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THE ROLE OF LOCAL OFFICIAL'S SOCIAL TIES IN BALANCING ECONOMIC DEVELOPMENT AND RESOURCE PROTECTION IN MICHIGAN'S EASTERN UPPER PENINSULA

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THE ROLE OF LOCAL OFFICIALS' SOCIAL TIES IN BALANCING ECONOMIC DEVELOPMENT AND RESOURCE PROTECTION IN MICHIGAN'S EASTERN UPPER PENINSULA

By

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ABSTRACT

THE ROLE OF LOCAL OFFICIALS' SOCIAL TIES IN BALANCING ECONOMIC DEVELOPMENT AND RESOURCE PROTECTION IN MICHIGAN'S EASTERN UPPER PENINSULA

By

Georgia L. Peterson

Many rural natural resource-dependent regions of the United States have undergone substantial economic, social, and environmental stress over the past century. The Eastern Upper Peninsula of Michigan is one such region that has historically depended on resource extraction activities, such as timber, as an economic base. As these industries have declined, communities in the area are attempting to fill the economic void by turning to amenity-based opportunities such as snowmobiling, fishing, and casino gaming. Despite the promotion of new economic activities, residents are still struggling with poverty while at the same time experiencing a change in local development patterns. Increasing tourism and seasonal home development are generating concerns about recreational access, aesthetics, water quality, and biodiversity. Two seemingly divergent concepts are used to examine how local officials respond to these issues—social capital and the growth machine. Social capital is a general term that attempts to define the effectiveness of a community in reaching its economic and social development goals through its levels of intercommunication, civic involvement and trust. The growth machine concept also examines the relationships between local officials, business interests, and residents of a community. The emphasis is on local officials and business interests who focus on unlimited economic growth at the expense of residents and their

surroundings, making officials unrepresentative of their constituents and their policies socially and environmentally unsustainable.

This study examines how local residents and officials prefer to balance economic development and natural resource protection for the future of the Eastern UP. It also examines the social connections and levels of personal leadership that could influence local officials' preferences for this development. Conjoint analysis, which elicits tradeoffs between preferred development and protection strategies, was used to determine these preferences among 45 residents and 38 local officials. Additionally, qualitative interviews were conducted with those 38 local officials to examine their social connections. These officials also were sent a followup mail questionnaire asking about their perceived levels of influence in their communities.

Results from the conjoint survey show that local officials are no more likely to prefer amenity-based economic growth than residents of the region. Officials are, however, less likely to prefer the status quo for the future, but neither their social connections nor their level of personal influence appear to affect their preferences. Bivariate regression models do indicate that living in the region over 20 years decreases the likelihood of preferring status quo conditions. Overall, however, the results do not find conditions that would indicate a growth machine mentality among local officials. Further examination of qualitative interviews suggest that the limited connections maintained with other officials in the region may hamper future attempts to protect the natural resource base while at the same time improving economic conditions for future generations. Opening these connections would improve local community capacities to deal with the delicate balance of resource protection and economic development.

To my parents, Ronald and Viola Peterson

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CHAPTER I:
INTRODUCTION

Many rural natural resource-oriented regions across the nation have historically been considered idyllic in their lush and beautiful settings. A substantial proportion of these areas, however, contain less than ideal economic and social conditions. Many have for the past century had to struggle with issues related to poverty and environmental destruction related to overexploitation of particular natural resources. Once the desired resources in these areas become more accessible elsewhere, the extractive industry moves on, leaving local communities with few other opportunities. The loss of jobs and reliable income can lead to substantial underinvestment in social infrastructure and a general loss in bright young people who must move elsewhere to find promising careers. Some of these areas have turned to other industries such as tourism, while others have become bedroom communities for larger city centers. These are, however, only partial solutions when addressing the issues rural resource-dependent regions face.

Both rural sociologists and economists have attempted to provide solutions for how these issues may be addressed in a local community. Economists have examined phenomena related to individual rational decision making in relation to job acquisitions and personal skill and knowledge development. The term that describes this concept, human capital, accompanies other economically rational behavior traits attributed to individuals. The generalized perspective is that individuals will not invest in personal growth and development if it does not pay off in terms of improved job opportunities in the local area. Additionally, individuals will rationally decide to move to a different area if better career opportunities present themselves there. On the more macro level,

economists have attempted to understand why rural poverty persists despite efforts by government and industry to change those conditions. One suggestion is that assistance programs have focused primarily on agriculture, even though only about one-fifth of rural counties have a dominant agricultural industry (Humphrey et al., 1993). Other economists focus on corporations that rely on low-income wage workers. These corporations will not find it in their rational interest to invest in schools or other training in the local area. Regardless of the theory behind these viewpoints, the primary focus is usually on economic recovery, often ignoring potential social or environmental impacts of those efforts.

Sociologists in turn have examined rural poverty from the perspective of industry, government, or class dominance. Internal colonialism is one such concept that focuses on the impacts of large public agencies or private industrial firms. These entities often make decisions about management of local resources from a remote location without ever understanding or relating to the local repercussions of their decisions. Structural conditions in these cases exist to prevent local areas from infringing on the control or profit gained by these companies. Other rural sociologists have instead focused on the agency of individuals or communities to change their circumstances. They have attempted to understand why some communities do manage to overcome the odds and become relatively successful on an environmental, social, and economic basis. What social conditions or arrangements allow this to take place? Moreover, are there actions or steps that can be taken by communities to improve their chances of improving their situation? If so, how can all interest groups in that area be assured of having an opportunity to provide their input in the process? Some studies in the rural sociological

field have attributed success at the community level to the ability of local officials and their constituents to mobilize and address the unique forms of poverty that they have historically had to face (Flora et al., 1991). An important ingredient in this "grassroots" recipe is a set of well-established connections between these officials, local individuals and organizations both within and outside the community (Aronoff, 1997; O'Brien et al., 1998). Efforts are often centered on fixing economic, social and/or environmental problems while at the same time maintaining the character of the area that attracted its residents in the first place.

The purpose of this study is to examine the potential relationship between economic development preferences and the social networks that exist among local officials in a rural resource-dependent region. The structural conditions that help to shape decision making processes may illuminate what priorities exist in local development and resource protection efforts. Local officials in particular are considered to be either the connection that helps to solve a community's problems or the barriers to alternative solutions. They can be the conduits that allow the flow of information and resources, or the members of an elite club that prevent individuals or groups from voicing opinions that run counter to their preferred direction. The types and levels of connections forged between local officials (whether elected, appointed, or agency personnel), their constituents, and outside agencies and organizations help determine the effectiveness of local efforts to improve economic and social conditions. An overt focus on only economic development may ultimately unravel the social and environmental character of a rural resource-dependent community. Understanding development attitudes and preferences of local officials and their constituents, and how these preferences relate to

each other, will help to determine whether development strategies will help or hinder a community's economic, social and environmental sustainability.

The Eastern Upper Peninsula (UP) of Michigan is a classic example of a rural region rich in natural resources with a historically high dependence on the timber industry for its economy. Timber harvesting in recent decades has declined substantially, and significant government facilities including an air base and mental hospital have closed down. These types of withdrawals have left the area scrambling to find commercial or amenity-based industries to fill the economic void. Some types of recreation and tourism, including snowmobiling, fishing, and casino gaming, have helped. The job opportunities that accompany many of these industries, however, are primarily seasonal or minimum-wage. The development of seasonal and second homes has also increased in recent decades, which has introduced its own set of problems and opportunities. Maintaining the relatively pristine beauty of the region, and respecting resident senses of identity with the land, while at the same time introducing sustainable job opportunities is an ongoing struggle for local decision makers.

This dissertation examines these issues in the Eastern UP from the perspective of local officials at regional and local levels. This research will apply both social network and community leadership concepts to determine if they truly help to explain similarities and differences in development and conservation attitudes between local officials and their constituents. Potential patterns in social relationships, sense of leadership, and development attitudes may help explain the role of local officials in economic growth and development in a rural natural resource-dependent region. Chapter II reviews the general characteristics of natural resource-dependent regions, and concepts related to economic

and environmental sustainability in those areas. It also provides a detailed description of the study area, including its social, environmental and economic conditions. Chapter III reviews the various theories related to rural poverty, including its causes and effects. It then turns to the application of various social capital concepts that attempt to address these concerns. The social capital section also includes a general description and history of the concept, its classical roots, its drawbacks, and previous applications. This chapter also explores the possibility that a community considered to have high social capital may contain characteristics of a "growth machine" (Molotch, 1976) if it benefits a given social network of local elites at the expense of others. Chapter IV, the methods section, describes in detail the use of conjoint analysis to determine residents' and local officials' preferences for future conditions and economic development in the Eastern UP. It also describes an additional set of personal interviews conducted with local officials that examine their connections with their community and outside the region. This chapter concludes by describing a follow-up questionnaire sent to these officials, asking additional questions regarding self-perceptions of their leadership and influence in their respective communities. Chapter V synthesizes the results of these data gathering efforts, beginning with a direct comparison of economic development and growth preferences between local officials and residents. Scenarios of possible future conditions, using combinations of the conjoint attribute levels, are then created to determine whether a high growth scenario is preferred by local officials. A qualitative analysis of the officials' interviews is then conducted, followed by a summary of the followup questionnaire on personal influence in their communities. The quantified results are then used to determine whether there is a significant relationship between social network connections, levels of

personal influence, and preference for a high growth scenario. Chapter VI concludes by summarizing these findings, describing possible implications of the results, and suggesting limitations and future opportunities for research.

CHAPTER II:
RESOURCE DEPENDENCE AND MICHIGAN'S EASTERN UPPER PENINSULA

Characteristics of resource-dependent communities

The term natural resource, as it will be used in this study, includes features or substances in the biophysical environment that are seen as possessing economic and/or social value. Freudenburg et al. (1995) point out that resources have value beyond their inherent physical existence. Resource values are ultimately determined by their social applications. When, then, does a rural community or region become characterized as natural resource-dependent? Resource dependence usually refers to an area whose economic structure relies heavily on a large company's or government agency's extraction of a single raw material. Historically, communities developed around employment opportunities based on resource extraction activities such as mining, timber harvesting, or commercial fishing. These "boomtowns" thrived as long as the resource being extracted was in plentiful supply, and the wide expanses of open space in the young country made it seem as if there was no end to the resources available. Eventually and inevitably, natural resource supplies began to decline in these areas, causing the big resource-extraction corporations to relocate to new sources where raw materials were more plentiful. Towns and even regions whose sole dependence had been placed in the hands of these extraction industries were left with massive unemployment and high levels of poverty. Mining communities of Appalachia and the northern Midwest, and forest regions of the North and West are examples of remote, high poverty, high natural resource-based areas that continue to struggle today for a sustainable existence (Lyson and Falk, 1993). Although they all can be lumped into the typical classification of rural

resource-dependent regions, the physical, social and cultural distinctiveness of each specific area makes the nature of their rural poverty issues complex and varied.

An additional set of distinctions can be made among natural resource-oriented regions in terms of their spatial relations with other social or physical characteristics. Peluso et al. (1994) divide natural resource-dependent areas (NRDAs) into three groups which are not necessarily mutually exclusive: 1) extractive NRDAs, where the greatest source of income resides in traditional fishing, forestry or mining operations, usually controlled by one or few companies; 2) nonconsumptive NRDAs, regions where they are able to take advantage of scenic or unique natural or historical features focusing its economy on amenity-based industries such as tourism; and 3) backdrop NRDAs, typically referred to as bedroom communities, where incomes are earned outside the local area. The authors feel it is important to make the distinction among the dominant NRDA forms because of the unique social and economic issues each must face.

Because of natural resource-dependent areas rely on a single or few sources of economic wealth, rural poverty is often a harsh reality (Peluso et al., 1994). Once the resource becomes depleted or declines in value, or changes in technology substitutes capital for labor, businesses "downsize" or relocate, leaving the community without jobs or sense of identity (Beckley, 1995; Dumont, 1996). If new economic opportunities do not compensate for the loss, which is likely since the rural nature of these areas often make industrial transportation difficult, out-migration often follows. Children of resource-dependent families must look elsewhere for careers once they've completed their education and begun their own families (Rural Sociological Society Task Force, 1993).

These areas usually look for ways to expand their economic base to improve their poor employment conditions. Since many resource-dependent areas are located in Western states, considerable research has been conducted on sustainable economies using Western locations as a focus. Ashton and Pickens (1995), for example, identified several Western state counties that are highly rural and resource dependent, and attempted to identify if employment diversity did indeed keep communities more stable. Generally, they found that diversification is an appropriate and worthwhile goal. They suggest that industries that are unrelated to resource product industry cycles, such as recreation and tourism, would be the most appropriate. This does not, however, address the seasonal or low-wage nature of most of these job opportunities. Gomoll and Richardson (1995) cite that population growth in rural western counties will provide the push for diversification through such industries as service, trade, finance, insurance, real estate, and transportation. Unfortunately these authors do not address the complications resulting from these increased populations or possible environmental impacts in these regions.

Different segments of the population typically have different outlooks on growth, and rural settings are no exception. For example, resource-dependent communities in the Midwest host a large population of seasonal residents who have built second homes in the area. Because they are only part-time members of the local population, their attitudes and perceptions tend to differ from those of permanent residents. Green et al. (1996) compared economic development attitudes between permanent and seasonal homeowners in a northern county of Wisconsin. They found that seasonal residents were much more likely to be concerned with overdevelopment and enacting land use controls, while permanent residents were more concerned about the tax base and economic growth. They

also found that class differences among permanent residents affected attitudes toward development. Wealthier residents were more likely to support land use controls and zoning, although the authors were unable to explore the specific reasons for these tendencies.

Concepts of economic and social sustainability

Communities and regions that struggle with issues related to resource dependence often refer to their need to encourage sustainable development. The meanings behind the term sustainable, however, are typically ambiguous. They usually revolve around the recognition that physical or other constraints require maintaining the integrity of a resource base while at the same time being able to maintain the productive use of that resource (Dixon and Fallon, 1989). Decision makers and researchers still struggle with the ambiguity of this term because several questions often remain unanswered: What is being sustained? Sustainable under what set of environmental conditions? Sustainable for how long? Who determines what should be sustained?

Various institutions and interests have their own answers to these questions. All may agree that *something* in the community or region needs to be sustained, but the way each interest expresses the values given to economic, social, and environmental conditions influences the way in which each is managed or manipulated (Redclift and Sage, 1994). All of these interests place some value on various aspects of an area, and it is the differences among those values that can cause disagreement over development strategies. Versions of market-value predominate in the economic point of view, where interests in sustaining natural resources translates into maintaining the most profitable aspects of the resource in a given area. Profitable ventures rely on fast and efficient

'turnover' based on forecasts that rarely exceed five years into the future (Maser, 1994), which suggests that sustainability in this context does not take long-term conditions into account. Conversely, other interests compel agencies that manage public lands to take more than market values into account. Growing environmental concerns have given use-values of such features as soil, air, and water greater prominence in natural resource management. As resulting priorities shift, these other factors in the ecosystem are taken into account to maintain overall resource health. For instance, sustaining certain levels of growth and diversity in watersheds to protect soil and water integrity reflects a management agency's value placed on those characteristics. Although these types of actions can hardly be called altruistic, they do represent a break from pure market considerations. Generally speaking, environmental interests represent greater attention to both use-values and existence values. Use-values, or the benefits provided by a resource for those who use or intend to use it, can translate into an appreciation of forest resources for various recreation opportunities or other amenity uses. Existence values, those perceived benefits that are not directed specifically to users, advocate sustaining a host of living and nonliving entities because of their value in and of themselves. This perspective advocates that any management or development planned by humans should automatically incorporate both of these types of values. Both typically require the correct balance of desired environmental conditions to be maintained in perpetuity.

When considering the previously mentioned sustainability questions, one could conclude that answering any one of these questions requires defining the values that lie behind them. Throughout the decision-making process, an agency or official must deal with contentions relating to these value differences among various interests (Hays, 1998).

