DISCREPANCIES BETWEEN THE PURSUIT AND IMPLEMENTATION OF ECONOMIC DEVELOPMENT IN THE NONMETROPOLITAN WEST: HOW MUCH DO NATURAL, PHYSICAL, AND SOCIAL FACTORS MATTER?

By

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of JESSICA AUGUSTA CROWE find it satisfactory and recommend that it be accepted.

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Abstract

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In this dissertation, I draw upon a community capitals framework (CCF) to analyze economic development efforts in rural communities. I have developed a series of studies that together empirically examine the impact of four community capitals (human, built, social, and natural) on a community's level of economic development. More specifically, I examine the impact of various community capitals on two types of economic development: industrial (also referred to as job) recruitment and self-development. A second purpose of the dissertation is to explore how community capitals impact the pursuit of these two types of economic development strategies and how this differs from the implementation of economic development. Finally, this dissertation explores which economic development promotions are most successful and how the community capitals help or hinder successful implementation.

This dissertation is comprised of an introductory chapter that outlines the conditions that rural communities face, the need for economic development, and gives a

brief summary of research conducted on community-level economic development to date. Following the introductory chapter, three chapters of journal article length form the main body of the dissertation and address how different forms of community capital impact economic development. Finally, a concluding chapter summarizes the main findings and considers future directions for research. Data come from a survey of community leaders from 101 communities in Washington and Oregon, along with interview data from key respondents from six communities.

Chapter Two examines how a community's interorganizational network structure impacts industrial recruitment and self-development. Results suggest that different types of network structures are better suited for different economic development strategies. A certain level of cohesiveness among community organizations and institutions are favorable for implementing self-development projects. However for industrial recruitment, networks that are bridging facilitate more types of economic development.

Chapter Three explains how a community's stock of natural capital impacts the pursuit and implementation of industrial recruitment and self-development. While natural capital has an impact on the pursuit and implementation of both types of economic development, it positively impacts industrial recruitment while negatively impacting self-development. Moreover, while the natural surroundings of communities impact the pursuit of economic development, the impact becomes more important for the implementation of economic development strategies, net of other social and demographic factors.

Chapter Four examines how economic development is impacted by natural, social, human, and built capital. It also describes which economic development strategies

are effective and how different community capitals contribute to the level of effectiveness. Results suggest that the pursuit and implementation of economic development are associated with built, natural, and social factors in an intricate pattern, while human capital does not appear to play a major role in the successful implementation of economic development.

In an era of globalization, rural communities are forced to change their sources of economic development. The question as to how communities can effectively implement economic development is an important one to policymakers, social researchers, and community members. This dissertation shows that there is no easy solution to this question, and that several factors simultaneously play a part. Thus it is imperative that researchers, policy-makers, and community activists heavily consider the complex ways that built, natural, and social capital work together to influence different types of economic development strategies.

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CHAPTER ONE

RURAL ECONOMIC DEVELOPMENT IN THE UNITED STATES

The Changing Economic Base of Rural Communities

The world economy in the 21st century is very different from what it was in the early 20th century. Technological advances in traditional sectors, such as agriculture and manufacturing, advances in shipping, and the notion of "free trade" that allows produce, raw material, and finished products to be bought and sold between countries all over the world without huge tariffs are just a few examples of how the world economy has changed (Held, McGrew, Goldblatt, and Perraton 1999; Sharp, Agnitsh, Ryan, and Flora 2002). In response to these world-wide changes, the United States economy has been undergoing a process of restructuring. Rural communities play a part in this transformation as the changed global economy has impacted rural economic development in a number of ways. The collapse of commodities markets and the flight of manufacturing industries during the 1980s imply that rural communities cannot sustain themselves on any single economic activity. The traditional strengths of rural economies, low-wage labor and natural resources, offer little advantage in today's market. Most natural-resource-based industries compete with industries in other countries in a flooded market. The flight of manufacturing jobs to developing countries and the flood of low-wage workers migrating to the United States illustrate the international competition with whom rural laborers must contend (Flora, Flora, and Fey 2004). Although natural resources and light manufacturing continue to be important contributors to rural economies, the nature of these economic activities has changed in response to the changing global economy.

Rural communities are beginning to diversify their economies in order to survive. For instance, natural-resource industries, including food producers, are starting to expand into value-added activities. Logging communities, for example, are adding small wood-manufacturing operations to existing milling facilities (Flora et al. 2004). Some communities have also begun to enter into niche markets, such as the wine industry. Improved transportation and communication linkages make even the remotest rural communities less remote. For example, hi-speed Internet allows for some people to do their jobs at home, wherever home may be.

Several researchers of community-level economic development have lumped the different economic strategies employed by community leaders into two broad categories: industrial recruitment and self-development (Eisinger 1999; Flora, Green, Gale, Schmidt, and Flora 1992; Sharp et al. 2002; Sharp and Flora 1999). Industrial recruitment involves efforts to attract outside firms and industries to locate to the community (Sharp et al. 2002). These efforts include the provision of tax abatements, low-interest loans, and easy access to cheap land for infrastructure development. The attractiveness of industrial recruitment stems from its ability to generate a large number of jobs in a relatively short time period. In contrast to industrial recruitment, self-development activities foster local businesses and other entrepreneurial activities along with relying on local resources to aid in development from within the community (Flora et al. 1992). Examples of self-development activities include revitalizing downtown businesses, promoting local tourism, and retaining or expanding locally owned businesses. The changing economic base of rural communities has led researchers and practitioners to question what types of local development programs are most successful and which factors lead to development

success. In this dissertation, I draw upon a community capitals framework (CCF) to analyze economic development efforts in rural communities.

Community Capitals Framework

Because of the highly integrated global economy that has begun to impact the economies of rural communities, researchers have developed a community capital framework (CCF) that communities must develop to thrive locally (Emery and Flora 2006; Flora et al. 2004; Johnson 2002). Johnson (2002) first developed a conceptual model that specified six types of community capital assets that U.S. urban areas must develop in order to compete in the global economy. These six community capital assets are polity, physical, financial, human, cultural, and social. Under this model, Johnson (2002) argues that polity capital is perhaps the most important as city government uses resources and tools to improve the competitiveness of their city in the global marketplace. For example, city government can reduce city taxes to entice businesses to locate there. However, Bishop (2000) argues that to secure the resources needed to compete, cities must embrace a "network governance model" in which business, government, and community leaders network in order to solve public problems. The other five sources of community capital can be enhanced to alleviate poverty, create jobs, and foster community development (Johnson, Washington, and Wheeler 2001).

Flora et al. (2004) extends the notion of community capital assets used by Johnson (2002) in his description of cities to describe rural communities. The community capital framework (CCF) developed by Cornelia Flora and colleagues (see Emory and Flora 2006; Flora et al. 2004), includes the six capitals in Johnson's (2002)

description of cities but also includes natural capital. While Flora et al. (2004) acknowledge political capital as one of the capitals that communities can possess, they assert that in actuality rural communities have relatively little political capital.

Description and Background of Dissertation

The community capitals framework is a relatively new framework for examining community-level economic development. While much of the theoretical framework is laid out with some supporting anecdotal and case study evidence (see Emory and Flora 2006; Flora et. al 2004), to date I am unaware of any studies that systematically examine community capitals impact on rural economic development in an operational manner. For this dissertation, I have developed a series of studies that together empirically examine the impact of four community capitals (human, built, social, and natural) on a community's level of economic development. More specifically, I examine the impact of various community capitals on two types of economic development: industrial (also referred to as job) recruitment and self-development. A second purpose of the dissertation is to explore how community capitals impact the pursuit of these two types of economic development strategies and how this differs from the implementation of economic development. Finally, this dissertation explores which economic development promotions are most successful and how the community capitals help or hinder successful implementation.

This dissertation is an extension of my Master's thesis in which I examine the role of natural and social capital on economic development in six rural communities. Part of my thesis is published in the December 2006 issue of *Rural Sociology*. When I first

began collecting data for my thesis, I wanted to see how a community's social infrastructure impacted recent economic development activities. Of all the different social capital variables, I discovered that the networks of communities had the largest impact on pursuing economic development. Thus, Chapter two of my dissertation explores this finding in more detail by examining how the organizational network structure of a community impacts job recruitment and self-development. While collecting data for my thesis, I realized that a community's natural surroundings appeared to be an important factor for pursuing economic development. However, this was a rough observation in only six communities. Chapter three of this dissertation explores this observation in more detail by operationally defining natural capital and testing the impact of several natural capital variables on economic development activities in over 100 communities. Finally, while I only wrote about social and natural capital for my thesis, I observed several community leaders touching on how the built infrastructure impacted economic development. Thus, the fourth chapter of this dissertation ties together natural, social, built, and human capital and qualitatively explains how the four community capitals work in conjunction with one another to influence different kinds of economic development.

The format for this dissertation is an article format in which Chapter One provides an introduction to rural economic development and an overview of the dissertation, Chapters Two, Three, and Four are article-length journal papers, and Chapter Five concludes with a brief summary of the main conclusions of the dissertation and considers future directions for rural economic development research. Data for chapters two, three, and four are a combination of survey and interview data that I collected between the

summer of 2003 and summer of 2007. I funded the extensive project through a variety of internal and external fellowships and scholarships that I earned over the course of my graduate career. Chapters two and three are published or accepted to be published, and therefore are presented in this dissertation exactly as they appear in the journals, as required by Washington State University. Chapter four is currently under review and appears as it was when submitted. Below, I give a brief description of chapters two through five and in the next section describe the methodology that I use for chapters two, three, and four.

Chapter Two is a paper that I presented at the Rural Sociological Society Meeting in August, 2007. This paper "In Search of a Happy Medium: How the Structure of Interorganizational Networks Influence Community Economic Development Strategies" is published in the December 2007 issue of *Social Networks* and appears in its published format. In Chapter Two, I examine the impact of a community's interorganizational network structure on industrial recruitment and self-development. More specifically, I look at the level of density that is present in a community's organizational network structure and how this relates to the pursuit of different types of economic development strategies.

Chapter Three builds on Chapter Two by examining natural capital variables in addition to social variables. Chapter Three is a paper that I presented at the Rural Sociological Society Meeting in August, 2007. This paper "The Role of Natural Capital on the Pursuit and Implementation of Economic Development" is forthcoming in the journal *Sociological Perspectives* (volume 51(4)) and appears in the format accepted for publication. In Chapter Three, I examine the relationship of natural capital on the pursuit

and implementation of two types of economic development: industrial recruitment and self-development. More specifically, I look at how a community's level of accessibility, natural circumscription, and ecosystem type impact the pursuit of economic development and how the pursuit of economic development differs from the implementation of economic development. I test the impact of natural capital while controlling for social and demographic variables.

The purpose of Chapter Four is to advance my previous research on economic development presented in Chapters Two and Three by providing a more in-depth analysis of which economic development promotions are successful and which are not successful when it comes to industrial recruitment and self development. Furthermore, it provides an insight into the factors that community leaders perceive as either helping or hindering economic development. Specific data reported build upon the results reported in Chapters Two and Three and in my master's thesis (Crowe 2006). However, Chapter Four builds on the results of Chapters Two and Three by emphasizing the importance of a community's built capital. It is currently under review at *Community Development: The Journal of the Community Development Society*.

Chapter Five concludes with a summary of the main findings from Chapters Two, Three, and Four and provides suggestions for future research. This chapter discusses the implications of these findings for researchers, policy makers, and community development activists. In addition, the importance of evaluating the different types of community capital is highlighted with attention to understanding how social, natural, and physical factors impact the types of economic development implemented. This chapter also considers how improving social and physical capital, while acknowledging natural

factors will lead to more environmentally and economically sustainable community development.

Methods for Studies

For this dissertation, I use a combination of qualitative and quantitative methods to most accurately answer my research questions. Qualitative data provides an abundance of context and nuance not available in quantitative data, but is limited by its ineffectiveness to generalize the results to other cases. In contrast, quantitative data is relatively weak in terms of its in-depth descriptive capabilities, but affords a high degree of generalizability. Therefore, depending on the nature of the research question, I draw upon network analysis, survey methodology, and semi-structured interviews in my attempt to find answers.

The research presented here stems from several research projects that I have undergone—both by myself and as part of a research team under the guidance of Washington State University's Center to Bridge the Digital Divide. Funding for this research came from a variety of sources, including the Bill and Melinda Gates' Foundation, the Department of Sociology at Washington State University, the Thomas Foley Institute at Washington State University, and the Graduate School at Washington State University. Data for chapter two was collected during the summer and fall of 2003, while data for chapters three and for was collected during the summer and fall of 2006. Because different sources of data are used for each chapter, I will briefly discuss the methodology for each. Interview and survey questionnaires are located in the appendices.

Chapter Two. In Search Of A Happy Medium: How the Structure of Interorganizational Networks Influence Community Economic Development Strategies

Data for this analysis are drawn from interviews and surveys conducted in six rural communities in Washington in the summer and fall of 2003. The six communities for this study were a part of another study titled "Connecting Schools and Communities," of which I was a member. The six communities had applied and been chosen to receive a new school called a "High-tech High." The funding for the new school was being provided by the Bill and Melinda Gates' Foundation. Because the funding was to only cover the first three years of the school's existence, The Center to Bridge the Digital Divide at Washington State University was asked to travel to each community and conduct a study that evaluated the community. I was a part of the research team that traveled to these communities and interviewed community members. While these communities were already chosen, they share a number of characteristic. They are of relatively equal size (all under 10,000), have similar levels of racial/ethnic composition, and are rural. However, they vary in the amount and type of recent economic development activities. Therefore, they made excellent subjects to examine the effect of a community's associational network structure on economic development.

To evaluate each community's associational network structure, I analyze data from 15 to 34 interviews with local leaders and citizens from each community, with a total of 150 participants among the six communities. Informants were selected to represent one of 20 categories of people that characterized the community and therefore needed to be represented. Sixteen of the categories of people were consistent for each

community, while four wild card slots were made available to fill with people from categories that were unique to each particular community. A list of the categories can be found in the appendix to chapter two. A local community coordinator from each community, who was extremely familiar with that particular community, helped identify and recruit the participants. Interviews lasted between 30 and 60 minutes, with most hovering around 45 minutes.

Informants were asked a series of open-ended questions about general community action. The purpose of the interviews was to capture the social network structure of each community. The researcher asked participants to recall all local organizations and government institutions that they belonged to, the number of years they had been a member, as well as all leadership positions that they had held in the previous five years. For specifics, the interview questionnaire as well as the consent form for participating in the interview can be seen in Appendix A.

Each participant was interviewed by a team of two. One person asked the questions and took notes, while the second team member took extensive notes during the interview without asking questions. After the interviews, I collected all of the researchers' notes, typed them, and compared them for accuracy. Because, most of the questions called for participants to list people or organizations, the team members' notes were extremely similar to each other.

After the interview, each participant was handed a survey along with a stamped envelope to complete and mail in their spare time. The survey contained several questions about the social infrastructure of the community. In order to measure the level of economic development in each community, informants were asked a series of

questions with regards to whether or not a particular type of economic development activity had been implemented in the community in the past three years. Nine items asked about self-development activities for the previous three years. An additional nine items asked about industrial recruitment activities over the past three years. The full survey questionnaire is located in Appendix A.

Chapter 3. The Role of Natural Capital on the Pursuit and Implementation of Economic Development

Data for this analysis come from surveys conducted in 101 communities in Oregon and Washington in the summer and fall of 2006. Communities were selected based on population size and geographical location. Each community in the study has a population between 1,000 and 9,000. Attempts were made to have at least one community from each of the 39 counties in Washington and from each of the 36 counties in Oregon. Thirty-five of the 39 counties in Washington contained at least one community that fit the population requirements while 29 of the 36 counties in Oregon had at least one community that fit the population guidelines. Several counties contained only one community that fit the population requirements. In these cases, the sole community was selected for the sample. If a county had more than one community that fit the population requirements, a random sample of relevant communities was taken. A total of 101 communities were sampled, 51 from Oregon and 50 from Washington.

For each of the 101 communities, surveys were mailed to five community leaders. Community leaders consisted of two representatives of city council (typically city managers and city council members), one representative of the chamber of commerce or economic development council, one representative of local schools (typically

superintendents), and one representative of an active civic organization. City clerks and local websites helped identify participants.

A mail survey was conducted using a modified Dillman (2002) method. Five contacts were made; however, the fifth contact was by e-mail rather than special delivery. In implementing the survey a number of principles from the Tailored Design Method (TDM) were applied (Dillman 2002). These included blue, ball-point pen hand signatures on all letters; personalized questionnaires, cover letters, and envelopes; a $1 token incentive in the first mailing; self-addressed, postage-paid return envelopes with all questionnaires; and specifically timed mailings. A modified version of the surveys used by Flora, Sharp, Flora, Newlon (1997) and Sharp (2001) in their analyses of economic development was used for the study. The final sample consisted of 361 participants (72% response rate). In 85 of 101 communities, at least three community leaders responded. In thirteen communities, two community leaders responded, while one community leader responded from three communities. I created community-level attributes by aggregating leader responses for each community. Because response differences among leaders of the same community sometimes existed, two procedures were used to account for these differences. For factual questions (e.g., Is there a local bike trail?), the modal response of leaders served as the community-level attribute. For perceptual questions (e.g., How often do youth and adults work together on community development projects?), the mean response of participants was used.

Chapter 4. Economic Development in the Nonmetropolitan West: The Influence of Built, Natural, and Social Capital

Data come from surveys and interviews conducted during the fall of 2006 and summer of 2007 on community leaders in seven communities throughout Oregon and Washington. Survey data for the seven communities comes from the data described in chapter three. Based on the findings of the survey, I selected the seven communities for further in-depth analyses.

Communities were selected based on population size, geographical location, and the number of economic development strategies they had pursued during the previous three years. Each community in the study has a population between 1,000 and 9,000. Thus, each community is large enough to have economic development, but not so large that economic development is a direct result of population size. Four of the communities have lower levels of natural capital (i.e. were hard to access and had little room for expansion), while three of the communities have high levels of natural capital. Finally, two communities had lightly pursued both industrial recruitment and self development projects, two communities had lightly pursued outside industry but heavily pursued self-development projects, and three communities had heavily pursued both types of economic development strategies.

I conducted in-depth interviews with 35 community leaders: five from each community. Participants consisted of city managers, city planners, council members, port commissioners, economic development council members, and newspaper editors. I solicited individuals based on their knowledge of economic development that had taken place in the community over the past three years. In-depth interviews were directed towards expanding on the number and characteristics of economic development activities that had been successfully and unsuccessfully implemented in the community and the

perceptions that key leaders had on what type of development should be pursued and what factors facilitate and hinder economic development. Interview questions were designed to clarify, confirm, or deny results obtained from the survey data. Interviews lasted between 30 and 75 minutes, with most lasting around 50 minutes. For specifics, the interview questionnaire as well as the consent form for participating in the interview can be seen in Appendix C. All of the interviews were digitally recorded and extensive field notes were written as soon as possible after each interview. Recorded interviews were then transcribed verbatim and coded for relevant themes.

Conclusion

Human interaction, with each other and their natural environment, is at the crux of sociology. One setting where humans interact with each other and their environment is their community. This interaction of people, their built environment, and the nearby natural environment can impact human and environmental activity in numerous ways. This dissertation attempts to address how the intersection of human activity, the built infrastructure, and natural surroundings affect rural economic development. The following three chapters examine these development consequences in a sequential manner—by first studying the impact of social behavior, in the form of social networks, on economic development in Chapter Two, adding the natural environment to the framework in Chapter Three, and examining the combined effects of social, natural, built, and human capital in Chapter Four.

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CHAPTER 2

IN SEARCH OF A HAPPY MEDIUM: HOW THE STRUCTURE OF INTERORGANIZATIONAL NETWORKS INFLUENCE COMMUNITY ECONOMIC DEVELOPMENT STRATEGIES

Introduction

In recent decades, many rural communities have witnessed an employment decline in traditional resource-based sectors, such as agriculture, fishing, and forestry due to technological advances, environmental awareness, and a deteriorating resource base. This decline in traditional rural sectors often poses a threat to the survival of rural communities as homes and places of work as people lose their jobs in these traditionally high paying sectors and are forced to live and work elsewhere (Brown, 1995 Sharp et al., 2002). In response, many communities see a need for change in their economic base and have initiated economic development strategies to try to recruit, create, keep, and boost local economic endeavors. Recently, social scientists have taken an interest in researching which characteristics of a local community facilitate effective economic development (e.g. Crowe, 2006; Flora et al., 1997; Putnam, 1993; Shaffer and Summers, 1989; Sharp et al., 2002). In particular the concept of social capital, "the connection among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000, p.19), has received much attention as a causal mechanism that can facilitate economic development (e.g. Crowe, 2006; Flora et al., 2004; Sharp et al., 2002). The recent popularity of bonding and bridging social capital has further stimulated an interest in the potential for network structures to facilitate

effective community-level economic development. An argument exists in the literature as to whether tightly-knit, cohesive networks (e.g., Putnam, 1993) or loose, expansive networks (e.g., Woolcock and Narayan, 2000) are more conducive for implementing local economic development. Drawing on economic development research (Flora et al., 2004; Sharp and Flora, 1999; Sharp et al., 2002; Summers, 1986) community network analysis (Burt, 1992, 2002; Scott, 2004), and social capital literature (e.g. Portes, 1998; Putnam, 1993), I propose that instead of being in direct conflict with one another, different types of network structures are better suited for different economic development strategies. To evaluate this proposition, I analyze associational membership data and recent economic development activities provided by key informants in six rural communities in Washington State. I conclude by exploring implications the findings have for studying community-level economic development.

Economic Development Strategies

As rural communities have tried to increase their economic base, researchers and practitioners have questioned what types of development are most successful and which factors lead to development success. Several researchers of economic development have distinguished between two economic development strategies: industrial recruitment and self-development (Eisinger, 1999; Flora et al., 1992; Sharp and Flora, 1999; Sharp et al., 2002). These two forms of economic development are often pitted against one another as opposing approaches to development. Despite this contrast, communities can successfully implement both forms of economic development (see Crowe, 2006 for an example).

Industrial recruitment involves efforts to attract outside firms and industries to locate to the area (Sharp et al., 2002). These efforts include the provision of tax abatements, low-interest loans, and easy access to cheap land for infrastructure development. The attractiveness of industrial recruitment stems from its ability to generate a large number of jobs in a relatively short time period. Crowe (2006) finds that active civic organizations, community-wide fund-raising capacity, and the availability and control over natural surroundings have a significant positive effect on industrial recruitment. Sharp et al. (2002) find that the existence of active community organizations, businesses that support local community projects, community-wide fund-raising capacity, and extra-local linkages to peer communities and state government have a modest effect on industrial recruitment.

Criticisms of industrial recruitment, such as the payment of low wages, short-term success, high recruitment costs (Loveridge, 1996), degradation of the local environment (Pellow, 2002), and possible increases in population growth, housing prices and rents (Logan and Molotch, 1987; Molotch, 1976, 1993), have led some communities to promote a second type of economic development: self-development. In contrast to industrial recruitment, self-development activities foster local businesses and other entrepreneurial activities along with relying on local resources to aid in development from within the community (Flora et al., 1992). Examples of self-development activities include revitalizing downtown businesses, promoting local tourism, and retaining or expanding locally owned businesses. Previous research shows that some community attributes foster self-development. Sharp et al. (2002) find that a social infrastructure rich in active community organizations, supportive businesses of local community projects,

community-wide fund-raising capacity, and extra-local linkages to peer communities and state government is more likely to cultivate self-development than industrial recruitment. While self-development has some advantages over industrial recruitment, such as new jobs requiring higher skills and stronger job security, a higher number of jobs tend to be created from successful industrial recruitment endeavors than from self-development (Green et al., 1993; Sharp and Flora, 1999; Sharp et al., 2002).

Both forms of economic development have their advantages and disadvantages. Therefore, it is up to each individual community to weigh its advantages and potential shortcomings when deciding on an economic development strategy. While previous research has examined the effects of a community's social infrastructure (Crowe, 2006; Sharp et al., 2002) and environmental surroundings (Crowe, 2006) on the two types of economic development, to date little to no research has looked at the effect of a community's organizational network structure on the different forms of economic development.

Bridging (loosely connected, weak ties) and bonding (dense, strong ties) social capital are terms often used to describe a community's network structure. While the differentiation between bridging and bonding social capital (Putnam, 2000) is a step in the right direction, the terms are still broadly defined. Below, I give a brief synopsis of the two forms of social capital and definitional problems with each. I then further divide bonding and bridging social capital into four network configurations (complete, factional, coalitional, and bridging) ranging on a scale from densely connected to loosely connected and theorize how each network configuration impacts the two forms of economic development.

Bridging and Bonding Social Capital

Recent discussions of social capital often distinguish between "bonding" and "bridging" social capital (Putnam, 2000; Woolcock and Narayan, 2000). Bonding social capital is typically characterized as having dense relationships and networks within communities (Taylor, 2004). This is often typified by the existence of tightly woven networks in which members are directly tied to many other members in the network. Bridging social capital is often described as the weaker relationships and networks across social groups and communities. It consists of the weak ties described by Granovetter (1986). Woolcock and Narayan (2000) argue that while the dense networks of bonding social capital can effectively defend against poverty, real economic development requires a shift to other, looser forms of network structures. In order to shift from "getting by" to "getting ahead," a shift from bonding to bridging network structure must occur (Putnam, 2000).

The concept of "bridging" social capital has been used in at least three ways in discussions of social capital. These three uses are not necessarily complimentary. Portes (1998) conceptualizes bridging social capital as networks that cross demographic divides of class, age, ethnicity, etc. Burt (2002) conceptualizes bridging social capital much differently by referring to bridges across structural holes[1], or gaps between networks, which are not necessarily of dissimilar people. Bridging social capital has also been used by researchers to refer to the capacity to access resources such as information,

[1] Burt uses the term structural hole to refer to the connection of non-redundant contacts. Non-redundant contacts are either not directly connected or have contacts that are different from one another. A network that has numerous structural holes has links between many non-redundant contacts and therefore is diverse in nature.

knowledge, and finances from sources that lie outside of the organization or community (e.g., Woolcock and Narayan, 2000).

While bridging and bonding capital are often depicted as two distinct forms of connections, Leonard and Onyx (2003) argue that the two are not necessarily mutually exclusive. They suggest that bridging and bonding capital differ in degree, but they do not offer a conceptual model of how one can empirically measure the different types of bridging and bonding capital. Network analysis, by examining the structure of networks, can allow for one to distinguish between different degrees of bridging and bonding capital. By performing network analysis, I differentiate between the second and third uses of bridging social capital. However, because network analysis does not allow for a meaningful way to study various attributes of network nodes, I do not distinguish between the first use of bridging social capital and the second and third uses. Like bridging social capital, network analysis also allows for the unpacking of bonding social capital. In what follows, I distinguish between two types of bonding social capital and two types of bridging social capital and theorize how each relates to different strategies of economic development.

