatory is how frequently it is referenced in diverse research products, i.e., Reimer (2002b, 2004b, 2006) and Lyons and Reimer (2007). We find it

useful to organize both theoretical and empirical methods and conclusions from both the NRE and NWAFF studies. In this section, we discuss each element in the capacity model and cite research products related to that element. Then we examine applied research between elements to show how the NRE project is being used to measure capacity and community development.



Source: Reimer (2006)

Figure 1: The NRE Community Capacity Model

Assets and Liabilities

Capacity in the NRE study is defined as "the ability of people to organize their assets and resources to achieve objectives they consider important" (Lyons and Reimer, 2006). This definition seems to agree with the view of capacity as a dynamic process. Figure 1 shows this process as a whole. Communities start with assets and liabilities.

These characterize the resources available for a community to use. Some are easier to measure than others. Economic capital and natural resources seem to be the easiest to quantify, with human skills and abilities and social capital being more difficult. In this paper, we focus on the measurement of social capital.

Social Capital

In the NRE project, social capital is defined as:

"one type of asset or resource that can be used to achieve valued outcomes. As *capital*, it is a part of production that is reinvested into future production. As *social capital* it refers to social forms as reflected in organizations, collective activities, networks, and relationships. From this point of view, social capital is a relational, as opposed to an individual characteristic" (Reimer, 2002b).

This definition informs the way the NRE project measures social capital. It looks for evidence of social capital embedded in the processes, which we discuss later, that exist within a community. As shown in Figure 1, the market, bureaucratic, associative, and communal relationships are "four relatively coherent ways in which people organize their relationships to accomplish tasks, legitimize their actions, distribute resources, and structure their institutions" (Reimer, 2002b). Later in this paper we review how the NRE project measures social capital embedded in these relationships.

The Social Capital Community Benchmark Survey (SCCBS) is a survey-based approach to measuring social capital. Rahn references the work of Robert Putnam, whose work "on the decline of social capital in America has captured the attention of those who are concerned about and involved in making communities places in which their denizens can lead healthy, happy, and productive lives." According to Rahn, social capital is derived from the relationships individuals have with others. It is the material

that is used by a group to achieve an objective. She divides social capital into four different types: civic engagement, trust, government social capital, and collective efficacy.

Civic engagement seeks to capture how diverse and deep individuals' socio-political connections are in their local community. General and social trust is important in reducing uncertainty between individuals' interactions. Therefore, the level of trust in a community is a key component of social capital. Government social capital reflects the trust that community members have in their government institutions, while collective efficacy is "residents' beliefs that they can come together to realize common goals" (Rahn). Community members were asked questions designed to measure each of these forms of social capital. These questions are indicated in table 1.

Table 1: NWAFF Social Capital Definitions

Civic Engagement	involvement in voluntary organizations; frequency of entertaining friends at home or attending town meetings; voter registration and participation
Trust	trust "most people" as well as trust in specific groups (neighbors, co-workers, people at place of worship, people who work in stores, local news media, police, white people African-Americans/Blacks, Asians, Hispanics/Latinos, Native Americans)
Government	trust in local authorities; community leaders care about individuals
Collective Efficacy	cooperation of the community if "public officials asked everyone to conserve water or electricity because of some emergency"

Source: Rahn

To measure civic engagement in Central Oregon, the NWAFF project asked questions about the "variety and depth of individuals' socio-political connections...[for example] whether they were involved in a number of different kinds of voluntary

organizations, how often they did certain kinds of activities, such as entertaining friends at home or attending town meetings, and whether they were registered to vote and had voted in the 1996 presidential election" (Rahn). Using factor analysis, a score was calculated for each individual surveyed reflecting how above or below average their level of involvement in the community is. Averages across scores were taken in ten dimensions: cyber, arts, sports, youth, vets-seniors, reform politics, voting, informal socializing, faith-based and civic activism, as well as general civic engagement. Comparing these levels with the national sample reveals statistically significant differences in the voting, faith-based and civic activism types of civic engagement. Central Oregon showed higher levels of civic engagement in the voting and civic activism categories and a lower level of civic engagement in the faith-based category.

The next form of social capital that Rahn investigates is general and specific trust. "Trust is an important lubricant of social life because we can never know others as well as we know ourselves. Social interaction, therefore, always involves some degree of uncertainty." By measuring how much people in communities trust each other, we can compare those communities to each other for this type of social capital. The NWAFF project asked how much individuals trusted particular groups: neighbors, co-workers, people at place of worship, people who work in stores, local news media, police, White people, African-Americans/Blacks, Asians, Hispanics/Latinos, and Native Americans. Results from those who responded "a lot" or "some" are shown in table 2.