Allen and Gould (1986) make this issue clearer by distinguishing between what they call complex and wicked problems. They define these problems in relation to agencies dealing with forest management, but this concept can also apply to decisions that must be made in surrounding communities. Development in natural resource-dependent areas can readily be considered a complex issue, where there are numerous factors that make relationships and conditions very difficult to understand. On the other hand, decision making bodies must also deal with wicked problems related to such development. These are problems with more than one acceptable answer, depending on who is being asked and how the problem is defined. Since the answer may depend on the time and location of the area, development strategies cannot be standardized to be used across all locations (Patterson and Williams, 1998). Although sustainability in an economic context received plenty of attention in resource-dependent areas in the past, the term has gotten more 'wicked' as environmental and social interests have gained voice.

The Eastern Upper Peninsula as a natural resource-dependent region

Michigan's Eastern UP, consisting of Chippewa, Luce, and Mackinac Counties, is the body of land that separates Lake Michigan, Lake Huron, and Lake Superior (Figure 1). It is a relatively remote region of the state, with approximately 53,000 permanent residents (U.S. Bureau of the Census, 1990) in this spacious three-county area (Figure 2). The greatest concentration of residents can be found in each of the county seats, Newberry, St. Ignace, and Sault Ste. Marie. Many who own permanent or seasonal homes in the Eastern UP refer to the area as "God's country" when describing its character (McDonough et al., 1999). Vast tracts of undeveloped land support a wide array of plant

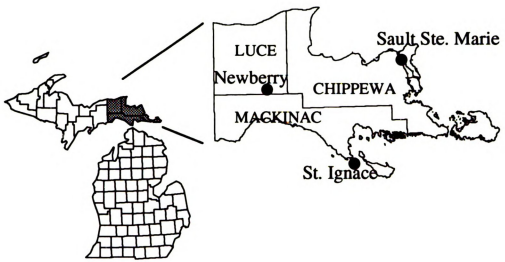


Figure 1. The three counties of the Eastern Upper Peninsula: Chippewa, Luce, and Mackinac.

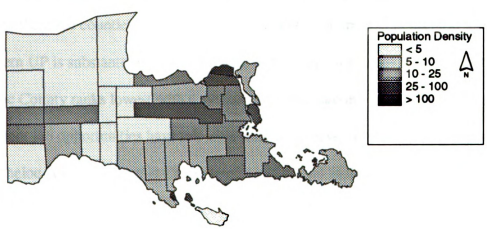


Figure 2. Population density per square mile of residents in the Eastern UP.

and animal species. The rich combination of forests, wetlands, rivers, and inland lakes provide an ideal setting for a wide variety of outdoor activities.

The Upper Peninsula has historically depended on a few natural resource extraction industries, including mining and timber. In the last few decades, however, these communities have been facing high unemployment due to cutbacks, especially in the timber industry (McLaughlin, 1990). Although settlers initially attempted to farm the areas that had been cut over, the short growing season and thin soils made agriculture a poor enterprise in the region. These events have contributed to relatively high poverty rates and heavy dependence on the government for jobs and transfer payments. In 1996, Chippewa County had the highest jobless rate (18%) in Michigan, followed by Luce County (14%). Government transfer payments comprise approximately 25% of personal income in the three counties (McDonough et al., 1999). The median household income in the Eastern UP is substantially below the state of Michigan's level of $31,020 (Table 1). Mackinac County ranks lowest with a median household income of $19,397. Shifts in government job opportunities have left local economies relatively unstable. For instance, the Kincheloe Air Force Base in Chippewa County closed in the mid 1970s, causing

Table 1. Median household income in the three counties of the Eastern UP and Michigan, 1990.

COUNTY	INCOME
Chippewa	$21,449
Luce	$20,370
Mackinac	$19,397
Michigan	$31,020

losses in population and employment in the nearby town of Kinross (McDonough et al., 1999). The site now houses three prisons that have helped the area to slowly recover. Luce County experienced similar problems with the 1992 closing of a state regional mental health center in the village of Newberry (the county seat). Again, prison systems have come to their economic rescue, with a minimum security facility opening in 1996. Both the Kincheloe and Newberry prisons are generally viewed by residents as a positive addition to their areas (McDonough et al., 1999), since prison jobs pay reasonable wages with benefits. In Table 2, prison employment is included under the government category, along with positions in natural resource-based agencies such as the Michigan Department of Natural Resources and the US Forest Service. Other important employment sectors are natural resource and tourism based, with the natural resource sector including the

Table 2. Industry employment per category as percent of total industry output (IMPLAN, 1995).

	Natural Resources	Tour-ism	Const-ruction	Trans-portation	Whole-sale	Retail	Profes-sional	Govern-ment	Other
Chippewa	4.4%	19.2%	5.6%	2.0%	3.9%	15.3%	9.3%	26.3%	13.9%
Luce	13.2%	9.6%	6.5%	1.9%	1.6%	6.9%	3.9%	46.5%	9.8%
Mackinac	3.8%	36.7%	7.4%	5.5%	6.2%	12.2%	5.6%	13.3%	9.3%
EUP	5.5%	22.0%	6.2%	2.8%	4.1%	13.4%	7.6%	26.1%	12.2%

manufacture of wood products. The combined contributions of natural resource, tourism and government related occupations accounted for 50% to 60% of total employment for each county. This is a much greater proportion than in the state of Michigan overall, where these categories made up only about 24% (Steffens and Stevens, 1996).

Despite the drastic timber extraction activities that took place in the early 20th century, the Eastern UP is still well endowed with forested areas and other undeveloped

land. The U.S. Forest Service manages the eastern half of the Hiawatha National Forest (892,100 acres) in this region. The Michigan Department of Natural Resources has additional landholdings (675,375 acres) scattered in smaller individual parcels. Combining these and private forested lands results in a total of approximately 1,770,000 forested acres in this area (Steffens and Stevens, 1996). Residents often depend on these resources in providing wood for heat, as well as hunting, fishing, and other subsistence activities to supplement their incomes (Emery, 1996; Kakoyannis, 1997). With the building of the Mackinac Bridge (in 1957) that joined the lower and upper peninsulas of Michigan, outdoor recreation opportunities became more accessible to a greater number of people than ever before. Residents of Michigan, surrounding states, and Canada today regard the Eastern UP as an "outdoor playground," enjoying the vast expanses of undeveloped land for such outdoor recreation activities as hunting, fishing, camping, boating, cross-country skiing, snowshoeing, and snowmobiling. In terms of days of activity taking place in the region, swimming, boating, fishing and camping are the most popular activities, each consisting of over 600,000 person-days of activity per year (Table 3). The region is a net importer for all activities except backpacking and alpine skiing. Across all 18 activities, seasonal homes and campgrounds each account for about a million person-days of recreation participation in the Eastern UP (Stynes and Kakoyannis, 1999).

The Native American tribes that live in the region have also taken advantage of the tourist trade by opening a large number of casinos. This has brought in much needed revenues to the tribes for infrastructure development and support services for their

Table 3. Days of recreation participation for the Eastern UP, by thousands of person-days in 1990 (Stynes, 1996).

EUP Total	Days of Activity Received in the Counties					
	Participate on overnight stays at			Total overnight stays	On day trips	Total days in county*
	Seas home	Motel	Camp			
Backpack	0.0	0.0	8.4	8.4	0.0	8.4
Bicycle	68.6	5.9	44.4	124.8	3.2	319.4
Camping	0.0	0.0	613.5	613.5	0.0	613.5
Fishing	152.3	57.4	62.4	274.6	224.6	685.9
Golf	23.9	4.4	1.5	43.1	4.5	179.2
Hike	71.6	14.8	118.3	219.5	29.5	275.0
Hunting firearms	40.9	2.6	16.9	63.1	46.1	161.0
Snowmobile	31.6	126.4	0	158.0	50.0	270.0
Ski alpine	0.0	0.0	0.0	0.0	0.0	0.0
Ski cross country	6.8	1.1	0.0	8.9	4.5	21.7
Swimming	208.7	14.8	147.9	386.3	45.5	907.2
Boating motor	296.1	45.9	41.6	385.6	41.3	633.5
Canoeing	31.8	1.7	1.6	36.8	15.5	66.0
Sailing	23.7	0.0	6.2	29.9	4.5	51.5
Water skiing	21.7	0.0	0.6	22.2	2.7	30.1
Total*	1,001.7	278.6	1,064.6	2,407.2	473.6	4,334.1

* *Totals will include extensive double counting, as someone fishing from a boat is both boating and fishing.*

members. Jobs created by such tourism ventures, however, are typically part-time or seasonal in nature and rarely include fringe benefits (McDonough et al., 1999). And despite the Eastern UP's natural resource amenities and outdoor recreation opportunities on public lands, government cutbacks in the Forest Service and the Michigan DNR have reduced these agencies' employment levels (Steffens and Stevens, 1996).

The character and backgrounds of Eastern UP residents are changing as well. While overall population levels are low, the proportion of those residents who are in older age groups is relatively high, with approximately 15% of the population over 65 years old (Table 4). Stynes and Olivo (1990) predict that senior citizens will continue to migrate to non-metropolitan areas, including the Eastern UP, during the next 30 years. Retirement migration into an area can bring a relatively stable income through transfer payments and investment incomes, while at the same time increase demand for health-related industries and certain leisure opportunities (Reeder and Glasgow, 1990).

Table 4. Proportion of age classes by county and state (U.S. Census, 1990).

AGE	Chippewa	Luce	Mackinac	Michigan
17 or younger	23.35	27.21	25.91	26.45
18-44 years	46.67	33.91	34.56	42.87
45-64 years	17.44	21.64	22.51	18.75
65 or older	12.54	17.25	17.01	11.92

Seasonal homeowners are also a growing population in the area. Seasonal homeowner spending rivals all spending by traditional visitors who stay in commercial lodging, such as hotels and motels. Since choosing a seasonal home requires a large investment of time and money, owners tend to be wealthier than the general population (Stynes and Zheng, 1995). Seasonals also tend to be older, and these homes are therefore

often purchased as potential retirement properties. Reasons for owning a seasonal home include getting away and relaxing, spending time with friends and family, and recreating outdoors. Once again, these patterns tend to increase demands on local services, including transportation, health, and recreation.

Although the communities of the Eastern UP once depended on the timber extraction industries of the past, economic and recreational data from Tables 2 and 3 show that the region is now expanding its economy beyond the traditional extractive industries by focusing on various amenity-based attractions. With the influx of additional visitors, seasonal homeowners, and retirees come diverse sets of perceptions about how the region is changing, according to oral history interviews conducted with long term residents (Kakoyannis, 1997). For instance, when residents are asked about their images of the Eastern UP in the near future, many express the feeling that growth and development are inevitable. One Chippewa County resident observed "*...in the next 5 years, there's gonna be some real rude awakenings...more and more people are gonna be movin' to the area, I believe.*" Concerns about crowding and the effects of additional development were also expressed. One Luce County resident said, "*...in Michigan we're going to grow and continue to have population increases to the point to where we're not going to have a very good life because depending on resources for we're going to dilute what's there...so the outlook, in my opinion, is poor.*" A Mackinac County resident expressed concerns about changes in the types of residents and corresponding land values. "*All the land around the lakes are going to be purchased by people that can afford it, they are driving off local people now...I mean people are just going to swarm in proximity to the expressway here, and the land is going to become so valuable...*" There

is a sense of helplessness expressed when residents discuss such changes,. Many feel that these changes will take place regardless of their personal preferences. *"There's nothin' you can do about it. You can't stop it. I wish you could but you can't,"* stated one Chippewa County resident. Another in Mackinac County said, *"...you're going to have it built up more and more all the time around here and that's, that's something you're not going to stop."* A few residents expressed concerns about local officials' involvement in this process. *"[What do I like] Least? Well, I guess sometimes their high-handed county government. You know, what they're trying to do is develop,"* observed one Luce County resident. A senior citizen from Chippewa County expressed a need for vigilance when it comes to their elected officials. *"I think we have to watch our ah, legislators because they do things more for their own benefit or their party's benefit, than they do for the general benefit..."*

Despite their perceived lack of control over the situation, most residents were willing to describe their vision of a preferred future for the region. Preferences for future conditions are based in part on the goals and purposes of why both seasonal and permanent residents want to be in the Eastern UP in the first place. For instance, one of the most common preferences expressed by permanent residents relates to the retention of young people, reflecting the "brain drain" concerns documented in rural sociology literature (Humphrey et al., 1993). Reasons for an expressed interest in development of new businesses or industry is usually related to having available jobs for their children so they can remain in the Eastern UP. One Luce County man summarized by stating,

> *"But they [the young people] can't making a living here. So I would like to see the UP and Luce County grow to a point that it will still be a great place to raise kids but they can make a living here, so that once they're raised they don't have to*

move away. I think, really, that would probably be the best thing that could happen to Luce County."

Seasonal residents were more likely to express an interest in keeping future conditions as they are today. A seasonal resident from Neebish Island said, *"Well, I think most...of the people on the island...would like to have it stay just about like it is ..."*

Results from a general population survey conducted as part of a larger study of attitudes toward economic and environmental conditions in the Eastern UP both confirm and confound the observations from the oral histories (McDonough et al., 1999). The questionnaire consisted of a set of questions asking residents about their perceptions of, and preferences for, particular characteristics in the region. Respondents were asked to rate a series of future development strategies for the Eastern UP. These selections and the relative percent of respondents who support them are listed in Figure 3. The list included a range of resource protection and economic development of strategies. The alternative that gathered the highest percentage of support from respondents was "setting aside natural areas." Amenity-based opportunities and development, including more recreation and tourism development, also were supported. On the other hand, many of the participants in the oral histories expressed concerns about the availability of full time, high wage jobs. These results illustrate the dilemma residents face, since setting aside lands and promoting tourism with primarily minimum wage level jobs does not satisfy the need for strong employment opportunities. Multiple views of ideal future conditions affect the way local officials make decisions for future economic and resource development strategies based on the social forces that exist in their communities. Both elected officials, such as county commissioners or township supervisors, and appointed or hired personnel, such as public property managers or directors of local Chambers of

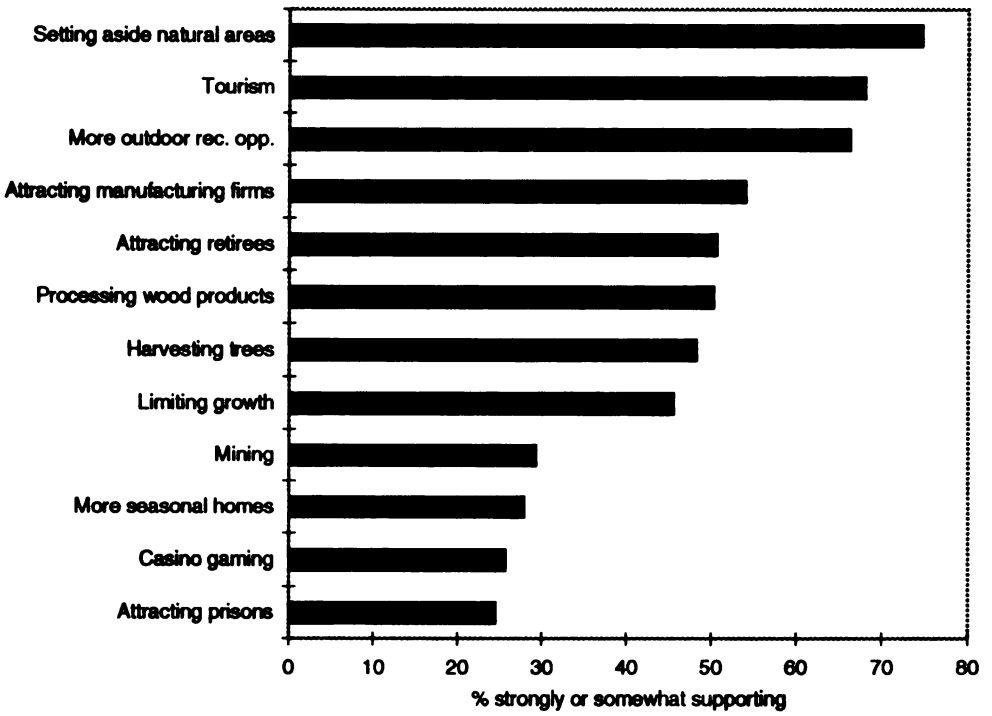


Figure 3. Percent of respondents who support the given strategies for future development in the Eastern UP.