Interorganizational Network Structures and Economic Development

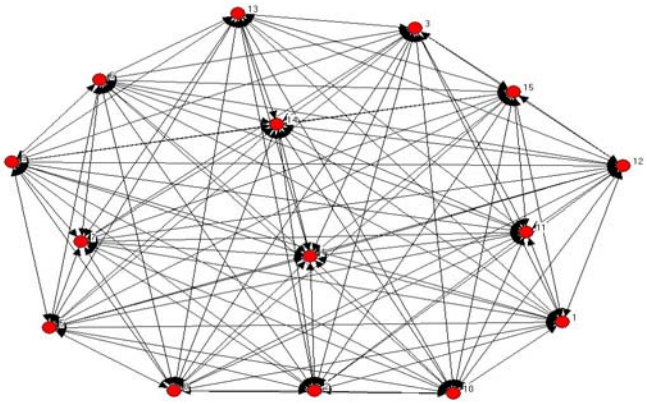
Bonding social capital acts as the social glue that binds groups together. The network structure under bonding social capital is quite dense. Two typologies of network structures exist that may be considered forms of bonding social capital. At the far extreme end of the dense/loose scale lies the complete network structure. In the complete structure, each organization is directly connected to all other organizations in the

community (see Figure 1 for schematic approximations). Density is at its upper limit. Such completion is very rare even in small communities. The second typology that falls under bonding social capital is a factional structure. A factional network structure consists of two or more connected groups that are not connected to one another.

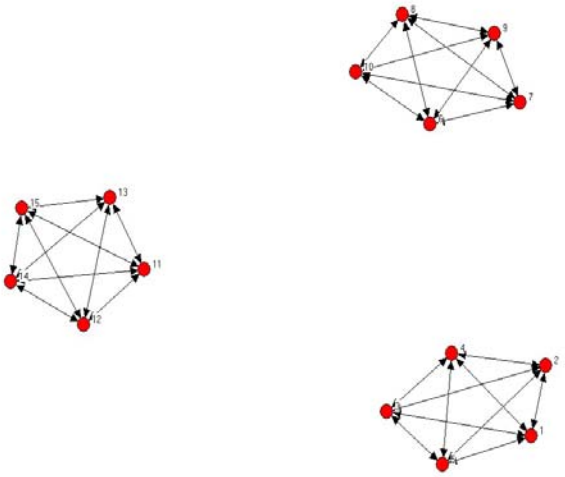
Figure 2.1. Network Structure Typology

Dense — Bonding

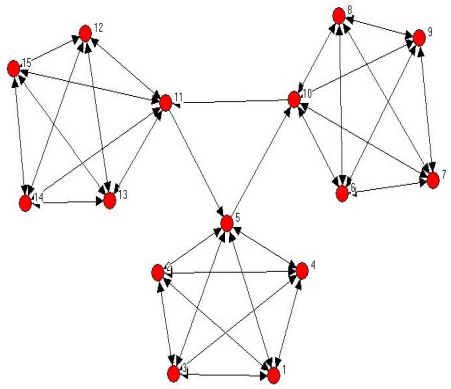
Complete Network Structure



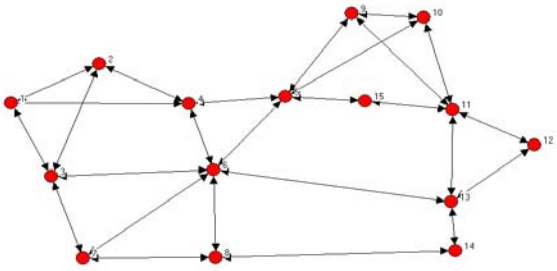
Factional Network Structure



Coalitional Network Structure



Bridging Network Structure



Loose

Bridging

Bridging social capital can also be divided into two network structure typologies: coalitional and bridging. In a coalitional structure, dense networks of organizations are connected to each other in a non-redundant fashion. Coalitional structures resemble Burt's use of bridging social capital to describe networks with structural holes. Coalitional structures lie in the middle of the dense/loose continuum. Bridging network structures consist of weak network connections that link organizations together in a loose manner. Bridging structures are representative of the third use of bridging social capital by allowing organizations to access sources of information and other resources that lie

outside of an organization. This network structure falls at the opposite extreme end of the dense/loose continuum.

In his work on regional differences in social capital in Italy, Putnam (1993) asserts that dense organizational network structures (what I have termed complete) are conducive for economic development. Putnam (1993: 173) writes: "Networks of civic engagement, like the neighborhood associations, choral societies, cooperatives, sports clubs, mass-based parties, and the like… represent intense horizontal interaction. Networks of civic engagement are an essential form of social capital: the denser such networks in a community, the more likely that its citizens will be able to cooperate for mutual benefit." It is the tightly cohesive nature of these social networks that facilitates cooperation among individuals for collective benefit.

In opposition to Putnam's early research, Portes and Landolt (1996) show that dense network structures can have a downside. Specifically, they note that strong, tightly knit, long-standing civic groups may hinder economic growth by inhibiting economic development on an individual level. In other words, demanding personal obligations placed on members of a social group may prevent the group from participating in broader extensive social networks that connect individuals to members outside their cohesive group. This critique can be extended to the community level. As effort and resources are increasingly spent on various community organizations and their projects, less effort and resources are spent on possible external sources of development.

While critics have questioned the effectiveness of dense networks (what Putnam later referred to as bonding social capital) in building economic development, a certain

level of cohesiveness[2] may be desirable for certain economic development strategies such as self-development. Cohesive ties found in complete and near complete network structures may be effective in lowering the risk of cooperation and thereby making trust and norms possible. Because self-development projects come from within the community and rely on local resources, high levels of trust and norms lower the risk of cooperation that is needed to successfully implement the projects. Thus, I hypothesize that complete network structures will aid in the pursuit of self-development activities. However, because trust and norms are exceptionally strong in a complete network structure, obligation to the community may be so overwhelming that it severely reduces the time and effort spent on external sources of development, thus hindering industrial recruitment efforts.

On the other hand, factional structures are unlikely to aid in the pursuit of economic development activities of either type. A structure containing dense unlinked factions probably cannot discover a common economic interest and work for it effectively. Information and other resources are not shared among different factions, therefore making industrial recruitment harder to effectively accomplish. Yet, trust and norms are likely to be low making self-development projects more difficult to implement.

Coalitional network structures have traits of both complete structures and bridging structures. Dense networks of organizations are connected to each other in a non-

[2] There are four general ways to conceptualize a cohesive network (see Wasserman and Faust 1994 for a description of these properties). In this study, cohesive ties refer to the frequency of ties among network members. That is, cohesive networks consist of members with direct ties to many other members in the network. Here, I measure cohesiveness by analyzing k-cores. This is discussed in detail in section 7.

redundant way. This type of network structure may facilitate both self-development and industrial recruitment projects. Because density occurs on a smaller level, but each dense network is connected to other dense networks, a level of trust and norms can develop. This sense of obligation (albeit lower than in complete networks) and level of trust facilitate self-development projects that rely on local resources. While obligation to the community is apparent in a coalitional network structure, it is not so overwhelming that it reduces the time and effort spent on external sources of development. The downside of social capital that Portes and Landolt (1996) refer to is not experienced. Therefore, I hypothesize that because coalitional structures facilitate trust and norms but not in an overpowering fashion, information and resources that are shared among groups will result in high amounts of both self-development and industrial recruitment efforts.

Since a bridging network structure is relatively loose compared to a complete network structure, it may facilitate economic development that relies on external resources. By being loosely connected, organizations can spread information and resources to one another, yet not feel obliged to contribute resources to every project that is hosted by a community organization. This can be particularly useful when attempting to recruit outside industries to the community. However, loose interorganizational network ties may result in lower levels of trust and norms, thereby making it somewhat difficult to come to a consensus on which industry to pursue. Lower levels of trust and norms will also make it very difficult for pursuing self-development strategies. Therefore, I hypothesize that bridging network structures will result in low amounts of self-development and higher amounts of industrial recruitment, but to a lesser extent than coalitional network structures.

Summary of Prior Research and Hypotheses Tested in the Present Study

While much research has been conducted on the effects of social capital toward community-level economic development, less research has been conducted that evaluates the role that a community's network structure plays with regards to various economic development strategies. Using community level data, the purpose of the current study is to empirically analyze the effects of the structure of a community's associational network on the two economic development strategies: industrial recruitment and self-development. The primary goal of the analyses is to test the following hypotheses:

- H_1: Communities with relatively closed, cohesive associational networks (i.e., complete network structures) exhibit higher numbers of self-development strategies.
- H_2: Communities whose associational networks are loosely connected (i.e., bridging network structures) exhibit higher amounts of industrial recruitment strategies.
- H_3: Communities with non-redundant connections of dense organizational networks (i.e., coalitional network structures) are more likely to display both self-development and industrial recruitment strategies.

Data and Methods

Data for this analysis are drawn from interviews and surveys conducted in six rural communities in Washington in the summer and fall of 2003. The six communities for this study were chosen because they share a number of characteristics—are of relatively equal size (all under 10,000), have similar levels of racial/ethnic composition,

and are rural, but vary in amount and type of recent economic development activities. Table 1 broadly describes each community on a number of characteristics.

Table 2.1. Name and Broad Description of the Sampled Communities

Community	Population Size[a]	Percent White	Household Median Income	Percent Poverty	Primary Economic Base[b]	Rural Typology
Creston	5,000-10,000	60-70	30,000-35,000	15-20	Farming	Non federal lands
Davis Grove	0-5,000	80-90	35,000-40,000	15-20	Non specialized	Federal lands
Gwenville Heights	5,000-10,000	80-90	35,000-40,000	10-15	Non specialized	Metro
Mayfield	0-5,000	80-90	35,000-40,000	10-15	Service industry	Island
Rowans View	0-5,000	80-90	30,000-35,000	10-15	Farming	Non federal lands
Soundberry	0-5,000	70-80	30,000-35,000	15-20	Non specialized	Federal lands

[a] Population size, percent white, household median income, and percent poverty provided by the United States Census Bureau (2000).

[b] Primary economic base and rural typology provided by the Economic Research Service of the United States Department of Agriculture (1989).

To represent community network structure, I analyze interlocking leadership among local community organizations and institutions. One can either focus on the linkages among organizations created by members or the linkages among members created by organizations. Here I focus on links among organizations created by members. To evaluate each community's associational network structure, I analyze data from 15 to 34 interviews with local leaders and citizens from each community, with a total of 150 participants among the six communities. Informants were selected to represent one of 20 categories of people that characterized the community and therefore needed to be represented. Sixteen of the categories of people were consistent for each

community, while four wild card slots were made available to fill with people from categories that were unique to each particular community. A list of the categories can be found in the appendix. A local community coordinator from each community, who was extremely familiar with that particular community, helped identify and recruit the participants.

Informants were asked a series of open-ended questions about general community action. The purpose of the interviews was to capture the social network structure of each community. The researcher asked participants to recall all local organizations and government institutions that they belonged to, the number of years they had been a member, as well as all leadership positions that they had held in the previous five years.

To evaluate the various strategies of economic development recently pursued by each community, I analyze survey data from the same informants who were interviewed. Informants were asked a series of questions with regards to whether or not a particular type of economic development activity had been implemented in the community in the past three years.[3] Nine items asked about self-development activities that were implemented in the previous three years. These items included: efforts to promote

[3] Questions measured a total of 18 different types of economic development activities. While the range of economic development measures used are quite extensive, each measure falls into one of two categories: self-development or industrial recruitment. These are two very different strategies that research has shown to yield different economic results. Furthermore, previous research shows that different community traits are more favorable for implementing either self-development or industrial recruitment strategies (e.g. Crowe, 2006; Sharp et al.; 2002). Continuing with this tradition, I aggregate the outcome measures into two composite measures: self-development and industrial recruitment. This also helps to focus the analyses in a concise manner when comparing each outcome variable to the four network configurations.

agricultural diversification; to revitalize the downtown or retail sector of the community; to retain or expand locally-owned businesses or industry; to develop a small business assistance program; to develop a commercial/retail center for locally-owned businesses; to apply for financial governmental assistance to expand local businesses; to attempt to find buyers for local businesses; to develop or promote a local historic or cultural site or event to promote tourism; and to encourage local realtors or contractors to develop housing. The mean number of types of self-development activities implemented in the previous three years is computed and serves as the indicator of self-development.[4] An additional nine items asked about industrial recruitment activities that occurred in the past three years. These items included: efforts to organize a committee to recruit new business or industry; to attract a large scale agricultural producer or outside owned value-added processing firm; to develop a commercial/retail center for outside-owned businesses; to develop an industrial park; to develop and maintain contact with leaders in industry outside the area; to apply for government financial assistance to attract industry or business; to seek investments from corporations outside the community to expand business or industry; to bring a state or federal office or facility to the community; and to seek outside investors to develop single or multi-family housing. The mean number of types of industrial recruitment activities implemented in the previous three years is

[4] While it is possible to achieve successful economic development by pursuing one or a couple of economic development strategies, many communities have been scorned by "putting all of their eggs in one basket." Particularly when it comes to industrial recruitment, many communities have witnessed industries move in only to shut down operations a few years later (LeRoy 2005). For this reason, I equate the pursuit of a larger variety of economic development strategies as having a more likely chance of benefiting the community both economically and socially.

computed and serves as the indicator of industrial recruitment. Past questionnaires and surveys used by Flora et al. (1997) and Sharp and Flora (1999) in their analyses of entrepreneurial social infrastructure served as the basis for both the interview questionnaire and the survey.

Analytic Strategy

The first stage of the analyses focuses on the description of each community's organizational network with regards to component analysis. This is meant to give a vivid depiction of each organizational network before more precise measures are conducted to determine the level of bonding and bridging capital in each community.

For the second stage of the analyses, I examine the level of bonding and bridging social capital in each community by evaluating *k*-cores and cut-points of each organizational network. It is useful to examine *k*-cores (Seidman, 1983) to help interpret the level of bonding capital in each network structure. A *k*-core is a maximal subgraph in which each point is directly connected to at least *k* other points.[5] Thus an isolate is a '0-core' since the single point is not connected to any other points in the network. Because the current study is interested in bonding and bridging network structures in how they relate to different types of economic development strategies, the analysis of *k*-cores is an

[5] Because the highest value of *k* for each of the six community network structures ranges from 3 to 8, I will compare the proportion of organizations that belong to a 3-core or higher (i.e. the proportion of organizations that are directly connected to at least 3 other organizations).

improvement over a measure of density for measuring bonding structures.[6] It is also important to look at the number and proportion of cut-points in a network to measure the level and type of bridging capital in each network. Cut-points determine the extent of non-redundant contacts: contacts that are either not directly connected or have contacts that are different from one another. A cut-point is a node in which its "removal would increase the number of components by dividing the sub-graph into two or more separate sub-sets between which there are no connections" (Scott, 2004: 107).[7] Each sub-graph that either stands alone or is connected to a larger graph by a cut-point is referred to as a block. Thus, cut-points are essential in measuring the extent and type of bridging capital in a given network. The existence of several cut-points indicates a coalitional network structure. While a loosely connected network with few cut-points indicates a bridging network. Each community's organizational network is evaluated with regards to its level of *k*-cores and cut-points and is allotted an estimated network configuration: complete, factional, coalitional, bridging, or a combination of two.

For the final stage of the analyses, I test my hypotheses by comparing each community's mean number of pursued self-development and industrial recruitment

[6] While the density of each community network can be measured, a fundamental problem exists with this measure. The density of a network depends on the size of the graph. This prevents density measures from being compared across networks of different sizes (Friedkin 1981; Scott 2004). While measuring the mean degree of each network overcomes this limitation, it does not measure the bonding type of structures that are theoretically important for the current study. This is because one member may have direct ties with many other members thus raising the mean number of ties for all other members of a network whom may not have many direct ties with other members in the network. Because the analysis of *k*-cores overcomes both of these limitations, the current study uses *k*-cores to measure bonding network structures.

[7] This is what Burt (1992) refers to as "structural holes."

activities with a community's organizational network structure.[8] I do this in a qualitative manner by describing where each community falls in the rank order of each type of development and comparing it to each community's network configuration based on the *k*-core and cut-point analyses depicted in the second stage of the analyses.

Component Analysis

I gathered organizational and institutional[9] membership data from 15-34 key informants from each of the six communities. Table 2 provides the number of informants and organizations along with a descriptive summary of the associational networks for each community. For instance, in Rowans View, I acquired information from 22 key informants on 48 organizations and institutions, while in Mayfield I collected information from 34 informants on 72 organizations and institutions.

[8] A limitation of cross-sectional data performed on a small number of communities is the uncertainty of causation. While descriptive comparisons can reveal trends between the dependent and independent variables, caution must be taken in asserting causality from data collected from one point in time. Nevertheless, various forms of social capital theory assert that network structures influence economic development and not vice versa. Furthermore, the measures of economic development activities are based on the previous three years, while most participants were members of organizations and institutions for much longer than three years (6.6 years on average). Because the study's hypotheses were made prior to data collection, I infer causal relationships, albeit with caution.

[9] Organizations included voluntary and civic organizations such as the Chamber of Commerce, Kiwanis, and local development groups. Institutions included boards associated with government, the hospital, schools, churches, and the like.

Before describing each community's network structure with regards to its level of bonding and bridging capital, component analysis of the organizational adjacency matrix helps to describe the overall appearance of each community's organizational network structure. A component is a "maximal connected subgraph" (Scott, 2004: 101). In other words, a component is the largest sub-graph of the entire network in which all points are connected to all other points in the sub-graph by one or more paths. By examining the components of each community's organizational network, one can begin to see distinct differences among the six communities. For instance, Gwenville Heights has the most components at five. The largest component includes 39 organizations linked by 18 informants. On the other hand, Mayfield has one component that consists of 70 organizations linked by 28 informants. Component analysis suggests that Gwenville Heights may be more factional, while Mayfield may take on characteristics of a complete network structure. However, more precise measures need to be taken to determine the level of bonding and bridging capital in each community. This can be done by examining *k*-cores and cut-points of each organizational network. This will also help to determine the organizational network structure of each community in relation to the network configurations depicted in Figure 1.

Table 2.2. Organizations, Networks, and Economic Development: Descriptive Summary

	Mayfield	Rowans View	Soundberry	Gwenville Heights	Davis Grove	Creston
Organizational data						
Total organizations	72	48	35	49	28	18
Number of informants	34	22	18	29	30	15
Number of components	1	3	4	5	2	2
Largest component: organizations	70	43	19	39	24	11
Largest component: Interorganizational members	28	16	13	18	20	6
Isolated organizations	2	0	1	2	2	4
Indicators of network closure						
Largest k-core	8	5	5	5	4	3
Number of organizations in largest k-core	9	17	6	6	5	8
Proportion in 3-core and higher	.78	.78	.67	.65	.57	.44
Indicators of structural holes						
Number of cut-points	5	5	5	5	2	4
Number of blocks	6	10	10	13	5	6
Proportion of cut-points to total points	.07	.10	.14	.10	.07	.22
Estimated Network Configuration	Complete	Coalitional	Coalitional/ Factional	Factional/ Bridging	Bridging	Coalitional/ Bridging
Measures of economic development						
Self-development (ranking from highest to lowest)	4.72 (2^{nd})	5.36 (1^{st})	3.23 (4^{th})	3.11 (5^{th})	2.65 (6^{th})	4.56 (3^{rd})
Industrial recruitment (ranking from highest to lowest)	1.64 (6^{th})	3.64 (2^{nd})	2.69 (3^{rd})	2.32 ($4^{th}/5^{th}$)	2.32 ($4^{th}/5^{th}$)	4.22 (1^{st})

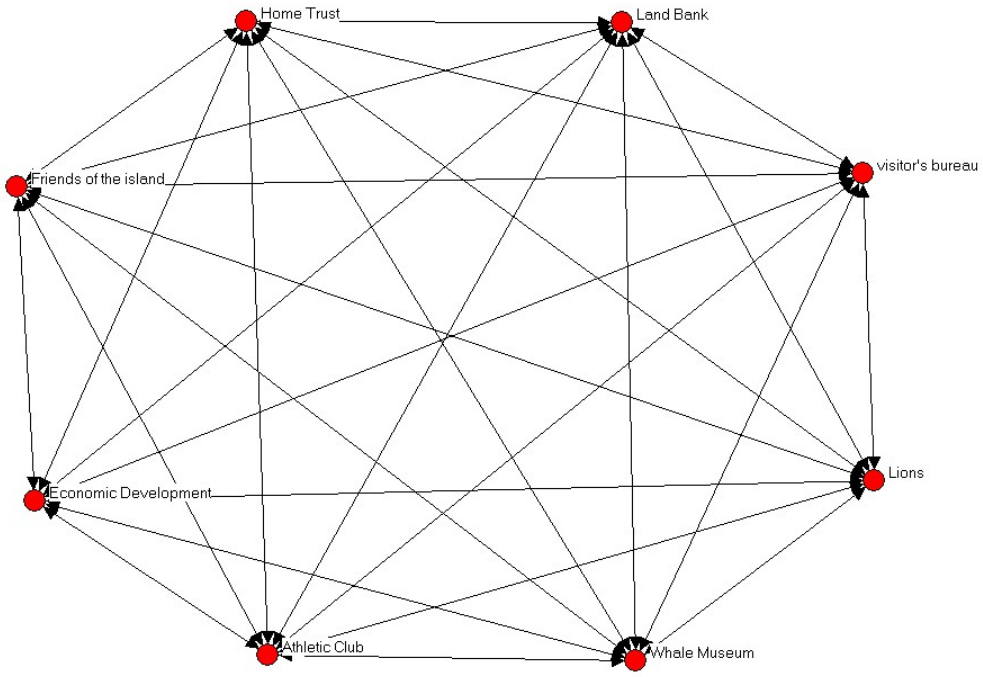
Organizational Network Structure in Each Community

Here I describe and interpret each community's organizational network structure in relation to the network configurations depicted in Figure 1. Mayfield's organizational network is large with numerous ties among it various organizations. At the core of the network is a densely interlocked clique (see Figure 2). One hundred percent of the possible links among organizations exist within this eight member clique. Mayfield has the highest order of a k-core among the six communities with k = 8, in which 9 organizations are connected to 8 other organizations. The proportion of organizations in Mayfield that are connected to a minimum of 3 other organizations is .78 (see Table 2). Mayfield's network structure has five cut-points and six blocks. However, because there are a total of 72 organizations in the network, the proportion of cut-points is small at .069 (see Table 2).

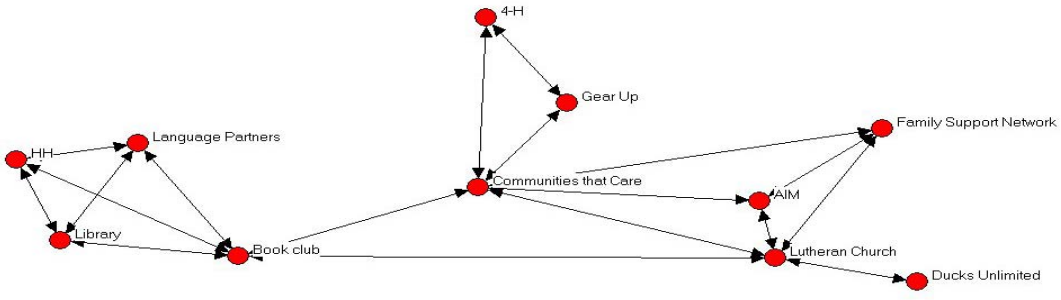
These findings suggest that Mayfield has a highly dense associational network with relatively few structural holes. Thus Mayfield's interorganizational structure appears to be characterized by a strong bonding structure. Because of these dense existing ties, trust and norms are more likely to develop leading Mayfield to have a high potential for implementing self-development projects.