Table 2: Proportion Reporting Trust Group Members "A Lot" or "Some"

	<i>Central Oregon</i>	<i>National Sample</i>
Neighbors*	86.7%	82.4%
Co-workers*	90.4	83.9
People at Place of Worship*	94.5	92.5
People Who Work in Stores*	84.5	75.9
Local News Media	59.9	58.6
Police	86.2	82.3
White People*	93.9	86.2
African-Americans/Blacks*	90.0	84.2
Asians*	90.3	82.9
Hispanics/Latinos*	86.6	81.4
Native Americans*	92.2	85.7

* indicates a statistically significant difference between the Central Oregon and national samples.
Source: Rahn

There is a statistically significant difference between the Central Oregon and national samples for neighbors, co-workers, people at place of worship, people who work in stores, White people, African-Americans/Blacks, Asians, Hispanics/Latinos, and Native Americans. In all cases, central Oregon respondents were more trusting than the national sample, indicating a higher level of social capital compared to the nation in the general and specific trust category.

Next, Rahn examines the level of trust in local authorities. Government is an important player in the development of social capital. "Government can support the efforts of nongovernmental actors to build social capital by, for example, using its taxing and spending authority to subsidize the costs of information, communication, and

transportation" (Rahn). In addition, civil society and government "are mutually supportive of each other," since "when people trust their public authorities, they take greater pride in being a member of a particular community and they are more likely to feel that they are respected members of that community" (Rahn). When asked how much they trust local political authorities, 55.7% of central Oregon respondents answered "some of the time" or "hardly ever" compared to 56.7% for the national sample. With regard to "whether community leaders care about what happens to them," 63.5% disagreed with the statement "The people running my community don't really care much what happens to me" (Rahn). Again, this result was not significantly different from the national sample.

Collective efficacy, the final form of social capital, is based on the notion that "the viability of any community depends on its residents' beliefs that they can come together to realize common goals" (Rahn). Rahn quotes the work of social psychologist Albert Bandura (1982) who originated the concept:

The strength of groups, organizations, and even nations lies partly in people's sense of collective efficacy that they can solve their problems and improve their lives through concerted effort. Perceived collective efficacy will influence what people choose to do as a group, how much effort they put into it, and their staying power when group efforts fail to produce results (p. 143).

The NWAFF attempted to measure collective efficacy with this question: "If public officials asked everyone to conserve water or electricity because of some emergency, how likely is it that people in your community would cooperate - would you say it is very likely, likely, unlikely, or very unlikely?"

Table 3: Perceptions of Collective Efficacy in Central Oregon and the Nation

	<i>Central Oregon</i>	<i>National Sample</i>
Very likely	55.4%	43.9%
Likely	39.4	47.6
Unlikely	1.7	4.9
Very Unlikely	2.9	2.1

Question text: If public officials asked everyone to conserve water or electricity because of some emergency, how likely is it that people in your community would cooperate - would you say it is very likely, likely, unlikely, or very unlikely?

Source: Rahn

Results from this survey question are shown in table 3. More Central Oregon respondents said "very likely" (55.4%) than the national sample (43.9%), while fewer responded "likely" (39.4% versus 47.6%). This totals to 94.8% of central Oregon respondents saying their community would be "very likely" or "likely" to cooperate versus 91.5% for the national sample.

Processes

Economic capital, human skills and abilities, social capital, and natural resources are resources available to the community that then undergo "actions or processes that may be taken by individuals or groups to recognize, reorganize, or manage those assets in order to produce outputs" (Lyons and Reimer, 2006). The processes constitute social relationships that are needed to produce outcomes valued by the community.

Table 4 shows the four processes in the NRE model: market, bureaucratic, associative and communal. Market relations are "based on the exchange of goods and services within a relatively free and information-rich context" (Reimer, 2004b).

Bureaucratic relations are "rational-legal" relationships that are "impersonal and formal"

(Reimer 2002a). They are related to social capital in that they codify and enforce rights and entitlements in the community. Associative relations are "churches, clubs, social action groups, internet chat rooms, spectator events, hobby groups, and food banks," for example (Reimer, 2002a). Resources are distributed only if an individual is accepted by the group in question. Finally, communal relations come about from a strong sense of community. Goods or services equally distributed, regardless of status or ability to pay. They require a "high level of trust and loyalty" (Reimer, 2002a).