Commerce, must find ways to accommodate these economic and social changes that are taking place. Land management agency personnel in the region must manage vast tracts of open land in a way that satisfies the various use demands of both local constituents and larger agency policies. Since a significant proportion of the public forest property in the Eastern UP is available for timber management, a central focus for managers has involved timber production that meets market demand and local processing facility needs (Beckley and Korber, 1995). In the past few decades, however, shifts in policy have charged agency decision-makers with considering a wider variety of values and concerns when planning resource management activities. They now must consider the entire ecosystem when managing forests, rather than compartmentalizing the various resources

into management of wood, wildlife, and people (Beckley and Korber, 1995). These shifts require a wider array of skills, yet agencies are slow to provide the necessary training so that agency personnel may better deal with the additional responsibilities.

Local government officials in rural communities are often not technically or administratively equipped to handle drastic changes in their region (Brown and Glasgow, 1991). Perceived increases in population and tourism growth in the Eastern UP not only leave residents with a sense of helplessness, but also create new challenges to local officials who must bear the burden of accommodating increased demand for public services. Changes in the composition of the local population, such as in the Eastern UP where there are increases in retirees and seasonals, can shift social perceptions of how community resources should be managed. As Brown and Glasgow (1991) suggest: "Local decisions and actions are no longer taken (if they ever were) in isolation or in response to purely local needs and interests. Local government officials must observe extralocal rules, mandates, and regulations (p. 198)." Local governments in rural areas tend to be conservative and relatively nonconfrontational, and officials in various governmental capacities are usually paid a token salary for their efforts. Consequently, officials such as county commissioners and township trustees can spare precious little time or resources learning new planning or governing techniques. Yet local governmental bodies must look beyond business as usual, and find creative ways to use financial and technical resources more effectively. At the same time, they still must work toward reaching the perceived goals and demands of their constituents.

If the natural resource agency personnel and local government officials in the Eastern UP do indeed face the above challenges in their respective positions, how do

their situations affect the economic and environmental sustainability of the region? It is not understood how these local officials maintain their connections with local and extralocal interests that could potentially affect their communities. It is also not clear whether their attitudes toward future conditions in the region resemble those of their constituents. The next chapter examines the concepts that have been used to study the ways local officials deal with economic, social and environmental changes, and how these conceptual bases can be used as a foundation for this study.

CHAPTER III:
CONCEPTS OF IDENTITY AND SOCIAL NETWORKS IN RURAL SETTINGS

Residents and local officials alike express concern over the fate of communities in their region. Rural nonfarm aspects of locales have been largely ignored in most economic recovery efforts, and advocacy networks outside agricultural interests have been weak. Many researchers with wide range of backgrounds have attempted to explain the underlying causes of these persistent problems, including internal colonialism, power-based theories, human capital and rational choice (Humphrey et al., 1993; Freudenburg and Gramling, 1994; Peluso et al., 1994). Many of these concepts use economic or political structures as their foundation, while others focus on the agency of individuals or communities that ultimately result in perpetuating rural problems. But rural natural resource-dependent regions provide more than substance for economic recovery through industrial development. The natural resources that remain so prominent in regions such as the Eastern UP also play a vital role in peoples' sense of identity and attachment to place (Cantrill, 1998; Burnett, 1998; Hummon, 1986). This aspect of rural areas should be considered when examining efforts to improve economic conditions.

Social constructions of nature and sources of rural identity

Decisions about whether to stay in a rural resource-dependent community do not entirely revolve around rational behavior, at least in the economic sense. An individual's sense of place may compel them to remain, even if economic conditions are not ideal. According to Cantrill (1998), sense of place is defined as "...the perception of what is most salient in a specific location, which may be reflected in value preferences or how that specific place figures in discourse." He suggests that sense of place helps to define

the individual, or self identity, and that the surrounding environment (both natural and human constructed) serves in part as a source of that definition. Even residents who are new to rural locations typically find ways to become a part of their surrounding community. Rural identity and related constructions of nature have been found to correlate with length of residence in an area (Cantrill, 1998; Burnett, 1998). For instance, Burnett (1998) discusses the 'otherness' of newcomers to a rural community. In a case study involving the examination of rural communities in Scotland, she describes the relationship between local development initiatives and the importance residents place on a sense of local identity in that development. Although in-migrants are regarded as a source of economic development for a rural area, and are encouraged to accommodate and engage in all things 'local,' these new residents are often excluded from local frames of reference, such as shared community history. New residents often exhibit 'alternative lifestyles' or higher levels of wealth that run counter to traditional sources of identity.

Although Burnett's examination does not explicitly include social constructions of nature, it could be argued that local identities of long-term residents often differ from residents who had recently moved into the area. Cantrill (1998) explores these types of relationships in his study of identification with natural environments and attachment to place among two different populations in Munising, Michigan. He conducted interviews with residents who had lived in the area for various amounts of time and asked them about the features of the local area that they felt were special, and the qualities of the area that made them feel connected to it. Content analysis of the interviews revealed that generally people stressed features and connections related either to the natural environment, or to their social relationships, or to both at the same time. Cantrill

concluded that those residents who had spent fewer years living in the area were more likely to identify specifically with aspects of nature in their surroundings. For those living there for longer periods of time, independent of age, the natural environment is still important, but it is mostly valued in the context of their social relations and the community at large. An interesting implication in this research is that, as the Munising community experiences the typical 'brain drain' problems of young people moving away for education opportunities and better employment, and as new residents move in (usually with little to no preestablished social relationships in the area), community identities that are attached to the natural world may become stronger (Cantrill, 1998). The potential shift in identification with nature may very well affect resident attitudes toward various forms of economic development and growth.

Earlier concerns among social researchers asserted that modern American individuals with their greater mobility and mass-produced neighborhoods could be considered "socially rootless (Hummon, 1986)." However, more recent work has revealed that identification with community, wherever it might be located, is still common among individuals. Hummon (1986) interviewed residents in urban, suburban, and rural settings to understand the meanings they attached to their locales, and their personal identification with them. Most expressed some sort of attachment to their area, with residents living in the countryside constructing their identity with such personal values as friendliness, openness, and a sense of independence (self-sufficiency). In addition, many infused these self-images with an interest in the outdoors, valuing such characteristics as fresh air, uncrowded open space, and outdoor activities. Their constructions of nature as a source of rejuvenation and insulation from others help these residents to distinguish themselves

from the urban or suburban 'other.' Natural surroundings therefore seem to be especially important in rural resource-based communities.

Frauws' utilitarian and hedonist discourses

Despite these attachments to the natural world, it is clear that natural resource-based communities still struggle and hope to extend their focus beyond single-company, resource extraction economies. Frauws (1998) examines three discourses on how various interests would like to see rural settings developed in the future. Although his focus is on rural spaces in the Netherlands, the concepts can relate to development strategies in natural resource-dependent locations.

1) Agri-ruralist discourse. This relates directly to rural associations with agriculture, where farming is considered to be the economic activity that is vital to the health of rural economies. Farmers are seen as the source of a socio-cultural, "rural renewal" (p. 59) complete with the traditional values associated with a romanticized view of the countryside.
2) Utilitarian discourse. Any development activities that bring about the maximum economic potential possible are appropriate. In this view, the country is treated just like any other potential 'site' for development. This parallels such concepts as 'maximum sustainable yield' in forestry practices that does not see a necessity in incorporating socio-cultural factors in the maximization equation. Environmental factors should only be a concern if they somehow threaten that yield.
3) Hedonist discourse. Frauws considers this discourse to be the most multidirectional. It focuses on 'quality of life' issues which can range from instrumental to intrinsic values.

This implies varying levels of concern for environmental, socio-cultural, and economic conditions in a community.

Frauws recognizes that identifying these discourses does not suggest that there is a one-to-one relationship between those of popular opinion and prevailing political agendas. For instance, in the Netherlands, there is a considerable popular occurrence of the hedonist style of discourse, but development trends in rural areas seem to be reflecting a more utilitarian discourse. Based on previous observations with residents in the Eastern UP, all three discourses were represented in the discussions. Local officials in the region, however, were not part of Kakoyannis' (1997) study. Based on previous work on rural identities and various forms of discourse in communities, it is not clear if local officials who make conservation and economic development decisions have a propensity to identify with certain types of discourse or particular constituents.

Social capital and social networks

A new wave of research is attempting to understand how success in alleviating poverty can happen at the community level (rather than the individual level). Much ado has been directed at the expressions of social capital, which focus on the benefits of social networks and relationships in a community. Researchers are beginning to make attempts to sort out the flurry of work and discussion that uses this term as a focal point (Portes, 1998; Wall et al., 1998; Flora, 1998; Woolcock, 1998). The classic use of the term 'capital' was originally limited to kinds of productive wealth which can be employed for the creation of more wealth. Attaching the 'social' to this term is in part an attempt to narrow the gap between the work of sociologists and economists (Portes, 1998). Social capital concepts follow two major foci: "the mutual relations, interactions, and networks

that emerge among human groups" and "the level of trust found within a particular group or community" (Wall et al., 1998; p. 303). The concept has reached buzzword status as a result of inconsistent and nebulous definitions. Researchers and policymakers alike are attempting to further the causes of community vitality, education and learning, social mobility, and economic growth through identification of social capital's vital ingredients. For proponents, it is a way to facilitate partnerships and cooperation, what Day (1998) describes as core principles of community development.

Classical sociological connections

Recent examinations have made extensive associations between various meanings of social capital and classical sociological theory (Flora, 1998; Wall, Ferrazzi, and Schryer, 1998; Portes and Sensenbrenner, 1993). For instance, Durkheim's work emphasizes that, as individuals are socialized, they take in the norms and values associated with those around them. This value introjection ultimately forms the "non-contractual aspects of contractual solidarity" that accompanies cooperation and mutual trust (Portes and Sensenbrenner, 1993). Individuals therefore behave in ways that lie beyond self-interest, which is an underlying principle in most social capital concepts.

A related approach to describing the basis behind cooperation and mutual trust is described as enforceable trust (Portes and Sensenbrenner, 1993). Max Weber originally used this concept when describing formal and substantive rationality. While formal rationality relies on bureaucratic institutions to enforce cooperation and exchange according to agreed-upon rules, substantive rationality involves traditional (non-rational) customs such as those that exist through family ties. Individuals set aside their own immediate gains in expectation of favorable membership in a socially and economically

dominant group. This is a purely utilitarian way of looking at cooperation within a group, but it does have the advantage of placing importance on the structural web of social networks.

Marx and Engels focused extensively on the social solidarity associated with exploited classes. In this case, it is not the noncontractual elements nor the set of accepted norms that bind individuals together, but the shared struggles they face by the dominant class (Portes and Sensenbrenner, 1993). Marx referred to this as bounded solidarity, where adverse social conditions serve to encourage intra-group cohesion (Woolcock, 1998). Although this perspective could serve as a basis for social movements, it has the disadvantage of ignoring cooperation among groups that involve situations other than those of negative influences.

Yet another source of social capital concepts relies on the work of Simmel. His introductory work on social networks at the beginning of this century found that individuals' interactions in a group through such symbolic means as language, technology, and social institutions have a profound effect on how they behave. He also was instrumental in showing that networks can vary in their structure and type of interactions based on their size (Collins and Makowsky, 1998). Other work by Simmel focused on reciprocity transactions which describe how, at the individual level, the process of exchange between actors takes place (Woolcock, 1998; Portes and Sensenbrenner, 1993). Favors and information are given from one member to another member of a group with the expectation that he/she will receive a corresponding amount of favor in return. Not only is this a purely utilitarian way of conducting life's business,

but all of these actions are inherently selfish. The individual only takes in consideration what will eventually be acquired from his/her efforts.

These individual classical examples provide various elemental pieces of the social capital concept puzzle. The motivations and conditions under which social capital exists can be viewed through various dichotomies, based on the classic foci: class oppression versus cooperation, individual versus network levels, dynamic versus static network links, or selfish versus altruistic motivations. Regardless of which approach is used, Flora (1998) points out that using the term 'capital' when examining these conditions differs in that most communities do not consciously create social capital. Cooperation and participation by members of a group in various situations over a long period of time is said to create or foster social capital, but it appears to serve only as a by-product of those actions. Coleman (1988) describes this as the 'inadvertent' aspect of social capital.

Concerns about including cooperation and trust in social capital theory have been voiced in recent work. Researchers have pointed out how the definitions of social capital are usually circular in nature. For instance, Putnam (1993) examined the amount of civic involvement in various Italian villages as a measure of its overall government performance and economic sustainability. His finding that civic communities are high in public participation and involvement can be summed up in the words of Portes and Landolt's (1996) critique, "If your town is 'civic,' it does civic things; if it is 'uncivic,' it does not" (p. 21). They point out that this tautology does nothing to define or understand the nature of social cooperation and trust, nor how it is related to community sustainability. Further, social capital cannot be bought or 'accumulated' as other forms of capital can be.

The argument on how to attain stronger levels of social 'civic' capital also leads to theoretical concerns related to policy. Because of the circular nature of many concepts used to describe the benefits of social capital, policymakers with contradictory strategies can use it to justify their particular position (Woolcock, 1998). Many equate the conditions associated with social capital with Tonnies' *gemeinschaft*, and lament the apparent decline in local civic associations that kept it going. Conservative philosophies suggest that state intervention is partly responsible for the wane in private social institutions, thus supporting their position that less government is better. At the very least, governments have no role in promoting civic associations, because it's not in the government's best interest to promote such personal agency. Conversely, liberal positions argue that policies can be created to provide a more stable and predictable environment, thus making it easier for civic associations and other forms of social capital to develop. This perspective suggests the arrangement is mutually fulfilling--with a greater proportion of individuals volunteering and participating in civic activities, greater attention is directed toward encouraging a more responsive and responsible government. People gain greater access to vital information, as well as improved organizational skills to be able to discuss and interpret new information (Woolcock, 1998). These examples illustrate the almost universal agreement among policymakers that social capital is a valuable 'public good,' yet there is little to no shared conception of how to measure it, nor how it should be attained.

The significance of social networks

Social capital theory does not need to be abandoned entirely, however. Those who have been using the concept of social capital to examine the effectiveness of

communication in relation to social networks have typically focused on both the connections among individuals or groups within the network, and connections with other networks. Various terms and descriptions have been used to describe these networks and the actors in them. For instance, members can have few shared acquaintances among a group, or they can be more interlocking, where all members know and communicate with each other (Rogers and Kincaid, 1981). Members themselves are not considered to be equally communicative or to have similar status in the network structure. They can have such specialized roles as liaisons (those who are a member of one clique but interact with a member or members of another), bridges (those who are not members of either of two cliques but interact with certain members of each), or isolates (individuals who have no identification with the system). Ties or connections among members of a network can be influenced by such conditions as the length of time the connections have existed, a member's reciprocal behavior with others, and the affective intensity of the connections between members. Granovetter's (1973) examination of interpersonal networks found that information and behaviors within a given network are typically similar. Therefore, bridges and liaisons are important ties that connect two networks and channel new information or ways of doing things. Connections that are relatively low in frequency and/or intensity are therefore still important in communicating information and ideas.

Other research has focused on aspects of social networks that reach beyond basic structural components. Davern's (1997) examination of economic-based social networks divided different aspects of social networks into four basic components that might help to sort out possible applications in social capital models. Networks in his conceptualization can have:

1) a structural component, where the configuration of the network itself is important (much like original sociograms and their graphic representations of groups);
2) a resource component, where certain characteristics of each actor in a network, such as class, knowledge, or abilities, are sources of assistance for other actors (corresponding to original descriptions of opinion leaders);
3) a normative component, where formal or informal rules and sanctions govern how actors should behave (corresponding to issues of trust and reciprocation as described in social capital); and
4) a dynamic component, which describes the formation and dissolution of social ties between actors over time (Davern, 1997).

He proposes using these distinctions to examine various economic strategies, ranging from setting wage rates for employees in a firm, to understanding class development and other socioeconomic processes, to markets and their effect on exchange rates. These four components of social networks are also important when considering issues related to social capital in communities.

Limitations of social capital applications

Many uncritically accept the axiom that, if some social capital is good, more is better. The perception that social capital provides many benefits without any costs is ultimately misleading, however. For instance, if members of a social network are tightly knit, this would generally be accepted as contributing to high social capital (according to previous descriptions). Stronger intra-network ties is not necessarily a good condition, however, since these may ultimately result in the exclusion of outsiders (Portes and Landolt, 1996). This falls in line with classical Marxian perspectives, where one cultural

group dominates a local industry, or where members of a minority group attempt and fail to gain access to clients in certain industries. Many business transactions are still made on the golf course or during boating excursions--informal arrangements that are not accessible to those who do not have the financial means to participate.