Figure 2.2. Interorganizational Network Structures in Six Communities

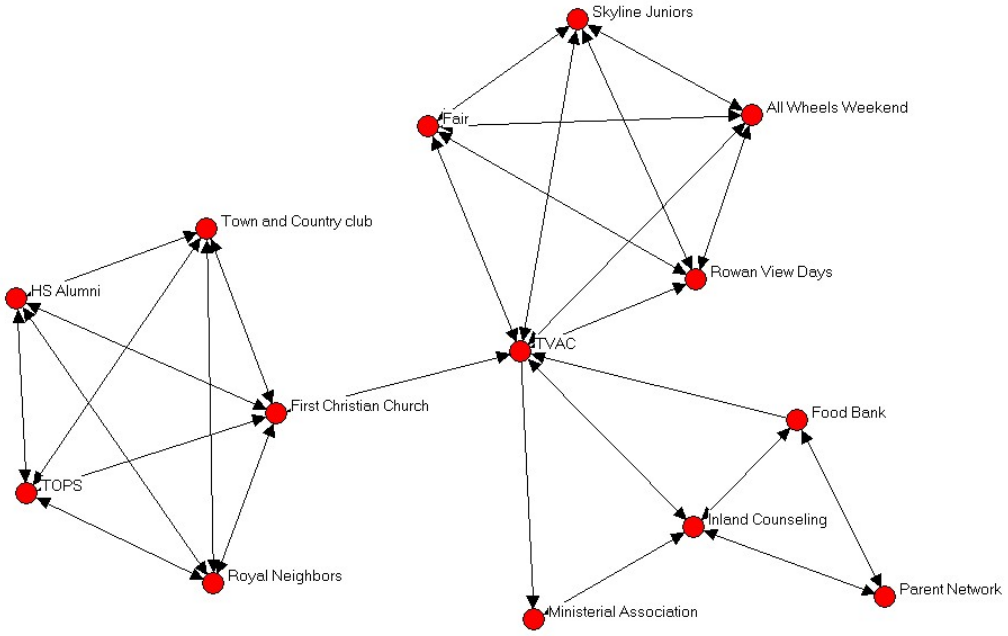
Core Mayfield Interorganizational Network Structure



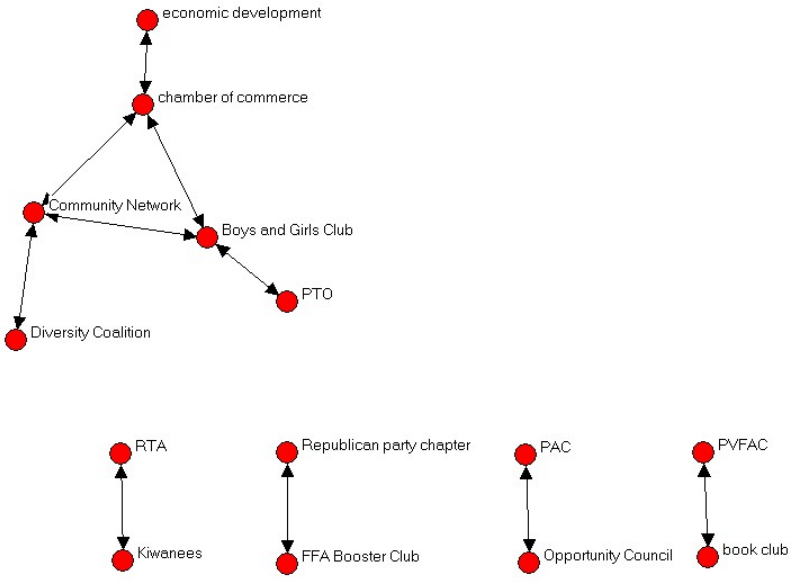
Creston Interorganizational Network Structure



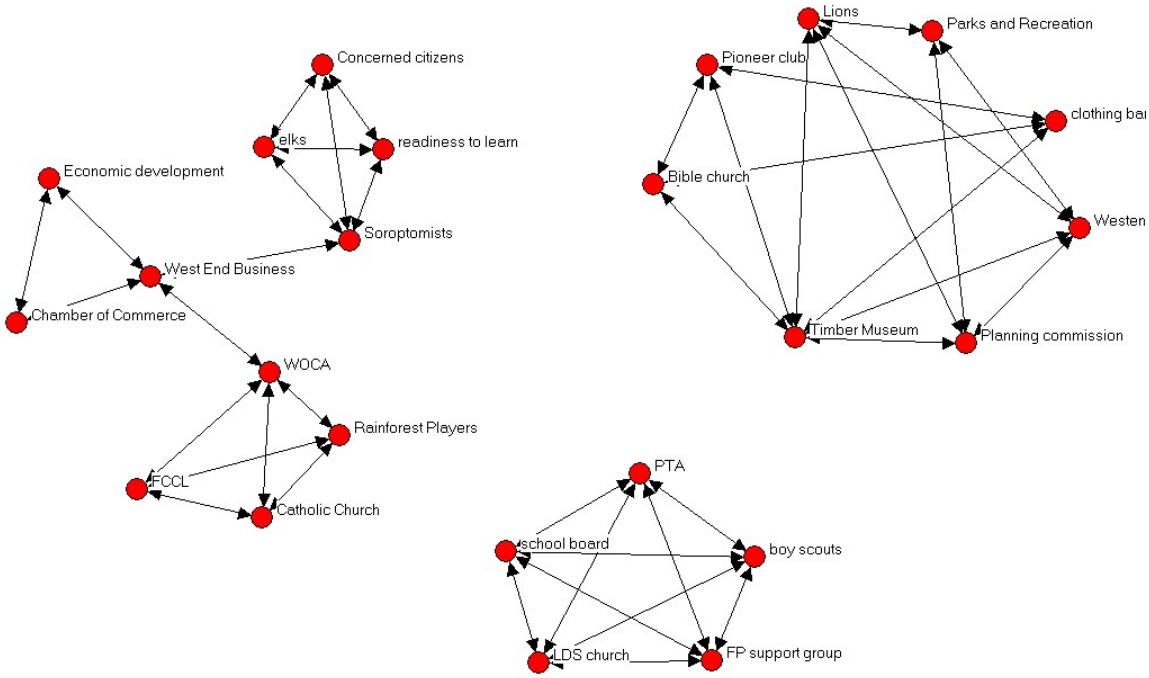
Rowans View TVAC-centered subnetwork



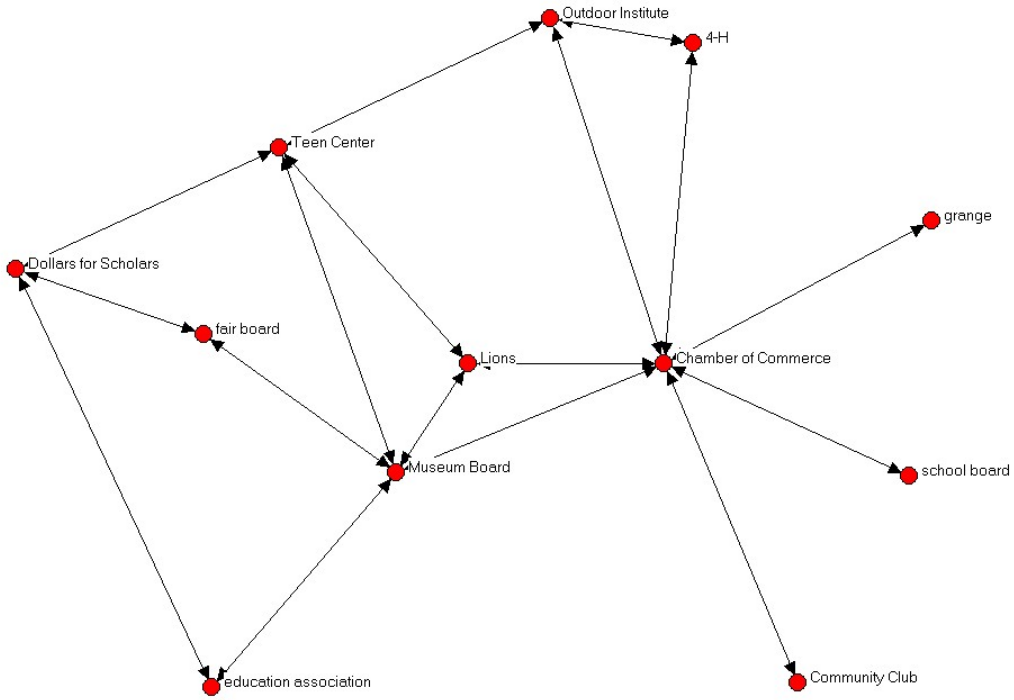
Gwenville Heights Interorganizational Network Structure



Soundberry Interorganizational Network Structure



Davis Grove Interorganizational Network Structure



Creston's network structure is much more sparse and lacks the cohesion of the Mayfield network. Creston's organizational network is the smallest with 18 organizations broken into two components (Figure 2 shows the largest component). The highest order of a k-core is k = 3, in which 8 organizations are connected to 3 other organizations. The proportion of organizations that are connected to a minimum of 3 other organizations is .44. This proportion is much smaller than it was for Mayfield. Four organizations serve as cut-points, while there are a total of 6 blocks. Since there is a relatively low number of total organizations, the proportion of organizations that serve as cut-points connecting non-redundant contacts is .22. This proportion of cut-points is three times the Mayfield's proportion.

Creston has somewhat cohesive sub-components, but has the highest proportion of structural holes out of the six communities. These findings suggest that Creston's network structure possesses a mix of coalitional and bridging properties. Creston's high proportion of cut-points mirrors a coalitional network structure. However, the less cohesive sub-components reflect a network that is bridging in nature. These network properties are conducive for industrial recruitment but only modestly favorable for self-development.

Rowans View's network is relatively large with one large component and two small components. The highest order of a k-core is k = 5, in which 17 organizations are connected to 5 other organizations. The proportion of organizations that are connected to a minimum of 3 other organizations is .78. This is the same proportion as Mayfield, although the value of the highest *k*-core is lower. Five organizations serve as cut-points,

while there are a total of 10 blocks. For the entire network structure, the proportion of organizations that serve as cut-points connecting non-redundant contacts is .10. However, for the sub-network shown in Figure 2 that revolves around the arts council (TVAC) the proportion of cut-points is .14 (2 out of 14).The proportion of cut-points is lower than it was for Creston but higher than it was for Mayfield.

Rowans View has highly cohesive sub-components with a relatively mid-range proportion of structural holes. While, the proportion of cut-points lies in the middle for the six communities, one can clearly see by looking at the TVAC-centered sub-network (Figure 2) that Rowans View's network structure is coalitional. Therefore, Rowans View's network structure is favorable for both self-development and industrial recruitment.

Among the six communities, Soundberry lies in the middle with regards to number of organizations at 39. It consists of one large component, two mid-size components, and one small component. The highest order of a k-core is k = 5, in which 6 organizations are connected to 5 other organizations. The proportion of organizations that are connected to a minimum of 3 other organizations is .67. Compared to the other five communities this proportion is in the middle. Five organizations serve as cut-points, while there are a total of 10 blocks. The proportion of organizations that serve as cut-points connecting non-redundant contacts is .14.

Soundberry has somewhat cohesive sub-components; however, it has several sub-components that are not connected to each other. The largest subcomponent, which consists of 19 organizations, has a higher proportion of structural holes. Soundberry's interorganizational network structure is quite different from the other community network

structures. While the overall network structure appears to be factional, the network structure of the largest component has coalitional properties. These two network structures have quite different expectations for economic development. While factional network structures are expected to have low numbers of both industrial recruitment and self-development activities, coalitional network structures are expected to be favorable to both types of economic development strategies. Therefore, Soundberry may lie somewhere in the middle with regards to both types.

The Gwenville Heights network is large with one large component and four small components. The highest order of a k-core is k = 5, in which 6 organizations are connected to 5 other organizations. The proportion of organizations that are connected to a minimum of 3 other organizations is .65. Five organizations serve as cut-points, while there are a total of 13 blocks. The proportion of organizations that serve as cut-points connecting non-redundant contacts is .10. Gwenville Heights has somewhat cohesive sub-components with a relatively lower proportion of structural holes.

Of the six communities, Gwenville Heights appears to be the most factional. Several blocks are not linked to other blocks of organizations. However, the largest component appears to have bridging qualities. The proportion of organizations that are connected to at least three other organizations is relatively low as well as the proportion of cut-points. Both factional and bridging network structures are expected to result in low levels of self-development. However the two structures are expected to produce opposite results with regards to industrial recruitment. While bridging structures are expected to produce higher levels of industrial recruitment, factional structures are

expected to produce low levels. Thus, Gwenville Heights may lie somewhere in the middle with regards to industrial recruitment activity.

Davis Grove's network is relatively small with a total of 29 organizations. The highest order of a k-core is k = 4, in which 5 organizations are connected to 4 other organizations. The proportion of organizations that are connected to a minimum of 3 other organizations is .57. Two organizations serve as cut-points, while there are a total of 5 blocks. The proportion of organizations that serve as cut-points connecting non-redundant contacts is .069. While Davis Grove's interorganizational network is not very dense, it is connective. Hence, Davis Grove has a bridging network structure. With a bridging network structure, self-development is expected to be low and industrial recruitment is expected to be higher.

Qualitative Assessment of Community Network Structure and Economic Development

Table 2 provides the number of types of economic development strategies implemented for the two forms of economic development for each community along with each community's rank order with regards to each type of development. For self-development, communities on average implemented 3.84 types of self-development activities over the past three years. Rowan's View had the highest amount of self-development activities (5.36) while Davis Grove had the least (2.65). On average, all communities had implemented fewer industrial recruitment activities than self-development activities over the past three years (2.35 compared to 3.84). Creston had the

highest amount of industrial recruitment activities (4.22), while Davis Grove once again had the fewest number at .4.

When comparing each community's mean number of self-development and industrial recruitment activities with a community's associational network structure, a pattern emerges. First, the communities that have the top two highest number of self-development activities implemented in the past three years have the highest proportions of organizations and institutions that belong to a 3-core and higher (are directly connected to at least three other organizations). Rowans View and Mayfield have the highest number of different types of recently implemented self-development activities (5.36 and 4.72 respectively) and have the most cohesive sub-components of the six communities with 78% of the organizations in both communities directly connected to at least three other organizations. Mayfield has a network structure similar to a complete network structure, while Rowan's View has a coalitional network structure. Both network structures were expected to have high levels of self-development.

In addition the community that has the lowest number of recent self-development activities (Davis Grove) has a bridging network structure with a proportion of organizations and institutions that belong to a 3-core or higher at .56. Gwenville Heights, which has the second lowest number of recent self-development activities, has an overall factional network structure with its largest component having a bridging network structure. Hence, it appears that communities that have complete or coalitional interorganizational network structures are more likely to implement self-development activities than communities with bridging or factional networks. This supports my first hypothesis.

With regards to industrial recruitment, a different pattern emerges. First, the community that has the highest proportion of organizations serving as cut-points (Creston) has the highest number of recently implemented industrial recruitment activities. Creston implemented 4.22 types of industrial recruitment activities in the previous three years and 22% of its organizations serve as cut-points in its associational network. Creston's network structure has both coalitional and bridging properties. While it has the highest proportion of cut-points among the six communities, the density among sub-groups is relatively low. Rowans View had a coalitional network structure and had the second highest number of recently implemented industrial recruitment activities with 3.64. The coalitional and bridging network structures were predicted to have higher amounts of industrial recruitment strategies.

In addition, the two communities with the lowest number of recently implemented industrial recruitment activities (Mayfield and Gwenville Heights) have low proportions of organizations serving as cut-points (.069 and .10 respectively). Mayfield's network structure resembles a complete network structure by having one tightly knit component, while Gwenville Heights' overall network structure is factional with 5 separate components. Both complete and factional network structures were predicted to have lower amounts of industrial recruitment activities. Hence, it appears that communities with coalitional and bridging associational network structures are more likely to implement industrial recruitment strategies than communities whose networks are complete or factional. This is in support of my second hypothesis.

Finally, it is important to note that both communities with coalitional network structures (Rowans View and Creston) displayed high amounts of both strategies of

economic development. In fact, Rowans View had the highest number of self-development activities and the second highest amount of industrial recruitment activities, both numbers well above the mean. Creston had the highest amount of industrial recruitment activities and the third highest amount of self-development activities, again both numbers above the mean. This supports my third hypothesis that communities with non-redundant connections of dense organizational networks display high amounts of both self-development and industrial recruitment.

Discussion and Conclusion

Does a community's associational network structure have an effect on the type and extent of economic development strategy pursued? For the six communities in the current study, it appears that network structure does impact economic development activities. However, different network qualities have a positive impact on different types of economic development strategies. A certain level of cohesiveness among community organizations and institutions are favorable for implementing self-development activities. This may be because cohesive ties are effective in lowering the risk of cooperation and thereby making trust and norms possible. Because self-development activities come from within the community and rely on local resources, high levels of trust and norms lower the risk of cooperation that is needed to successfully implement the projects. With regards to industrial recruitment activities, bridging and coalitional networks are desirable. Industrial recruitment comes from outside of the community. Therefore, a high level of trust and norms from within the community may not be needed as much as

is access to a wide variety of information in coming up with a successful plan to recruit outside businesses.

These findings have several interesting implications for the community sociology and economic development literature. The results of the current study show that different types of network structures facilitate different kinds of economic development activities. For industrial recruitment, networks that are bridging facilitate more types of economic development. However, networks with bonding elements are more likely to generate more types of self-development. While bonding and bridging network structures appear to be at odds with one another, it is possible for communities to increase both forms of economic development by maintaining a certain level of cohesiveness among subcomponents and increasing the number of organizations that serve as cut-points connecting non-redundant sources of information. This is representative of a coalitional network structure.

The current study focuses on the impact of structural network configurations and their impact on different strategies of community-level economic development. In this sense it is fairly unique, seeing that most studies of economic development focus on examining the attributes of the community that facilitate development. However, a brief discussion of the study's findings in light of some specific community characteristics is warranted. The following are mere observations, given that the number of communities in the study is not large enough for empirical testing. First, it appears that population size and racial make-up of the community have little influence on economic development activities (see Table 1). The community with the largest population, Gwenville Heights, did not rank high for either self-development or industrial recruitment. On the other hand

the community with the highest percent of racial and ethnic minorities, Creston, ranked high for both industrial recruitment and self-development—which is in contrast to the popular belief that minority communities are less likely to implement economic development. Second, it appears that the level of financial resources in a community, at least for these six communities, has little impact on economic development activities. The level of household income was relatively similar for all six communities (between $30,000 and $40,000). In fact, some communities with higher income levels (such as Gwenville Heights and Davis Grove) had lower economic development activity, while some communities with lower income levels (such as Creston and Rowan's View) had higher economic development activity. Likewise, the percent of people below poverty did not seem to influence community-level economic development activity. This does not imply that a community's ability to mobilize resources does not impact economic development. However, in light of a community's financial resources, network structures seem to matter. Of all the indicators shown in Table 1, rural typology appears to have the most potential for influencing which economic development strategy is pursued. The communities that are limited in available land by either being an island community or surrounded by federal lands rank low for industrial recruitment. Crowe (2006) argues that the availability and control over natural surroundings have a significant positive effect on industrial recruitment. It may be the case that the location of Davis Grove and Soundberry near federal lands and Mayfield on an island may limit the types of opportunities they can pursue. Thus, more research is needed to tease out the impact network structures have on economic development activities controlling for various community attributes such as a community's resource base and natural surroundings.

In addition to teasing out the impact of network structures in congruence with various community attributes, further studies need to address the impact other types of networks outside of the community have on different economic development strategies. For instance, future research is needed to analyze how linking social capital (networks and connections between communities and other communities and institutions) interacts with bonding and bridging social capital and how this interaction impacts various forms of economic development. Finally, future research is needed to extend the analyses to other forms of community development. The current study limits community development to two forms of economic development. However, community development encompasses a broad spectrum of phenomena. To identify the impact of different forms of network structure on community development, future research should examine their influence on other types of development in the community, such as recreational and social service opportunities as well as network capital's influence on the capacity of social institutions to distribute resources to the community.

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CHAPTER THREE

THE ROLE OF NATURAL CAPITAL ON THE PURSUIT AND IMPLEMENTATION OF ECONOMIC DEVELOPMENT

The impact of humans on the natural environment has received considerable attention from social scientists. Researchers from a variety of disciplines including anthropology, economics, geography, history, political science, and sociology have examined societal impacts on the natural environment. In particular, much research has been conducted that examines the effects of the structure and characteristics of economic development on environmental degradation such as global warming, (Jorgenson 2006) deforestation, (Bunker 1984) endangered species, (Hoffman 2004b) and overall ecosystems (York, Rosa, Dietz 2003). Most studies generally find economic development to have a negative impact on the environment, and in particular, a negative impact on peripheral nations as core nations increasingly extract raw materials from peripheral nations for their own use (Jorgenson and Rice 2006). Social scientists have also examined how environmental degradation historically led to the decline of civilizations (Chew 2001). However, research to a lesser extent examines the impacts that different aspects of the natural environment (not just degradation) have on economic development. While the political ecology approach has examined how ecologically unequal exchange between the core and the periphery has led to deteriorating economic conditions in the underdeveloped south (e.g., Martinez-Alier, 2006), community sociologists have for the most part neglected the impact that natural capital endowments have on community-level economic development in the industrialized north.

It is important to acknowledge the interdependent relationship between the natural environment and society and that while humans impact the environment, the environment in turn impacts social functions, such as economic development. While environmental degradation impacts economic development on a global scale, the natural environment also impacts economic development on a more local scale—even in the industrial core nations. For example, many rural communities in the United States have experienced an employment decline in traditional resource-based sectors, such as agriculture, fishing, and forestry due to technological advances, environmental awareness, and a deteriorating resource base. As a result, the receding traditional rural base threatens the survival of certain communities as people lose their jobs in these traditionally high paying sectors and are forced to live and work elsewhere (Sharp, Agnitsch, Ryan, and Flora 2002). In response, many communities see a need for change in their economic base and have initiated economic development strategies to try to recruit, create, keep, and boost local economic endeavors. Recognizing that a community's natural environment directly and indirectly impacts the types of economic development strategies pursued and implemented can lead to new insights into processes of community development.

While sociologists see the need in examining the characteristics that lead to effective community-level economic development (e.g. Crowe 2006; Flora, Sharp, Flora, and Newlon 1997; Sharp et al. 2002), most sociological research has focused on the impact that a community's social and human capital have on economic development. With few exceptions, (e.g. Crowe 2006) not many sociologists have examined natural capital endowments with respect to community development. Furthermore, the few studies that examine the impact of natural capital on economic development are often

focused on theory construction or rely on a small number of cases. To date, no systematic study exists that examines various aspects of a community's location and natural surroundings in comparison to the types of economic development activities that a community pursues. In addition, no study systematically examines the successful implementation of different economic development activities with regards to a community's natural capital. In this research, I seek to answer several questions about the relation between a community's geographical and natural surroundings and the pursuit and implementation of economic development. More specifically, I seek to answer the following question: how do a community's accessibility, natural circumscription, and surrounding ecosystem impact the type of economic development strategies pursued? Furthermore, how do a community's accessibility, natural circumscription, and surrounding ecosystem impact the actual implementation of different economic development activities, namely industrial recruitment and self-development? Finally, to what extent does the effect of natural capital differ from the pursuit of economic development activities to the actual implementation of such activities? To answer these questions, I examine data provided by the Oregon and Washington state departments of transportation along with survey data on recent economic development activities provided by leaders in 101 communities throughout Oregon and Washington.

Economic Development Strategies in the United States

Community-level economic development involves direct or indirect actions that result in the creation of local jobs and a raise in the real incomes of residents (Summers 1986). Historically, federal and state governments have been responsible for the role of

economic development. In the past, federal and state governments impacted local economies by investing in physical infrastructure projects, such as the interstate highway program and the construction of dams along the Columbia and Snake Rivers (Green 2003). However, in the last few decades state governments have adopted a variety of new methods for stimulating economic development, ranging from enterprise zones and right-to-work laws to technology parks and public venture capital firms (Leicht and Jenkins 1994).

While state governments continue to actively promote economic development for their constituents, economic development is increasingly seen as a local responsibility. The economic recession of the 1980s led to a loss of jobs and incomes for many rural communities. This loss of jobs and income pushed many local government officials to take action and pursue new sources of revenue in order to retain residents and preserve the community atmosphere (Green 2003). The change in the location of economic development activities to the local level has led researchers and practitioners to question what types of local development programs are most successful and which factors lead to development success. Several researchers of community economic development have distinguished between two economic development strategies employed at the local level: industrial recruitment and self-development (Eisinger 1999; Flora, Green, Gale, Schmidt, and Flora 1992; Sharp et al. 2002).

Industrial Recruitment

Industrial recruitment involves efforts to attract outside firms and industries to locate to the community (Sharp et al. 2002). These efforts include the provision of tax

abatements, low-interest loans, and easy access to cheap land for infrastructure development. The attractiveness of industrial recruitment stems from its ability to generate a large number of jobs in a relatively short time period. Several studies show that community members can act to improve the effectiveness of industrial recruitment. Crowe (2006) finds that communities with active civic organizations and community-wide fund-raising capacities are more likely to pursue industrial recruitment. Sharp et al. (2002) find that the existence of active community organizations, businesses that support local community projects, community-wide fund-raising capacity, and extra-local linkages to peer communities and state government have a modest effect on industrial recruitment. The interorganizational network structure of communities can also impact industrial recruitment efforts. For example, Crowe (2007) finds that communities with loose ties across local organizations are more likely to expend resources to pursue outside industry than communities who have tightly interwoven networks across local organizations.

Self-Development

Evaluation of industrial recruitment outcomes has led some communities to promote a second type of economic development: self-development. Criticisms include the payment of low wages, short-term success, high recruitment costs (Loveridge 1996), degradation of the local environment (Pellow 2002), and possible increases in population growth, housing prices and rents (Molotch 1976). In contrast to industrial recruitment, self-development activities foster local businesses and other entrepreneurial activities along with relying on local resources to aid in development from within the community

(Flora et al. 1992). Examples of self-development activities include revitalizing downtown businesses, promoting local tourism, and retaining or expanding locally owned businesses. Previous research shows that some community attributes foster self-development. Sharp et al. (2002) find that a social infrastructure rich in active community organizations, supportive businesses of local community projects, community-wide fund-raising capacity, and extra-local linkages to peer communities and state government is more likely to cultivate self-development than industrial recruitment. While self-development has some advantages over industrial recruitment, such as new jobs requiring higher skills and stronger job security, a higher number of jobs tend to be created from successful industrial recruitment endeavors than from self-development (Sharp et al. 2002). Also, certain self-development activities, such as tourism, may become vulnerable to downturns in the economy and may not generate incomes that are able to support a family (Krannich and Petrzelka 2003).

While previous research has examined the effects of a community's social infrastructure (Crowe 2006; Sharp et al. 2002) and organizational network structure (Crowe 2007) on the two types of community economic development, to date little research has looked at the effect of a community's natural surroundings on the two forms of economic development. Because of the interdependency of society-environment relations, it is imperative that those examining the effectiveness of community-level economic development include natural factors in their studies. Below, I give a brief overview of previous research on the relationship between natural capital and community economic development. While there has been some general recognition that natural factors impact local economic development, researchers have yet to systematically

examine the impact of a community's natural capital on the pursuit and implementation of various types of economic development. I build upon this recognition by dividing natural capital into three components: accessibility, natural circumscription, and ecosystem and by theorizing how each component impacts both industrial recruitment and self-development.

Natural Capital and Economic Development

Natural capital, also referred to as environmental capital, includes a community's base of natural resources: air, water, land, flora, and fauna (Green and Haines 2002). These natural resources may have direct use values in the form of provisioning services (e.g., timber, crops), unpriced benefits obtained from the regulation of ecosystem processes (e.g., climate and erosion regulation), and/or nonmaterial benefits in the form of cultural services (e.g., aesthetic values, sense of identity, recreation) (Millennium Ecosystem Assessment 2005). Ostrom (2000) similarly defines natural capital as the *available* complex array of biophysical resources that surround a particular community. This includes geographical and social properties such as accessibility, control over surrounding land and resources, and geographical space. For the purposes of this study, I examine the first and third properties of natural capital while breaking up geographical space into two components: natural circumscription and ecosystem type.

Accessibility

The level of a community's accessibility has a significant impact on local community development. Accessibility refers to the different modes by which a

community can be reached along with the relative ease of entry. Depending on location, communities can be accessed by humans in a variety of ways, including automobile, train, boat, and airplane. When it comes to transporting goods, some communities, particularly large cities, can be reached by all four modes, while other communities can only be accessed by one. Communities also differ with regards to ease of access. Some communities are reachable by faster modes of transportation (e.g., interstate) while others are accessible by slower routes (e.g., two-lane highway). Furthermore, some communities can be accessed from a number of highways and from multiple directions while others are limited to the number of highways and directions by which they can be accessed.