Lyons and Reimer distinguish *use* of each of the four processes by individuals and households from *availability* of the process in the community. Household use of market processes, for example, is measured by indicators of whether the household employs people or owns a business, and of use of the internet for market transactions. Community availability of market relations, in contrast, is measured by – among other things – the number of enterprises, or banks or ATM machines, and number of media services available locally.

Table 4: Processes in the NRE Capacity Model

	<i>Characterization</i>	<i>Examples Where Type Dominates</i>	<i>Basis of Distribution</i>	<i>Indicators of Household Use and Community Availability</i>
Market	Free exchange of goods or services	Farmers market; stock exchange	Supply and demand; prices	<i>Use:</i> Access to market relations - employ or own business; Use internet for market relations' market public services used; <i>Availability:</i> number of market participation groups; income from market sources; total market supports
Bureaucratic	Relations structured by general rules and principles; division of labor	Governments; legal systems; corporations	Objectives; formal structures of status	<i>Use:</i> Use internet for bureaucratic relations; bureaucratic public services used; <i>Availability:</i> number of bureaucratic actions taken; income from bureaucratic sources; total bureaucratic supports
Associative	Shared interests	Clubs; churches; recreation groups; social action groups	Shared interest	<i>Use:</i> Use internet for associative relations; associative public services used; <i>Availability:</i> number of associative participation groups; number of associative actions taken; total associative supports
Communal	Common identity	Family; close friendship groups; churches; gangs; clans	Common identity and need	<i>Use:</i> Use internet for communal relations; <i>Availability:</i> total types of sharing from family and friends; total communal supports

Source: Reimer (2004b)

The NRE project has collected data on these four processes to study social exclusion in rural Canada (Reimer, 2004b, 2004c). Rural community members in 20 sites were surveyed about "the types of services they used and who they turned to for

social support in times of change" (Reimer, 2004b). Their responses were classified into the four major processes. By studying who people turn to for support, the researchers were able to get a better idea of the processes at work in a community.

Social Capital Embedded in Processes

As discussed earlier, the NRE project views social capital as embedded in four types of relationships between individuals: market, bureaucratic, communal and associative. Using survey data collected from 1,995 households in 20 rural communities in 2001, the NRE project measured social capital embedded in the aforementioned relationships. As Reimer (2002b) notes, the benefit of having both household-level and site-level data is twofold. "First, researchers frequently use participation and volunteering to measure social capital. These indicators assume that the *use* of particular social resources is equivalent to the *availability* of those resources" (Reimer, 2002b). From a community development standpoint, the existence of social capital that is not currently being exploited is critically important to developing successful community strategies. "Second, using site-level data makes it possible to represent the institutional forms of social capital" (Reimer, 2002b). When surveyed, individuals may not reference local institutions such as schools, hospitals, or food banks, but these institutions are important sources of social capital.

Table 5 shows how Reimer (2002b) assessed social capital availability in the 20 rural, Canadian communities. This approach creates indicators of the comparative

Table 5: Measurement of Social Capital Availability

*Embedded
in...*

Market Relations	<p>Total number of enterprises in the site (within 30 min. of travel)</p> <p>Total of: banks, credit unions, ATM machines, micro-financing groups, insurance offices in the site (within 30 min. of travel)</p> <p>Total of: cable TV, Internet, public access terminals, local newspaper, regional newspaper, national newspaper, community newsletter, local radio station, number of available radio stations</p> <p>Rating of commercial services in the following way:</p> <p>(1) minimum convenience center (gas and basic groceries)</p> <p>(2) full convenience center (minimum plus some general merchandise, full grocery store, implement dealers)</p> <p>(3) partial shopping center (above plus selected merchandise - small malls)</p> <p>(4) complete shopping center (above plus extensive retail merchandise - large malls)</p> <p>(5) secondary wholesale retail center (above plus some wholesale)</p> <p>(6) primary wholesale retail center (above plus central wholesale outlets)</p>
Bureaucratic Relations	<p>Total of the following organizations (within 30 min. of travel): elementary school, high school, CEGEP or community college, university, continuing education or extension courses, other educational institutions, hospital, blood/urine test facility, X-ray facility, baby delivery facility, nursing home, doctor, nurse, dentist, dental surgeon, optometrist, home care/visits, Victorian Order of Nurses, social worker, pharmacy, ambulance, emergency services, public health nurse, physiotherapist, speech therapist, occupational therapist, police, fire department, 911 emergency line, lawyer, notary, citizenship court, employment insurance office, Revenue Canada office, provincial automobile license office, welfare office, town hall, band council, post office, bus, passenger train, freight train, airport, heliport, boat, taxi service</p> <p>Total of: Internet, public access terminals, national newspaper</p>
Associative Relations	<p>Total of the following organizations (within 30 min. of travel): Credit Union, micro-financing group, food bank, clothing exchange or depot, second-hand stores, drop-in center, half-way house, personal aid services, curling rink, municipal swimming pool, municipal skating rink, community playing field, community gym, community center, YMCA/YWCA, athletic club, theatre, cinema, museum, library, park</p> <p>Total of: Internet, public access terminals, local newspaper, regional newspaper, national newspaper, community newsletter, local radio station, number of radio stations available in the site, community bulletin boards, community 'welcome' sign, community flag, community symbol</p>
Communal Relations	<p>Average size of census families in the site</p> <p>Number of daycares and senior citizens retirement homes (within 30 min. of travel)</p> <p>Number of churches or other religious organizations in the site</p> <p>Number of community integration events in the site</p>