Another limitation that accompanies close social network ties relates to ultimately hegemonic belief systems, values, or activities that can restrict individual agency (Woolcock, 1998; Portes and Landolt, 1996). Tightly integrated communities, for example, may often bring benefits of mutual support, but also demand a certain amount of conformity. This set of concerns relates directly to Granovetter's (1985) concept of embeddedness. Individual action is mitigated by the social structures that surround them. Social pressures such as those requiring the provision of favors for friends and family can undermine sincere business development efforts (Portes and Landolt, 1996). Failures to do as the social network demands may result in permanent exclusion from further group benefits. At its worst, these kinds of social ties can become sources of corruption or exploitation (Woolcock, 1998).

An illustration of problematic conditions based on social capital can be found in Flora's (1998) examination of communities in the Midwest. One town named Riverview was found to be high in social capital factors, including well integrated social networks, and large number of civic, government, and church organizations. This would suggest that chances of success would be high if community-wide development projects were introduced. Upon further examination, however, it turns out that the high proportion of Catholic members in the community affected such efforts. Many local leaders were Catholic, whom Flora referred to as the "power brokers" of the area. Without their favor,

any proposed project would be rejected in its early stages. Although the researchers found that the power had been passed down from older generations to a set of under-40 leaders, it turned out that most were members of the "old guard" families in the community. Furthermore, women were underrepresented in the leadership structure, although they owned many of the active downtown businesses. Riverview is an excellent example of how, on the surface, a community can be regarded as high in social capital, but low in inclusive and effective social and economic development projects.

Elements of social capital in rural settings

Despite the potentially exclusive nature of social networks in a community, there are instances of community action fostering positive, sustainable economic and social development. Following these leads, we can continue to search for effective local community relationships and social networks that may be used to provide relief from rural poverty conditions. Working with these keys to local networks, argues Day (1998), will discourage the prevailing belief that rural communities must either change their culture or be forever considered merely as a 'heritage' area. Local opinion leaders typically serve as primary storehouses of knowledge, and may take influential roles in promoting information exchange and broader perspectives to local issues. The role of liaisons and bridges is also key in this information-sharing process. These ties have been particularly important in finding out about such economic opportunities as employment in a local area (Davern, 1998). In rural areas with scarce job availability, these ties may be one of the few ways a resident can improve his/her economic situation.

Since the search for appropriate development in an area can be a slow process requiring patience and perseverance, long-term social ties among residents are vital in

attaining and maintaining economic viability for the community. O'Brien et al.'s study on communities in Missouri found that an area is more likely to maintain its viability if local leaders (including heads of organizations and local elected officials) formed formal social networks that enabled them to participate in projects together. Viability in this case is defined as "the extent to which rural communities continue to function as trade and service centers" (p. 111).The fostering of reciprocation and trust through these projects allowed communities to maintain their economic health. The authors admit, however, that viability in these areas was mostly due to large hog farm operations, which did not necessarily foster good social or environmental conditions.

Brown and Glasgow (1991) consider a different focus when measuring success in community viability. Capacity building, a "community's ability to manage its own affairs" (p. 200), is a concept that transcends standard development policy. Instead of focusing solely on private business and economic development, capacity building turns toward public infrastructure development. This can include such benefits as access to public services, as well as expertise in technical and organizational skills. The capability of local governments and other organizations to provide these services to their constituents is dependent on the social networks that are maintained. According to Brown and Glasgow, access to technical information and information on prevailing public opinion on local issues can be gained more easily with the formation of inter-community partnerships. Better connections among individuals and organizations, both within and outside an area, build the capacity to better deal with changes or challenges that rural communities face. If rural community changes include in-migration or population growth, local officials will find themselves in a better position to deal with these changes

if they gain leadership and planning skills from professional sources. This once again emphasizes the importance of connections with others, particularly outside their own region, who are capable of sharing this knowledge and expertise with local officials.

The growth machine as an exclusionary form of social capital

Flora (1998) suggests there must be high inter- and intra-community linkages, vertical and horizontal linkages, and acceptance of multiple viewpoints to maintain economic and social stability in a community. Although it is generally believed that rural social networks have high intra-community ties (Hofferth and Iceland, 1998), there may be fewer opportunities to create and maintain links outside the area. In addition, issues related to internal colonialism could be considered a form of vertical domination without associated linkages with the rest of the community. Although Flora (1998) argues that socioeconomic inequality (such as that found between local elites and lower-income individuals) does not necessarily suggest poor relationships, it is possible that social networks among the elite exclude others in the community. "If a development-oriented business elite takes care that others are incorporated into social action—if mechanisms for inclusion of various social groups are strong—the outcome may be positive for the entire community, even though the effort is elite led (Sharp, 1998)" (p. 501). If, however, elite business owners do not have these linkages, unwanted growth and development (in the eyes of general residents) could take place. One could consider such conditions as high in social capital, but they can also be considered analogous to what Molotch (1976) ultimately refers to as a growth machine.

Molotch, in his descriptions of municipal functions in 1976, points out that resident concerns about jobs and general economic health are played upon by business

and industry by influencing the policies of local government officials to make a community favorable for unlimited growth and development opportunities. He defined this coalition of business elites and government officials as the "growth machine (Molotch, 1976)." His original work altered dominant pluralistic theories in city politics. Instead of looking at a city's political functions as a multifaceted combination of services, the political structure's sole underlying and consistent goal is to facilitate a climate for unlimited growth. If growth was in actuality the central concern of local government, then businesses and other entrepreneurial interests could align themselves with the dominant local coalition in land development issues. Besides business and local government officials, Molotch included planners, the media, and university administrators as additional members of an elite group of growth pushers that ultimately dominates the way growth is invited into their area. In attempts to make sure that business does not locate elsewhere, governments make other benefits available to industries, such as tax breaks, good (docile) labor relations, and well structured (and plentiful) transportation systems. The growth machine coalition also (consciously or unconsciously) covers their underlying interests with a veneer of support for events and activities that encourage civic pride and a sense of territorial bonding.

Proponents of economic development argue that growth not only increases job opportunities and strengthens communities fiscally, but also increases the local tax base and stabilizes the relationship between a household's taxes and the public services it receives (Peterson, 1981). Indeed, Baldassare (1981) concludes that rapid growth is especially good for non-metropolitan areas in providing local services and facilities, increasing personal satisfaction with the residential environment. Other researchers,

however, have countered these arguments, pointing out that job increases and higher tax bases are not necessarily resulting products of economic growth (Molotch, 1976; Logan and Molotch, 1987; Vogel and Swanson, 1989; Schneider, 1992). Residents often find that, although business development increases some job opportunities in an area, it also draws more in-migrants that increase local populations. This results in greater stresses on social services and infrastructure while at the same time leaving job opportunities flat. As effects of crowding and cost of living increase, local residents may find that they have lost a great deal of what they enjoyed about their community in the first place. Residents ultimately pay the price for these additional businesses as the burden of increased demands on infrastructure and municipal services weigh more heavily on available municipal funds.

Local officials in the Growth Machine

Molotch characterized local government officials as individuals who have the power to become part of the coalition that makes pro-growth development decisions at any cost to residents. This suggests a struggle of an elite class that dominates the workings of local government, rather than the more human ecological view of efficient free market democracies. Box (1995) points out that, although the capitalist political system does allow access to policy, there is at least some degree of elite control based on power and wealth. The concern among these and other researchers is not that certain members of a community stand to gain from growth strategies, but that local policymakers do not have the necessary tools in place to determine and include what true community interests really are (Vogel and Swanson, 1989). Since one of the central problems is the difficulty in attaining consensus on the best interests of the community,

local government officials run the risk of becoming instruments of the narrow views related to those who are politically attentive. Local government officials may therefore be neither representative nor attuned to the interests and concerns of those they govern.

Luloff and Hodges (1992) illustrated this potential lack of connection between local officials and their constituents in their study of attitudes toward economic development and growth in northern New Hampshire. "The implicit assumption is that if bureaucrats and the public hold similar attitudes, then bureaucratic decisions and actions will reflect the interests and desires of the public" (p. 384). They found that there were substantive differences between local officials' and constituents' attitudes on growth and development issues. Although an official's concerns must often consider the requirements of various industries and government agencies, a lack of congruence between leaders and residents may result in decision-making that negatively affects local quality of life.

According to other researchers, not all growth regimes are equally powerful, nor are they similar structurally. Elkin (1987) grouped these regimes into three categories, pluralist, federalist, and entrepreneurial. In this typology, the federalist regime eclipsed the previous dominant pluralist structure in the 1960s when minority groups struggled to gain better representation in their areas. Growth regimes co-opted the minority leaders into the growth mentality to improve the job opportunities and economic well-being of poorer minority neighborhoods. Growing out of the federalist regime, the entrepreneurial regime transcends racial and minority struggles to include all sectors in unlimited growth objectives. This most nearly reflects Molotch's classic description of the growth machine. The collection of business elites and subordinated local officials combine to create an

alliance that allows for unimpeded growth. Although regime theories such as these point out that the balance of politics can be variable, "...in all three types, a progrowth coalition is dominant; what differentiates them is the influence accorded to other groups, including growth opponents (Logan, Whaley, and Crowder, 1997)."

Individuals and established organizations who oppose unlimited economic growth do in fact exist. Residents of an area may initially support uncontrolled growth along with elected officials and business leaders because they may stand to benefit from the improvements in an area's amenities that have been put in place to attract new businesses. If tax structures and cost of living increase too drastically, however, residents can become disenchanted, and may organize to oppose further growth. Molotch (1976) described them as "antigrowth" movements. This term is an interesting one, because its use implies a general dependence on growth terminology to describe those who oppose it. In any case, residents oppose growth for different reasons. Some focus on environmental or other human "carrying capacity" impacts, while others may not want the additional population growth that accompanies economic development (Vogel and Swanson, 1989). Growth advocates accuse these groups of being obstructionist or spreaders of dissent among the community—just another set of NIMBYs who don't want to take the bitter pill of some negative externalities to improve their area's economic stability. These types of opposition to growth vary across locations. Logan et al. (1997) have found that communities with many who are of higher socioeconomic status, those who face an environmental threat, or those with higher rates of civic organization are more likely to challenge the growth machine.

Local officials' responses to growth opposition also vary. In today's political climate, policies regarding economic development are rarely set without some consideration of environmental and social impacts. Warner and Molotch (1995) categorized three ways that growth control may be addressed by local government officials. Symbolic politics relates to situations where policy makers create superficial rules and pay lip service to controls, but essentially affect little. Episodic intervention, such as moratoriums or other temporary halts to actions, enacts sporadic regulations so that developers and business interests can take advantage of the resulting "windows" of opportunity when the regulations do not apply or expire. Finally, countervailing policies take place when government organizations become so complex or fragmented that their policies in different departments are inconsistent. Most of these responses ultimately confound efforts to slow growth in a community.

Growth management principles and practices

Although local officials may not have the ability or ambition to fully capture what amounts and types of economic growth their constituents are willing to accept, some in the past decade have used planning processes under the term "growth management" to capture pro- and anti-growth interests under the same umbrella. Although there are multiple definitions for growth management, Vogel and Swanson (1989) capture its essential nature:

> Growth management is touted as a rational planning process to arrive at community decisions regarding growth rates, the mix of residential, industrial, and commercial development, the tradeoffs between 'use' and 'exchange' values, the provision of public services, and the protection of the environment (p. 66).

Local officials see it as a compromise between extreme growth and anti-growth forces, although proponents of different sides of the issue may not see it as such. As Molotch (1976) mentions, planning processes in these situations typically address the question of *where* to locate development rather than asking the question of *whether* the development should take place at all. Supporters of growth management promote the process as a way to bring all concerned parties to the table, but these collaborative efforts often overlook certain crucial issues. For instance, local policymakers are not charged to separate the issues related to job creation from those of population growth (Vogel and Swanson, 1989), and usually accept increases in populations as long as the additional needed social support and infrastructure services, such as roads, health services, and housing, are anticipated. In fact, economic development plans and growth management plans are not necessarily coordinated, thus increasing the chances that Warner and Molotch's previously described countervailing policies will occur. The separateness of these types of plans also ignores the relationships among economic, social, and environmental sustainability.

Gill and Williams (1994) examined a growth management application in two mountain tourism communities: Aspen, Colorado and Whistler, British Columbia. The authors felt that the growth management methods used in these locations went beyond traditional planning approaches by including specific policy statements and budget guidelines, and defined implementation strategies to reach the communities' defined goals. As with other planning processes, however, officials did not have effective mechanisms in place to include all stakeholders in the process. In addition, it appeared in these two examples that merely providing accommodations for inevitable increases in the

local population was the central focus, falling in line with Vogel and Swanson's (1989) observations. Gill and Williams point out that growth management efforts are only successful if support for growth and development goals extend beyond the local area to include higher regional and state levels of government.

Local effectiveness

Businesses have typically complained that growth controls and regulations initiated by anti-growth agendas have inhibited the economic health of an area and created housing shortages. But how effective are these measures in controlling development? Conversely, how effective are growth forces in promoting their community for additional development? Results from previous researchers have been mixed. Warner and Molotch (1995) point out that growth rates among cities with growth controls were no slower in 1980 population and development increases than those without such controls, according to studies at that time. In their study of three California locations, the authors concluded that growth controls such as zoning are effective only when there is a sustained favorable political environment that, over time, institutionalizes these growth controls. Loosely organized or temporary controls rarely succeed in slowing development or population increases. In some areas with strict zoning or housing development restrictions, housing prices increased, resulting in (intentional or unintentional) exclusion of certain socioeconomic groups from that area (Logan et al., 1997). It appears that such growth control measures serve to redirect development rather than slowing it.

Effectiveness of development promotion in areas has also received mixed reviews. In Humphrey and Wilkinson's (1993) examination of growth promotion in rural Pennsylvania, they found significant positive effects on in-migration and property sales in

promoting recreation and tourism, but no effects in active promotion of communities in industrial, forest products and service-related economic sectors. McGranahan (1984) found that if local officials were more connected with extralocal elites, the community's population and manufacturing sectors were more likely to grow. He posits that officials' exposure to innovative opportunities and personal influence outside their local communities encourages local growth. Humphrey and Wilkinson (1993) also found that local officials who maintain connections and communication with others both outside their locales and among others in surrounding communities are more effective in initiating local growth.

Economic Development in Rural Communities

Many of the previously mentioned authors have examined the growth machine and its related issues in an urban or suburban setting. Logan et al. (1997) point out that the effects of the growth machine are not clear in rural community studies. They suggest that these areas have fewer resources to lure outside investors, which may reduce the influence of growth advocates. On the contrary, it would seem that there are many amenities, such as low tax rates, affordable property values, and a "willing" workforce that serve as incentives to draw certain industries.

It is not prudent to assume that all local officials wholeheartedly support the growth machine. Some studies have examined possible variations in support for growth among political entities. In a study of metropolitan and nonmetropolitan mayors, Maurer and Christenson (1982) found that a larger proportion of large town mayors (population 1,000 or over) were more growth-oriented than small town mayors (population under 1,000). Although these authors point out that costs to local government often outweigh

the benefits of development, and local residents often bear the brunt of those costs while a few private sector elites gain the benefits, these local officials still regard growth as important for their communities. Although Maurer and Christenson did examine nonmetro communities, they focused primarily on industrial development as opposed to the growth of tourism and natural resource-oriented interests. These regional differences may affect how residents and their local officials view growth.

This discussion illustrates the importance of knowing who has power and influence on growth decisions in a community. Local elites may or may not include elected officials or other formal decision makers, and may not be what one would consider to be local opinion leaders. In fact, there may be important distinctions between opinions of local elected officials (such as mayors or councilmembers), non-elected local government administrators (such as regional foresters or planners), opinion leaders (such as business entrepreneurs or members of local fraternal organizations), and other residents. A good example of how perceptions may differ can be found in a natural resource and economic development study of Oakridge, Oregon (Hibbard, 1986). Opinion leaders in this community see the average resident as apathetic and resistant to change, even though residents apparently feel there is a need for some economic development. Resident interviews, on the other hand, revealed that they want the town to be successful, and express a genuine caring for their community. They take pride in their self-sufficiency. They love the natural beauty of the area, and want the town to remain small and uncrowded (Hibbard, 1986). This shows how difficult it is for local decision makers to determine resident preferences for economic development and natural resource

protection. This study also points out some of the relationships between residents and various community leaders, and their sense of what the community stands for.