A community's accessibility can have a significant impact on which types of economic development are pursued and which types are implemented. Lack of accessibility puts communities at a disadvantage for successful industrial recruitment. This is because physical remoteness leads to higher shipping costs and ultimately to lower profits for industries (Saiz 2001). Thus, I hypothesize that communities that are easily accessible to markets are more likely to pursue and implement outside industries to their areas. However, I hypothesize that communities that are not easily accessible are more likely to pursue and implement self-development strategies. Gone are the days in which consumers of local business tend to reside in the same area. With the advances in computer and telecommunication technologies, small locally-run businesses have an easier time of reaching consumers who reside far distances from the community. These advances in technology make alternatives to industrial recruitment more attractive to rural communities.

Natural Circumscription

Natural circumscription refers to the extent to which a territory can expand. Natural circumscription was originally coined to explain the rise and fall of chiefdoms and states (Carneiro 1970, 2000). Under this scenario, as population grew, arable land for farming diminished. This led to warfare as villages fought over parcels of land. Regions where circumscription was high (i.e., where tillable land was limited and sharply bounded by mountains, deserts, or oceans) were the first to engage in warfare. Today in the United States, an industrialized nation with set political boundaries, barriers to expansion still exist. However, they can be both natural and social and do not lead to the type of warfare described by Carneiro. Natural barriers to expansion include water, sand, or rugged mountains that physically limit the outward growth of a particular territory. Social barriers are often political in nature, such as the border of a neighboring country or community. Although natural circumscription may originally be low (i.e., ample room for expansion) it can increase as the landscape fills in and merges with other territories. In most cases, the level of natural circumscription tends to be fairly stable.

While natural circumscription no longer leads to warfare within industrialized nations that have set political boundaries, it can be extended to explain community-level economic development activity. Communities with high natural circumscription will be less likely to effectively recruit outside industry than communities with low natural circumscription. Industrial recruitment often generates commercial and residential construction. This is because large industries need a physical infrastructure to accommodate both the industrial facility and the people who flock to the area seeking employment (Flora, Flora, and Fey 2004). Communities that are either geographically

constrained to expand (e.g., located on small islands) and/or constrained by local, state, or national regulations against expansion are limited in their ability to offer open space to industries. Therefore, I hypothesize that communities with high natural circumscription (i.e., little room for expansion) are more likely to pursue and implement self-development activities, while communities with low natural circumscription are more likely to pursue and implement industrial recruitment activities.

Ecosystem Type

An ecosystem is "a dynamic complex of plants, animals, microbes, and physical environmental features that interact with one another" (Millennium Ecosystem Assessment 2005). While the structure of the world's ecosystems changed more rapidly in the second half of the 20th century than in any previous time period in recorded history, most recent ecosystem changes occur in developing nations. In the United States and other developed nations, ecosystem changes occur at a slower pace--mostly due to the rapid changes that previously took place in the 18th and 19th centuries. Communities and businesses rely on ecosystems and their provided services. Services are benefits that humans receive from ecosystems and can be provisioning (e.g., food, wood, fiber), regulating (climate, flood, and disease regulation), or cultural (aesthetic, educational, recreational) in nature (Millennium Ecosystem Assessment 2005). The degradation of ecosystem services profoundly impacts not only a community's economic base but its way of life. As resources are degraded and as environmental regulations are put into place to reduce further degradation, operating costs rise and operation becomes less flexible. This ultimately leads to the closure of many businesses and industry that rely on

ecosystem services. One example is the reduction in the number of timber mills as most of the profitable trees are harvested and environmental regulations are put in place to preserve the remaining forest. In response, communities must change their economic activity in order to survive. This may include using the local ecosystem in a sustainable manner to entice business, industry, residents, and/or tourists to the community.

Certain features of a community's ecosystem may influence different types of economic development. Communities whose ecosystems provide recreation, ecotourism, and/or educational opportunities may be more likely to attract residents and tourists to the community. With population growth, outside industry and business may find these communities as attractive and profitable places to locate. Thus I hypothesize that communities located in cultivated ecosystems, which tend to have fewer recreational and educational opportunities, are less likely to implement outside industry than communities located in ecosystems that provide for recreational and educational opportunities, such as urban ecosystems. On the other hand, communities located near forests and water sources may be favorable for self-development. Natural amenities such as forests, coasts, and lakes have become very attractive in the eyes of vacationers. Communities located near such natural amenities also have become appealing for residential, recreation, and conservation purposes (Jackson-Smith 2003). Communities located near such ecosystems may be better able to use their natural amenities to develop identities that facilitate self-development, such as local tourism. Thus, I hypothesize that communities located near forest, coastal, and inland water ecosystems are more likely to pursue self-development activities than communities located in ecosystems that have less aesthetic value, such as urban ecosystems.

Natural Capital and Economic Development: The Case of the Northwest

The states of Washington and Oregon serve as prime locations to test the impacts of the various subcomponents of natural capital on the two economic development strategies: industrial recruitment and self-development. Located in the northwest corner of the United States, Oregon and Washington have a diverse geographical landscape. From the rolling wheat fields of Eastern Washington, to the arid desert of Southeastern Oregon, to the temperate rainforests located in the far west of both states, surrounding ecosystems of communities diverge immensely from one another. Furthermore, accessibility significantly varies from community to community. While some communities are located off of an interstate, others are accessible by a single two-lane highway and are located over 100 miles away from the nearest interstate. Natural circumscription also varies among communities in Washington and Oregon. Mountains, oceans, and rivers serve as natural barriers, while borders with Canada and other communities serve as social barriers to development.

When it comes to economic development strategies, Oregon and Washington actively pursue both industrial recruitment and self-development activities at the state level (Saiz 2001). Throughout the 1980s and early 1990s, self-development strategies became more predominant in both states, while industrial recruitment strategies became less predominant. Nevertheless, as of the mid 1990s, one strategy was not significantly favored over the other with both states adopting similar proportions of both types of economic development programs (Saiz 2001). Because communities in the Northwest actively pursue both industrial recruitment and self-development but significantly diverge

when it comes to natural capital, the Northwest serves as a prime region to test my hypotheses.

Methods and Data

Data come from surveys conducted in 101 communities in Oregon and Washington in the summer and fall of 2006. Communities were selected based on population size and geographical location. Each community in the study has a population between 1,000 and 9,000. Attempts were made to have at least one community from each of the 39 counties in Washington and from each of the 36 counties in Oregon. Thirty-five of the 39 counties in Washington contained at least one community that fit the population requirements while 29 of the 36 counties in Oregon had at least one community that fit the population guidelines. Several counties contained only one community that fit the population requirements. In these cases, the sole community was selected for the sample. If a county had more than one community that fit the population requirements, a random sample of relevant communities was taken. A total of 101 communities were sampled, 51 from Oregon and 50 from Washington.

For each of the 101 communities, surveys were mailed to five community leaders. Community leaders consisted of two representatives of city council (typically city managers and city council members), one representative of the chamber of commerce or economic development council, one representative of local schools (typically superintendents), and one representative of an active civic organization. City clerks and local websites helped identify participants.

A mail survey was conducted using a modified Dillman (2002) method. Five contacts were made; however, the fifth contact was by e-mail rather than special delivery.

A modified version of the surveys used by Flora et al. (1997) and Sharp (2001) in their analyses of economic development was used for the study. The final sample consisted of 361 participants (72% response rate). In 85 of 101 communities, at least three community leaders responded. In thirteen communities, two community leaders responded, while one community leader responded from three communities. I created community-level attributes by aggregating leader responses for each community. Because response differences among leaders of the same community sometimes existed, two procedures were used to account for these differences. For factual questions (e.g., Is there a local bike trail?), the modal response of leaders served as the community-level attribute. For perceptual questions (e.g., How often do youth and adults work together on community development projects?), the mean response of participants was used.

Measurement of Community Economic Development Strategies

Participants were asked a series of questions with regards to whether or not the community pursued a particular type of economic development strategy in the previous three years[10]. Table 1 lists the descriptions for both self-development and industrial recruitment variables.

[10] Questions measured a total of 12 different types of economic development strategies. While the range of economic development measures used are quite extensive, each measure falls into one of two categories: self-development or industrial recruitment. These are two very different strategies that research has shown to yield different economic results (Saiz 2001). Furthermore, previous research shows that different community traits are more favorable for implementing either self-development or industrial recruitment strategies (e.g. Crowe 2006; Sharp et al. 2002). Continuing with this tradition, I aggregate the outcome measures into two composite measures: self-development and industrial recruitment.

TABLE 3.1: SUMMARY OF DEPENDENT VARIABLES

Dependent Variables	Description	Scale	Counted Item
Self-Development Strategies	revitalize the downtown or retail sector of the community	0-5	Yes
	retain or expand locally-owned businesses or industry		
	apply for financial governmental assistance to expand local businesses		
	attempt to find buyers for local businesses		
	develop or promote a local historic or cultural site or event to promote tourism		
Industrial Recruitment Strategies	organize a committee to recruit new business or industry	0-7	Yes
	attract a large scale agricultural producer or outside owned value-added processing firm		
	develop and maintain contact with leaders in industry outside the area		
	apply for government financial assistance to attract industry or business		
	seek investments from corporations outside the community to expand business or industry		
	bring a state or federal office or facility to the community		
	seek outside investors to develop single or multi-family housing		
Self-Development Implementation	developed a small business assistance program in previous three years	0-2	Yes
	developed a commercial/retail center for locally-owned businesses in previous three years		
Industrial Recruitment Implementation	developed a commercial/retail center mostly for outside-owned businesses in previous three years	0-5	Yes
	number of outside businesses that located to the community that received incentives		

Affirmative responses by community leaders to five items concerning self-development strategies serve as the indicator of self-development. Because responses to the questions were highly correlated, an additive scale was constructed (alpha reliability = .62)[11].An additional seven items asked about industrial recruitment strategies that were pursued. An additive scale consisting of the number of types of industrial recruitment activities pursued in the previous three years serves as the indicator of industrial recruitment (alpha reliability = .68).

Measurement of Implemented Economic Development

Participants were asked a series of questions pertaining to the implementation of self-development and industrial recruitment in the past three years. Two questions related to the implementation of self-development projects: development of a small business assistance program and development of a commercial/retail center for locally-owned businesses. The response pattern to the two items was not conducive to Mokken scaling so a simple count scale is used to represent the range and amount of self-development activity in a community. The number of implemented self-development projects over the previous three years serves as the indicator of self-development. Two questions asked

[11] While it is possible to achieve successful economic development by pursuing one or a couple of economic development strategies, many communities have been scorned by "putting all of their eggs in one basket." Particularly when it comes to industrial recruitment, many communities have witnessed industries move in only to shut down operations a few years later. Furthermore, evidence exists that economic diversity reinforces economic stability. For this reason, I equate the pursuit of a larger variety of economic development strategies as having a more likely chance of benefiting the community both economically and socially.

about the implementation of industrial recruitment projects: development of a commercial/retail center mostly for outside-owned businesses and the number of outside businesses that located to the community that received incentives. Since these two activities appear to be related sequentially—i.e., development of a commercial center for outside businesses typically occurs before relocation of outside businesses—a Mokken scale was constructed for this index. Evaluation of the Mokken scale indicated acceptable scaling with Loevinger's H (H) = .34. The number of implemented industrial recruitment projects over the previous three years serves as the indicator of industrial recruitment.

Measurement of Natural Capital

Accessibility

Rail accessibility is measured with a dichotomous variable. Communities that have one or more freight rail lines that run through the community are coded as one, while communities that have no freight rail lines that pass through are coded as zero. A dichotomous variable is used to measure highway accessibility. Communities that have more than one two-lane highway that passes through the community are coded as one, while communities that have only one two-lane highway that passes through are coded as zero. Interstate accessibility is measured with a dichotomous variable. Communities located further than 25 miles from the nearest interstate are coded as zero, while communities located less than 25 miles from the nearest interstate are coded as one. These data are collected from the Washington (2007) and Oregon (2007) Departments of Transportation.

Natural Circumscription

Natural circumscription is measured by the number of directions (0-4) in which a community has the potential to expand. These data are collected from the Washington (2007) and Oregon (2007) Departments of Transportation.

Ecosystem

In order to examine the natural surroundings of each community, I measure a community's ecosystem. Communities located along the coast or in forested areas are coded as one, while all other communities are coded as zero. Communities located near permanent water bodies that are inland from the coast are coded as one, while all other communities are coded as zero. Communities located near cultivated land are coded as one, while all other communities are coded as zero. Communities located in urban areas are coded as one, while all other communities are coded as zero. Detailed atlases of Oregon and Washington were used to calculate ecosystem (Oregon 2001; Washington 2002) based on the broad classifications provided by the Millennium Ecosystem Assessment (2005).

Control Variables

Prior research suggests that the pursuit of economic development activities may depend on the social infrastructure and network configurations of communities (Crowe 2006, 2007; Sharp et al. 2002). For this reason, I include social attributes and background demographic variables as statistical controls in the analysis. Measures of social attributes come from the survey of community leaders, while demographic variables are provided

by the U.S. Bureau of the Census (2000) and Washington State Office of Financial Management (2005).

Legitimacy of Alternatives

Research shows that the level of inclusiveness and accessibility of local processes to the whole community impacts economic development activities (Sharp et al. 2002). Thus, I include two variables to measure the level of inclusiveness of communities. A forum variable measures the quality of forums in a community that allow different views to be expressed in an open environment. I also include a variable that measures the open discussion of issues in other settings in the community.[12]

Resource Mobilization

Variables that represent a community's ability to mobilize resources for development include the number of community foundations and bonds passed as well as the willingness of financial institutions to contribute to development projects. A summation scale measures the extent to which a community's largest financial institution

[12] Quality of forums were measured using a five-point scale ranging from a particular media outlet providing excellent forums (coded as one) to air different views on community issues to the particular media outlet providing terrible forums (coded as five). The number of excellent and good forums a community possesses serves as the first category under legitimacy of alternatives. The second variable consisted of nine statements about how issues were discussed in the community (e.g., "The issue was discussed at community meetings." "Existing civic groups were actively engaged in the issue."). After each statement, the respondent marked whether the statement had occurred (yes), had not occurred (no), or if s/he did not know. Since responses to these questions were highly correlated, an additive scale was constructed (alpha reliability=.59). The number of favorable answers was recorded and used for the second category under legitimacy of alternatives.

provides low-interest loans to community projects; grants, donations or in-kind contributions to community projects; marketing or technical assistance to local businesses; and whether personnel serve on local boards and committees (alpha reliability = .78).

Network Diversity

Research has shown that the diversity of groups who take leadership roles in the community as well as a community's links to other communities, state, and national organizations are positively associated with economic development activities (Crowe 2006; Sharp et al. 2002). I include two variables to measure diversity of leadership and one variable to measure quality of linkages. The first variable measures the activity of community organizations (from a list of twelve) in economic development activities. A diverse leadership variable measures the extent that different groups in the community work together on community improvement projects. I also include a variable that measures a community's linkages to other communities, state, and national organizations.[13]

[13] Organizations included economic development, chamber of commerce, service and fraternal, public or private housing development, professional, environmental, commodity or general farm, women's societies, civic groups, city government, historical or heritage societies, and church groups. Response categories ranged from very active (coded as one) to no such group exists (coded as four). A summation scale was created with lower values corresponding with higher levels of community involvement from community organizations (alpha reliability = .83). The second variable is a summation scale of how often different groups of individuals in the community took leadership roles for a community project and how often different groups of individuals worked together on a community project. Groups included women, racial and ethnic minorities, newcomers, businesspeople, and youth among others. Because responses to these

Background Variables

Median household income and percent of individuals over the age of 25 with a bachelor's degree or higher are used as controls for prior economic conditions and human capital. Population density (computed as the total population of each community divided by the number of square miles the community occupies) and minutes from the nearest city (population over 70,000) are included to control for rural/urban locations. Minutes from the nearest city are computed by Rand McNally (2007), which takes into consideration mileage, speed limit, and road type. Population data are for the year 2000.

Analytic Strategy

The first stage of the analyses focuses on the descriptive statistics of each dependent and independent variable. I examine the different components of natural capital for the pursuit and implementation of both types of economic community development (self-development and industrial recruitment). For the second stage of the analyses, I test my hypotheses by performing negative binomial regression to assess how the indicators of natural capital impact the two forms of economic community development. Both dependent variables are over dispersed count variables (alpha does not equal 0). While Poisson regression is typically used for count variables, the preferred

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questions were highly correlated, a summation scale was created with lower values corresponding with a higher number of diverse groups taking leadership positions and working together (alpha reliability = .79). The third variable consists of a series of strongly correlated items from the survey to form a diverse linkages scale (alpha reliability = .72). The scale is based on the number of issues in which the community joined with another community to address combined with the number of state and national organizations to which a community belongs. Organizations included planning agencies, tourism or marketing groups, environmental groups, economic development, groups for special events, among others.

model for over dispersed count variables is negative binomial regression, because the negative binomial distribution assumes that the variance is larger than the mean (Barron 1992; Hoffmann 2004a). VIF scores for all of the independent variables were well under 6.0, suggesting little multicollinearity exists among the variables.[14]

Results

Table 2 presents the mean number of economic development projects pursued and implemented by type for each of the independent variables. The percent of communities possessing each independent variable category (control variables are excluded) is also presented. Sampled communities vary significantly with respect to the three main subcomponents of natural capital: accessibility, natural circumscription, and ecosystem. On average, a little over half (58%) of the communities are easily accessible (either by rail, highway, or interstate). Communities are divided roughly in quarters with regards to the number of directions they can potentially expand. Roughly half (51%) of communities have low circumscription (i.e., can expand in three or four directions), while the other half possess high levels of natural circumscription. A higher percent of sampled communities are located in forest and woodlands compared to urban areas (38%

[14] I calculate VIF scores by first running the negative binomial regression model to calculate alpha and then inserting alpha into a generalized linear model with a negative binomial option. Because negative binomial regression is an overdispersed, discrete response regression model, VIF scores are typically not used to account for multicollinearity. Therefore, I also calculate the correlation of the predictors and investigate the instability of estimates with a nonparametric bootstrap model, which also suggests little multicollinearity exists among predictors.

compared to 5%), while coastal, inland water, and cultivated areas each possess one fifth of the sampled communities.

On average, communities pursue self-development strategies more often than industrial recruitment regardless of level of natural capital. As a whole, the sampled communities pursued more types of self-development projects (3.79 out of a possible 5) over the previous three years compared to the number of types of industrial recruitment projects (3.4 out of a possible 7). In addition, communities implemented more types of self-development projects in the previous three years (.55 out of a possible 2) compared to industrial recruitment projects (.49 out of a possible 5). This holds despite the fact that self-development figures are constrained due to fewer questions being asked compared to questions regarding industrial recruitment projects.

Table 3.2 Mean Economic Development Projects Pursued and Implemented

	Economic Development Pursued		Economic Development Implemented		
	Self-Development	Industrial Rec	Self-Development	Industrial Rec	Total
Accessibility					
Railway					
0	3.46	3.34	.54	.22	37%
1 and up	3.98	3.44	.56	.64	63%
Interstate					
>25 mi.	3.91	3.26	.66	.56	45%
<25 mi.	3.70	3.52	.46	.43	55%
Highway					
1	3.64	3.34	.49	.59	44%
>1	3.91	3.45	.60	.40	56%
Natural Circumscription					
0 directions	3	3.67	.33	0	3%
1 directions	3.87	3.28	.76	.5	23%
2 directions	4.02	3.88	.63	.48	24%
3 directions	3.73	3.59	.5	.61	22%
4 directions	3.67	2.93	.38	.43	29%
Ecosystem					
Coastal	3.89	3.42	.74	.61	19%
Forest	3.75	3.45	.5	.57	38%
Inland Water	3.9	4.00	.63	.5	19%
Cultivated	3.58	2.84	.34	.18	19%
Urban	3.8	3.00	.6	.6	5%

In order to empirically test the effects of the subcomponents of natural capital on the pursuit and implementation of self-development and industrial recruitment activities, I perform negative binomial regression. Tables 3 and 4 present the negative binomial regression models for each dependent variable. In both tables, four models are presented: the full and reduced (i.e., only the significant variables) models for both types of economic development strategies.

Economic Development Strategies

Table 3 presents the full and reduced models for industrial recruitment and self-development strategies.

Industrial Recruitment

For both models, communities that have inland water ecosystems are more likely to pursue outside industries. All other natural capital variables are non-significant. Consistent with arguments from other researchers (Crowe 2006; Sharp et al. 2002), I find that network diversity significantly impacts the pursuit of industrial recruitment. Communities with active civic organizations are more likely to pursue outside industry to the community than those with less active or non-existent organizations.

Table 3.3. Negative Binomial Regression (with robust standard errors) of Economic Development Strategies

Independent Variables	Industrial Recruitment		Self-Development	
	Full Model	Reduced Model	Full Model	Reduced Model
Rail Accessibility	.087		.098*	.083*
	[9.1]		[10.3]	[8.6]
	(.119)		(.049)	(.05)
Highway Accessibility	.143		.096*	.087*
	[15.4]		[10.1]	[9.1]
	(.115)		(.056)	(.048)
Interstate Accessibility	.14		-.108*	-.038
	[15.0]		[-10.2]	[-3.7]
	(.162)		(.067)	(.046)
Natural Circumscription	-.034		-.01	
	[-4.0]		[-1.2]	
	(.048)		(.025)	
Coast/Forest Ecosystem	.251		-.072	
	[28.5]		[-6.9]	
	(.22)		(.117)	
Inland Water Ecosystem	.398*	.251*	-.1	
	[48.9]	[28.6]	[-9.5]	
	(.231)	(.115)	(.131)	
Cultivated Ecosystem	.01		-.076	
	[1.0]		[-7.3]	
	(.253)		(.123)	
Legitimacy of Alternatives:	-.004		-.004	
Forum Provided	[-.4]		[-.3]	
	(.064)		(.023)	
Discussion of Local	.014		.022	
Issues	[1.6]		[2.7]	
	(.043)		(.019)	
Resource Mobilization:	.058		-.002	
Bonds and Funds	[8.9]		[-.4]	
	(.038)		(.016)	
Financial Institutions	-.036		.046*	.046*
	[-4.6]		[6.3]	[6.3]
	(.049)		(.023)	(.022)
Network Diversity:	.037*	.019*	-.001	
Civic Organization	[17.5]	[9.0]	[-.4]	
	(.018)	(.01)	(.008)	
Community Linkages	.031		.037**	.038**
	[9.9]		[11.9]	[12.3]
	(.023)		(.012)	(.01)
Diverse Leadership	-.004		-.019**	-.019**
	[-1.5]		[-7.2]	[-7.2]
	(.015)		(.007)	(.006)
Bachelors Degree and Higher	-.006		-.008*	-.007*
	[-4.7]		[-5.9]	[-5.2]
	(.008)		(.004)	(.004)
Median Household Income	.00		.00	
	[11.5]		[2.3]	
	(.00)		(.00)	
Population Density	-.00		-.00**	-.00**
	[-9.7]		[-6.2]	[-5.7]
	(.00)		(.00)	(.00)
Minutes From Urban	.001		-.001	
	[5.2]		[-3.9]	
	(.001)		(.001)	

Notes: Standardized percent change appears in brackets (unstandardized for dummy variables). Robust standard errors are in parentheses. For industrial recruitment, tests for inland water ecosystem for the full model and civic organizations for the reduced model are one-tailed. For self-development, tests for interstate and highway accessibility in the full model and highway and rail accessibility in the reduced model are one-tailed; all other tests are two-tailed.
* P < .05; ** P < .01

Self-Development

Unlike the models for industrial recruitment, accessibility has a significant impact on self-development strategies. In the full model, both rail and highway accessibility have a positive impact on pursuing self-development. However, interstate accessibility has a negative impact on self-development. As for the social infrastructure variables, one of the measures of resource mobilization and two of the measures for network diversity are significant. Having financial institutions that contribute to economic development projects positively impacts the pursuit of self-development. In addition, linkages to other communities, state, and national organizations as well as having diverse leadership also positively impacts the pursuit of self-development activities. As for the demographic variables, population density has a negative impact on self-development strategies. Communities with less density tend to pursue more self-development activities than their highly dense counterparts. Level of education also has a negative impact on self-development activities. The exclusion of all non-significant variables in the reduced model produces effects similar to the full model. All significant variables in the full model remain significant in the reduced model except for interstate accessibility.

Economic Development Implementation

Table 4 presents the models for industrial recruitment and self-development implementation.

Industrial Recruitment

As with the pursuit of industrial recruitment, ecosystem type is significantly related to implementing industrial recruitment. Communities located near inland water

and cultivated areas are less likely to successfully recruit outside industries to their communities than communities that are located in urban areas. However, in addition to ecosystem type, accessibility to rail and natural circumscription are positively significant with implementing industrial recruitment. Communities that have access to freight rail and that have room to grow (low circumscription) are more likely to implement outside industry than communities without access to rail and those that have little or no room to grow (high circumscription). As for the social and demographic variables, high quality forums, the number of passed bonds and funds, and linkages to other communities, state, and national organizations all positively influence the implementation of outside industry. However, percent of bachelor's degrees or higher and number of minutes from the nearest urban area are negatively associated with such implementation. In other words, communities with lower levels of educational attainment along with communities that are closer to an urban area are more likely to implement industrial recruitment.

Several inconsistencies exist between the pursuit and implementation of outside industry. First, aside from being near inland water, natural capital does not significantly influence the *pursuit* of outside industry. However, it has a significant impact on the *implementation* of such development. Accessibility, natural circumscription, and ecosystem type all significantly influence the successful implementation of outside industry while controlling for social and demographic factors. Second, while social and demographic factors do not have much of an influence on *pursuing* outside industry, they have a significant impact on *implementing* such development. Legitimacy of alternatives, resource mobilization, and network diversity all positively impact outside industry implementation, while level of education and distance from the nearest urban area

negatively impact industrial recruitment. When comparing only the significant variables in the reduced model, the natural capital variables appear to have a larger impact on the implementation of industrial recruitment than the social and demographic variables have. For instance, having access to freight rail increases the number of implemented industrial recruitment projects by 169%, while being located in a cultivated ecosystem decreases the number by 88%. This is in contrast to the pursuit of industrial recruitment, in which the magnitude of the effect of the natural capital variables is similar to that of the social and demographic variables and, except for two variables, are non-significant.

Self-Development

As with the pursuit of self-development, accessibility to an interstate is negatively associated with implementing self-development while highway accessibility is positively related. That is, communities that are located more than 25 miles from the nearest interstate are more likely to pursue and implement self-development projects than communities that are less than 25 miles from an interstate. Furthermore, communities that have more than one highway are more likely to implement self-development. In addition to accessibility, natural circumscription is also significantly related to implementing self-development. Communities that have fewer directions to expand are significantly more likely to implement self-development projects than communities that have more room for expansion. However, while rail accessibility positively influences the pursuit of self-development it is not significant for implementing self-development.