Source: Reimer (2002b)

amounts of social capital in the 20 communities as well as the distribution of that social capital between the four types of relations. Additionally, Reimer (2002b) examines the question of how much community members use the social capital available to them. Reimer (2002b) gives indicators of the use of social capital, again broken down by relationship type. Statistically significant correlation coefficients between the available level of social capital and the level of used social capital are reported in table 6.

Table 6: Available Social Capital by Used Social Capital

Used Social Capital	Available Social Capital				Total
	Market-based	Bureaucratic-based	Associative-based	Communal-based	
Market-based	.37**		-.20**	-.20**	-.35**
Bureaucratic-based		.27**	-.12**		
Associative-based	-.21**	-.21**	.42**	-.12**	.28**
Communal-based	-.20**		-.11**	.40**	.22**
Total	-.35**	-.17**	.27**	.21**	.40**

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Source: Reimer (2006)

There is a positive relationship between availability of social capital in a community and household use of social capital generally. Although statistically significant, the correlation between use and availability is not particularly strong, ranging between .27 and .42. Availability and use are more strongly associated for associative-based (AB) and communal-based (CB) social capital than for market-based (MB) or bureaucratic-based (BB) social capital. Higher levels of use and availability of AB and CB social capital are

generally related to lower levels of use of other forms of social capital but with higher levels of use of total social capital And higher levels of MB social capital (both use and availability) are generally associated with lower levels of use of the other forms and of social capital overall. Finally, BB social capital is weakly (or not at all) related to use/availability of other forms of social capital.

Economic Capacity

One particular strand of research in the NRE project is in measuring economic capacity; that is, capacity that "is about accessibility and availability of locational factors that support economic development" (Connell, 2004). In Lyons and Reimer's (2006) capacity model, economic capacity relates to the ability of communities to marshal their resources to achieve economic outcomes. Economic capacity, then, is particularly helpful in a pragmatic sense. It offers measurable outcomes and a useful way to compare communities. However, it is limited in its ability to describe the entire range of goals that any one particular community may wish to achieve.

To observe the economic capacity of their communities, the NRE project used two sets of data: census data and site profile data. Economic capacity profiles were made for each community. The first set of profiles used 1996 Census and 2001 NRE site profiles data, while an updated version used 2001 Census data and 2003 NRE site profiles data. A mix of quantitative and qualitative variables were used: they are listed and defined as in Connell (2004) in Table 7. The idea was to create profiles that are "effective summaries that provide a less-detailed account of what can be a complicated set of information" (Connell, 2004). These profiles help to provide descriptive

information about communities and generate well-grounded research questions. Based on the community development literature, four variables were chosen by the NRE study: level of entrepreneurship, human resources, infrastructure, and business environment. Twenty locational indicators contribute to determining each of these four levels for each community.