Measuring preferences using conjoint analysis

If decision makers more clearly understood resident preferences, then this knowledge in turn should assist them in making more informed choices about development and protection. Researchers approach decision making in several ways (Stewart, 1994). For example, Abelson and Levi (1985) distinguish between structural decision making models and process decision making models. While process models examine the ways in which an individual makes decisions, structural models focus on the outcomes, or choices, that are ultimately made. Recreation and marketing disciplines often use a particular form of structural modeling, called Information Integration Theory (IIT), because of its well-defined theoretical applications and clear statistical methods in comparing alternatives (Louviere, 1988). IIT has designed measurement techniques to understand how multi-attribute alternatives are subjectively evaluated. Experimental designs have more recently incorporated conjoint measurement, which examines how the evaluation of each attribute of an item affects consumer choice.

From the previous section discussing resident attitudes toward development and natural resource protection, there appear to be a variety of characteristics framing residents' perceptions of what is needed in their community for a favorable quality of life and economic stability. Determining the best mix of attributes that make their area an acceptable place to live, however, can be highly dependent on how preferences are measured. Conjoint analysis is based on the assumption that an individual's ability to evaluate an object is related to his or her perceptions of various important attributes (Toy,

Rager, and Guadagnolo, 1989). This method has been used extensively in consumer behavior and marketing literature to determine new product acceptance, market segmentation, or product positioning (Green and Krieger, 1991; Kuhfeld et al., 1994). The general steps in a conjoint analysis interview are:

> 1) provide a series of hypothetical choice alternatives, composed of various combinations of attribute levels that have been found to be important in evaluating a particular object;
>
> 2) transform the results to interval scale estimates of the utility (called part-worths) for each attribute level; and
>
> 3) combine the derived part-worths to determine the overall utility for the object with a particular set of characteristics (Joseph, Smit, and McIlravey, 1989).

This modeling approach represents a more realistic depiction of the decision process (Toy, Rager, and Guadagnolo, 1990).

There are several other issues in conjoint analysis that must be addressed. The attributes that are selected to describe the object must be of sufficient number to accurately measure preferred alternatives, but several attributes and levels require considerable amounts of time for the respondent to consider all possible combinations of these levels. A complicated set of attributes can make the survey tool cumbersome and confusing to the respondent. Regardless of the number of attributes included in the survey, all should be sufficiently independent of each other, so that any given aspect of the Eastern UP is not evaluated more than once.

There are several conjoint applications in previous research that diverge from the traditional marketing applications to assist in structuring the conjoint survey tool (Mackenzie, 1992; Dennis, 1997; Joseph, Smit, and McIlravey, 1989; Toy, Rager, and Guadagnolo, 1990). For example, Mackenzie (1992) used a full-profile method in his

study of preferred waterfowl hunting trips that creates alternatives with a combination of all attributes with varying levels. Having each respondent rate every possible combination of attribute levels would be too taxing, so each is given only a fraction of alternatives to reduce fatigue. Results of this study found, among other things, that waterfowl hunters are generally willing to pay more in travel expenses to save time when getting to their destination.

Other variations on the conjoint method have been developed to further reduce respondent fatigue. One method, called hybrid conjoint, incorporates a combination of self-explication techniques as well as a tradeoff exercise (Toy et al., 1990). These authors used the method to determine what aspects of a country club could be improved. Respondents were first asked to rank the attributes in order of importance, and also indicate which attribute levels were preferred, acceptable, or unacceptable. The second step involved a full-profile conjoint analysis of those same attributes. After gathering all respondent data, the authors could then use the results in market segmentation simulations and pricing strategies.

An example of an application related to land use management is provided by Don Dennis (1997). He measured the most preferred combination of timber harvesting, wildlife management, hiking trails, snowmobile use, and ORV use in the Green Mountain National Forest in Vermont. A unique alternative combination of these attributes with varying levels of each was provided on each of 18 cards. Respondents then ranked these cards from most to least preferred. Generally speaking, the author found that respondents were interested in multiple uses of the forest, combining a moderate amount of timber harvesting, a mix of wildlife habitat management, an extended hiking trail system, and

some snowmobile use, but no ORV trails. Dennis asserted that these findings run in contrast to interest groups, who generally focus on one type or style of management to the exclusion of others. This type of conjoint analysis application allows resource managers to understand the combinations of uses that potential visitors to the forest are willing to accept.

Although these conjoint analysis examples illustrate how resource managers have attempted to measure multiple use preferences, the method has not been applied to the multiple concerns of local officials and residents in a rural natural resource-dependent region. Recognizing that these officials must often make tradeoffs among economic development and resource protection alternatives in their decision making processes, conjoint analysis may serve as a useful tool in gauging which choices will be most palatable to their constituents.

Local officials, levels of influence, and opinion leadership

Another body of literature examines the importance of opinion leadership in prevailing attitudes and preferences among the citizenry. Lazarsfeld et al. (1944) began the search for opinion leaders by focusing on concerns about how the media influences attitudes among the general public. The "magic bullet" or "hypodermic needle theory" (Weimann, 1994) asserted that the media had a direct, powerful influence on the opinions of all who heard their messages. Results from the studies, found in Lazarsfeld et al. (1944) *The People's Choice*, showed that there were no obvious magic bullets. Instead, there seemed to be a two-step flow to the communication. The logic behind this observation begins when individuals change their minds about topics or issues because of their personal interactions with others. The next step was to determine whether there are

some individuals who are more influential than others. Lazarsfeld's study found that certain people seemed to be more exposed to mass media, suggesting that these people served as the mediator between the media and the broader audience (Weimann, 1994). Later studies showed that the system is yet more complex. Using various techniques to identify these mediators, researchers found there are individuals who influence the opinions of those around them. There are generally four different methods that have been used to identify these opinion leaders. One method uses observers who monitor group activities and records the communication behavior among its members. This is only applicable, however, to very small groups who are located geographically close to each other. Another technique, called the sociometric method, asks members of a group who they turn to for information or advice, and those people who are named the most are considered opinion leaders. The sociometric method, however, is also limited to small groups since all members of that group must be questioned. Another method, called informants' ratings, reduces the need to contact all group members by identifying key informants who are found to be particularly knowledgeable about social ties. The challenge in this case is that chosen informants may not be particularly representative of the group, and that the group must still be located within known boundaries. The third technique, called the self-designating method, asks respondents a series of questions about their own perceived level of influence in the group. The reliability of the self-designation method, however, depends heavily on an individual's self-awareness and an accurate assessment of what other group members think of them. Each method has been used in particular settings to identify community leaders who in some way influence the opinions of others.

Through these various methods, opinion leaders were found to be experts in a particular area of expertise, and that a leader in one realm (such as public affairs, household goods, fashion, etc.) does not have identical personal characteristics with leaders in other realms. Additionally, opinion leaders in their respective fields of interest use more than mass media for information gathering, including such sources as written product literature and friends or acquaintances. Weimann's examination of various types of opinion leaders showed that these individuals come from various demographic backgrounds. People of both sexes, high or low incomes, and high or low formal education levels could all qualify as opinion leaders in certain realms.

Other researchers have critically examined the opinion leader concept, and have pointed out several flaws. For example, measures of leadership were often characterized in a dichotomous fashion—either an individual was an opinion leader or he/she wasn't. The opinion leader as described also overlooked the nature of his or her social network, as well as the horizontal or vertical links that may exist among themselves and other leaders. Katz and Lazarsfeld (1955) summarized the important characteristics that Weimann feels are important to making the concept of opinion leadership more complete: 1) Who one is—a person must personify a certain set of accepted values; 2) What one knows—a person must be competent in certain areas or fields; and 3) Whom one knows —a person must be strategically located in his or her particular social network.

Responding to these criticisms of the opinion leader concept, Weimann reconstructed it to create a scale that was applicable across various fields of interest. Using what he calls the Strength of Personality (PS) Scale, he defines individuals who rate highly on this scale as influentials. He used ten general statements to which subjects

can agree or disagree (Table 5). Summing the weighted values associated with each response, an individual can fall within one of four quartiles in personality strength;

Table 5. Weimann's (1994) Personality Strength (PS) Scale.

Statement	Weight Yes	No
1. I usually count on being successful in everything I do	13	7
2. I am rarely unsure about how I should behave	14	7
3. I like to assume responsibility	15	7
4. I like to take the lead when a group does things together	17	8
5. I enjoy convincing others of my opinions	15	7
6. I often notice that I serve as a model for others	16	8
7. I am good at getting what I want	14	7
8. I am often a step ahead of others	18	9
9. I own many things others envy me for	15	9
10. I often give others advice and suggestions	12	6

strong, above average, moderate, or weak. In his test of this scale, he found that, in contrast to opinion leaders, people who rate highly on the PS scale are more likely to be male, and are high on various socioeconomic measures such as income and education. Additionally, Weimann's network analysis of influentials in an Israeli kibbutz and in Germany found that they also tend to be centrally located in their social networks. He also found that influentials tend to be more socially active (at least in informal settings), and read more books and newspapers than those who scored lower on the PS scale. Overall, Weimann concluded that this type of measure better reflected levels of personal influence on others, based on both personal and social characteristics.

Summarizing conceptual frameworks

The theories relating to social networks and relationships illustrate the various ways local officials can be portrayed as members of their communities. Some theories

related to social capital focus on the structure and content of social networks, of which formal and informal leaders play an important part. To build capacity for improvements in social and economic conditions, members of these networks must share information and resources (Flora, 1998). Other studies have found that long-term relationships reinforce these networks and provide a sense of social and economic stability (O'Brien et al., 1998). Although strong and extended networks are generally seen as a good thing, they can also become exclusionary, inflexible, or hegemonic. If this network contains members of an elite class who encourage economic development and growth for their personal gain, this could be considered as Molotch's (1976) conception of a growth machine. Although these officials may be disconnected from their constituents, McGranahan (1984) suggests that connections with extralocal elites were evident in areas where populations and the manufacturing industry were growing. Some residents may support such high growth activities at the outset, but increased burdens on infrastructure, social services, and environmental conditions can sour those preferences. Molotch, however, focused his examinations on urban settings. When officials' growth attitudes are compared between metro and nonmetro regions, it appears that metro officials are more likely to support growth and development (Maurer and Christenson, 1982). Interest in tourism development and other natural resource-based industries were not explored, however, which apply directly to natural resource-dependent regions such as the Eastern UP.

Outright dismissal of resident opinion by officials is only one explanation as to why their development attitudes may differ. Local officials simply may not have the capacity to effectively gauge prevailing resident attitudes on these matters. Officials may

or may not serve as opinion leaders in their respective communities, nor might they be particularly influential in their existing social networks. As natural resource-dependent regions such as the Eastern UP begin to face an influx of newcomers who strongly identify with natural settings, it is not clearly understood how officials incorporate these potentially new attitudes in their decision making processes. Local officials' levels of local connectedness, opinion leadership, and personality strength should ultimately affect their ability to identify with the needs and preferences of constituents (even newcomers), and thus influence their expressed preferences for economic growth and development.

Applying conceptual approaches to the Eastern Upper Peninsula

Residents of the Eastern UP face similar concerns about their livelihoods and their communities that others in either rural or urban settings must deal with. Many have also encountered the problems associated with a community's sole reliance on one industry, and the consequent economic decline if that industry leaves (such as the Kincheloe air base closing in the late 1970s in Kinross). These concerns create an atmosphere that encourages economic growth and development as a necessary ingredient to community and regional sustainability. Attitudes regarding how and to what extent that development should occur, however, may vary considerably among different groups in the residential population.

Current growth levels and economic development in the Eastern UP do not seem to reflect high growth conditions, according to census data and economic indicators that have been tabulated for the region (McDonough et al., 1999). Residents of the Eastern UP who participated in the McDonough et al. study, however, expressed concerns about perceived population growth and development that is beginning to push its way into their

communities. This input from residents provides a baseline of information about their attitudes toward growth, which creates an opportunity to continue exploring more specific preferences for economic development and natural resource protection among both resident and local officials. Previous literature on economic development efforts in rural resource-dependent regions seem to portray local officials as either pro-growth or isolated and anti-change. Explorations appear to be lacking on how officials must address development while at the same time maintaining the rural character that serves as a basis for residents' local identity.

The reviewed literature offers some suggestions on how local officials in regions like the Eastern UP deal with perceived economic and social changes. Luloff and Hodges (1992) demonstrated that congruence between local officials' and residents' attitudes toward development and resource protection cannot be assumed. A critical step is to therefore determine how local officials in the Eastern UP reflect concerns among residents about growth, economic development, and natural resource protection. If there are differences between these two groups, however, the possible causes behind those differences need to be identified. Some authors have found that local networks with other officials are likely to result in successful efforts in improving economic conditions (Flora, 1998; O'Brien et al., 1998). Likewise, Humphrey and Wilkinson (1993) found that local officials who maintain connections with others outside their area are more effective in initiating local growth. This so-called form of social capital, however, may work to the disadvantage of residents who may have a sense of local identity that includes undeveloped, unspoiled natural surroundings (Cantrill, 1998). Differences in development attitudes between constituents and local officials would then result in

growth that benefits only the elite leaders of the community (Logan and Molotch, 1987). According to these observations, if local officials have a strong preference for growth, have extensive connections with others both within and beyond their region, have low propensities for gathering input from their constituents, and are not particularly influential with residents, then Molotch's portrayal of the growth machine model will be supported (Figure 4). There are other characteristics of local officials that could influence their preferences for growth and development. Many previous studies focused primarily on the attitudes of elected officials (Maurer and Christenson, 1982; Logan and Molotch, 1987), typically excluding non-elected officials who also make important local decisions. Additionally, Cantrill's (1998) findings that longer-term residents maintain local identities with friends and neighbors more than the surrounding natural environment might influence local officials' development preferences. Officials who have lived and been socially active in the Eastern UP for longer periods of time have had a greater opportunity to form identities beyond the natural environment. One final aspect of local officials may influence attitudes, based on Weimann's (1994) observations of opinion leaders. It is important to recognize that local officials are not necessarily opinion leaders, and that opinion leaders have a specific discipline or topic of expertise. In the case of the Eastern UP, if local officials are opinion leaders in economic development or environmental issues, these levels of expertise may influence their preferences for development or protection. Therefore, the length of time officials have lived in the region, the length of time they have served in their positions, their elected or non-elected status, and their levels of opinion leadership may also affect their development preferences (Figure 5).

Research Questions

1) Do preferences for economic development or resource conservation differ between local residents of the Eastern UP and local officials who are responsible for decisions that affect these resources?

2) If local officials have higher preferences for economic development than residents, are officials' preferences influenced by their intra- and extra-local connectedness with others, communication with their constituents, opinion leadership, or level of influence in the region?

3) How might other personal characteristics influence local officials' potential differences in preferences for economic development, such as the length of time living in the Eastern UP, the length of time in their position, whether the position is elected or not elected, and whether they are opinion leaders in economic development-related topics?

4) What kinds of local and extralocal connections do officials maintain to accomplish their responsibilities?

5) How might the connections local officials maintain help or hinder their capacity to deal with change?