Table 3.4. Negative Binomial Regression (with robust standard errors) of Economic Development Implementation

Independent Variables	Industrial Recruitment		Self-Development	
	Full Model	Reduced Model	Full Model	Reduced Model
Rail Accessibility	1.496**	.988**	.114	
	[346.6]	[168.6]	[12.1]	
	(.409)	(.317)	(.308)	
Highway Accessibility	-.766		.48	.531*
	[-53.5]		[61.5]	[70.1]
	(.502)		(.319)	(.269)
Interstate Accessibility	-.802		-.825*	-.594*
	[-55.2]		[-56.2]	[-44.8]
	(.67)		(.454)	(.280)
Natural Circumscription	.339*	.222+	-.097	-.222*
	[50.8]	[30.8]	[-11.1]	[-23.7]
	(.164)	(.156)	(.126)	(.106)
Coastal/Forest Ecosystem	-.661	-.18	-.01	
	[-48.4]	[-16.5]	[-1.0]	
	(.592)	(.498)	(.454)	
Inland Water Ecosystem	-1.346*	-.682	-.35	
	[-74.0]	[-49.5]	[-29.5]	
	(.694)	(.592)	(.463)	
Cultivated Ecosystem	-2.368**	-2.086**	-.282	
	[-90.6]	[-87.6]	[-24.6]	
	(.83)	(.709)	(.587)	
Legitimacy of Alternatives:	.381*	.161	.227	
Forum Provided	[39.0]	[14.9]	[21.7]	
	(.168)	(.171)	(.153)	
Discussion of Local	-.174		.053	
Issues	[-18.5]		[6.4]	
	(.175)		(.122)	
Resource Mobilization:	.416**	.29**	-.063	
Bonds and Funds	[84.7]	[53.4]	[-8.9]	
	(.132)	(.117)	(.091)	
Financial Institutions	.086		-.111	
	[12.2]		[-13.7]	
	(.174)		(.149)	
Network Diversity:	.056		-.047	
Civic Organization	[28.3]		[-18.6]	
	(.063)		(.05)	
Community Linkages	.269**	.166*	.035	
	[127.6]	[65.9]	[11.1]	
	(.093)	(.072)	(.086)	
Diverse Leadership	.002		-.046	
	[.8]		[-16.6]	
	(.052)		(.054)	
Bachelors Degree and Higher	-.064*	-.071*	-.015	
	[-39.1]	[-42.0]	[-11.1]	
	(.028)	(.029)	(.028)	
Median Household Income	.00		-.00	
	[27.6]		[-15.5]	
	(.00)		(.00)	
Population Density	-.001		.00	
	[-29.7]		[30.6]	
	(.00)		(.00)	
Minutes From Urban	-.009*	-.004	-.001	
	[-34.4]	[-18.9]	[-3.1]	
	(.005)	(.004)	(.004)	

Notes: Standardized percent change appears in brackets (unstandardized for dummy variables). Robust standard errors are in parentheses. For industrial recruitment, tests for minutes from urban for the full model and natural circumscription for the reduced model are one-tailed. For self-development, the test for interstate accessibility for the full model is one-tailed; all other tests are two-tailed. + P < .10; * P < .05; ** P < .01

As for the social and demographic variables, while having linkages to other communities, state, and national organizations as well as having financial institutions that contribute to economic development are positively significant for pursuing self-development strategies, they are no longer significant when implementing such strategies. Similarly, level of education and population density, while negatively related to pursuing self-development, do not significantly impact the implementation of such development.

As with industrial recruitment, natural capital appears to have a greater impact on implementing self-development than pursuing self-development. For example, being located closer than 25 miles from an interstate decreases the number of implemented self-development projects by 56 percent, holding all other variables constant, compared to the 10 percent for pursuing self-development.

Discussion

This research provides a starting point for thinking about the relationship between natural factors and community-level economic development. In general, findings show that natural capital does have an impact on both the pursuit and implementation of economic development. However, the nature of the impact is different for industrial recruitment than for self-development. For instance, a community's ecosystem did not have an impact on either self-development pursuit or implementation, but had an impact on pursuing and successfully recruiting outside industry. Communities located in an urban area are more likely to successfully recruit outside industries to their communities than are communities located near inland water and cultivated ecosystems. Natural circumscription also impacts self-development differently than it does industrial

recruitment. While natural circumscription positively impacts the implementation of industrial recruitment, it is negatively related to self-development implementation. Communities that have less room to expand are more likely to implement self-development projects than are communities with more room for expansion, while communities with more room for expansion are more likely to implement outside industry. Finally, accessibility is positively associated with implementing industrial recruitment projects while it is negatively related with implementing self-development projects. These findings suggest that environment-society relations are important to consider when it comes to community-level economic development.

While the natural environment impacts both the pursuit and implementation of economic development, natural factors have a larger impact on the actual implementation of economic development projects than on the pursuit. Furthermore, natural capital has an opposite effect on implementing industrial recruitment projects than self-development projects, as hypothesized. Communities that are accessible by rail and have ample room for expansion are more likely to implement industrial recruitment projects, while communities that are less accessible by interstate and have little room for expansion are more likely to implement self-development projects. However, natural capital's effect on the pursuit of industrial recruitment and self-development are more muddled. For instance, rail and highway accessibility are positively correlated with self-development while interstate accessibility is negatively related to the pursuit of self-development strategies. Furthermore, natural circumscription does not impact the pursuit of self-development but negatively impacts the implementation of self-development (communities with less room for growth are more likely to implement self-development).

This indicates that some communities that are hard to access and have little room for growth do not try to actively pursue self-development projects. Perhaps they are not pursuing any economic development, either because they are happy with current levels of development and/or do not want to grow at all. They may also be trying to recruit outside industry, although the results from this study show that implementation of industrial recruitment is an uphill battle for these communities. However, when it comes to implementing self-development projects, communities that are less accessible and have little room for growth are more likely to do so than other communities. This may be due to outside industries not wanting to move to these communities and choosing less costly locations. Alternatively, these communities may have been scorned by outside industries as they packed up and moved when higher profits could be made elsewhere. Therefore, these communities with lower levels of natural capital have opted for alternative development strategies, such as self-development.

The impacts of a community's natural environment hold up in conjunction with social and demographic factors. Similar to other studies that focus on a community's social infrastructure (Crowe 2006; Sharp et al. 2002), I find that having diverse networks is positively related to the pursuit of both industrial recruitment and self-development activities. Resource mobilization is also positively associated with pursuing self-development. However, a community's social infrastructure is not as central to implementing self-development as it is for pursuing self-development. For example, none of the social infrastructure variables significantly impacted the implementation of self-development projects. Only the natural capital variables were significant. This lends even more weight to the argument that the natural environment cannot be excluded when

looking at social phenomena such as economic development. On the other hand, a community's social infrastructure is more central to implementing outside industry than it is for pursuing outside industry. This may be because many communities do not actively pursue outside industry but rather wait for outside industry to show interest in them. This more passive approach lends those communities with stronger social infrastructures to be better equipped to assist with the implementation process. This may explain why previous studies show a community's social infrastructure to have more of an effect on the pursuit of self-development than on industrial recruitment (Crowe 2006; Sharp et al. 2002). However, when implementing economic development, social infrastructure has more of an impact on outside industry than on self-development.

While social infrastructure has varying impacts on the pursuit and implementation of self-development compared to that of outside industry, the picture becomes clearer for the impact of natural capital. In sum, a community's natural surroundings, although significant for the pursuit of economic development, become even more of a decisive factor when implementing development. This is an example of the society-environment dynamic as outside employers consider natural factors such as accessibility, natural circumscription, and ecosystem when deciding on locations. Much of this consideration is due to profit motivation; however, other factors may come into play, such as environmental regulations.

There are some limitations of the study that future research should attempt to address. For instance, measures of self-development and industrial recruitment implementation focus on the number of categories of each that have been implemented over the past three years. Future studies can improve upon this by also including a

measure of the number of projects actually implemented. While the current study has a measure of implementation for both types of economic development activities, it does not measure the outcomes each type of development has on the community. It would be instructive to know how implementing self-development projects compared to industrial recruitment projects impacts various economic, environmental, and social conditions, such as income inequality and environmental degradation. Finally, while the findings illustrate that natural capital influences community-level economic development, there is a need for more comparative studies to better evaluate the robustness of the findings. For instance, future studies may compare how the natural capital variables influence local economic development in developed nations to that in less developed nations.

Conclusion

Although the natural environment is increasingly accounted for when examining what was once thought to be entirely social phenomena, until now little empirical work has systematically addressed the connection between the natural environment and community-level economic development. Accordingly, this study makes a unique contribution to our understanding of a community's stock of natural capital and local economic development efforts. By using survey data from community leaders in 101 communities throughout Washington and Oregon in combination with data from the Oregon and Washington Departments of Transportation and detailed atlases, this study shows that the pursuit and implementation of economic development are related to several components of natural capital. However, natural capital impacts industrial recruitment and self-development in opposite ways, particularly when implementing

these two strategies. Moreover, findings suggest that while the natural surroundings of communities impact the pursuit of economic development, the impact becomes more important for the implementation of economic development strategies, net of other social and demographic factors. Future research should bear in mind the environment-society relationships that lead businesses and industry to choose some locations over others and the economic development decisions that local communities make in response.

In conclusion, it is not surprising that issues surrounding economic development have begun to capture the attention of many disciplines, including sociology. With an increasingly global economy, researchers and communities alike continue to strive for development that is both economically and environmentally sustainable. While there is increasing recognition that habitat destruction and other forms of land degradation are often results of economic growth (Hoffman 2004b), sociologists need to recognize that the environment and society are interdependent and that local economic development decisions are often heavily influenced by one's natural surroundings. This study shows that unless researchers, policy makers, and community leaders pay attention to natural factors, communities may continue to spend time and resources pursuing certain types of economic development strategies to no avail, while failing to implement alternative economic development strategies that may be of extreme benefit to community citizens.

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CHAPTER FOUR

ECONOMIC DEVELOPMENT IN THE NONMETROPOLITAN WEST: THE INFLUENCE OF BUILT, NATURAL, AND SOCIAL CAPITAL

Introduction

Structural changes and technological advances in traditional rural sectors, such as agriculture and manufacturing, along with advances in shipping and the notion of "free trade" pose a threat to the survival of rural communities as homes and places of work (Sharp, Agnitsch, Ryan, and Flora 2002). For instance, while manufacturing in the United States increased by nearly 40 percent from 1973 to 1985, the number of employed workers in the sector decreased over the same time period (Flora, Flora, and Fey 2004). From 1970 to 2000, manufacturing employment dropped by 5 percent and in 2001, after the September 2001 terrorist attacks, rural manufacturing jobs dropped an additional 5.5 percent (Henderson 2002). In response, many rural communities have initiated economic development strategies to try to recruit, create or keep local economic endeavors. While some communities attempt to recruit outside business and industry to locate to their areas, other communities generate and encourage local businesses and other entrepreneurial activities from within the community.

In seeking to understand and adapt to such structural changes, analysts and policymakers have studied which community characteristics lead to effective economic development promotion (e.g. Crowe 2006, Sharp et al. 2002), economic development implementation (Crowe 2007b), and outcomes of economic development, such as population growth and unemployment figures (Pigg and Crank 2005). Characteristics of

communities that have been analyzed include social infrastructure, (Flora, Sharp, Flora, and Newlon 1997; Sharp et al. 2002, Crowe 2006) human capital (Becker 2002; Gordon 2000; Schultz 1961), information communication technologies (Pigg and Crank 2005), natural endowments (Crowe 2006, 2007b), organizational structures of communities (Crowe 2007a), and physical infrastructure (Christopherson et al. 1999; Harrison 1992).

While sociologists see the need in examining the characteristics that lead to effective community-level economic development (e.g. Crowe 2006; Flora et al. 1997; Putnam 1993; Sharp et al. 2002), most sociological research has focused on the impact that one or two sources of community capital have on economic development. To date, no study extensively examines the successful implementation of different economic development activities with regards to the full array of capital from which a community can draw. In addition, no study exists that examines which methods of economic development promotions are effective in implementing outside industry and which methods are effective in implementing self-development activities. In this research, I seek to answer several questions about the relation between a community's level of capital and the pursuit and implementation of economic development. More specifically, I seek to answer the following questions: which methods of economic development promotions are effective in implementing outside industry and which methods are effective in implementing self-development activities? Furthermore, how do the four sources of capital: human, built, social, and natural impact the methods used to promote the two types of economic development? Finally, how do these four sources of capital impact the actual implementation of different economic development activities, namely industrial recruitment and self-development? To answer these questions, I examine semi-

structured interview data along with survey data that captures recent economic development activities and social, natural, and physical conditions of communities. Data are provided by leaders in seven communities throughout Oregon and Washington.

Economic Development Strategies in the United States

Community-level economic development involves direct or indirect actions that result in the creation of local jobs and a raise in the real incomes of residents (Shaffer and Summers 1989; Summers 1986). Historically, federal and state governments have been responsible for the role of economic development. In the past, federal and state governments impacted local economies by investing in physical infrastructure projects, such as the interstate highway program and the construction of dams along the Columbia and Snake Rivers (Green 2003). However, in the last few decades state governments have adopted a variety of new methods for stimulating economic development, ranging from enterprise zones and right-to-work laws to technology parks and public venture capital firms (Leicht and Jenkins 1994). While state governments continue to actively promote economic development for their constituents, economic development is increasingly seen as a local responsibility. The economic recession of the 1980s led to a loss of jobs and incomes for many rural communities. This loss of jobs and income pushed many local government officials to take action and pursue new sources of revenue in order to retain residents and preserve the community atmosphere (Green 2003). The change in the location of economic development activities to the local level has led researchers and practitioners to question what types of local development programs are most successful and which factors lead to development success. Several researchers of

community economic development have distinguished between two economic development strategies employed at the local level: industrial recruitment and self-development (Eisinger 1999; Flora, Green, Gale, Schmidt, and Flora 1992; Sharp and Flora 1999; Sharp et al. 2002).

Industrial Recruitment

Industrial recruitment involves efforts to attract outside firms and industries to locate to the community (Sharp et al. 2002). These efforts include the provision of tax abatements, low-interest loans, and easy access to cheap land for infrastructure development. The attractiveness of industrial recruitment stems from its ability to generate a large number of jobs in a relatively short time period. Several studies show that community members can act to improve the effectiveness of industrial recruitment. Crowe (2006) finds that communities with active civic organizations and community-wide fund-raising capacities are more likely to pursue industrial recruitment. Sharp et al. (2002) find that the existence of active community organizations, businesses that support local community projects, community-wide fund-raising capacity, and extra-local linkages to peer communities and state government have a modest effect on industrial recruitment. Furthermore, research shows that a community's natural surroundings can influence the successful implementation of industrial recruitment. Crowe (2007b) finds that communities that are more accessible and have room for expansion are more likely to implement outside business or industry than communities that are less accessible and confined.

Self-development

While there are some advantages of recruiting outside industry to one's area, outside businesses and industries often pay low wages, have short-term success and high recruitment costs (Loveridge 1996), degrade the local environment (Pellow 2002), and can lead to population growth, housing prices, and rents (Logan and Molotch 1987; Molotch 1976). These criticisms of industrial recruitment have led some communities to promote a second type of economic development: self-development. In contrast to industrial recruitment, self-development activities foster local businesses and other entrepreneurial activities and rely on local resources to aid in development from within the community (Flora et al. 1992). Examples of self-development activities include revitalizing downtown businesses, promoting local tourism, and retaining or expanding locally owned businesses. Previous research shows that some community attributes foster self-development. Sharp et al. (2002) find that a social infrastructure rich in active community organizations, supportive businesses of local community projects, community-wide fund-raising capacity, and extra-local linkages to peer communities and state government is more likely to cultivate self-development than industrial recruitment. However, Crowe (2007b) asserts that a community's social infrastructure is not as central to implementing self-development as it is for pursuing self-development. A study of over 100 communities found that while an active social infrastructure positively influenced the pursuit of self-development activities, none of the social infrastructure variables significantly impacted the implementation of self-development projects (Crowe 2007b).

Instead, natural factors appeared to have more of an impact on the implementation of self-development projects.

While previous research has examined the effects of a community's social infrastructure (Crowe 2006; Sharp et al. 2002) and natural capital (Crowe 2007b) on the two types of community economic development, to date little research has thoroughly examined the impact of multiple modes of capital on the two forms of economic development. Furthermore, research has not examined which methods of economic development promotions are effective in implementing outside industry and which methods are effective in implementing self-development activities. In this article, I describe which economic development promotions are successful and which are not successful when it comes to the two types of economic development. In addition, I explain how the different forms of capital impact economic development promotion and ultimate implementation. But first, I give a brief overview of previous research on the relationship between the different forms of capital and community economic development.

Capital and Economic Development

Human Capital

Human capital includes characteristics of individuals that strengthen one's ability to earn a living and provide for one's community, family, and self-improvement. It consists of one's personal assets: health, formal education, skills, intelligence, leadership, and talents (Flora, Flora, and Fey 2004). The association between human capital and economic development originates from the early work of Schultz (1961). Schulz (1961) argues that economic growth is largely the result of investing in human capital. He

suggests that investments in human knowledge and skill are the major determinants of economic growth. Education is necessary if communities lacking such capabilities ever expect to attract and benefit from economic development. Schultz argues that increases in income are due to human capital rather than material or built capital, which were originally thought to account for economic growth and subsequent increases in income.

Since Schulz's early work relating human capital to economic development, several other economists have made every effort to ensure that human capital is a core concept in economics and in social sciences in general (e.g. Becker 2002). While Becker (2002) defines human capital as assets such as knowledge, skills, health, and values that contribute to income and other useful outputs, he firmly states that education and training are the most essential forms of human capital. When examining economic growth at the national level, human capital is viewed as the main contributor, along with built capital, of economic development in less-developed countries. For instance, Graff (1999) finds that college education in less-developed countries has a positive impact on economic development. However, several social scientists argue that investments in human capital can also lead to economic development in rural areas of industrial nations. Gordon (2000) suggests that education and training are crucial in an increasingly hi-tech global economy in determining which communities will economically flourish and which will fall behind.

When it comes to recruiting outside industry, Rainey, Robinson, Allen, and Christy (2003) argue that communities that are able to train and/or attract a technologically competent labor force will be more equipped to attract and retain globally competitive firms. According to Rainey et al. (2003), rural communities must develop or

attract workers who can adapt to new technology quickly and who can make creative adjustments to the production process in order to develop sustainable economies. Flora et al. (2004) similarly argue that the level of schooling of a community's residents is an increasingly important asset of a community. Industries that are currently growing are computer oriented and thus require more highly educated workers. Therefore, rural communities need to invest in human capital to not only be attractive to outside industry but to be able to provide for self-development.

When examining economic development, the age structure of a community needs to be accounted for in conjunction with human capital. A high proportion of elderly residents in a community impacts both the types of jobs available and the types of workers available. For instance, communities with a lower proportion of younger workers are less likely to attract manufacturing and other industries that rely on a large number of entry level workers (Flora et al. 2004). Instead, communities that attract retirees and tourists are more likely to generate jobs that are in the lower register of the service sector (Whitener and McGranahan 2003). While education level may influence the average income of a community's residents, the type of economic development that is implemented not only depends on level of education, but depends on the education level of the working age residents and the proportion of working age residents to retired residents.

Built Capital

Along with human capital, research cites built capital as a major contributor to economic development. Built capital, sometimes referred to as physical capital, is the

permanent physical infrastructure used to support community activities. Historically, when development agents discussed built capital, they referred to water and sewer capacity and transportation infrastructure. However, built capital also includes electric and natural gas, waste-disposal facilities, telephone and fiber optic networks, schools, hospitals, fire-protection, police, and other public buildings.

Recent research reveals that communities with well-managed, high quality built capital are more likely to be successful in sustaining and attracting economic development. In order to attract outside industry, Harrison (1992) argues that communities need to attract such industry by providing high-quality physical infrastructure, such as roads, sewer treatment, waste disposal, water lines, and telecommunications. Similarly, Rainey et al. (2003) suggest that in an increasingly global economy, communities that have a deficient physical infrastructure will find themselves at a considerable disadvantage for attracting and/or maintaining industry. However, Rainey et al. (2003) argue that while basic physical infrastructure, such as water and sewer capacity, are still necessary for growth, a more significant factor of economic growth in a global economy is the availability of information and communication infrastructure.

Research also suggests that investment in built capital can also contribute to self-development. For instance, Christopherson et al. (1999) found that investment in a community's physical infrastructure can have a positive impact on local tourism and the economy as a whole. While elements of a community's built capital allow businesses and industry to be more productive, Flora et al. (2004) argue that built capital alone cannot guarantee the economic well-being of that community. They argue that social

capital is necessary to constructing a strategy that leads to long-term, successful economic development.

Social Capital

While there are many definitions of social capital, Putnam (1995:67) states that social capital refers to "features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit." While early studies linked social capital to individual outcomes such as educational attainment (Coleman 1988) and wealth (Bourdieu 1979, 1980), later studies, led by Putnam (1993), began to link social capital to larger units such as nations and communities. Under Putnam's conceptualization, communities and even nations could possess a "stock" of social capital. He argued that communities that build a "stock" of social capital will have higher levels of community development.

Flora and Flora's (1993) concept of an entrepreneurial social infrastructure (ESI) provides a way to more directly measure specific features of social capital. ESI is "a format for converting social capital into organizational forms that facilitate collective action" (Flora et al. 1997:623). It differs from social capital by linking social capital to agency. Thus, a community with a high social infrastructure tends to collectively engage in activities that result in community betterment. The components of ESI include legitimacy of alternatives, resource mobilization, and network diversity. Where there is legitimacy of alternatives, community members can take different sides of an issue and still have respect for one another, and a person's stand on an issue is not "equated with one's moral worth" (Flora et al. 1997:628). Communities that are tolerant of differing

perspectives are expected to have access to a broader array of choices and be more likely to come to an agreement that benefits all groups than do communities characterized by conflict and intolerance (Coleman 1957; Sharp et al. 2002). The resource mobilization element includes collective and individual investment for the common good. Individuals and firms are willing to contribute a variety of resources toward community projects, which may include, but are not limited to, money, expertise, and labor (Flora et al. 1997). The third component, network diversity, is expected to facilitate the flow of information, resources, and support within a community. Networks involve the nature of ties within the community and between the community and its broader regional and national interests. In the form of either strong or weak ties, networks assist the exchange of information among groups as well as connect organizations within the community to the state.

Several studies show a link between high levels of social infrastructure and economic development. Flora et al. (1997) show a positive association between the implementation of economic development projects and having an entrepreneurial social infrastructure. In particular, communities that have a relatively unbiased local media, financial institutions that contribute resources to local development projects, and horizontal and vertical linkages to other communities and governments have higher levels of economic development. With regards to the two forms of economic development, Sharp et al. (2002) argue that a community's social infrastructure is more positively associated with self-development than with industrial recruitment. This is because self-development relies greatly on local resources and diverse leadership, while industrial recruitment relies more on government policy and funding. However, Crowe (2007b)

finds that while social infrastructure is not related to pursuing outside industry to one's community, it is positively associated with the actual implementation of outside business and industry. This may be because many communities do not actively pursue outside industry but rather wait for outside industry to show interest in them. This more passive approach lends those communities with stronger social infrastructures to be better equipped to assist with the implementation process.

Natural Capital

Natural capital, also referred to as environmental capital, includes a community's base of natural resources: air, water, land, flora, and fauna (Green and Haines 2002). These natural resources may have direct use values in the form of provisioning services (e.g., timber, crops), unpriced benefits obtained from the regulation of ecosystem processes (e.g., climate and erosion regulation), and/or nonmaterial benefits in the form of cultural services (e.g., aesthetic values, sense of identity, recreation) (Millennium Ecosystem Assessment 2005). Ostrom (2000) similarly defines natural capital as the *available* complex array of biophysical resources that surround a particular community. This includes geographical and social properties such as accessibility, control over surrounding land and resources, and geographical space. Crowe (2007b) operationally defines a community's level of natural capital as the extent to which it is accessible, has room for expansion, and can provide services through its ecosystem.

Of the different forms of capital that can impact economic development, natural capital is the least mentioned. Weinberg (2000) states that for rural development to succeed in a global economy, communities must invest in education (human capital) and

physical infrastructure (built capital) and have adequate financing (financial capital). Rainey et al. (2003) argue that while human and built capital are necessary for rural economic development, financial capital should be replaced with social capital. This is because communities that have thriving social networks and institutions and high human capital will also have adequate financing. Flora et al. (2004) suggests that natural capital can impact economic development, but in an indirect fashion. For instance, natural resources are transformed into financial capital through farming and timber production and the consumption of natural capital provides the foundation for built capital (e.g. public buildings, roads, pipelines).

Despite many researchers lack of acknowledgement of the direct role that natural capital plays with regards to economic development, studies show that natural capital can also directly impact economic development strategies. For instance, Crowe (2006, 2007b) finds that natural capital has a positive impact on both industrial recruitment and self-development strategies. However, while natural capital impacts a community's willingness to pursue economic development, it has a greater impact on the actual implementation of economic development, particularly on the implementation of outside industry and businesses.

Methods

The primary goals of the current study are to evaluate 1. Which methods of economic development promotions are effective in implementing job recruitment and self-development and 2. How human, built, social, and natural capital impact the implementation of economic development. Data come from surveys and interviews

conducted during the fall of 2006 and summer of 2007 on community leaders in seven communities throughout Oregon and Washington. Communities were selected based on population size, geographical location, and the number of economic development strategies they had pursued during the previous three years. Each community in the study has a population between 1,000 and 9,000. Thus, each community is large enough to have economic development, but not so large that economic development is a direct result of population size. Four of the communities have lower levels of natural capital (i.e. were hard to access and had little room for expansion), while three of the communities have high levels of natural capital. Finally, two communities had lightly pursued both industrial recruitment and self development projects, two communities had lightly pursued outside industry but heavily pursued self-development projects, and three communities had heavily pursued both types of economic development strategies.

In the fall of 2006, I collected survey data on the seven communities as part of a larger project that surveyed over 100 communities throughout Washington and Oregon on a variety of issues pertaining to economic development, physical, and social infrastructure. For each community, surveys were mailed to five community leaders. Community leaders consisted of two representatives of city council (typically city managers and city council members), one representative of the chamber of commerce or economic development council, one representative of local schools (typically superintendents), and one representative of an active civic organization. City clerks and local websites helped identify participants. Surveys were mailed to participants using a modified Dillman (2002) method. Five contacts were made; however, the fifth contact

was by e-mail rather than by special delivery. I used a modified version of the surveys used by Flora et al. (1997) and Sharp (2001) in their analyses of economic development.