Table 7: NRE Economic Capacity Indicators and Variable Definitions

<i>1. Level of Entrepreneurship</i>	
Level of self-employment	expressed as the number of self-employed males and females compared to all employed individuals
Availability of micro-financing	distance from site
Employment outside of the primary sector	percentage of workforce not employed in the primary sector
<i>2. Human Resources</i>	
Education level	education attainment among the population, expressed as the percentage of adult population with a low level of education
Labour market	unemployment rate
Proximity to college	proximity to site
Proximity to university	proximity to site
<i>3. Local Infrastructure</i>	
Availability of transportation	proximity to major airport, freight train, harbour
Access to public services	level of services available; proximity to site
Available communications	availability of local and regional papers; availability of Internet access; speed of Internet access
Access to public buildings	level of services available; proximity to site
Proximity to high school	proximity to site
Availability of water/sewage systems	level of services available
Proximity to major highway	proximity to site
<i>4. Business Environment</i>	
Access to industrial park	proximity to site
Level of commercial shopping	level available within the site
Access to financial institutions	proximity to site of banks and credit unions
Access to economic development agencies	proximity to site
Proximity to urban center	proximity to site
Concentration of retail activity	level of retail activity within site; proximity to site

Source: Connell (2004)

Entrepreneurship is key to a community's economic success. Entrepreneurs are creative, and by creating businesses they provide new sources of employment. Micro-financing, an important input requirement for entrepreneurship, is a way to help entrepreneurs start and develop their business. Level of self-employment is included as an indicator of the outcome of entrepreneurship, people earning their living independently. Finally, employment outside of the primary sector is an indicator of how diverse the local economy is. According to Connell (2004), "diversity...creates opportunities for linkages among business (Welke and Douglas, 1999: 178-9) and for spin-off businesses".

Education level, proximity to a college and university help to characterize the available human resources in the community and are important determinants of economic development. Since individuals are an important input in production, "the quality of the human element in productive processes will inevitably influence the final product, whether it is something concrete or an immaterial service" (Connell, 2004). The labor market variable (the unemployment rate) is a reflection of how well the labor supply matches the needs of a community's producers.

Another important determinant of local economic development is the quality and availability of infrastructure. Availability of transportation, measured as proximity to a major airport, freight train, or harbor and proximity to a major highway measures the avenues by which a community is connected to other communities. In a similar vein, access to public services, communications, public buildings, high school and availability

of water/sewage systems are all types of infrastructure valuable to a community's economic development.

Finally, the strength of the business environment of communities is measured using a mix of quantitative and qualitative variables. Access to an industrial park is included because "generally, the agglomeration of business reflects the local demand for business activities" (Connell, 2004). Other variables include access to financial institutions and economic development agencies, key ingredients in starting or maintaining a business. Concentration of retail activity and proximity to an urban center are measures of distance to markets.

With all of this data collected from the communities, the NRE project generated an "Economic Capacity Profile" for twenty two rural communities in Canada. As an example, see the economic capacity profile for Benito, Manitoba located in the appendix of this paper. The profile lists the 2001 population (415) and unemployment rate (11.1%) of Benito. Results for each of the four indicators are clearly shown with a relative ranking of Benito compared to the other twenty one rural communities. From these charts, readers may clearly see that Benito's relative strength is in entrepreneurship, while it lags in the human resource category. In the infrastructure and business environment categories, Benito shows about average scores. A circular diagram on the right shows scores for each individual variable used in the four indicators. Benito had high scores in TR - transportation, PB - access to public buildings, WS - water/sewage service levels, HW - proximity to major highway, FI - access to financial institutions, RE - concentration of retail activity, and MF - access to micro-financing.

The economic capacity profiles are a valuable NRE product, useful to community decision makers and members who want to compare their community with others. Using all indicators and variables, an average score is calculated that gives an overall sense of the economic capacity of Benito. In a ranking of the sites, Benito is fourteen out of the twenty-two communities ranked. The variables and indicators used in this type of publication may help the community to evaluate their strengths and weakness and aid in decision making.

Social Capital and Income

Tiepoh and Reimer (2004) use household survey data from the NRE project to examine the relationship between social capital and income in rural Canada. They propose the following two hypotheses: (1) that "social capacity, defined as the ability of people to organize and use their social capital, does influence their level of income," and (2) the reason for the aforementioned hypothesis is that "social capital use facilitates the flow of income-related knowledge and information between economic agents" (Tiepoh and Reimer, 2004). Again, reference is made to the four processes in which social capital is embedded.

Tiepoh and Reimer (2004) find that "overall there is an important relationship between household social capital use and household income" and that all four types of social capital use are significantly related to household income. They conclude that "increasing the level of household involvement in any type of social relations has an important income affect." When they examined the relationship between community income and the availability of social capital at the community level, however, they did

not find statistically significant relationships between income and social capital availability for any of the four types of social capital. They conclude that there is "an important gap between the availability of social capital and its use...[which] cautions those policies that focus on increasing the availability of social capital alone" (Tiepoh and Reimer, 2004)⁵.