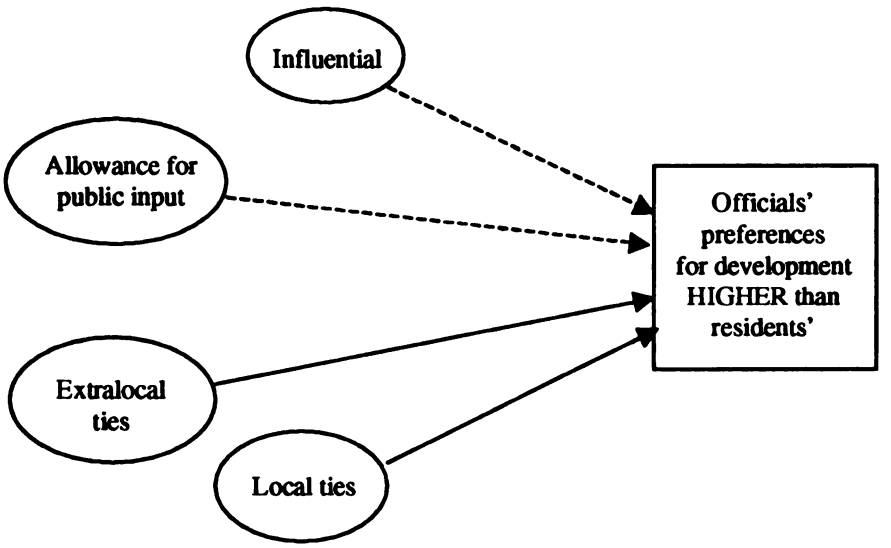


Figure 4. Proposed relationship of social connectedness and personal influence if preferences for economic development are found to be higher than residents among local officials (Dashed lines indicate negative relationships).

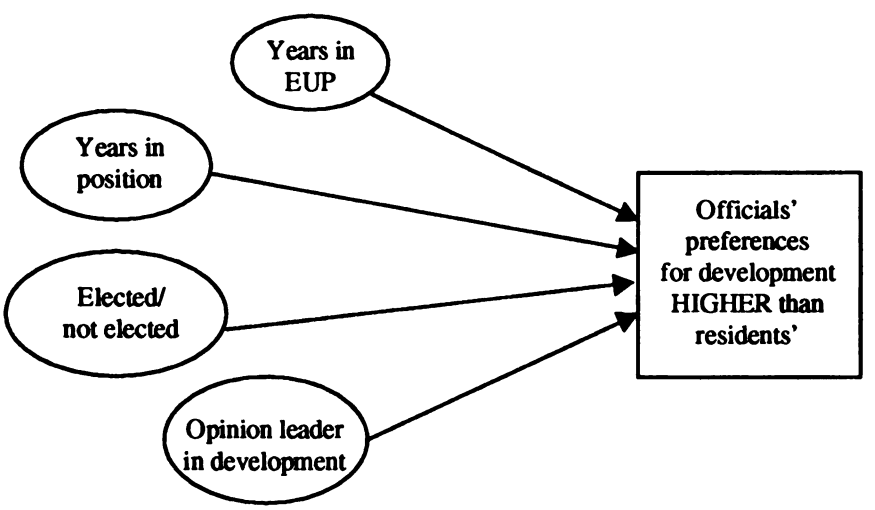


Figure 5. Proposed relationships between personal characteristics of local officials if their preferences for development are higher than residents'.

CHAPTER IV:
METHODS

Based on previous examinations of the Eastern UP (McDonough et al., 1999), the region contains particular natural resource-based characteristics that are very important to residents. Many of the things that residents value, such as uncrowded open space and high quality water resources, are seen as being threatened by new development. On the other hand, job opportunities and a healthy local economy are also important to them. An important step in this study therefore lies in determining to what extent these resources are important in relation to particular development opportunities. Do local officials have similar preferences for resource protection and economic development? How might the social networks of these officials influence their preferences? Attempting to answer the posed research questions entails using multiple data-gathering techniques, and a mixture of qualitative and quantitative methods. An advanced survey technique called conjoint analysis was used to explore preferences for development and resource conservation among both residents and local officials (Question 1). Semi-structured interviews were used to determine the extent of network connections between those officials and others, and to understand the extent of public input efforts in decision-making processes (Questions 2 and 3). A brief survey of self-perceived influential abilities was also used to answer Questions 2 and 3. Qualitative results from the semi-structured interviews were also used to answer Questions 4 and 5. Each data gathering technique will be detailed in subsequent sections of this chapter.

Eastern Upper Peninsula Profile

The region being studied includes the three easternmost counties of the Upper Peninsula of Michigan. These three counties, Chippewa, Luce, and Mackinac, are sparsely populated and richly endowed with natural resource amenities. Population and housing has begun to increase in recent decades, mainly due to the influx of retirees and seasonal residents. Although the region has economically depended on resource extraction activities in the past, these are on the decline. Increases in economic industries that depend on natural amenities, such as outdoor recreation and tourism, are increasing. Native American tribes in the area have opened several casinos, boosting their economic viability. These recent efforts to bolster local economies have had some success in reducing levels of poverty and dependence on government assistance, yet concerns about young peoples' livelihoods in the region are still expressed among residents. Despite the concerns about economic viability, most residents still consider the wild, undeveloped nature of the Eastern UP to be central to their lives. In the McDonough et al. (1999) study, residents indicated that the large acreages of public land, as well as access to lakes and streams, are important in the outdoor activities (such as hunting and fishing) that are a significant part of their lives. Increases in populations and growth that might affect the quality and quantity of these natural resources are therefore a serious concern among residents.

Eliciting economic and environmental tradeoffs

The first and most important step is to successfully identify those important characteristics that should be used in the conjoint analysis. This can be done by examining previous surveys and interviews of resident opinion in the Eastern UP

(McDonough et al., 1999). This research was completed in two stages that captured these opinions: oral history interviews that allowed for free-form discourse, and a broader mail survey that measured the extent of these opinions. The oral histories of Eastern UP residents were conducted during the summer of 1996 (Kakoyannis, 1997). Sixty-three oral history interviews were conducted with respondents who lived in at least one of the three counties for at least 30 years. Each consisted of the following open-ended questions:

1) What were your natural resource-oriented experiences (recreation and subsistence) during childhood?
2) What were some past events that had a great impact on your county?
3) What are some of the characteristics that you like most about your county?
4) What are some of the characteristics that you like least about your county?
5) What are your hopes and concerns for the future in your county?

Most of the residents interviewed enjoyed a variety of outdoor activities both now and in their childhood. Residents have indicated that they participate in many of these activities either for subsistence or recreation, or both. These results show that the natural resource base in the Eastern UP does indeed play a significant role in residents' lives. Interviewees also indicated a variety of Eastern UP aspects that appeal to them. For instance, many mentioned that it is a "good place to raise kids." They enjoy its natural beauty, rural setting, peace and quiet, recreation opportunities, clean air and water, and low population. Most mentioned a need for more job opportunities, especially so that their children can stay in the area when they start their careers. This paradox of wanting more jobs without substantially increasing the area's population or level of development is an indicator of residents' ambivalence toward these aspects of their community (Kakoyannis, 1997), and the dilemma local officials face when making decisions about development.

Using the results from the oral histories, a mail survey was constructed to gather information on more widespread concerns and interests in the Eastern UP (McDonough et al., 1999). A stratified sample of permanent residents and seasonals were selected from lists of utility company accounts, totaling 1566 questionnaires. A total of 872 useable questionnaires were returned. Topics included in the survey that are relevant to this study include: 1) importance of and satisfaction with selected characteristics of the Eastern UP; 2) perceived changes in Eastern UP conditions; and 3) preferences for specific economic development strategies for the Eastern UP. The importance/satisfaction, perception of change, and development preference sections all contain pre-selected categories (based on the results from the oral histories) with Likert-style scales. Reflecting what participants had indicated in the oral histories, characteristics such as air quality, water quality, cost of living, and access to outdoor recreation opportunities were chosen by over 50% of all respondents as being very important. These results therefore helped to determine which attributes should be included in the conjoint analysis interviews. Possible changes in those characteristics were then outlined so that potential future scenarios could be created in the conjoint survey itself.

Due to the complex nature of these methods, computer packages were developed in the 1980's to assist in survey execution and data analysis. One software company, Sawtooth Software, specifically addresses respondent fatigue resulting from a large number of characteristics through a method called Adaptive Conjoint Analysis, or ACA (Green and Srinivasan, 1990). As with the hybrid conjoint procedure, ACA uses responses to self-explication techniques that are entered directly into the program, and these answers are used to pose the conjoint analysis portion of the survey. Sawtooth

Software argues that more characteristics can be tested in this way by initially omitting those levels that are not acceptable to the respondent (Sawtooth Software, 1985). This is especially important when measuring preferences for an "object" that is as complex as the Eastern UP. ACA, therefore, was the most appropriate conjoint method for this project, employing an easy-to-use on-screen interactive survey and accompanying data analysis software.

Adaptive Conjoint Analysis uses the selected set of characteristics, or attributes, that are most appropriate in describing an object or situation, and creates alternative scenarios using varying levels of each characteristic. In this case, the Eastern UP is the object, having various attributes of the area that are especially salient to its residents (according to the results of the mail survey). Each attribute can vary according to possible changes that may take place in that characteristic in the future. These selected attributes and their possible levels of change are provided in Figure 6.

Selecting residents and local officials

Conducting the survey itself required arranging personal interviews with residents. Since it is important to have respondents who consider the Eastern UP to be a salient topic, a sample of 100 individuals who returned a completed mail questionnaire from McDonough's (1999) study were randomly selected to participate. Selected respondents consisted of both permanent and seasonal residents who owned a home in either Chippewa, Luce, or Mackinac Counties. These 100 were among about 600 who had responded positively to the final question in the survey instrument that asked if he/she would be willing to participate in a followup survey. This suggests that, if residents are interested enough in the area to complete a mail survey, and they are willing

Fishing quality
- Populations of game fish increase
- Populations of game fish remain the same
- Populations of game fish decrease

Quality of lakes and streams
- Lakes & streams are safe for boating, fishing, and swimming
- Lakes & streams are safe only for swimming and boating
- Lakes & streams are safe only for boating

Seasonal home development
- No change in the number of seasonal homes
- A small increase in the number of seasonal homes
- A moderate increase in the number of seasonal homes
- A large increase in the number of seasonal homes

Year-round population
- No change in the number of permanent residents
- A small increase in the number of permanent residents
- A moderate increase in the number of permanent residents
- A large increase in the number of permanent residents

Hotel/motel development
- No additional hotels or motels
- A small increase in the number of hotels or motels
- A moderate increase in the number of hotels or motels
- A large increase in the number of hotels or motels

Job opportunities
- No additional jobs of any kind
- Additional commercial forestry jobs
- Additional tourism service jobs (excluding casino jobs)
- Additional casino jobs
- Additional prison jobs
- Additional government jobs related to public parks/forests

Forest harvesting
- No timber harvesting on public lands
- No change in the amount or kind of timber harvest on public land
- Additional single-tree selection cutting on public lands
- Additional group selection cutting on public lands
- Additional clearcutting on public lands

Motorized vehicle recreation
- Decrease opportunities for snowmobiling and 4-wheeling
- No change in opportunities for snowmobiling and 4-wheeling
- Increase opportunities for snowmobiling and 4-wheeling

Protected natural areas
- Moderate decrease in the amount of protected natural areas
- Small decrease in the amount of protected natural areas
- No change in the amount of protected natural areas
- Small increase in the amount of protected natural areas
- Moderate increase in the amount of protected natural areas

Figure 6. Selected attributes (underlined) and associated levels for each.

to be contacted for a followup survey, they will be more likely to have the patience to participate in the conjoint analysis interview. Individuals were telephoned, introduced to the project, and asked for consent to participate in the interview. Of the sample of 100 respondents, 18 had unlisted phone numbers and were therefore unreachable. Of the remaining 82, seven either moved or no longer owned property in the Eastern UP. Seven others who were selected as part of the sample but lived out-of-state were not interviewed because it was beyond the economic scope of this project to travel such long distances for individual interviews. Of the remaining 68 eligible respondents, 45 completed an interview (66% response rate). Respondents were guaranteed confidentiality in that no names were associated with their responses. Thirty-one interviews were conducted in the three counties of the Eastern UP, while fourteen additional interviews were conducted with seasonal residents who lived throughout the lower peninsula of Michigan. Table 6 summarizes the nonresponse categories for residents in the sample.

Table 6. Summary of nonresponse categories for residents included in conjoint survey.

Type of nonresponse	Number of respondents
Did not own property in Eastern UP	6
Lived out of state	7
Moved	1
Unlisted phone number	18
No answer after six attempts	6
Not interested/Refused	17
TOTAL	55

The second set of respondents for this study included local officials in the Eastern UP. Participating officials would take the conjoint analysis survey, in addition to participating in a series of open-ended questions about their background, responsibilities,

and relationships in their community. It was important to focus on the perceptions and opinions of those officials who have a direct effect on how communities or areas in the Eastern UP are managed economically or environmentally. An advantage to this focus is that these types of leaders are easily identified through courthouse and government records. A list of approximately 50 officials was generated from source listings of county extension offices and local websites. The list includes a variety of decision makers from each of the three counties (Table 7). Due to the small number of officials in many of these categories, a representative from similar units of government across counties or towns was contacted. For instance, the mayor of Sault Ste. Marie, the mayor of St. Ignace, and the President of Newberry were all contacted. Similarly, all Economic Development Corporation directors and local newspaper editors were contacted. If more than one official with the same responsibilities existed in each county, contacts were randomly selected. For instance, a commissioner from each county was randomly

Table 7. Distribution of officials who participated in interviews (frequencies of each category included in parentheses).

Elected officials	Non-elected officials
County commissioners (3)	Michigan DNR employees (4)
Town/village mayors (3)	Forest Service employees (2)
Tribal members (2)	Economic Dev. Corp. directors (3)
Township supervisors (7)	Chamber of Commerce directors (2)
School superintendents (2)	County extension directors (2)
	Newspaper editors (2)
	Tribal fisheries director (1)
	Regional planning director (1)
	Natural Resources Conservation Service agent (1)
	Not-for-profit conservancy employee (1)
	Municipal manager (1)
	Township deputy supervisor (1)

selected. If the first contact refused the interview request, another was randomly selected from the remaining list. A total of 38 local officials (17 elected and 21 non-elected) participated, resulting in a 76% response rate. Taking into account both the residents and officials who participated in the conjoint survey, therefore, there were a total of 83 participants, with 42 (50.6%) owning a residence in Chippewa County, 14 (16.9%) in Luce County, and 27 (32.5%) in Mackinac County.

The time required for most respondents to complete the survey ranged from 15 minutes to one hour, depending on the amount of time each participant spent on each question. A portable PC computer was used for the interview itself. After the initial description of the survey and its sections, respondents read each screen and chose a response to each question either by directing the interviewer to press the number corresponding to their desired answer or by doing it themselves. Respondents generally seemed to accept and understand the premise behind the survey, and had no trouble with the computer format. Respondents were introduced to the software (although they only needed to be able to read the screen) and asked to consider what they would like to see change in the Eastern UP in the next ten years. They were given a fact sheet to inform them of current conditions in the area, and some basic terms with which they may not be familiar (such as *group selection cutting* and *protected natural areas*). An example of this fact sheet is located in Appendix B. The first section of the survey asked respondents to examine all of the attribute levels and remove any that would be considered so unacceptable that they would not consider a future alternative with that level in it. Respondents were then asked to rank the remaining levels of each attribute in the survey, and rate the importance of each attribute itself. These preliminary questions were used to

shorten the remaining portion of the interview (Sawtooth Software, 1985). It also introduced the subject matter to the respondent so that they're more familiar with the attributes before making profile comparisons. ACA then used a paired-comparison version of conjoint analysis. Figure 7 illustrates the method by which respondents indicate their preferences. The results of the paired comparisons were used to compute individual respondent utilities for each level through ordinary least squares regression.

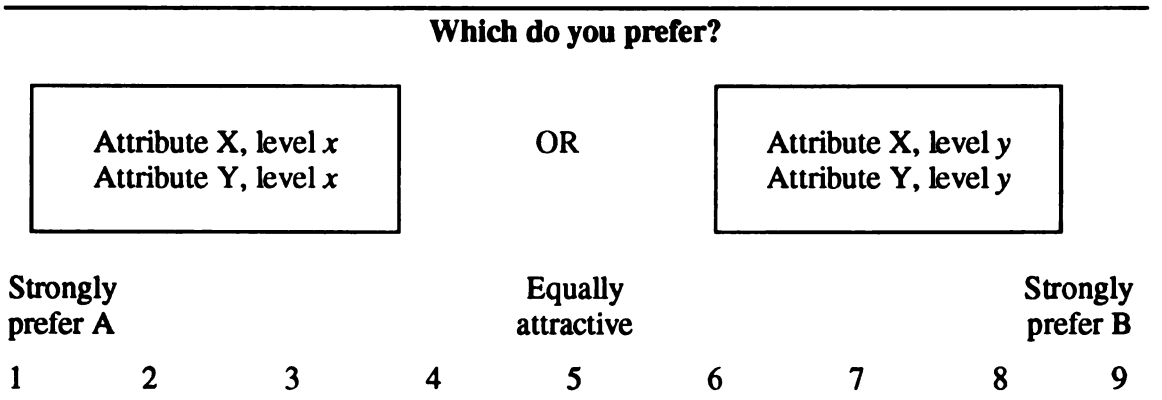


Figure 7. An example of profile comparisons in Sawtooth's ACA (Items X and Y represent randomly selected attributes, while *x* and *y* are randomly selected levels of these attributes).