In addition to survey data, I conducted in-depth interviews with 35 community leaders: five from each community. Participants consisted of city managers, city planners, council members, port commissioners, economic development council members, and newspaper editors. I solicited individuals based on their knowledge of economic development that had taken place in the community over the past three years. In-depth interviews were directed towards expanding on the number and characteristics of economic development activities that had been successfully and unsuccessfully implemented in the community and the perceptions that key leaders had on what type of development should be pursued and what factors facilitate and hinder economic development. Interview questions were designed to clarify, confirm, or deny results obtained from the survey data. All interviews were transcribed and coded.

Results

Promoted Economic Activity vs. Implemented Economic Activity

Table 1 shows the methods used to promote economic activity and the number of industrial recruitment and self-development projects implemented within the past three years for each community. With regards to implementing outside industry, a total of seven different methods were employed. Rose Creek attempted the most types of methods, with six, while Evanston did not attempt any recruitment methods. Subsequently Rose Creek had the highest number of outside industry and businesses locate to the community with eight, while Evanston did not have any outside industry or

business locate to the community. Of the seven methods used, two methods were never successful in implementing outside industry. Four communities applied for financial assistance from county, state, or federal government to attract industry or business but were unsuccessful at obtaining such funds. Three communities sought investments from corporations or investors outside the community to expand business or industry to no avail. One community sought to attract a large-scale agricultural producer or outside-owned, value-added processing firm and was successful. The other four methods were sometimes successful and sometimes not successful. Two communities were able to organize a committee to successfully recruit new business or industry while one was not successful. Two communities successfully implemented outside industry by developing and maintaining contact with leaders in industry outside the area while one was not successful. One community organized to successfully bring a state or federal office or facility to the community, while one was not successful at bringing such a facility to the community. Two communities increased their housing by seeking outside investors to develop single or multi-family housing, while two communities sought such outside investors, but were not successful at implementing new housing construction.

Table 4.1. Promoted and Implemented Economic Development for Each Community

Community	Promoted Industrial Recruitment	Promoted Self-development	Number of IR Implemented	Number of SD Implemented
Evanston	none	Promoted agricultural diversification; marketing or locally owned, value-added processing Attempted to find buyers for a local business Developed and/or promoted a local historic or cultural site or event to promote tourism	0	10
Taylor Heights	Organized/rejuvenated a committee to recruit new business or industry Sought to attract a large scale agricultural producer or outside-owned, value-added processing firm Organized to bring a state or federal office or facility to the community Applied for financial assistance from county, state or federal government to attract industry or business Sought investments from investors outside the community to expand business or industry	Promoted agricultural diversification; marketing or locally owned, value-added processing Worked to revitalize the downtown or retail sector Taken action to retain or expand locally-owned businesses or industry Attempted to find buyers for a local business Developed and/or promoted a local historic or cultural site or event to promote tourism	3	16
Sunset Valley	Applied for financial assistance from county, state or federal government to attract industry or business Sought outside investors to develop housing	Worked to revitalize the downtown or retail sector Attempted to find buyers for a local business Developed and/or promoted a local historic or cultural site or event to promote tourism	0	4

Table 4.1, Continued

Community	Promoted Industrial Recruitment	Promoted Self-development	Number of IR Implemented	Number of SD Implemented
Lilac City	Sought outside investors to develop housing	Promoted agricultural diversification; marketing or locally owned, value-added processing Worked to revitalize the downtown or retail sector Taken action to retain or expand locally-owned businesses or industry Attempted to find buyers for a local business Developed and/or promoted a local historic or cultural site or event to promote tourism Created a local housing development organization or encouraged local realtors or contractors to develop housing	2	5
Reeve	Systematically developed and maintained contact with leaders in industry outside the area Organized to bring a state or federal office or facility to the community	Promoted agricultural diversification; marketing or locally owned, value-added processing Worked to revitalize the downtown or retail sector Taken action to retain or expand locally-owned businesses or industry Developed and/or promoted a local historic or cultural site or event to promote tourism	7	5
Rose Creek	Organized/rejuvenated a committee to recruit new business or industry Organized to bring a state or federal office or facility to the community Applied for financial assistance from county, state or federal government to attract industry or business Sought investments from investors outside the community to expand business or industry Systematically developed and maintained contact with leaders in industry outside the area Sought outside investors to develop housing	Promoted agricultural diversification; marketing or locally owned, value-added processing Worked to revitalize the downtown or retail sector Taken action to retain or expand locally-owned businesses or industry Attempted to find buyers for a local business Applied for financial assistance from county, state or federal government to expand local businesses Developed and/or promoted a local historic or cultural site or event to promote tourism Created a local housing development organization or encouraged local realtors or contractors to develop housing	8	6

With regards to self-development, a total of seven different methods were employed. Like with industrial recruitment, Rose Creek attempted the most types of self-development methods, with seven, while Evanston and Sunset Valley promoted three self-development methods. However, Taylor Heights implemented the most self-development projects with 16, while Shady Grove implemented the fewest number of self-development projects with three. All of the seven methods were successful in at least one community. However, five of the seven methods were unsuccessful in at least one community that attempted them. Four communities were successful at retaining or expanding locally-owned businesses or industry. However, one community who took action to retain or expand locally-owned businesses was not successful. Four communities were also successful at promoting a local historic or cultural site or event to promote tourism, while three communities who tried were unsuccessful. Half of the communities who promoted agricultural diversification, marketing, and locally-owned, value added processing were successful, while half of the communities who attempted to revitalize the downtown or retail sector were successful. The method with the least success was attempting to find buyers for a local business, as only two of the six communities who attempted it were successful. Below I examine which forms of capital lead some methods to be successful and others to be unsuccessful as well as why some methods are successful in some communities and are not successful in others.

Human Capital and Economic Development

Human capital, defined as level of formal education for working-age adults, does not appear to have played a role in the implementation of economic development. Of the seven communities, Evanston had the highest percent of residents ages 25-44 with at least some college education at 71.7%. Furthermore, 60.1% of residents 18 and older fell within that age group—the highest percent of all seven communities. Despite such high human capital, Evanston had not implemented any outside industry in the past three years and had implemented 10 locally owned businesses. While the number of implemented self-development activities is the second highest of the seven communities, none of the activities rely on advanced technical knowledge. Locally owned businesses that had recently opened included a storage facility, tattoo parlor, coffee stand, art studio, and fishing tackle shop—none of which required the advanced training in computer skills that advocates of human capital stress for rural communities to flourish.

Taylor Heights had the second lowest percent of residents ages 25-44 with at least some college education at 39.1%. Yet they had implemented 16 self-development activities in the past three years and had recruited three outside businesses and industries to the community. However, perhaps skills were obtained in other outlets that did not require formal higher education, as many of the new locally owned businesses and industries were agriculturally related.

The two communities that had implemented the highest number of outside business and industry, Rose Creek (8) and Reeve (7), were in the middle with regards to the percent of working age residents with some college education. Fifty-three percent of Reeve residents ages 25-44 and 54% of Rose Creek residents between the ages of 25 and

44 had at least some college education. Two of the communities had a higher percent of residents with some college education while three of the communities had a lower percent.

By itself, it does not appear that level of formal education, which is most often used as a measure of human capital, impacts either economic development type. This is in sharp contrast to economists and other social scientists who assert that in a global economy, rural communities must become educated in computer and other advanced technologies to flourish economically. However, these findings are in line with the perceptions of the community leaders, as none of the interviewed leaders mentioned any aspect of human capital as a reason for having or not having economic development.

Built Capital and Economic Development

Built capital, particularly water, sewer, and gas, played an important role in the implementation of outside industry to a community. Evanston did not implement any outside industries in the past three years. Community leaders attribute the lack of outside industry or businesses coming to the town on the lack of sewer in the community. As one community leader put it:

> The biggest limiting factor to development here is the lack of sewer systems. Businesses haven't been able to come into town. If you look at Jonesburg, which is just north of us, there's lots and lots of development going on and they have sewer.

However, because there wasn't a sewer, community leaders in Evanston did not attempt to recruit outside industry. Instead of actively seeking outside industry and business, they have been focusing on obtaining sewer:

> Sewer is our biggest issue. It has been for years now. It's been hard to think about anything beyond sewer. Economic development just has not been at the top of the list until now. It's now up there because we are getting sewers. For the last few years, all of our energy has been based on getting our sewer treatment plant. Now that the work is mostly behind them, city hall and city council are now looking at economic development.

In the past three years, Taylor Heights was able to successfully implement three outside businesses. This is in spite of Taylor Heights attempting five different methods to recruit industry. One of the main reasons community leaders attribute to not being able to obtain more outside industry and business, is the lack of water and adequate roads:

> We have a huge Wal-mart distribution center in the next town over. They actually approached Taylor Heights wanting to build here, but we just didn't have the infrastructure. There's one thing that you could say that not being prepared with our infrastructure, we weren't able to serve something like that. We lost out on that.

Community leaders in Taylor Heights particularly attribute the lack of growth on inadequate water pressure. As one leader put it:

> We're stymied on development right now, especially right here (points to map) where this parcel of land can be developed. This is because the water pressure only goes to here (points to different spot on map). So we need that water tower.

Taylor Heights did apply for financial assistance from the state, but were unsuccessful. This has perpetuated the problem:

> We've tried to pursue a public works trust fund loan for a new water reservoir to expand our infrastructure. We've been unsuccessful in that. That has a huge impact on our economic development because right now we are in a position where we have to have that in order to grow.

While Taylor Heights has had success in economic development, particularly with self-development, community leaders perceive that there would be much more growth if adequate water pressure and roads were in place.

While Evanston and Taylor Heights have had problems with their built infrastructure, to which they attribute their economic setbacks, Rose Creek has had some success in building their physical infrastructure. Rose Creek implemented eight outside industries or businesses over the past three years. Three of six attempted recruitment methods were successful. A committee was successful in recruiting new business or industry to the community. Putting in natural gas lines is viewed by community leaders as contributing to economic development particularly outside industry:

> Bringing in Northwest natural gas, I feel was a very good move on our area. That has proved to be very successful. It's provided for other developments. Businesses are looking at our North Spit area for manufacturing. We never had natural gas out there before. Now we do and so we are getting responses. There are people looking at the North Spit for developing out there.

Built infrastructure is also viewed as contributing to self-development in Rose Creek. Rose Creek successfully implemented six self-development activities in the past three

years, while attempting seven different methods of promoting self-development. Rose Creek was successful in expanding locally-owned businesses or industry. Community leaders partially credit this to the built infrastructure, particularly putting in a rail line that connects the city proper to the North Spit:

> We just put in eight miles of railroad that is just right on that spur. The railroad bridge (that connects the town to the North Spit) keeps the wood products going that is crucial for the new mill that's been built on the North Spit.

Without the railroad and natural gas lines, the locally-owned saw mill and other manufacturing plants could not be located in the community.

While water, sewer, natural gas, and transportation infrastructure were repeatedly perceived by community leaders as agents that either limited or contributed to development, surprisingly, information and communications infrastructure were not mentioned as factors that influenced either industrial recruitment or self development. None of the community leaders interviewed attributed either the implementation of economic development or the failure of economic development to the possession or lack of communication and other information technology.

Natural Capital and Economic Development

As with built capital, natural capital, particularly level of accessibility and opportunity for expansion, played a major role in the implementation of outside industry to a community. Sunset Valley and Shady Grove are both hard to access—only by one two-lane highway, and have little to no room for expansion as they are locked in by steep hills on one side, water on two sides and government-owned land on the other side.

Sunset Valley did not implement a single outside industry, while Shady Grove successfully implemented one outside industry to the community. However, this was in spite of Sunset Valley attempting two methods of recruitment and Shady Grove attempting four methods of recruitment. Sunset Valley applied for financial assistance from the federal government to attract industry or business and sought outside investors to develop housing. Despite this, no outside industry or business came in. In fact, one outside industry and one outside developer wanted to come to Sunset Valley but decided against it. In both instances, natural factors were to blame:

> The carpet company wanted to come in, but we didn't have any room. There was also an outside developer who has developed a bunch of ocean front condos and restaurants and golf courses in Westport, actually bought a water front restaurant in Sunset Valley and had those plans to develop here. But my impression is that he got over extended and his funders would not fund him because they did not see the location as profitable. So he's actually selling that and decided not to enter into Sunset Valley.

Shady Grove also applied for financial assistance from the federal government to attract industry or business and sought outside investors to develop housing. In addition, Shady Grove organized a committee to recruit new business or industry and sought investments from corporations or investors outside Shady Grove to expand business or industry. Despite these efforts, only one small outside industry located in Shady Grove and they sought out Shady Grove, rather than Shady Grove doing the pursuing.

Lilac City, like Shady Grove and Sunset Valley, is also hard to access—only by one two-lane highway. However, it has more room for expansion, as only two sides are

limited by water. Lilac City implemented one outside industry and one outside developer to build residential housing. However, it only attempted one method of recruitment—to seek outside investors to develop housing. Unlike Sunset Valley and Shady Grove, Lilac City was successful in recruiting outside investors to develop housing. Part of their success is the availability of land. Whereas Sunset Valley and Shady Grove have very little land to develop, Lilac City has ample amounts of land that can be developed that is already platted for housing.

In all three communities, community leaders perceived natural factors to be a barrier to development. As one community leader put it:

> Shady Grove and Sunset Valley too have a history of blue collar, manufacturing, work in saw mills, work in processing plants, and would like to see that come back. But I don't know if that's going to come back and there's a national trend that manufacturing is in decline, let alone manufacturing when there's no rail, and there's no natural gas, and there's no highway system. So we're kind of struggling. We would like to see small type manufacturing come and we'll work to try to continue to promote that. But it's difficult.

Another community leader in the same community perceived the lack of expansion as the main limiting factor to development:

> The city itself has no property to dabble with because the state purchased us out at the south end by putting that big project in the south (salmon rehabilitation)…and the north end, actually the city limits ends and it becomes (another community), and we have the river to the west. So we have just the hills to the east. We are locked in.

On the other hand, Reeve, a community that is accessible by rail, highway, and is close to an interstate and has ample room for expansion, had successfully recruited seven outside industries or businesses and will implement three more in the near future. However, despite such success, the community had only attempted two methods of recruitment—organized to bring in a state or federal facility to the community and systematically developed and maintained contact with leaders in industry outside the area. While not yet implemented, the community had successfully recruited a state penitentiary and state mental hospital as well as a bio fuel company to locate to the community in the near future. In all cases, accessibility and room for expansion played a role in being able to attract them:

> The prison folks required 250 acres or something like that…and so Reeve was one of those sites. When the need for the hospital came up, one of the citing priorities was to find available land that was already in state ownership. So that's how we get two (both the state hospital and prison).

As for the bio-fuel company:

> In the past three months, we've been working with the county on trying to get a bio-fuel company to locate here. We've set up a meeting with them and are looking for some land for them. They want rail access. They want to be close to the source, close to the farms, but be close to rail and close enough to the interstate as well. It's just finding the land that would work for them.

Despite having success at implementing outside industry to the community, Reeve takes a laissez faire attitude toward recruitment. As one community leader puts it:

> I sometimes think that economic development happens in spite of what everybody does to promote it. And that it sometimes comes from directions that you don't expect, like Camping World locating a store here.

Social Capital and Economic Development

While community leaders mainly attributed the success or failure of economic development to built and natural capital, a few communities perceived social conditions to either hinder or facilitate economic development. For instance, leaders in both Shady Grove and Sunset Valley perceived their relationship with the Department of Ecology (DOE) as hindering both industrial recruitment and self-development. Their relationship with the state agency was caustic, as leaders in both communities viewed DOE agents as governmental officials who were out to deliberately thwart economic development in the communities without any sound reasoning. As one community leader in Shady Grove described the situation:

> On a whole for economic development, we want to work with them (DOE) in an effective manner. Not just for them to come down and regulate. We're looking for a partnership that has mutual respect and communication. We find that we're always up against a brick wall. We start a process and they come down and say "you can't do this." They don't work with you for the best method of resolving it. They are extreme stumbling blocks for economic development.

However, the lack of effective communication came from both the DOE and the two communities:

> We used to have signs out in the valley that said "communist environmentalist." So for a long time, they (DOE) would not set foot down in our county. They were afraid they would be shot.

While vertical linkages between the two communities and the government were poor, until recently, any links between Sunset Valley and Shady Grove were also poor. The two communities viewed each other as rivals and, although only three miles apart from each other, did not want to cooperate on any projects. Each community had their own school district, civic groups, and until the past year, their own chamber of commerce. In over 100 years of existence, the two communities had just begun to start to work together on a major project-- the implementation of a combined waste water treatment plant that would serve both communities. As one community member of Sunset Valley put it:

> The waste water treatment is a major hurtle. But it hasn't been an easy process. It did not go smoothly and there's some rough roads ahead….We are still very much individualist here.

While Shady Grove and Sunset Valley had poor vertical and horizontal linkages that contributed to a slow process of economic development, Rose Creek had effective linkages between the town and the nearby tribal reservation that heavily contributed to effectively implementing outside businesses to the community. When the local tribe purchased 50 acres in the community to develop, they included the community of Rose Creek from the beginning to help shape the type of economic development that the land would serve. As a liaison for the tribe described the process:

> We wanted five acres to grow our parking lot (for the casino) and they (owners of land) said, "why don't you buy all 50?" So we bought all 50. We did a series of

> meetings with the community. We thought that whatever we do for development, we want the community to be involved. This is very rare for a tribe to do this. Tribes are usually very protective of their sovereignty and rightfully so, but we wanted the community involved. So we held a series of community meetings. We asked them, "What do you want on this site?" We had every kind of idea. Through a process, we evaluated every idea that was presented, did feasibility studies and came up with an idea of developing a mixed-use retail and entertainment center for the piece of property. We had a second meeting to give a progress report and at our third community meeting we made the announcement that we had made a partnership agreement with the Home Depot to anchor the development.

The social networking between the community and tribe along with the open forum where community members could come and discuss ideas for economic development in a tolerant and accepting atmosphere led to several methods of recruiting outside industry to be effective. Rose Creek was able to effectively organize a committee to recruit new business or industry, seek investments from investors outside the community to expand business or industry, and systematically develop and maintain contact with leaders in industry outside the area that resulted in outside industry locating to the community. Both community and tribal leaders attribute this success to the social networking that took place between the tribe and the community and the open forum that provided for a variety of ideas to be expressed in an atmosphere where each were considered to be legitimate.

Discussion

This research provides a starting point for thinking about how the different sources of capital combine to impact methods of economic development promotion and how that in turn affects the successful implementation of outside industry and self-development. In the cases of the communities studied, natural and built capitals had the most significant impacts on the success of a method used to promote economic development, especially methods used to promote outside industry to the community. Community leaders in some communities also perceived social relations to have an impact on being able to effectively implement economic development.

However, none of the community leaders perceived human capital to have an impact, either positive or negative, on the successful implementation of economic development activities. In conjunction with the perceptions of community leaders, data from the U.S. census on levels of higher education show that there is no relationship between the percent of working age residents with some college education and the number of economic development projects that had recently been implemented. These findings are in opposition to Schulz (1961), Becker (2002), and others who assert that education, skills, and talents are imperative for economic growth.

One reason for this discrepancy may be due to the demographics of communities. Lilac City, had 64% of its residents ages 25-44 with at least some college education, but implemented few economic development projects in the previous three years (two industrial recruitment and five self-development). However, only 28% of the residents over 18 fall within that age bracket. The majority of residents are of retirement age and have moved to the community for quality of life purposes. As a result of the unique age

structure of the community, the city council passed a formula store ordinance that has stopped stores that fall under the guidelines of a "formula store" from being able to locate to the community. This ordinance severely hampers many outside owned service industries from being able to locate to the community.

Another reason for the discrepancy between human capital and economic development may be due to other forms of capital not being in place. For example, of the seven communities, Evanston had the highest proportion of 25-44 year-old residents with at least some college education, at 71.7%. However, Evanston had not recruited any outside industries to the community. While community residents are open to the idea of outside businesses and industry, they have been unable to attract outside industry to the community because of their poor physical infrastructure. Having only septic has prevented many businesses and houses from being built. Thus, the poorly built infrastructure seems to be a more significant factor to development than the availability of skilled workers.

While human capital did not play a significant role in implementing economic development in the seven communities, built capital was a major factor influencing development. However, community leaders attributed the lack or abundance of development on conventional types of built infrastructure, such as water, sewer, and natural gas. None of the community leaders mentioned information communication technologies as affecting economic development. These findings rival Rainey et al's (2003) argument that while basic physical infrastructure, such as water and sewer capacity, are necessary for growth, a more significant factor of economic growth in a global economy is the availability of information and communication infrastructure.

Instead they support Pigg and Crank's (2005) findings that information communication technologies have little impact on the success in attracting new business to communities.

There are some limitations of the study that future research should attempt to address. While the current study measures the promotion and implementation of self-development and industrial recruitment, it does not measure the outcomes each type of development has on the community. It would be instructive to know how implementing self-development projects compared to industrial recruitment projects impacts various economic, environmental, and social conditions, such as income inequality and environmental degradation. In addition, while the findings illustrate how natural, built, and social capital influence community-level economic development, there is a need for more comparative studies to better evaluate the robustness of the findings. For instance, future studies may compare how the sources of capital influence local economic development in developed nations to that in less developed nations.

Conclusion

Although community development activists and researchers have acknowledged the importance of capital, particularly human and built capital, toward community-level economic development, until now little empirical work has extensively addressed the connection between community-level economic development and the full array of capital from which a community can draw. In addition, research had yet to examine which methods of economic development promotions were effective in implementing outside industry and which methods were effective in implementing self-development activities. Accordingly, this study makes a unique contribution to our understanding of a

community's stock of capital and local economic development efforts. By using interview and survey data from community leaders in seven communities throughout Washington and Oregon, this study shows that the pursuit and implementation of economic development are associated with built, natural, and social factors in an intricate pattern. Findings suggest that while education level of residents and information communication technologies may play a role in economic development, alone each is not sufficient for either the pursuit or implementation of outside industry or self-development. Instead, factors such as a community's natural surroundings and access to adequate sewer, water, and natural gas appear to be more important for effectively promoting and implementing economic development. In addition, social networking and open forums can further enhance development. Future research should bear in mind the complex ways that built, natural, and social capital work together to influence self-development and industrial recruitment.

In conclusion, it is not surprising that issues surrounding economic development have captured the attention of activists, researchers, and policy makers for decades. With an increasingly global economy, researchers and communities alike continue to strive for development that is both economically and environmentally sustainable. While there is increasing recognition that different sources of capital influence community-level economic development, community leaders and researchers alike must recognize the intricate manner that each type of capital works in conjunction with one another to influence different kinds of economic development. This study shows that unless researchers, policy makers, and community leaders give sufficient attention to physical, natural, and social factors, communities may continue to spend time and resources

pursuing certain types of economic development strategies to no avail, while failing to implement alternative economic development strategies that may be of extreme benefit to community citizens.

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CHAPTER FIVE

THE FUTURE OF RURAL ECONOMIC DEVELOPMENT RESEARCH

The goal of this dissertation was to empirically assess how various community capitals impact two types of economic development: industrial recruitment and self-development. This study began as a follow-up to my master's thesis that looked at social and natural capital in six communities and the two capitals' roles in economic development (Crowe 2006). Because social networks appeared to be the most important factor out of the various components of an entrepreneurial social infrastructure (an operationalized version of social capital), I wanted to explore in more depth exactly how a community's network structure impacted the pursuit of the two types of economic development strategies. This led to the main research question of Chapter Two: How does the structure of a community's associational network impact the pursuit of the two economic development strategies: industrial recruitment and self-development? However, Chapter Two does not take into consideration a community's natural capital, which I found in previous research to be a significant contributor of successful economic development. Thus, Chapter Three attempts to examine the impacts of a community's natural capital while controlling for its social capital on a large enough sample, so that results are generalizeable. Chapter Three also goes one step beyond Chapter Two by asking how the two types of capital impact the pursuit of economic development strategies, how they impact the actual implementation of economic development, and how the pursuit of economic development differs from the implementation of economic development. While Chapter Three shows a distinct difference between the pursuit of economic development and the implementation of economic development, it does not

account for which economic development promotions were successful and why they were either successful or unsuccessful. Therefore, Chapter Four explores which types of economic development promotions were successful in seven of the 101 communities studied in Chapter Three and how the community capitals contributed to the success or failure of economic development promotions that had been attempted in the previous three years. Chapter three analyzes four of the six community capitals that are in the original community capitals framework: human, built, natural, and social (Flora, Flora, and Fey 2004). I do not examine cultural or political as political capital is rarely present in rural communities and cultural capital is not well defined and is often mixed with social capital.

Chapter Two uses data collected from six communities in Washington State to examine the impact of a community's interorganizational network structure on industrial recruitment and self-development. Results suggest that different types of network structures are better suited for different economic development strategies. A certain level of cohesiveness among community organizations and institutions are favorable for pursuing self-development projects. However for industrial recruitment, networks that are bridging facilitate more types of economic development. While bonding and bridging network structures appear to be at odds with one another, it is possible for communities to increase both forms of economic development by maintaining a certain level of cohesiveness among subcomponents and by increasing the number of organizations that serve as cut-points connecting non-redundant sources of information.

Using survey data collected from 101 communities in Oregon and Washington in combination with data from the Oregon and Washington Departments of Transportation

and detailed atlases, Chapter Three examines the relationship of natural capital on the pursuit and implementation of two types of economic development: industrial recruitment and self-development. Results suggest that the pursuit and implementation of economic development are related to several components of natural capital. However, natural capital impacts industrial recruitment and self-development in opposite ways, particularly when implementing these two strategies. Moreover, it shows that while the natural surroundings of communities impact the pursuit of economic development, the impact becomes more important for the implementation of economic development strategies, net of other social and demographic factors.

Using survey and interview data collected from seven communities in Oregon and Washington, Chapter Four explores which economic development promotions are successful and which are not successful when it comes to industrial recruitment and self development. In addition, it explains how different forms of capital impact economic development promotion and ultimate implementation. Results suggest that the pursuit and implementation of economic development are associated with built, natural, and social factors in an intricate pattern. A community's natural surroundings and access to adequate sewer, water, and natural gas appear to be important for effectively promoting and implementing economic development. In addition, social networking and open forums can further enhance development. On the other hand, the education level of residents and availability of information communication technologies do not appear to impact either the pursuit or implementation of outside industry or self-development.