IV. Lessons in Assessing Community Capacity for a U.S. Rural Observatory

We set out in this paper to learn more about the concept of community capacity and how to assess it. In the process, we acquainted ourselves with literature on the theory and practice of assessing community capacity. We found a rich literature, particularly in the discipline of sociology, on components of community development beyond human and physical capital producing economic outcomes. Clearly, social capital, the existence of social networks and trust, civic engagement, collective efficacy, all play a role in the success of communities. The challenge is finding ways to measure particular aspects of the system, including the more readily observable, such as physical or economic capital and economic outcomes, as well as those ideas that are more difficult to observe such as social capital and social cohesion. The NRE Rural Observatory project was particularly helpful in identifying ways to measure the hard-to-measure.

What are the important lessons from this review for the development of "community capacity" assessment projects for the rural U.S.?

(1) Have an explicit model of community change that specifies how "community capacity" is related to a community's desired goals.

Having a unifying model of how a community develops helped to place each piece of research from the project in a larger context of community development. For researchers, using an explicitly stated model may suggest new relationships between factors affecting development and may help to incorporate ideas from other disciplines. For example, the specification of a relationship between assets, processes and outcomes in the NRE model allows researchers to examine how particular types of processes affect development and allows policymakers to use this information in setting policy priorities. Having such a model also provides a structured way of interacting with community leaders about their own perceptions of community change, and about conditions and processes that they may want to change. And since the NRE model views capacity as a dynamic process, with outcomes affecting assets, the model implies an assessment system that requires revisiting rural communities over time.

(2) Involve a diverse set of communities to enable useful comparisons

Communities should be recruited to involve a broad range of rural communities that differ across a number of important dimensions. The NRE project selected their communities for study carefully so that they would be different across a set of characteristics representing the external forces affecting community vitality and growth.

(3) Involve the communities in the development of the indicators of capacity and in the statement of community goals.

If the effort is to be useful to the communities, community leaders need to be involved in the entire process of model development, indicator selection, survey design, data collection and interpretation of results. Acquiring data that is useful to communities

will almost certainly involve some primary data collection in the communities. And interpreting the results of the analysis will almost certainly require interaction with community leaders who understand the community context. Community leaders, in turn, can benefit from researchers' structured thinking and analysis. Involving communities in these ways, of course, adds considerably to the cost and complexity of the research process.

A strength of the NRE project is its diverse research products. For researchers, the project provides a useful dataset of both primary and secondary data. This data are used to examine questions that come from the conceptual model (about the relationship between social capital and particular economic outcomes, for example). For community members, the NRE project provides easy-to-read assessments of their community and comparisons with other communities. These products allow communities to assess their assets, processes, and outcomes and use that information when making community decisions.

Assessing community capacity is an important step in developing community strategies for reaching community goals. The small size, fragility and remoteness of rural communities introduce unique challenges to those who would study capacity in these places. At the same time, the human scale and rich social interaction in rural communities makes the assessment of capacity in such places particularly fruitful and rewarding. The NRE Rural Observatory and Central Oregon Social Capital Community Benchmark Survey provide excellent examples of assessment models and techniques that take advantage of the opportunities and address the challenges of rural community capacity

assessment. Particularly important to the success of the NRE were its explicit model of community change, its careful selection of communities that participated in the Rural Observatory, and its involvement of community leaders in all phases of the project. Attempts to assess community capacity in rural America should learn from these efforts.