The conjoint survey was pretested with several different groups. It was first conducted with university students and faculty, who suggested corrections to the attribute levels and wording of the survey questions. The survey was then pretested with several residents of both southern Michigan and the Eastern UP. Further refinements of the survey question wording and to the contents of the fact sheet handout were made as a result of these tests.

Semi-structured interviews

Before conducting the conjoint portion of the officials' interviews, additional open-ended questions were asked:

- What decisions are you responsible for in your community?
- What sorts of information do you gather to make your decisions?
- How do you gather public input regarding these decisions?
- How do you "get the word out" when an important decision has been made?
- Do you interact with other local officials often? If yes, who are they?
- How long have you lived in this area?

The information gathered from these additional questions helped to determine the nature of the decision maker's relationship with residents in his or her community. The portion of the interview that asked these questions was tape recorded and transcribed.

After the interviews were conducted, tapes were transcribed and a qualitative examination of the answers to the posed questions assisted in learning about the officials' social networks in the Eastern UP. This preliminary analysis included examining content for the existence of horizontal and vertical links, both within and outside the region. A summary was also conducted to determine various duties of the officials' positions and organizations or activities that they participate in on a volunteer basis. Additionally, keyword searches for pro-growth and protection-related contexts and relationships was conducted. The material was first categorized by topics related to theoretical growth machine and social capital issues (Table 8). This was followed by an examination of the types of relationships officials have with these entities, and contexts within which these relationships take place.

Subsequent information about officials as influentials

Although the information about preferences for growth or conservation measures and social links begin to paint a picture of local officials in the Eastern UP, it is not readily apparent how influential they are as individuals in their communities. Since it should not be assumed that local officials are either opinion or informal leaders, it is

Table 8. Initial categories for content analysis of interviews.

Representation of constituents	Connections outside of the region
public input (formal and informal)	extra-local organizations
information sharing with public	extra-local government agencies
other public involvement	extra-local individuals
	length of time living outside region
Connections within region	Roles/duties of position
local organizations	decisions made
other government agencies	meetings facilitated
local individuals	events/issues addressed
length of time living in region	Keywords related to growth
	Keywords related to resource protection

important to find measurable ways to associate their formal leadership with potential informal leadership. It is also important to distinguish between opinion leaders and what Weimann (1994) defines as influentials, although each concept may have important applications in this study.

In order to gain a better understanding of how influential local officials in the Eastern UP are in development or resource use issues, a hybrid survey of the Personality Strength scale and a self-report style of opinion leader measurement tool was administered to all officials who participated in the conjoint study and personal interviews (Figure 8). An 'influential' index was created based on the responses to the first nine questions, which came directly from Weimann's (1994) scale of personal influence. An individual's score was calculated based on the strength of response to each item. Summing the maximum possible responses for each question (with 'strongly agree' receiving 4 points and 'strongly disagree' receiving one), the maximum possible score for the influential measurement is 36. The remaining questions are based on King and

First, I would like to ask you a few questions about yourself as a member of your community. Generally speaking, which of the following statements do you feel apply to you?

	Strongly agree	Slightly agree	Slightly disagree	Strongly disagree
1. I count on being successful in the things I do	❑	❑	❑	❑
2. I am confident about how I should behave in most situations	❑	❑	❑	❑
3. I like to assume responsibility	❑	❑	❑	❑
4. I like to take the lead when a group does things together	❑	❑	❑	❑
5. I enjoy convincing others of my opinions	❑	❑	❑	❑
6. I often notice that I serve as a role model for others	❑	❑	❑	❑
7. I am often good at getting what I want	❑	❑	❑	❑
8. I am often a step ahead of others	❑	❑	❑	❑
9. I often give others advice and suggestions	❑	❑	❑	❑

I would also like to ask some specific questions about your interests in sharing ideas and information with your acquaintances.

10. What kinds of local issues do you usually discuss with your acquaintances?

11. In general, do you like to talk about these issues with your acquaintances?

❑ I enjoy talking about them very much (2)
❑ I somewhat enjoy talking about them (1)
❑ I would prefer not to discuss these issues with my acquaintances (0)

Figure 8. Sample questions for measurement of personality strength and opinion leadership among local officials.

Figure 8, continued

12. Would you say you give very little information, an average amount of information, or a great deal of information about these issues to your acquaintances?

- ❑ I give a great deal of information (2)
- ❑ I give an average amount of information (1)
- ❑ I give very little information about them (0)

13. Compared with your circle of acquaintances, are you less likely, about as likely, or more likely to be asked for advice about these issues?

- ❑ More likely (2)
- ❑ About as likely (1)
- ❑ Less likely (0)

14. If you and your acquaintances were to discuss these issues, what part would you be most likely to play? Would you mainly listen to your friends' ideas or would you try to convince them of your ideas?

- ❑ I mainly would listen to acquaintances' ideas (0)
- ❑ I mainly would try to convince them (1)

15. Do you have the feeling that you are generally regarded by your acquaintances as a good source of advice about these issues?

- ❑ I'm regarded as a very good source of advice (2)
- ❑ I'm somewhat regarded as a good source of advice (1)
- ❑ I'm not considered to be a source of advice on these issues (0)

Figure 8. Sample questions for measurement of personality strength and opinion leadership among local officials, continued.

Summers' (1970) opinion leadership measures. Since opinion leadership is typically based on a specific topic or issue, Question 10 allows the participant to specify his or her field of expertise. Participants receive a higher score for responses that correspond to a greater willingness to discuss and share information relating to their specific field. The values associated with each response are indicated in parentheses for Questions 11-14. Summing the total values associated with each opinion leader response, the maximum possible score is 9, while the minimum is zero.

The two-page influential/opinion leader questionnaire was pretested with several officials in southern Michigan who hold similar positions as those Eastern UP officials who participated in this study. The wording of Question 10 (the open-ended item) was changed, as well as the scales associated with the influential statements. Additionally, one item from Weimann's (1994) original set of influential statements, "I own many things others envy me for," was removed due to these officials' hesitation toward stating such an opinion about themselves.

The questionnaire was then mailed to all local officials who participated in the interviews and the conjoint survey. A reminder card was sent three weeks after the first mailing. Twenty-nine of the 38 officials returned a completed questionnaire, resulting in a 76% response rate. Generally speaking, it is reasonable to expect that, compared to the general population, elected officials would score more highly on such scales. However, it is less clear how influential various non-elected officials are, or how these measures relate to their levels of connectedness with others, both within and outside their communities.

Synthesizing results from multiple sources

Once the data from these various sources was collected, it was combined into a coherent picture of the influence and effectiveness of the region's local officials and how they may effect its current and future economic and resource development activities. Content analysis of the interviews with these officials describe how involved these individuals are in their communities, as well as the various links they maintain between themselves, individuals within the community, and others outside the region. Further questions about their (self-described) personal influential nature and their opinion leadership in local economic development help to measure their potential effectiveness in furthering the cause of development.

To determine the relationships among the items described in the research questions, a series of statistical procedures were performed. The steps are as follows:

1) Use the ACA program to develop future "scenarios" based on the resulting utilities for the 37 conjoint attribute levels;

2) Compare preferences for a pro-growth "scenario" between local officials and residents, using a t-test procedure;

3) Using the quantitative score associated with the pro-growth scenario as the dependent variable, determine the (quantified) influence of local ties, extra-local ties, public input, opinion leadership, and influential scores using linear regression techniques.

Officials' coded responses to the interview questions on local ties, extra-local ties, and public input were then quantified for entry into the regression analysis. The number of mentioned ties or input methods were counted for each participant. For instance, an index was created based on participants' responses to the question, "In what ways do you gather public input to make your decisions?" Each time an official mentioned a different kind of public input method, he or she was given one point. Responses to the questions

regarding local connections and extralocal connections were tabulated in the same way to create indexes for those independent variables as well. This is a limited use of such rich qualitative information, so an examination of participants' responsibilities and concerns was also conducted to gain a broader perspective of local officials in the Eastern UP. A summary of the dependent and independent variables for the regression analysis is listed in Table 9.

The combination of methods through the conjoint analysis survey, open-ended interviews, and secondary data collection provides deep and comprehensive insights on concepts related to social capital and possible growth machine-related phenomena in a rural resource-dependent region. The next chapter details the results of these described methods, including the overall results of the conjoint survey and the formation of possible future scenarios, a qualitative description of the personal interviews, a summary of the influential/opinion leadership questionnaire, and the results of the regression exercise.

Table 9. A summary of the dependent and independent variables for the regression analysis.

Variable description	Data gathering method used	Quantitative measurement
Dependent variable:		
Support for economic development	Conjoint survey	Conjoint utility value of pro-growth scenario
		Conjoint utility value of status quo scenario
Independent variables:		
Public input efforts	Qualitative interview	Number of input methods mentioned in interviews
Local connections maintained	Qualitative interview	Number of local individuals, groups, or organizations mentioned in interviews
Extralocal connections maintained	Qualitative interview	Number of individuals, groups, or organizations mentioned from outside the region
Level of influence in community	Mail questionnaire	Personality strength scale score
Years living in Eastern UP	Qualitative interview	Number of years
Years serving in current position	Qualitative interview	Number of years
Elected/non-elected position	Public records	Dummy variable (elected=1)
Opinion leadership in economic dev.	Mail questionnaire	Dummy variable (econ. dev. opinion leader=1)

CHAPTER V:
RESULTS

This chapter summarizes the results of the conjoint surveys conducted with both residents and local officials, the qualitative and quantitative results of the officials' interviews, and the responses to the followup influential/opinion leader questionnaire. Comparing the conjoint survey results between residents and local officials determines whether the two groups differ in their preferences for future growth and development. The quantified results from the interviews, the results from the followup questionnaire, plus the background characteristics of officials—length of Eastern UP residence, length of time in their current positions, and elected/non-elected status—are then used as independent variables to determine whether any of these influence an official's preferences for economic development or resource protection.

Preferences for growth and resource protection

Based on the overall results from the conjoint surveys, the mean utility values and standard deviations for each attribute level are listed in Table 10, comparing residents and local officials. Several attribute levels contain fewer responses than the overall local official and resident totals. These missing responses are due to those respondents removing those levels from the survey because they were considered to be unacceptable. Utility values for each attribute level are centered on zero, with no maximum or minimum value, but usually range from negative one to positive one. A utility value is first computed

Table 10. Summary of comparisons between local officials' and residents' utilities for all attribute levels (** significantly different at the α=0.05 level).

	Local officials			Residents		
Level	N	Mean	Std. Dev.	N	Mean	Std. Dev.
Game fish increase	38	0.335	0.147	45	0.309	0.226
Game fish remain the same	38	0.048	0.169	45	0.008	0.103
Game fish decrease	38	-0.423	0.158	45	-0.369	0.223
Water safe for boating, swimming, and fishing	38	0.485	0.214	45	0.508	0.223
Water safe for boating, swimming only	38	-0.031	0.090	45	-0.043	0.110
Water safe for boating only	38	-0.494	0.185	45	-0.517	0.249
No change in seasonal homes	30	-0.106	0.231	43	-0.038	0.263
Small increase in seasonal homes	37	0.111	0.148	45	0.100	0.184
Moderate increase in seasonal homes	36	0.027	0.194	42	-0.028	0.245
Large increase in seasonal homes	23	-0.173	0.225	24	-0.197	0.255
No additional hotels/motels	29	-0.060	0.255	38	-0.059	0.260
Small increase in hotel/motels	37	0.115	0.233	44	0.110	0.179
Moderate increase in hotel/motels	37	-0.003	0.210	43	-0.041	0.216
Large increase in hotel/motels	19	-0.194	0.271	21	-0.151	0.284
No change in permanent residents	24	-0.120	0.321	40	-0.086	0.280
Small increase in permanent residents	36	0.059	0.228	45	0.094	0.179
Moderate increase in permanent residents	38	0.049	0.245	44	-0.007	0.233
Large increase in permanent residents	23	-0.115	0.314	23	-0.138	0.400
No additional jobs	14	-0.325	0.166	33	-0.334	0.274
Commercial forestry jobs	38	0.018	0.250	45	0.025	0.252
Tourism jobs	38	0.118	0.200	45	0.062	0.222
Casino jobs	31	-0.272	0.244	39	-0.249	0.209
Prison jobs	31	-0.036	0.355	40	-0.142	0.248
Government jobs in parks/forests**	37	0.094	0.259	45	0.234	0.239
No timber harvesting	22	-0.189	0.329	34	-0.114	0.215
No change in harvesting	38	0.018	0.242	44	0.089	0.247
Additional single-tree selection cutting	38	0.102	0.235	45	0.051	0.210
Additional group selection cutting	37	-0.005	0.214	43	-0.011	0.224
Additional clearcutting	22	-0.111	0.267	29	-0.191	0.193
Decrease opportunities for snowmobiling/4-wheeling	26	-0.134	0.264	33	-0.016	0.333
No change in opportunities for snowmobiling/4-wheeling	38	-0.001	0.238	45	-0.002	0.271
Increase opportunities for snowmobiling/4-wheeling	28	0.073	0.280	38	-0.040	0.331
Moderate decrease in protected nat. areas	18	-0.224	0.250	29	-0.306	0.191
Small decrease in protected natural areas	27	-0.140	0.242	37	-0.206	0.189
No change in protected natural areas	37	-0.042	0.258	44	-0.016	0.268
Small increase in protected natural areas**	37	0.078	0.216	45	0.157	0.173
Moderate increase in protected nat. areas	32	0.146	0.227	39	0.172	0.270

using responses from the ranking and rating exercises at the beginning of the survey. These prior utilities are used to determine which of the attribute levels are offered in the tradeoff section. Responses to the tradeoffs are then used to estimate a separate set of utility values using ordinary least squares regression. The final stage of the survey, referred to as "calibration concepts," assigns a weight to both the utility value from the ranking and rating exercise and to the utility from the tradeoff section. These weights are computed by comparing the predicted likelihood of accepting a selected combination of attribute levels (referred to as a future scenario) with the participant's stated likelihood of acceptance in a least squares regression. Computing the overall utility value for an attribute level, therefore, can be described as:

$U = (I / A) + WpUp + WtUt$, where

- U = overall utility value,
- I = computed intercept term from calibration concepts regression,
- A = number of attributes in survey,
- Wp = weight assigned to utility value in ranking and rating exercises,
- Up = utility value from prior exercises,
- Wt = weight assigned to utility value in tradeoff exercise, and
- Ut = utility value from tradeoff exercise (Sawtooth Software, 1985).

All respondents were highly interested in water quality issues. Having lakes and streams that are safe for boating, fishing, and swimming, and having populations of game fish increase, contained the highest utility values for both the residents and local officials. For both residents and officials, support for some development was reflected in the responses to increases in such attributes as hotels/motels, seasonal homes, and permanent residents. Note that the preferred amount of these types of development is small, while moderate and large increases have lower mean utility values.

Overall, only two of the thirty-seven attribute levels were significantly different between residents and local officials. Looking at the job opportunity choices, residents were most supportive of additional government jobs related to public parks or forests. Residents also have a higher mean utility value associated with a small increase in the amount of protected natural areas. Officials were no more likely to favor high rates of development and population growth than their constituents. On the surface, this would suggest that these officials are not members of a traditionally defined growth machine. The attribute levels that had statistically higher utilities for residents, however, did correspond with greater natural resource protection for the region. Industry, manufacturing, or other related businesses were not included in the conjoint survey, and it is important to note that many of the officials mentioned wanting these opportunities while responding to the survey.