This main theoretical contribution of this dissertation is that it empirically evaluates how effective the community capitals framework is toward pursuing and

implementing two types of economic development: job recruitment and self-development. Perhaps the most controversial finding that appeared in both quantitative and qualitative data is that human capital, defined by college education, does not seem to have a positive effect toward either type of economic development. Instead, natural capital, physical infrastructure, and social networks appear to have the strongest influence over pursuing and implementing economic development activities. Are the analysts wrong by saying more education is the answer to boosting the economy, reducing unemployment, and raising income? Probably not entirely, but this dissertation provides striking evidence that at least one region of the U.S. is at a level of education that it is less important toward implementing economic development than it once was. However, education may be an important factor in other regions of the U.S., such as the South. Rather than merely boosting education levels, this dissertation brings light to other community characteristics that often get left out of the economic development discussion, such as natural capital. This dissertation provides further evidence for how societal interaction and the natural environment are interconnected.

While the community capitals framework is a good start to evaluating the factors that contribute to successful economic development activities, it has its limitations. One major limitation is that it primarily identifies the current stock and flow of different community capitals while failing to effectively account for the history of a community. In other words, what previous incidents lead certain communities to have low social, cultural, etc. capital? Future researchers need to examine certain historical events that may have significantly led to high or low levels of particular community capitals. For instance, while the network component of social capital accounts for the level of

interaction among different groups in the community, it does not explain homogeneity or heterogeneity in a community. Certain rural communities are more racially, ethnically, and culturally diverse than other communities. Certain historical events have paved the way for why some communities are more diverse than others. Loewen (2005) in his book *Sundown Towns* argues that historically and even today some rural communities partake in activities to minimize the number of racial and ethnic minorities in their communities. Perhaps these activities lead to lower levels of certain community capitals and subsequently have a negative impact on economic development. Future research should investigate how these historical activities of exclusion have impacted current levels of community capital in rural towns.

A second limitation of the community capitals framework is that it does not account for forces outside of the community. For instance, how do certain state regulations impact economic development in rural communities? With regards to the environment, some states, such as Washington and Oregon, have much stricter regulations on where commercial and residential buildings can be built than other nearby states, such as Idaho. These state regulations are a big part of the decline in the dairy industry in Washington and Oregon and its rise in Idaho. A second example is the tax structure of states. Some states allow for commercial property tax abatements (e.g., Oregon), while other state do not (e.g., Washington). Some states have sales tax where a proportion of revenues go to the community (e.g., Washington), while other states do not have a sales tax (e.g., Oregon). The tax structure of a state can influence some outside businesses and industries' decisions on whether or not to locate in that particular state. It can also influence a community's leaders to pursue certain types of economic

development over other types. Future research can provide a multilevel model that accounts for community level attributes as well as state level attributes to determine how community capitals influence community-level economic development while controlling for state level characteristics. It can also determine whether there is an interaction between certain community capitals and state attributes.

As the United States is currently in a recession (although the media is scared from using the r-word) due in large part to the housing slump, high fuel prices, and a tumbling stock market, the economy is on most everyone's minds, especially presidential candidates. As the famous quote that helped Bill Clinton win the presidency in 1992 says: "It's the economy, stupid." However, as this dissertation shows, for rural communities, successfully implementing economic activities cannot be summed up by a single catch phrase. Different types of community capitals impact economic strategies in different manners, depending on the strategy. In conclusion, this dissertation demonstrates that unless researchers, policy makers, and community leaders pay attention to physical, natural, and social factors, communities may continue to spend time and resources pursuing certain types of economic development strategies to no avail, while failing to implement alternative economic development strategies that may be of extreme benefit to community citizens.

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APPENDIX A

INTERVIEW AND SURVEY MATERIALS FOR CHAPTER TWO

Community Interview Categories

1. Parent
2. Nonprofit Youth Focused Service Organization
3. Nonprofit Adult Focused Service Organization
4. Major Employer
5. Entrepreneurial Business
6. Faith Based Organization
7. Elected Official
8. Law Enforcement
9. Social Services Agency
10. Chamber/Economic Development Council
11. School Employee (must live in community)
12. School Board Member
13. Hospital/Health organization
14. Senior Citizen
15. Representatives of Ethnic groups in community
16. Older youth

17-20. Wild Card

Note: Wild Card category examples may include but are not limited to: farming community, service club representative, arts community, representative from an environmental group, factory worker, and timber worker.

WRITTEN CONSENT FORM

Washington State University Center to Bridge the Digital Divide is doing a community asset mapping assessment for the Connecting Schools & Communities project in your community. This is to help determine sustainability following termination of the Connecting Schools & Communities grant. The information in this consent form is provided so that you can decide whether you wish to participate in this study. It is important that you understand that your participation is completely voluntary. This means that even if you agree to participate you are free to withdraw from the interview or self-administered survey at any time, or decline to participate in any portion of the study, without penalty.

You will be asked to attend a short interview with a team of two researchers. These researchers will ask you questions about your community, write notes regarding your answers, and possibly record the interview on audio tape. You will also be asked to complete a self-administered survey after the interview's completion. In addition, you will be audio taped while you answer the interview questions, if you are willing to allow the interview to be audio taped. The audio tapes are to help ensure the researchers accurately note your answers and responses. If you agree to be audio taped, you can also ask that the audio taping be stopped at any time for any reason. Audio taping will resume only if you state that the tape can be turned back on. These audio tapes will be viewed only by project personnel, who will transcribe them, and then the tapes will be placed in a locked file cabinet in the researchers' office until July, 2006 when they will be destroyed. During this period only Dr. Alison Olzendam, Dr. Annabel R. Kirschner, and Ms. Doreen Hauser-Lindstrom will have access to these tapes.

This experiment poses no known risks to your health and your name will not be associated with the findings. Your participation in the interview will take approximately twenty (20) minutes. You will also be asked to complete a self-administered survey, after the interview, which will take approximately thirty-five (35) minutes. If you have any questions not addressed by this consent form, please do not hesitate to ask. You will receive a copy of this form, which you should keep for your records.

Thank you for your time.

_____ _____

Signature Date

Dr. Annabel R. Kirschner
Professor & Chair
WSU Department of Community & Rural Sociology
509-335-4519

CONSENT STATEMENT:

I have read the above comments and agree to participate in this experiment. I give my permission to be audio taped, under the terms outlined above. I understand that if I have any questions or concerns regarding this project I can contact the investigator at the above location or the WSU Institutional Review Board at (509) 335-9661.

_____ _____

(participant's signature) (date)

INFORMANT INTERVIEW

Individual/Civic Leader Respondent Survey Instrument

Respondent Code:_____

Interviewer:_____

Date:_____

Section I: Organizational Involvement

Introduction: We would like to know the level of your involvement in various organizations in the community. The following series of questions concern what organizations you belong to as well as if you are or have been a leader in the organization.

1. Do you belong to any local organizations:
   Y – ***Go to Question 2***
   N – Ask if there are any reasons why you don't belong to any local organizations (for example, time, children) – ***Go to Question 5***

2. What local organizations or groups do you belong to? (for example, service organizations; recreational groups; political and civic groups; job-related organizations; church related groups)

1.
2.
3.
4.
5.

3. Are you a member of any organizations which meet outside of _____? **Y** **N**

4. What organizations?

1.
2.
3.
4.
5.

5. Have you held an organizational leadership positions in the last 5 years? **Y N**
   (Either local or outside organizations)

6. What organizations and what was the position?

Organization	**Position**	**Years**	**Location***

*If headquartered in _____, put Local

7. Have you held public office or served on a govt. board in the past 5 years? **Y N**

8. What Positions?

Government Body	**Position**	**Years**	**Location***

Section II: Networks

Introduction: In addition to the organizations you are part of, we are also interested in knowing something about the people you interact with in the community as well as your recreational and social interactions.

1. Do you have any close personal friends or relatives involved in community affairs?

Name	**Community Involvement**	**Relationship**
1.		
2.		
3.		
4.		
5.		

2. In _____, what kind of recreational or leisure activities do you participate in? (Outdoor/sporting clubs, softball leagues, swim at the local pool, book club, craft classes, card group, etc.)

1.
2.
3.
4.
5.

3. Are you a member of a church? **Y** **N**

4. What is your Church Affiliation?_____

   b. Location (if not in _____):_____

5. Would you say you are very active, moderately active or not very active in your church?

   VA **MA** **NVA**

6. What do you think are some of the significant or leading social groups in town?

7. What are some of the informal (or formal) gathering places in town?

Location	**Who gathers there? (General Characteristics)**	**Do you go there?**
		Y N
		Y N
		Y N
		Y N
		Y N

8. About what proportion of all your close personal adult friends live in _____?
   - 1__ I really have no close personal friends
   - 2__ None of my friends live here
   - 3__ Less than one-half of them live here
   - 4__ About one-half of them live here
   - 5__ Most of them live here
   - 6__ All of them live here

9. About what proportion of adults living in _____ would you say you know by name?
   1. None or very few of them
   2. Less than half of them
   3. About half of them
   4. Most of them
   5. All of them

Section III: Community leadership:

Introduction: We are also interested in whom you believe the leaders of the community are. The following questions concern community leadership and power.

1. Who would you say are the individuals most effective in representing the community to the outside?

2. If a project is before the community which requires a decision by a group of leaders, who are the five people who could make that decision?

3. Name the four people most effective in implementing projects?

4. Name the three people most effective in stopping projects?

5. [If respondent answered no to any of the above]
   Do you have any thoughts on why you weren't able to identify leaders in the above questions?

Conclusion

1. In conclusion, is there a question you wish I had asked, but didn't?

A Survey of Community Development in _____

1. COMMUNITY EVALUATION—We are interested in your attitudes about _____.

A. Please rate _____ as a place to live by indicating whether you AGREE or DISAGREE with the following statements by circling the appropriate numbers.

	Strongly Agree	Agree	Un-decided	Disagree	Strongly Disagree
a. Being a resident of _____ is like living with a group of close friends	1	2	3	4	8
b. If you do not look out for yourself, no one else in _____ will	1	2	3	4	8
c. Most everyone in _____ is allowed to contribute to local governmental affairs if they want to	1	2	3	4	8
d. When something needs to get done in _____, the whole community usually gets behind it	1	2	3	4	8
e. Community clubs and organizations are interested in what is best for all residents.....	1	2	3	4	8

B. How would you describe _____? Imagine a scale for each pair of words listed below. For example, in the first pair, 1 on the scale indicates friendly and 7 indicates totally unfriendly. For each pair of words, please circle one number which *best describes* _____.

Friendly	1	2	3	4	5	6	7	**Unfriendly**
Indifferent	1	2	3	4	5	6	7	**Supportive**
Trusting	1	2	3	4	5	6	7	**Not trusting**
Prejudiced	1	2	3	4	5	6	7	**Tolerant**
Open to New Ideas	1	2	3	4	5	6	7	**Rejecting of New Ideas**

2. COMMUNITY LINKAGES—What kinds of relations does _____ have with other communities and agencies?

	Yes	No	Don't Know	Locality/Institution Visited
a. In the past three years, has a group from _____ visited another community to learn about its community development efforts?	1	2	3	_____
b. In the past three years, has a group from _____ gone outside the community to seek financial or technical assistance?	1	2	3	_____
c. In the past three years, has a group from _____ gone outside the community to lobby or to protest a decision affecting the community? ...	1	2	3	_____

A. Does _____ belong to any of the following regional organizations?

	Yes	No	Don't Know
a. Regional planning agency and/or council of governments.....	1	2	3
b. Multi-community development corporation.....	1	2	3
c. Regional tourism or marketing group	1	2	3

B. In the past 3 years, has _____ joined with other communities (or counties) to address any of the following issues? (IF YES: Please identify the community(ies) with which the joint effort occurred.)

	Yes	No	Not Sure	Community Joined
a. Joint effort on regional environmental issues	1	2	3	_____
b. Economic development (recruitment, marketing, etc.)	1	2	3	_____
c. Joint tourism efforts	1	2	3	_____
d. Joint lobbying of state or federal government	1	2	3	_____
e. Joint leadership/skills training	1	2	3	_____
f. Joint special event (fair, festival, etc.)	1	2	3	_____

C. Does _____ belong to the following state and national organizations?

	Yes	No	Not Sure
a. State League of Municipalities	1	2	3
b. State Chamber of Commerce/Downtown Development Association	1	2	3
c. State industrial development organization	1	2	3
d. Main Street Program	1	2	3
e. National Municipal League or National Association of Towns	1	2	3
f. Other state organization (identify):_____	1	2	3
g. Other national organization (identify): _____	1	2	3

3. COOPERATION & RIVALRY

A. Do you agree or disagree with the following statements concerning the involvement of rural residents in _____ affairs?

	Agree	Undecided	Disagree
a. Rural residents are active in _____ organizations	1	2	3
b. Rural residents do business in _____ more often than in another area community	1	2	3
c. Rural residents often hold civic leadership positions in _____	1	2	3
d. Rural residents are considered part of _____ by community residents	1	2	3
e. When rural residents raise a concern, town folks tend not to get involved	1	2	3

B. Does _____ have a close, cooperative relationship with another nearby community?

1. Yes —— What is the name of that community?
2. No

C. Does _____ have a rivalry with another community?

1. No rivalry — ***Go to Question 4.A on page 4***
2. Yes ↓

D. What is the name of that community:

E. How would you describe the rivalry?

Character of Rivalry	Yes	No
a. Competition in sports	1	2
b. Economic competition for industries, shoppers and/or public facilities	1	2
c. Longstanding rivalry that goes beyond economic competition	1	2
d. Citizens from each community make derogatory comments about the other community	1	2

4. FINANCIAL INSTITUTIONS AND BUSINESS

A. How many financial institutions (branch or independent) are located in _____? _____
(*If no local financial institution, indicate 0 and skip to question* 4.C on page 4)

B. Please identify the two largest financial institutions (branch or independent) and indicate each institution's contributions, if any, to local development projects?

1. Name of Institution #1:

Type of Institution:

1. Branch
2. Independent

Contributions to _____	Yes	No	Don't Know
a. Provides commercial or low-interest loans to community projects?	1	2	3
b. Provides grants, donations, or in-kind contributions to community projects?	1	2	3
c. Provides marketing or technical assistance to local businesses?	1	2	3
d. Personnel serve on local boards and committees?	1	2	3

2. Name of Institution #2:

Type of Institution:

1. Branch
2. Independent

Contributions to _____	Yes	No	Don't Know
a. Provides commercial or low-interest loans to community projects?	1	2	3
b. Provides grants, donations, or in-kind contributions to community projects?	1	2	3
c. Provides marketing or technical assistance to local businesses?	1	2	3
d. Personnel serve on local boards and committees?	1	2	3

C. Please indicate your degree of agreement or disagreement with the following statements about business people in _____.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
a. Business owners/managers in _____ are willing to expend resources to help the community	1	2	3	4	5
b. Business owners/managers in _____ are willing to take leadership positions in local development activities	1	2	3	4	5

5. FUND DRIVES, BONDS, REFERENDUMS & FOUNDATIONS

A. During the past three years, has _____ had a referendum or a bond issue?

1. No — ***Go to Question 5.C on page 5***
2. Yes

B. IF YES, please specify the purpose of each bond issue and whether the issue passed or failed.

	Purpose of Bond Issue or Referendum	Passed	
1.		Yes	No
2.		Yes	No
3.		Yes	No

C. During the past three years, has there been a community-wide fund drive, other than bond issues, to raise money for a specific development project?

1. No — ***Go to Question 6.A on page 6***
   Yes

D. IF YES, please specify the purpose of each community-wide fund drive during the past three years, the organization leading the drive, and the year it occurred.

Date	Purpose of Fund Drive	Organization Leading Drive
20		
20		
20		

E. We would like additional information about local fundraising efforts (Please choose what you think has been the most significant community fund drive when answering the following questions).

If more than one, which has been the most significant community fund-raiser?

F. Were any of the following activities conducted during the fund-raising?

Fundraising activities	Yes	No	Don't Know
a. Publicly displayed sign(s) indicating fundraising progress....	1	2	3
b. Fundraising event held such as a supper, sale or raffle	1	2	3
c. Local businesses donated funds.....	1	2	3
d. Civic organizations donated funds	1	2	3
e. Outside public or private grants were a source of funds.....	1	2	3
f. Local government contributed funds.....	1	2	3
g. Newspaper reported progress and contributions	1	2	3
h. A large contribution served as cornerstone of fundraising....	1	2	3
i. There was a challenge grant/donation to be matched	1	2	3

G. Does _____ have a community foundation, endowment or trust that provides financial resources for community or economic development activities (for example: a hospital endowment, a land trust to preserve habitat or a historic site, or a community foundation with income used for community improvement)?

1. No — ***Go to Question 6.A on page 6***
2. Yes

H. IF YES, please specify the names of the community foundations, endowments, or trusts and the approximate assets of each.

Name of Foundation, Trust or Endowment Fund	Assets
1.	
2.	
3.	

6. RECENT COMMUNITY ISSUE

A. In the last 5 years, what ONE local issue can you recall where there were different points of view expressed and significant discussion took place? (Examples: annexation, school controversies, landfill siting, zoning changes, bond issues, taxation, economic development issues)

1. No community issue in the last 5 years — ***Go to Question 7.A on page 7***
2. Don't Know — ***Go to Question 7.A on page 7***
3. Yes

B. Please identify the issue:

C. Please indicate whether or not each of the following occurred at the time the issue was being discussed?

	Yes	No	Don't Know
a. The issue was discussed at community meetings	1	2	3
b. The local newspaper reported both sides (pros & cons) of the issue ...	1	2	3
c. Existing civic groups were actively engaged in the issue.....	1	2	3
d. An organization(s) was formed to represent one or more viewpoints...	1	2	3
e. The issue impacted outcomes of city elections.....	1	2	3
f. The issue has led to permanent divisions in _____	1	2	3
g. The issue was mostly debated in the "coffee shops"	1	2	3
h. Many friends and neighbors were on different sides of the issue	1	2	3
i. The issue was resolved to the satisfaction of most parties.....	1	2	3

7. LOCAL CIVIC ORGANIZATIONS

A. How involved are the following community organizations in community improvement or economic development activities?

	Very Active	Moderately Active	Not Very Active	No Such Group(s)	Not Sure
a. Economic development organization (governmental or non-governmental)	1	2	3	4	5
b. Chamber of Commerce/Downtown Merchants organizations	1	2	3	4	5
c. Service and fraternal organizations (such as Lions, Kiwanis, Eastern Star)	1	2	3	4	5
d. Women's clubs or societies	1	2	3	4	5
e. Public or private housing development organizations	1	2	3	4	5
f. Civic groups (PTA, League of Women Voters, etc.)	1	2	3	4	5
g. Job-related/professional organizations (labor unions, professional associations)	1	2	3	4	5
h. City government	1	2	3	4	5
i. Environmental organizations (Pheasants Forever, Ducks Unlimited, Sierra Club, etc.)	1	2	3	4	5
j. Commodity or general farm organizations	1	2	3	4	5
k. Historical or heritage societies	1	2	3	4	5
l. Church or church related groups (church committees, Ministerial Alliance, etc.)	1	2	3	4	5

B. In your opinion, what are the three most influential organizations or groups in _____. (These may be formal organizations or informal groups.)

1.

2.

3.

C. In your opinion, which local organization or group does the best job of bringing together diverse groups of people in _____ to address community-wide concerns.

1. Organization or group name:
2. No such organization or group exists in _____.

D. How many churches are located in _____?

E. Over the past three years, please indicate whether any _____ church has taken part in the following activities.

Church Activities	Yes	No	Don't Know
1. Contributed to a community pantry or families in need	1	2	3
2. Conducted community-wide ecumenical services	1	2	3
3. Initiated their own community improvement project	1	2	3
4. Church leaders work on _____ social concerns	1	2	3
5. Contributed funds or provided volunteers for social service needs	1	2	3

8. ECONOMIC & COMMUNITY IMPROVEMENT PROJECTS

A. Please indicate whether individuals or groups in _____ have promoted economic activity over the past three years in the following manner:

Actions to Promote Economic Activity	Yes	No	Don't Know
1. Organized/rejuvenated a committee to recruit new business or industry	1	2	3
2. Promoted or encouraged agricultural diversification, marketing (including farmer's market), or locally owned, value-added processing	1	2	3
3. Sought to attract a large scale agricultural producer or outside-owned, value-added processing firm	1	2	3
4. Worked to revitalize the downtown or retail sector of _____	1	2	3
5. Taken action to retain or expand locally-owned businesses or industry	1	2	3
6. Developed a business incubator or small business assistance program	1	2	3
7. Developed commercial/retail center mostly for locally-owned businesses	1	2	3
8. Developed commercial/retail center mostly for outside-owned businesses	1	2	3
9. Developed an industrial park	1	2	3
10. Systematically developed and maintained contact with leaders in industry outside the area	1	2	3
11. Applied for financial assistance from county, state or federal government to attract industry or business	1	2	3
12. Applied for financial assistance from county, state or federal government to expand local businesses	1	2	3
13. Sought investments from corporations or investors outside _____ to expand business or industry	1	2	3
14. Attempted to find buyers for a local business	1	2	3
15. Organized to bring a state or federal office or facility to the community	1	2	3
16. Developed and/or promoted a local historic or cultural site or event to promote tourism	1	2	3
17. Sought outside investors to develop single or multi-family housing	1	2	3
18. Created a local housing development organization or encouraged local realtors or contractors to develop housing	1	2	3

C. In the past three years, have there been discussions in _____ concerning housing needs?

1. Yes
2. No
3. Don't Know

D. Have any of the following housing types actually been developed or expanded in _____ during the past three years?

General Housing	Yes	No	Don't Know
1. Conventional residential units	1	2	3
2. Privately owned townhouses or apartments	1	2	3
3. Designated location for mobile homes	1	2	3
Specialized Housing			
4. Subsidized housing for the elderly	1	2	3
5. Development of low or moderate income housing	1	2	3
6. Subsidized multi-family housing units (e.g. apartments)	1	2	3

9. SCHOOL ACTIVITIES

A. Are there regular high school awards ceremonies or events to which the public is invited to attend?

1. Yes
2. No
3. Not sure

→ **What Student achievements do these events recognize? (check all that apply)**

- ☐ Athletics
- ☐ Academics
- ☐ Orchestra/Band
- ☐ Citizenship
- ☐ Other (specify)

B. The following questions relate to the involvement of youth and schools in _____:

	Yes	No	Don't Know
a. In the past three years, has a group of youth contributed to a community improvement project?	1	2	3
b. Has a civic or service organization carried out a project to benefit youth in the past three years?	1	2	3
c. Do businesses in _____ provide student internships?	1	2	3
d. Is there a student co-op program between the high school and local businesses?	1	2	3
e. Is there a school-based business currently in existence?	1	2	3

10. LOCAL MEDIA—The next questions concern media outlets that may serve _____.

1. What media outlets do you read-listen to?	Daily	Weekly	Monthly or Less	Never
a. Local Newspapers	1	2	3	4
b. Regional Newspapers	1	2	3	4
c. Radio Station	1	2	3	4
d. Internet	1	2	3	4

2. What kind of job does each do in reporting local news?

	Excellent	Good	Okay	Never Covers Local News
a. Local Newspapers	1	2	3	4
b. Regional Newspapers	1	2	3	4
c. Radio Station	1	2	3	4
d. Internet	1	2	3	4

3. Do you think each is biased or unbiased when it covers local news.

	Biased	Unbiased	Does Not Cover Local News	Explain
a. Local Newspapers	1	2	3	_____
b. Regional Newspapers	1	2	3	_____
c. Radio Station	1	2	3	_____
d. Internet	1	2	3	_____

4. How does each do in providing a forum to air different views on community issues?

	Excellent	Good	Okay	Never Provides a Forum
a. Local Newspapers	1	2	3	4
b. Regional Newspapers	1	2	3	4
c. Radio Station	1	2	3	4
d. Internet	1	2	3	4

11. DIVERSITY AND DEVELOPMENT OF LOCAL LEADERSHIP

1. Are there instances in the last 5 years where individuals or groups in the following categories took leadership in a particular project which benefited the community?

	Often	Sometimes	Never
a. Youth (high school or in their 20s)	1	2	3
b. Young Leaders	1	2	3
c. Women	1	2	3
d. Newcomers	1	2	3
e. Senior Citizens	1	2	3
f. Others (Specify) _____	1	2	3

2. In the last five years, are there instances of cooperation among different groups in the community for community betterment?

	Often	Sometimes	Never
a. Different age groups?	1	2	3
b. Men and Women's groups?	1	2	3
c. Newcomers & Longtime residents?	1	2	3
d. Different Churches?	1	2	3
e. Business people & or other?	1	2	3

3. Are there any particular groups that generally do not get involved in community activities? Please explain.

4. Does the community seek out leaders? Yes No Not Sure

5. How are new leaders developed and/or recruited?

12. COMMUNITY SPACES AND RECREATION

A. How would you rate the following "spaces" in _____ that are available for use by local residents? Circle 8 if a particular facility is not available in _____.

	Very Good	Good	Fair	Poor	Not Available
a. Outdoor adult recreation space (softball, parks) ...	1	2	3	4	8
b. Indoor recreation or social event space	1	2	3	4	8
c. Senior Citizen Center	1	2	3	4	8
d. Community Center for meetings	1	2	3	4	8
e. Meeting space in city offices	1	2	3	4	8
f. Formal meeting space in local restaurants or other businesses	1	2	3	4	8
g. Restaurants/coffee shops for informal meetings...	1	2	3	4	8

B. What kinds of recreational or social opportunities exist within _____?

Recreational/Social Activities	Yes	No	Don't Know
a. Local adult softball team(s)	1	2	3
b. Local adult volleyball or basketball team(s)	1	2	3
c. Community dances (at private or public locations)	1	2	3
d. Art or cultural events occasionally held in the community	1	2	3
e. Weekly or monthly Farmer's Market during growing season	1	2	3

13. INDIVIDUAL BACKGROUND INFORMATION

1. Your age (as of last birthday)? _____ years
2. Your Sex: Male Female
3. Ethnicity: _____
4. What is your current marital status
   1. Married
   2. Divorced/Separated
   3. Never married
   4. Widowed
5. How long have you lived in the _____ Area? _____ years
6. Have you ever lived elsewhere? Yes No
7. Do you own or rent your current residence? Own Rent Other
8. How many people, including yourself, live in your household? _____persons
9. How many of the people living in your household are under 18 years of age?
   _____ persons *(Write in "0" if none)*
10. Your highest level of formal education attained?
    1. Less than 9th grade
    2. 9th to 12th grade, no diploma
    3. High school graduate (includes equivalency)
    4. Some college, no degree
    5. Associate degree
    6. Bachelors degree
    7. Graduate or Professional degree

11. Your present employment status?
    1. Employed or self-employed on a **full-time** basis
    2. Employed or self-employed on a **part-time** basis
    3. Retired
    4. Full-time homemaker
    5. Student
    6. Unemployed

    If employed or self-employed:

    Primary occupation:

    Community where employed:

    Second occupation (if any):

To be answered if respondent is presently married:

12. What is your spouse's present employment status?
    1. Employed or self-employed on a **full-time** basis
    2. Employed or self-employed on a **part-time** basis
    3. Retired
    4. Full-time homemaker
    5. Student
    6. Unemployed

    Spouses' primary occupation if employed or self-employed:

    Community where employed: _____

13. Is there any information you would like to add that might be useful to our understanding of _____?

14. Would you like a summary report of our study when it is complete? Yes No

15. Address and Telephone where respondent can be contacted for future contact

    Name: _____

    Address:

    Telephone:

This is the end of the survey! If you have other comments or other issues you would like us to know about, please use the back page.