Bibliography

- Bandura, Albert, 1982. "Self-Efficacy Mechanism in Human Agency," **37**(2):122-147.
- Brehm, John and Wendy M. Rahn, 1997. "Individual-Level Evidence for the Causes and Consequences of Social Capital." *American Journal of Political Science*, 41(3):999-1024.
- Castle, Emery N., 1998. "A Conceptual Framework for the Study of Rural Places", *American Journal of Agricultural Economics*, **80**(3): 921-931.
- Castle, Emery N., 2002. "Social Capital: An Interdisciplinary Concept", *Rural Sociology*, **67**(3): 331 - 349.
- Chaskin, R. J., 2001. "Community Capacity: A Definitional Framework and Implications from a Comprehensive Community Initiative." *Urban Affairs Review* 36(3): 292-323.
- Coleman, James S., 1988. "Social Capital in the Creation of Human Capital", *American Journal of Sociology*, **94**: Supplement S95-S120.
- Coleman, James S., 1990. *Foundations of Social Theory*, Cambridge MA: Harvard University Press.
- Connell, David J., 2004. "Economic Capacity Profiles: 2004 Update", report to the Canadian Rural Revitalization Foundation, <http://nre.concordia.ca/__ftp2004/capacity_profiles_2004/EcoCap2004%20REPORT.pdf>, September 28, 2004
- Durlauf, Steven N. and Marcel Fafchamps, 2006. "Social Capital" in Handbook of Economic Growth, Philippe Aghion and Steven N. Durlauf, eds., **1**(2): 1639-1699, Elsevier.
- Fisman, Raymond and Tarun Khanna, 1999. "Is Trust a Historical Residue? Information Flows and Trust Levels," *Journal of Economic Behavior and Organization*, **38**:79-92.
- Glaser, Edward L., David I. Laibson, and Bruce I. Sacerdote, 2002. "An Economic Approach to Social Capital." *Economic Journal*, 112(483):437-458.
- Guiso, L., P. Sapienza, and L. Zingales, 2002. "The Role of Social Capital in Financial Development," *George J. Stigler Center for the Study of the Economy and the State Working Paper No. 173*.
- Hofferth, S.L., and J. Iceland, 1998. "Social Capital in Rural and Urban Communities." *Rural Sociology*, 63(4):575-598.

- Karlan, Dean S., 2005. "Using Experimental Economics to Measure Social Capital and Predict Financial Decisions", *American Economic Review*, 95(5):1688-1699.
- Knack, S. and Keefer, P., 1997. "Does Social Capital Have Economic Payoff? A Cross-Country Investigation," *Quarterly Journal of Economics*, 112(4):1251-1288.
- Lyons, Tara and Bill Reimer, 2007. "A Literature Review of Capacity Frameworks: Six Features of Comparison", in Godfrey Baldachino, Rob Greenwood, Lawrence Felt (eds.), *Remote Control: Lessons in Governance for/from Small and Remote Regions*, St. Johns NL: ISER Press
- Putnam, Robert D., 2000. *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon & Schuster.
- Putnam, Robert, D., 2002. "Bowling Together." *The American Prospect*, 13(3).
- Rahn, Wendy, "A Survey-Based Assessment of Community Life in Central Oregon", report to the Northwest Area Foundation, no date
- Reimer, Bill, 1999. "Update to the Rural Canada Profile", report to the Canadian Rural Revitalization Foundation, <<ftp://132.205.182.30/reports/ruralcanadaprofileupdate.pdf>>, August 4, 1999
- Reimer, Bill, 2002a. "A Sample Frame for Rural Canada: Design and Evaluation", *Regional Studies*, **36**(8):845-859.
- Reimer, Bill, 2002b. "Understanding Social Capital: its Nature and Manifestations in Rural Canada", paper prepared for the CSAA Annual Conference, Toronto, Ontario.
- Reimer, William, 2004a. "Exploring Diversity in Rural Canada", *Measuring Rural Diversity Policy Series*, Southern Rural Development Center, **1**(2).
- Reimer, Bill, 2004b. "Social Exclusion in a Comparative Context", *Sociologia Ruralis*, **44**(1):76-94.
- Reimer, Bill, 2004c. "Social Exclusion and Social Support in Rural Canada", paper prepared for the XI World Congress of Rural Sociology, Trondheim, Norway, July 2004.
- Reimer, Bill, 2006. "The Rural Context of Community Development in Canada", *Journal of Rural and Community Development*, **1**(2):155-175.

- Rupasingha, Anil, Stephan J. Goetz, and David Freshwater, 2000. "Social Capital and Economic Growth: A County-Level Analysis." *Journal of Agricultural and Applied Economics*, 32(2):565-572.
- Rupasingha, Anil, and Stephan J. Goetz, 2003. "The Causes of Enduring Poverty: An Expanded Spatial Analysis of the Structural Determinants of Poverty in the US." *Northeast Regional Center for Rural Development, University Park, PA Rural Development Paper No. 22*, 2003.
- Rupasingha, Anil, Stephan J. Goetz and David Freshwater, 2006. "The Production of Social Capital in US Counties." *The Journal of Socio-Economics* 35(1):83-101.
- Sampson, Robert J. and Stephen W. Raudenbush, 1997. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science*, 277(5328).
- Shideler, David, 2004. "Determinants of Individual Social Capital Investment", paper presented at the Annual meeting of the American Agricultural Economics Association, Denver CO August 2004
- Tiepoh, M. Geepu Nah, and Bill Reimer, 2004. "Social Capital, Information Flows, and Income Creation in Rural Canada: A Cross-Community Analysis", *Journal of Socio-Economics*, 33(4): 427-448.
- Welke, Susan M. and David J. Douglas, "New Rural Enterprises in Huron County." *Dynamics of the New Rural Economy*. Guelph, ON: University School of Rural Planning and Development, University of Guelph.
- Ziembroski, Jessica, Chuck Fluharty, Keith Mueller, Bruce Weber, Brian Dabson, Michael Shambaugh-Miller, 2005. "What is a Healthy Rural Community?: Understanding Community Capacity", unpublished working paper, Rural Policy Research Institute, August 2005.

¹ The discussions of "social capital" and "collective efficacy" draw on "People and Places at the Ragged Edge: Place-Based Policy for Reducing Rural Poverty" Chapter 8 in *Frontiers in Resource and Rural Economics*, edited by Junjie Wu, Paul Barkley and Bruce Weber Washington DC: Resources for the Future Press, forthcoming.

¹ Three distinct, though interrelated, strands of sociological thinking on community capacity and change have emerged: *interactional theory* articulated by Wilkinson (1991) and developed by Luloff and Bridger (2003); *social capital theory* articulated by James Coleman and Robert Putnam and developed by Cornelia and Jan Flora (2003); and the *civic community perspective* growing out of the work of Goldschmidt and Mills/Ulmer in the 1940s and developed by Lyson and Tolbert (2003).

² Castle (1998, 2002) provides a useful framework for studying rural places by identifying four components of rural capital: natural, human, human-created, and social capital. While Castle does not claim to have developed a model of community capacity, he concludes his 1998 paper by hypothesizing that a community's capacity to develop depends on rural capital "there is a need to better understand how the development and conservation of the rural capital stock and the four components of rural capital relate to economic development, community development, natural and environmental policy and group decision making" (p. 629). Natural capital is defined as "resources found in nature that are useful in human affairs", while human capital is an: "individuals' capacity to contribute to their own and others' satisfaction" (Castle 2002). Human-created capital may be thought of as goods people have made from natural capital, or the "hardware and software that humans have brought into existence" (Castle 2002). Note that natural, human and human-created capital can be defined without reference to one's relations with others. Social capital, on the other hand, is defined only in the context of a group of people. Social capital has many different definitions. See Durlauf and Fafchamps (2006) for a review of social capital definitions. Castle (2002) defines it as "those group relations, or norms and networks, which facilitate accomplishments by social and economic systems." We find a similar definition from Coleman (1988): "Social capital...comes about through changes in relations among persons that facilitate action...it exists in the relations among persons." Both definitions emphasize the collective nature of social capital, defined between individuals and not to any one individual.

³ More information about the Canadian Rural Revitalization Foundation is available at: <http://www.crrf.ca/about>.

⁴ The NWAFF also sponsored surveys in Yakima County and Seattle, WA; Bismarck, ND; Southeast SD; Minneapolis, MN; and the neighborhood of North Minneapolis.

⁵ The authors estimate the following two systems of equations.

System 1:

$$\begin{aligned}
 Y_i &= \pi'S_i + \beta'X_i + \varepsilon_i \\
 SCM_i &= a_0 + a_1Y_i + a_2MU_i + \varepsilon_i \\
 SCB_i &= b_0 + b_1Y_i + b_2BU_i + \varepsilon_i
 \end{aligned}$$

where Y_i measures level of income at the household or community level, S_i includes a constant and four variables measuring use of market, bureaucratic, associative and communal based social capital, X_i contains two variables measuring labor force participation and human capital endowment, SCM_i and SCB_i are variables from the vector S_i that measure market and bureaucratic based social capital, respectively, and MU_i and BU_i measure household or community level characteristics.

System 2:

$$\begin{aligned}
 Y_i &= \lambda'K_i + \delta'X_i + \varepsilon_i \\
 KFM_i &= c_0 + c_1Y_i + c_2MF_i + \varepsilon_i \\
 KFB_i &= d_0 + d_1Y_i + d_2BF_i + \varepsilon_i
 \end{aligned}$$

where K_i includes a constant and four variables measuring use of market, bureaucratic, associative and communal based social capital, KFM_i and KFB_i are variables from the vector K_i that measure market and bureaucratic based social capital, respectively, and MF_i and BF_i measure household or community level characteristics (besides income) thought to "influence market- and bureaucratic-based knowledge and information flow or use, respectively" (Tiepoth and Reimer 2004).