THANK YOU

APPENDIX B

SURVEY MATERIALS FOR CHAPTER THREE

A Survey of Community Development in Community

An effort to understand how Community gets things done for the community.

We appreciate your help.

Jessica A. Crowe, Study Coordinator
Department of Sociology
Washington State University
Pullman, WA 99164-4020
(208) 301-3583
jacrowe@wsu.edu

1. Please indicate how much you AGREE or DISAGREE with the following statements by checking the appropriate box.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a. Being a resident of Community is like living with a group of close friends	☐	☐	☐	☐	☐
b. If you do not look out for yourself, no one else in Community will	☐	☐	☐	☐	☐
c. Most everyone in Community is allowed to contribute to local governmental affairs if they want to	☐	☐	☐	☐	☐
d. When something needs to get done in Community, the whole community usually gets behind it	☐	☐	☐	☐	☐
e. Community clubs and organizations are interested in what is best for all residents	☐	☐	☐	☐	☐

2. We now want to ask you some questions about the relations Community has with other communities.

	Yes	No	Don't Know	If yes locality/Institution visited
a. In the past 3 years, has a group from Community visited another community to learn about its community development efforts?	☐	☐	☐	_____
b. In the past 3 years, has a group from Community gone outside the community to seek financial or technical assistance?	☐	☐	☐	_____
c. In the past 3 years, has a group from Community gone outside the community to lobby or to protest a decision affecting the community?	☐	☐	☐	_____

3. Please indicate whether or not Community has joined with other communities (or counties) in the past 3 years to address any of the following issues. (IF YES: Please identify the community(ies) with which the joint effort occurred.)

	Yes	No	Not Sure	Community Joined
a. Regional environmental issues	☐	☐	☐	_____
b. Economic development (recruitment, marketing, etc.)	☐	☐	☐	_____
c. Tourism efforts	☐	☐	☐	_____
d. Lobbying of state or federal government	☐	☐	☐	_____
e. Leadership/skills training	☐	☐	☐	_____
f. Special events (fairs, festivals, etc.)	☐	☐	☐	_____

4. Please indicate whether or not Community belongs to the following state and national organizations.

	Yes	No	Not Sure
a. State League of Municipalities	☐	☐	☐
b. State Chamber of Commerce/Downtown Development Association	☐	☐	☐
c. State industrial development organization	☐	☐	☐
d. Main Street Program	☐	☐	☐
e. National Municipal League or National Association of Towns	☐	☐	☐
f. Other state organization (identify):_____	☐	☐	☐
g. Other national organization (identify): _____	☐	☐	☐

5. Does Community have a rivalry with one or more communities?

☐ No rivalry ⟶ ***Go to Question 7.***

☐ Yes ⟶

6. Please indicate whether or not each of the following describes the character of rivalry.

	Yes	No
a. Competition in sports	☐	☐
b. Economic competition for industries, shoppers and/or public facilities	☐	☐
c. Longstanding rivalry that goes beyond economic competition	☐	☐

7. How many financial institutions (branch or independent) are located in Community? _____
(*If none, indicate 0 and skip to question 9 on page 3.)*

8. What is the name of the largest financial institution (branch or independent) in Community?

A. Name of Institution #1:_____

B. Please indicate whether or not it contributes to Community in each of the following ways.

	Yes	No	Don't Know
1. Provides commercial or low-interest loans to community projects?	☐	☐	☐
2. Provides grants, donations, or in-kind contributions to community projects?	☐	☐	☐
3. Provides marketing or technical assistance to local businesses?	☐	☐	☐
4. Personnel serve on local boards and committees?	☐	☐	☐

9. Please indicate how often business people in Community contribute to the following:

	Very Often	Often	Sometimes	Rarely	Never
a. Expend resources to help the community…..	☐	☐	☐	☐	☐
b. Take leadership positions in local development activities	☐	☐	☐	☐	☐

10. During the past 3 years, has Community had a referendum or a bond issue?

☐ No ⟶ ***Go to Question 12.***

☐ Yes ⟶

11. IF YES, please specify the purpose of each referendum or bond issue and whether the issue passed or failed.

	Passed	Failed
1. _____	☐	☐
2. _____	☐	☐
3. _____	☐	☐

12. During the past 3 years, how many community-wide fund drives, other than bond issues, have existed to raise money for specific development projects?

☐ 0
☐ 1
☐ 2
☐ 3
☐ More than 3 (specify number _____)

13. Does Community have a community foundation, endowment or trust that provides financial resources for community or economic development activities (for example: a hospital endowment, a land trust to preserve habitat or a historic site, or a community foundation with income used for community improvement etc.)?

☐ No ⟶ ***Go to Question 15 on page 4.***

☐ Yes ⟶

14. IF YES, please specify the names of the community foundations, endowments, or trusts and the approximate assets of each.

Name of Foundation, Trust or Endowment Fund	Assets
1. _____	$_____
2. _____	$_____
3. _____	$_____

15. In the last 5 years, has there been a local issue in which there were different points of view expressed and significant discussion took place? (Examples: annexation, school controversies, landfill siting, zoning changes, bond issues, taxation, economic development issues etc.)

☐ No community issue in the last 5 years ⟶ ***Go to Question 18.***

☐ Don't Know ⟶ ***Go to Question 18.***

☐ Yes

16. Please identify the most important issue:_____

17. Please indicate whether or not each of the following occurred at the time the issue was being discussed.

	Yes	No	Don't Know
a. The issue was discussed at community meetings	☐	☐	☐
b. The local newspaper reported both sides (pros & cons) of the issue ...	☐	☐	☐
c. Existing civic groups were actively engaged in the issue.....	☐	☐	☐
d. An organization(s) was formed to represent one or more viewpoints...	☐	☐	☐
e. The issue impacted outcomes of city elections.....	☐	☐	☐
f. The issue has led to permanent divisions in Community.....	☐	☐	☐
g. The issue was mostly debated informally between friends.....	☐	☐	☐
h. Many friends and neighbors were on different sides of the issue.....	☐	☐	☐
i. The issue was resolved to the satisfaction of most parties.....	☐	☐	☐

18. Please indicate how often each of the following groups in the past 5 years got involved in community activities.

	Often	Sometimes	Rarely	Never
a. Young Leaders (high school or in their 20s).....	☐	☐	☐	☐
b. Women	☐	☐	☐	☐
c. Racial or Ethnic Minorities……	☐	☐	☐	☐
d. Newcomers.....	☐	☐	☐	☐
e. Senior Citizens	☐	☐	☐	☐
f. Rural community members……..	☐	☐	☐	☐
g. Others (Specify) _____	☐	☐	☐	☐

19. Please indicate how often each of the following groups in the community cooperate for community betterment in the past 5 years.

	Often	Sometimes	Rarely	Never
a. Men and Women's groups?	☐	☐	☐	☐
b. Younger and Older residents?	☐	☐	☐	☐
c. Different Racial/ethnic groups?	☐	☐	☐	☐
d. Rural &Townsfolk?	☐	☐	☐	☐
e. Newcomers & Longtime residents?	☐	☐	☐	☐
f. Business people & or other?	☐	☐	☐	☐

20. Please indicate how active each of the following community organizations are in community improvement or economic development activities.

	Very Active	Moderately Active	Not Very Active	No Such Group(s)	Not Sure
a. Economic development organization (governmental or non-governmental)	☐	☐	☐	☐	☐
b. Chamber of Commerce/Downtown Merchants organizations	☐	☐	☐	☐	☐
c. Service and fraternal organizations (such as Lions, Kiwanis, Eastern Star)	☐	☐	☐	☐	☐
d. Women's clubs or societies	☐	☐	☐	☐	☐
e. Public or private housing development organizations	☐	☐	☐	☐	☐
f. Civic groups (PTA, League of Women Voters, etc.)	☐	☐	☐	☐	☐
g. Job-related/professional organizations (labor unions, professional associations)	☐	☐	☐	☐	☐
h. City government	☐	☐	☐	☐	☐
i. Environmental organizations (Pheasants Forever, Ducks Unlimited, Sierra Club, etc.)	☐	☐	☐	☐	☐
j. Commodity or general farm organizations (wheat growers association, cattlemen's etc.)	☐	☐	☐	☐	☐
k. Historical or heritage societies	☐	☐	☐	☐	☐
l. Church or church related groups (church committees, Ministerial Alliance, etc.)	☐	☐	☐	☐	☐

21. Please indicate whether each is biased or unbiased when it covers local news.

	Biased	Unbiased	Not Applicable	Explain
a. Local Newspapers	☐	☐	☐	_____
b. Regional Newspapers	☐	☐	☐	_____
c. Radio Station	☐	☐	☐	_____
d. Internet	☐	☐	☐	_____

22. Please rate each media's performance in providing a forum to air different views on community issues?

	Excellent	Good	Fair	Poor	Terrible
a. Local Newspapers	☐	☐	☐	☐	☐
b. Regional Newspapers	☐	☐	☐	☐	☐
c. Radio Station	☐	☐	☐	☐	☐
d. Internet	☐	☐	☐	☐	☐

23. Please indicate whether or not individuals or groups in Community have promoted economic activity over the past 3 years in the following manner:

	Yes	No	Don't Know
1. Organized/rejuvenated a committee to recruit new business or industry	☐	☐	☐
2. Promoted or encouraged agricultural diversification; marketing (including farmer's market); or locally owned, value-added processing	☐	☐	☐
3. Sought to attract a large scale agricultural producer or outside-owned, value-added processing firm	☐	☐	☐
4. Worked to revitalize the downtown or retail sector	☐	☐	☐
5. Taken action to retain or expand locally-owned businesses or industry	☐	☐	☐
6. Developed a business incubator or small business assistance program	☐	☐	☐
7. Developed commercial/retail center mostly for locally-owned businesses	☐	☐	☐
8. Developed commercial/retail center mostly for outside-owned businesses	☐	☐	☐
9. Developed an industrial park	☐	☐	☐
10. Systematically developed and maintained contact with leaders in industry outside the area	☐	☐	☐
11. Applied for financial assistance from county, state or federal government to attract industry or business	☐	☐	☐
12. Applied for financial assistance from county, state or federal government to expand local businesses	☐	☐	☐
13. Sought investments from corporations or investors outside Community to expand business or industry	☐	☐	☐
14. Attempted to find buyers for a local business	☐	☐	☐
15. Organized to bring a state or federal office or facility to the community	☐	☐	☐
16. Developed and/or promoted a local historic or cultural site or event to promote tourism	☐	☐	☐
17. Sought outside investors to develop single or multi-family housing	☐	☐	☐
18. Created a local housing development organization or encouraged local realtors or contractors to develop housing	☐	☐	☐

24. In the past 3 years, have there been discussions in Community concerning housing needs?

☐ Yes
☐ No
☐ Don't Know

25. Please indicate whether or not any of the following housing types have been developed or expanded in Community during the past 3 years.

	Yes	No	Don't Know
1. Conventional residential units	☐	☐	☐
2. Privately owned townhouses or apartments	☐	☐	☐
3. Designated location for mobile homes	☐	☐	☐
4. Subsidized housing for the elderly	☐	☐	☐
5. Low or moderate income housing	☐	☐	☐
6. Subsidized multi-family housing units (e.g. apartments).....	☐	☐	☐

26. Approximately how many total businesses currently receive property tax abatements?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4 or more

27. Approximately how many businesses have received property tax abatements in the past 3 years?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4 or more

28. Approximately how many businesses have received free or reduced land as incentive to locate to Community in the past 3 years?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4 or more

29. Have any economic development efforts in the past 3 years required the conversion of farmland or forests to commercial or industrial property?

☐ No ⟶ ***Go to Question 32 on page 8.***
☐ Don't' Know ⟶ ***Go to Question 32 on page 8.***
☐ Yes ⟶

30. If YES, approximately how many acres have been converted?

_____ acres.

31. For economic development implemented in the past 3 years, please indicate whether or not each of the following required conversion of farmland or forests to commercial or industrial property?

	Yes	No	Don't Know
1. Expansion or creation of locally-owned businesses	☐	☐	☐
2. Location of new outside-owned industry or business	☐	☐	☐
3. Development of a commercial/retail center mostly for locally-owned businesses.....	☐	☐	☐
4. Development of a commercial/retail center mostly for outside-owned businesses.....	☐	☐	☐
5. Development of an industrial park.....	☐	☐	☐

32. Please indicate whether or not each of the following youth involvement projects have occurred in Community in the last 3 years.

	Yes	No	Don't Know
a. A group of youth contributed to a community improvement project	☐	☐	☐
b. A civic or service organization carried out a project to benefit youth.....	☐	☐	☐
c. A business/businesses in Community provided student internships	☐	☐	☐
d. A school-based business existed.....	☐	☐	☐
e. A co-op program existed between the high school and local businesses……	☐	☐	☐

33. Please indicate whether or not any of the following High School programs have been added to or cut in the past 3 years.

	Added to	Stayed the same	Cut
a. Boy's sports.....	☐	☐	☐
b. Girl's sports	☐	☐	☐
c. Drama/arts	☐	☐	☐
d. Academic clubs	☐	☐	☐
e. Band/orchestra……	☐	☐	☐
f. Other (Specify) _____	☐	☐	☐

34. For each of the following levels of schooling, please indicate whether the number of students per classroom has increased, stayed about the same, or decreased in the past 3 years?

	Increased	Stayed the Same	Decreased
a. Elementary School	☐	☐	☐
b. Jr. High/Middle School	☐	☐	☐
c. Sr. High School	☐	☐	☐

35. For each of the following levels of schooling, please indicate whether the number of teachers has increased, stayed about the same, or decreased in the past 3 years?

	Increased	Stayed the Same	Decreased
a. Elementary	☐	☐	☐
b. Jr. High/Middle School	☐	☐	☐
c. Sr. High	☐	☐	☐

36. How would you rank the quality of healthcare offered in Community?

☐ Excellent
☐ Good
☐ Fair
☐ Poor
☐ Terrible

☐ None offered

37. Has the quality of healthcare offered in Community increased, stayed the same, or decreased in the past 3 years?

☐ Increased
☐ Stayed the same
☐ Decreased

38. Does Community have a hospital?

☐ No ⟶ ***Go to Question 40.***
☐ Yes

39. If YES, has the hospital been updated or expanded in the past 3 years?

☐ Yes
☐ No
☐ Don't know

40. Does Community have a local police department?

☐ No ⟶ ***Go to Question 44 on page 10.***
☐ Yes

41. If YES, how successful or unsuccessful is the local police force in catching those who break the law?

☐ Very successful ⟶ ***Go to Question 43 on page 10.***
☐ Somewhat successful ⟶ ***Go to Question 43 on page 10.***
☐ Somewhat unsuccessful
☐ Very unsuccessful

42. If UNSUCCESSFUL, what is the main reason?

☐ Not enough police officers
☐ Lack of adequate training of police force
☐ Other (please specify) _____

43. Is the local jail overcrowded?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable

44. How often are roads in and around Community congested?

- ☐ All of the time
- ☐ Some of the time
- ☐ None of the time

45. Have any roads in or around Community been expanded in the past 3 years?

- ☐ Yes ⟶ ***Go to Question 47.***
- ☐ Don't know ⟶ ***Go to Question 47.***
- ☐ No ⟶

46. If NO, what was the main reason for not expanding local roads?

- ☐ No need to (low congestion)
- ☐ Not enough funding
- ☐ Dispute over expansion
- ☐ Other (please specify) _____

47. Please rate Community by indicating whether you AGREE or DISAGREE with the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a. It is possible for townsfolk to walk to work and to shopping areas in Community.....	☐	☐	☐	☐	☐
b. Roads in Community are bike-friendly.....	☐	☐	☐	☐	☐
c. Residences and businesses in Community are inter-mixed	☐	☐	☐	☐	☐
d. The only feasible way for townsfolk to get to work and to shopping areas in Community is by car	☐	☐	☐	☐	☐

48. Please rate the following "spaces" that are available for use by local residents in Community?

	Very Good	Good	Fair	Poor	Terrible	Not Available
a. Outdoor adult recreation space (ball fields, etc.) .	☐	☐	☐	☐	☐	☐
b. Indoor recreation or social event space	☐	☐	☐	☐	☐	☐
c. Senior Citizen Center	☐	☐	☐	☐	☐	☐
d. Community Center for meetings	☐	☐	☐	☐	☐	☐
e. Meeting space in city offices	☐	☐	☐	☐	☐	☐
f. Formal meeting space in local restaurants or other businesses	☐	☐	☐	☐	☐	☐
g. Restaurants/coffee shops for informal meetings..	☐	☐	☐	☐	☐	☐

49. Please indicate whether or not each recreational or social opportunity exists within Community?

	Yes	No	Don't Know
a. Local adult sports team(s).....	☐	☐	☐
b. Local bike trail……..	☐	☐	☐
c. Local arts theater.....	☐	☐	☐
d. Community dances (at private or public locations)	☐	☐	☐
e. Art or cultural events occasionally held in the community	☐	☐	☐
f. Weekly or monthly Farmer's Market during growing season.....	☐	☐	☐
g. Local or state parks……	☐	☐	☐

50. Is there any information you would like to add that might be useful to our understanding of Community?

Thank you for your help!

Please mail your completed questionnaire in the enclosed envelope.
If you no longer have that envelope, please send it to:

Jessica A. Crowe, Study Coordinator
Department of Sociology
Washington State University
Pullman, WA 99164-4020

Pre-Notice Letter (Printed on WSU Stationary)

September 24, 2006

Participant's name
Participant's address

Within the next few days you will receive in the mail a request to complete a questionnaire for an important research project being conducted by Washington State University.

It concerns rural community development in the Northwest and efforts taken to improve community well-being.

I am writing in advance because I have found many people like to know ahead of time that they will be contacted. The study is an important one that will help researchers understand what types of procedures and community traits are beneficial for different forms of community development as well as help form policies that will better serve rural community needs.

I would greatly appreciate your taking the few minutes from your busy schedule to complete and return the questionnaire. It's only with the generous help of people like you that our research can be successful.

Thank you in advance for your help.

Sincerely,

Jessica A. Crowe
Department of Sociology
Washington State University

P.S. I will be enclosing a small token of appreciation with the questionnaire as a way of saying thanks.

Initial Contact Cover Letter (Printed on WSU Stationary)

October 2, 2006

Dear (participant's name):

I am writing to ask for your help in a study of rural communities in the Northwest being conducted as part of my dissertation research. This study is part of an effort to understand the various community-level traits and procedures that aid in different forms of community development and how economic development contributes to general well-being.

It is my understanding that you are the (participant's occupation). I am contacting leaders from rural communities located throughout Washington and Oregon to ask about community development efforts and <community> is one of the communities in the sample.

Results from the survey will be used to help researchers, policymakers and community activists improve the quality of life in rural communities. By understanding how different economic development strategies and community traits impact different forms of community development, public officials can do a better job in evaluating such procedures and make recommendations for improvement. Furthermore, community leaders can make better informed decisions when deciding on an economic development strategy.

Your answers are completely confidential and will be released only as summaries in which one's answers can not be traced back to a particular individual or community. When you return your completed questionnaire, your name will be dropped from the mailing list and never connected to your answers in any way. This survey is voluntary. However, your participation will help me very much.

If you have any questions or concerns about this study, I would be happy to discuss them with you. You can e-mail me at jacrowe@wsu.edu.

Thank you very much for helping with this important study.

Sincerely,

Jessica Crowe
Department of Sociology
Washington State University

Post Card Reminder

1592 Rose Creek Road
Pullman, WA 99163

October 9, 2006

Dear (Participant's name):

Last week a questionnaire asking about community development was mailed to you. Leaders from a sample of small communities in Washington were asked to complete the survey. Your community was one of those selected.

Participant's name
Participant's address

If you have already completed and returned the questionnaire, please accept my sincere thanks.
If you have not, I ask that you please do so today.
I greatly appreciate your help in this study.

If you did not receive a questionnaire, or if it was misplaced, please call me at 208-301-3583 or email jacrowe@wsu.edu and another one will be mailed to you.

Jessica A. Crowe, Department of Sociology
Washington State University
Pullman, WA 99164-4014

Follow-Up Letter (printed on WSU stationary) with Replacement Questionnaire

Participant's name
Participant's address

November 14, 2006

Dear Participant's name,

About 6 weeks ago I sent a questionnaire to you that asked about community development efforts that have taken place in the past few years in <community>. To the best of my knowledge, it's not yet been returned.

The information provided by leaders from other communities includes descriptions of a wide variety of community development procedures that have been implemented in the past few years. Results from this study will be very useful in helping researchers, policymakers and community activists improve the quality of life in rural communities.

I am once again writing you because of the importance that your questionnaire has for helping me gain accurate results. I sent questionnaires to a small number of community leaders from your community and it's only by hearing from nearly everyone that I can be sure to include your community in the sample.

A few people have written to say that they should not have received the questionnaire because they have not lived in the community for very long. If this concern applies to you, feel free to pass the survey on to someone else whom is very knowledgeable about <community> or let me know on the cover of the questionnaire and return it in the enclosed envelope so that I can delete your name from the mailing list.

Protecting the confidentiality of people's answers is my and Washington State University's main priority. A questionnaire identification number is printed on the front cover of the questionnaire so that I can check your name off of the mailing list when it is returned. The list of names is then destroyed so that individual names can never be connected to the results in any way.

I hope that you will complete and return the questionnaire soon. However, if you prefer not to answer it for any reason, please let me know by returning a note or blank questionnaire in the enclosed stamped envelope.

Sincerely,

Jessica Crowe
Department of Sociology
Washington State University

APPENDIX C

INTERVIEW MATERIALS FOR CHAPTER FOUR

WRITTEN CONSENT FORM

As part of my dissertation, I am collecting data on economic development activities in your community. This is to help determine which types of economic development are more economically, socially, and environmentally sustainable. The information in this consent form is provided so that you can decide whether you wish to participate in this study. It is important that you understand that your participation is completely voluntary. This means that even if you agree to participate you are free to withdraw from the interview at any time, or decline to participate in any portion of the study, without penalty.

You will be asked to attend a short interview with one researcher. The researcher will ask you questions about your community, write notes regarding your answers, and possibly record the interview on audio tape. With your permission, you will be audio taped while you answer the interview questions. The audio tapes are to help ensure the accuracy of your answers and responses. If you agree to be audio taped, you can also ask that the audio taping be stopped at any time for any reason. Audio taping will resume only if you state that the tape can be turned back on. These audio tapes will be viewed only by Ms. Jessica Crowe, who will transcribe them, and then the tapes will be placed in a locked file cabinet in the researcher's office until December 2007 when they will be destroyed. During this period only Ms. Jessica Crowe will have access to these notes.

This interview poses no known risks to your health and your name will not be associated with the findings. Your participation in the interview will take approximately 40 minutes. If you have any questions not addressed by this consent form, please do not hesitate to ask. You will receive a copy of this form, which you should keep for your records. This study has been reviewed and approved by the WSU Institutional Review Board for human subject participation. If you have questions about the study please contact the researcher listed below. If you have questions about your rights as a participant please contact the WSU IRB at 509-335-3668 or irb@wsu.edu.

Thank you for your time.

_____ _____

Signature Date

Ms. Jessica Crowe
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jacrowe@wsu.edu, 208-301-3583

CONSENT STATEMENT:

I have read the above comments and agree to participate in this interview. I understand that if I have any questions or concerns regarding this project I can contact the investigator at the above location and if I have questions regarding my rights as a participant, I can contact WSU IRB at 509-335-3668 or irb@wsu.edu.

_____ _____

(Participant's signature) (Date)

INFORMANT INTERVIEW

Individual Respondent Survey Instrument

Respondent Code:_____

Date:_____

Section 1: Economic Development Activities

Introduction: I would like to know about the level of economic development that has taken place in the community in past three years. The following series of questions concern what kind of development has been pursued by the community and how successful the development has been.

1. For the past 3 years, please name all economic development activities that have been successfully pursued? (this includes any activities that has brought in revenue to the community.)

Economic Development Activity	Industrial Recruitment or Self-development

2. For each development activity, approximately how many people are employed? Would you say there is less than 20, between 20 and 50, between 50 and 100, over 100?

3. For each development activity, would you say the pay of the average worker is lower than the cost of living, about the same as the cost of living, higher than the cost of living?

4. For the past 3 years, please name all economic development activities that have been pursued but was **not** implemented? (this includes any activities that has brought in revenue to the community.)

Economic Development Activity	Industrial Recruitment or Self-development

5. Why do you think the community was not successful in implementing these development activities?

6. What do you think is the most important trait, community residents look for when seeking economic development? (e.g. number of jobs, quality of jobs, environmentally friendly, socially responsible)

7. Is there a debate within the community on which types of economic development should be pursued? Explain.

Section II: Natural Environment

Introduction: I am also interested in the natural surroundings of the community and how economic development has impacted the natural environment.

1. Has there been any controversy involving the community's natural environment in the past 5 years? **Y** **N**

2. If so, please describe this controversy. E.g. what was it, when did it occur, who was involved, was it resolved?

3. In the past 5 years, have there been any issues involving the environment and current economic development practices (old or new)? Please explain.

4. Have there been any issues involving the environment and recently implemented economic development activities (past 3 years)? Please explain.

5. Does the community have any kind of environmental regulations in place that developers must abide by? Please describe the nature of these regulations.

6. How are these regulations enforced?

7. In general, do community residents place a lot of emphasis on implementing economic development that is also environmentally sustainable? In your opinion, why or why not?

Conclusion

1. Is there any other community issue that you would like to talk about that did not come up in the interview?

2. Finally, are there any people that you would recommend that I interview whom are knowledgeable about the community's economic development practices?