Scenarios produced from conjoint results

Although the overall conjoint results have already been examined by comparing individual attribute level utility scores, the ACA program is designed to look beyond just individual attributes. The program also has the capability of combining levels to create overall scenarios that measure a respondent's "likelihood of purchase." For instance, a combination of levels that create a high-growth scenario can be created, and local officials' and residents' percent likelihood of accepting this scenario can be compared to examine any significant differences. Another scenario can be created based on status-quo conditions to determine whether the two groups have different preferences for no change in the Eastern UP. The purchase likelihood values for both the high-growth and status quo scenarios are summarized in Table 11. These are tabulated by summing the raw utility

Table 11. Likelihood of accepting high-growth and status quo scenarios among local officials and residents, based on conjoint survey results.

High-growth scenario:

Included attributes	Local officials' mean utility	Residents' mean utility
Game fish remain the same	0.048	0.008
Water safe for boating, swimming, and fishing	0.485	0.508
Moderate increase in seasonal homes	-0.027	-0.093
Moderate increase in hotel/motels	-0.029	-0.084
Moderate increase in permanent residents	0.049	-0.029
Additional tourism jobs	0.118	0.062
Additional clearcutting	-0.485	-0.478
Increase opp's for snowmobiling/4-wheeling	-0.209	-0.189
Moderate decrease in protected nat. areas	-0.389	-0.347
UTILITY SUM	-0.439	-0.642
e^x	0.645	0.526
"Purchase likelihood" $[e^x / (1 + e^x)]$	**39.2%**	**34.5%**

Status quo scenario:

Included attributes	Local officials' mean utility	Residents' mean utility
Game fish remain the same	0.047	0.008
Water safe for boating, swimming, and fishing	0.485	0.507
No change in seasonal homes	-0.295	-0.080
No additional hotels/motels	-0.282	-0.205
No change in permanent residents	-0.444	-0.188
No additional jobs	-0.751	-0.512
No change in harvesting	0.018	0.064
No change in opps for snowmobiling/4-wheeling	-0.001	-0.002
No change in protected natural areas	-0.038	-0.067
UTILITY SUM	-1.289	-0.444
e^x	0.276	0.642
"Purchase likelihood" $[e^x / (1 + e^x)]$*	**21.6%**	**39.1%**

Likelihood of choosing status quo over the growth scenario:

Officials: $e^{x1} / (e^{x1}+e^{x2}) = 0.276 / (0.276+0.645) = \mathbf{0.300}$
Residents: $e^{x1} / (e^{x1}+e^{x2}) = 0.642 / (0.642+0.526) = \mathbf{0.550}$

* The average utility between officials and residents is significantly different (using t-test at α=0.05).

scores for each chosen attribute level and computing the exponential (e^x) value of this sum. This resulting value is considered the "log of the odds," which is relatively difficult to interpret. The value is thus transformed by computing the odds of "accepting" or "purchasing" by using the formula $e^x / (1 + e^x)$. This is more easily interpreted to be the odds that the respondent will accept the given scenario. Moderate (25%) increases in seasonal homes, hotels/motels, and permanent homes were used in the growth scenario rather than large (50%) increases because many respondents rejected this level at the outset. Since so many rejected the large increases, it was more reasonable to construct a scenario with more moderate levels of growth. The likelihood of accepting the proposed growth scenario was low regardless of the group. Although local officials' preference for this scenario was somewhat higher than residents (39% vs. 34% likely to accept), this is not a significant difference. Alternatively, residents were significantly more likely than local officials (22% vs. 39% likely) to accept the status quo scenario. One explanation for this may relate to some of the officials' suggestions that a tourism-based growth model is not what they want. As was mentioned earlier in this chapter, several mentioned that light manufacturing or other small business development should have been offered as job opportunities in the conjoint survey. Therefore, it may not be growth that they disliked, but the *kinds* of future growth offered in the survey. Regardless, local officials were only 30% likely to choose the status quo scenario over the growth scenario, as opposed to residents who were 55% likely. Because of the uncertainty regarding the types of growth that local officials would prefer, however, preference for the status quo scenario was used as the dependent variable in subsequent analyses.

Officials' roles and social networks in communities

This section describes the qualitative descriptions and quantitative analysis of the interviews conducted with local officials. Background information on their educational experiences, professional backgrounds, time spent in the region and in their current positions is described, as well as job responsibilities that elected and non-elected officials have in their respective roles. Qualitative results of officials' public input experiences are described, as well as their local and extralocal connections. Quantification of these public input and connection responses is then outlined.

Officials' personal characteristics and roles

Background information

Personal interviews conducted with local officials were conducted before the conjoint survey was administered. Participants have a wide variety of backgrounds and experiences. Generally speaking, similar proportions of elected and non-elected officials in the sample can be found in the three counties. Fifteen of them, or approximately 40%, mentioned that they are native to the region. Twelve other participants were originally from other parts of the state. Taken together, this suggests that a substantial proportion of those interviewed—nearly three-quarters—are from Michigan. Another eight officials have lived in the area for over 20 years, although a few of these mentioned still feeling like newcomers. *"I was told when I got here you won't become a Yooper [Eastern UP resident] until the 3rd generation,"* mentioned one official from Luce County. Most of the participants who are originally from the Eastern UP have spent some portion of their time living in other areas. Some mentioned going away to attend college, but then returning to

find work or start a family. Others went into military service or found other employment outside the region because of the poor economic conditions in the Eastern UP One official in Chippewa County observed, *"I grew up here ah, and I left. Because I couldn't support a family. And I put 21 years in the military and I came back home and ah, retired here because I liked this community."* Participants often implied experiencing a severe contrast between life in the Eastern UP and elsewhere. *"Well, I went to work in Detroit one year and that was enough,"* proclaimed one official from Luce County.

Education and personal work experiences vary widely among local officials as well. Fourteen of the participants mentioned participating in some sort of postsecondary education. The majority of those that talked about higher education attended some university or college in the state. Those who held natural resource oriented positions usually earned a postsecondary degree in a related field. Participants who were not involved in natural resource-based occupations, however, earned degrees in a variety of fields, including teaching, political science, and accounting/finance degrees. Elected officials especially have various educational backgrounds, and do not necessarily have higher degrees. Those who have gone to a college or university often do not currently hold positions that mirror those educational experiences. For instance, one participant in Chippewa County said, *"I graduated from Northwood with a business degree in Midland...and then I went, I thought I'd try teaching, so I went to Northern and got my teaching degree, which I did teach for six years."* He now owns a private business in his community as well as serving as an elected official.

Other officials have professional backgrounds that are just as varied. Many mentioned participating in various volunteer programs that helped them get connected with others in the community, and ultimately aided in acquiring their current positions. For instance, one elected member of the Sault Ste. Marie Tribe of Chippewa Indians Tribal Council participated in several volunteer positions before being elected to the council, including originating an annual running event in the tribe to promote physical fitness. Several of the township supervisors who participated mentioned working as an assessor for the township before becoming supervisor (or doing both jobs at the same time). As with local elected officials in other rural regions, most in the Eastern UP have employment outside the elected position. Five of the seventeen elected officials who participated in the interviews mentioned owning a business of their own, while two others work for another agency in the region. Four elected officials said they are retired, which allows them to devote more of their attention to the position they hold. A few specifically mentioned the importance of being accessible to their constituents. *"You know, I'm here every day from 8:30 'til 3:30, usually, um, I mean it's not gonna—I can't solve the problems if I'm not where people can get a hold of me and listen to 'em—for me to listen to them,"* stated one township supervisor. Another mentioned the importance of full-time officials in his community because of the growth and changes taking place in the area:

> *"I just felt I was qualified and I had the ability because I am retired and wasn't holding down a permanent job that I couldn't give up. Ah, and that I could do the job full time, 'cause it requires a full-time supervisor. This community is no longer a part-time supervisor community."*

The amount of time officials spent in their respective positions ranged from less than one year to over 30 years. Nine of the participants had spent less than five years in their positions, while another nine had been there five to ten years, eight had had their

positions 11 to 20 years, and seven had served over 20 years. Six of the nine participants who have served less than five years in their positions are elected officials. Although most expressed satisfaction with the experience of being a local official, a few who are new to their positions have been taken aback by the demands of the job. One township supervisor who had taken the post less than two years ago said, *"...yeah, uh, I kind of enjoy it, but it's getting a little more involved all the time. There's so much, uh, paperwork involved on our part."* Another official from Mackinac County stated, *"It's just a lot of prep work and a lot of research. A big time commitment, a very big time commitment, more than I realized."* These observations tempered their enthusiasm when considering running for the position again in the future.

Job responsibilities—elected officials

General responsibilities local officials mentioned as part of their current positions were relatively similar for the same positions in each county. For instance, county commissioners across all three counties talked about being in charge of the basic necessities to keep a county operating. As one county commissioner put it, *"...my responsibility is to see to it that they [sheriff, judges, etc.] have enough money to operate."* All three of the commissioners who participated in the interviews mentioned the difficulties with maintaining a budget that adequately covers those basics for the county. *"...we're pretty close to the pocketbook with our money..."* mentioned one commissioner, while another said, *"We have a very small staff and we don't, you know, there's not a lot of services other than mandated services that we provide."* Other participants who hold elected positions talked about the financial issues and requirements necessary to run the

services for the area in their juristiction, including tribal leaders. Their responsibilities are very similar, helping to provide *"...for the health and the welfare of the community and provide housing for the community, provide jobs for the community,"* as one Tribal official put it. There are important responsibility differences, however, between tribal officials and other officials who were interviewed. Tribal officials often must help provide leadership and guidance in such activities as casino gaming and commercial fishing, two industries that are uniquely Native American in the Eastern UP. They also mentioned responsibility for housing their tribal members.

Although mayors are also important elected officials in the region, their roles in their respective communities serve a different purpose. Both mayors who participated in interviews mentioned serving in public relations, but also serve on various committees related to policy formation. "Day-to-day" operations of the city, however, are left to city managers, who are not elected. Mayors do not directly supervise city employees, nor help determine who gets hired. They do, however, conduct city council meetings. A village president serves similar purposes in communities with less than 2,500 residents. Since these are part-time positions, and, as one of the participants points out, *"...the village president can't really do the day to day operations, but basically conducts the council meetings and [I] try to involve myself in legislation, the creation or ordinances, and um, just try to see the basic operation runs okay."* Township supervisors appeared to have the greatest amount of diversity among them, even though there are basic required responsibilities they all must perform by law. Some supervisors see their job as similar to that of city managers—care of day-to-day operations, only at the township level. Others take a more philosophical view, including one supervisor in Mackinac County: *"Well,*

when we go into this work, why we take an oath, we are sworn [to protect] through the health, safety and welfare of the people." Several started their connection with township government through working as the certified assessor. Some still perform this function, although they all pointed out that the time that property assessment demands is beyond their personal availability. This is directly related to an increase in the number of smaller land parcels in these areas, resulting in a greater number of land owners who each need to have their properties assessed for tax purposes. Most also discussed their involvement with maintaining the township road system. This was of great concern because of the escalating costs of maintaining or upgrading their roads in the face of increased use. Several supervisors pointed out that, although they coordinate the activities of the township board, they are but one voice on that committee. *"I'm just one member of the board...if I come up with something, I go to the board and say here, this is what we got..."* mentioned one Mackinac County supervisor. Another in Chippewa County mentioned, *"...and you have to pay attention to the rest of the board; they've all good ideas."* Most mentioned serving on a wide variety of other committees and taking on other responsibilities as part of their position, including such things as grant writing, local park management, homestead tax exemption reviews, local forestry boards, economic development boards, and local planning boards. Many expressed what they saw as the ultimate goal of being in a supervisory position in a township. Both a Mackinac and a Chippewa County supervisor mentioned seeing their position as the first, most personal contact between constituent and the government:

> *"...and the good part of it is, that if you live here and ah you don't like it [the local tax assessment], you can go to the board of review. You can complain and carry on. But where can you go to complain about your federal 10-40s? Where*

can you go to complain about your Michigan taxes? No place you can go [face to face]."

Some feel they should serve as motivators, to promote the area as a place to live and do business, perhaps in similar to a mayoral position. *"...my job as supervisor is to stir people up and keep them moving, keep them going in the direction that we need to go in,"* suggests one official from Chippewa County. Others merely expressed a sense of responsibility to their community: *"you have to be a, you hope, a role model for people, you know...the biggest thing is, is listening..."*

Job responsibilities—non-elected officials

Non-elected officials who work in some capacity with natural resources planning, education, or management play a vital role in Eastern UP communities. Interviews were conducted with several Michigan Department of Natural Resources (MDNR) personnel, U.S. Forest Service personnel, an official affiliated with another federal agency related to natural resources, and a tribal member working with fisheries and aquatic issues (the names of the last two agencies have been withheld to protect confidentiality). Several natural resource-based programs focusing on private forest landowners are coordinated and executed by a handful of these officials. Even with significant declines in federal financial support for these programs, those who implement them are kept very busy based on landowner demands. *"I feel burdened a lot now with the stewardship program, 'cause I spend an awful lot of my time administering the paperwork and the allocation of funds and so forth under that program."* They also agree, however, that it is important to not treat these programs as if they were desk jobs. As one federal official pointed out, *"...I guess I feel if you're not out in the field meeting landowners, talking with landowners, people aren't going to be walking in, or even have knowledge about the programs."*

Other participants are responsible for the management of a particular portion of public property. Management objectives could include recreation facility maintenance, wildfire protection, wildlife, fisheries, and/or timber management. Although regulation and enforcement is an important aspect of many natural resource based agencies, the only participants in this study who were involved in such activities were related to fisheries and other aquatic species. One such manager maintained jurisdiction of the inland lakes and streams over a large portion of the Upper Peninsula, while another coordinates licensing for tribal fishermen. The tribal fishing license coordinator also participates in various regulatory and educational efforts in controlling exotic aquatic species. Other responsibilities among some of the interviewed natural resource-based employees included various planning activities, including data gathering, analysis, and facilitating projects with constituents. Many of the participants in a natural resource field mentioned an increase in concentration on an ecosystem approach, which included greater attention to coordination of planning or management efforts with other organizations or agencies both within the Eastern UP and beyond. *"[We're] trying to do more ecosystem or landscape management programs. Ah, trying to bring landowners closer together as a group through a landscape perspective,"* said one MDNR official.

Planning activities are not done only by natural resource-based agencies in the Eastern UP. One participant serves as the coordinator for a clearinghouse of data for the region, available to any agency or organization who has these needs. *"And we ah, periodically we let all of the units of government know what we have at the time and if they want to request that we tell them how to go about it. And so we are just sort of in the data center whenever they need any kind of data, they come to us."* This individual is also

frequently involved in other planning activities, such as meeting facilitation or conflict resolution.

County extension offices also serve as sources of information and assistance to a wide variety of audiences. According to one interview participant in extension, he must maintain awareness of the multitude of data sources, both within and outside the region, so that those with questions will be pointed in the proper direction. If there is enough interest in a particular topic in the community, the extension office will often exert a more coordinated effort to share information. *"...just whatever comes up as a need or an interest in the community and we've got the resources, we'll put on a workshop and get people involved."* These types of activities require an intimate knowledge of "who knows what" in their community.

Several individuals from local Economic Development Corporations (EDCs) and Chambers of Commerce were also participants in the interviews. The directors of these entities often serve as the focal points for business generation and financial growth in their communities. As one EDC director explained, *"We try to provide a one-stop shopping...um, or whatever type of enterprise we try to um, cut through all the red tape and try to send you to the people that can really be of assistance."* Another EDC director, because of his personal background and local financial arrangements, offers business counseling. Chambers of Commerce are also involved in information dissemination and technical assistance. *"Then we do education workshops on employer issues, on, like for instance, we work with other organizations,"* said one Chamber of Commerce director. The primary business development focus seems to depend on the community in which it's located. In some areas, for instance, the push is not to invite

additional businesses but to support and maintain those that are already located in the community. The EDCs in other communities of the region are focusing primarily on smaller companies. *"The under 100, under 50-employee type firms that are small, but have potential for growth. They are easier to locate into a community,"* suggested one EDC director. Yet another community divides its economic development focus between the local EDC and its Chamber of Commerce. The EDC plans to primarily focus on attracting larger industries, while the Chamber of Commerce will focus on attracting the smaller businesses. Additionally, the Chamber of Commerce directors also mentioned the added importance of conducting special events to promote their communities. As one director points out, *"...some of our special events are geared toward our own fundraising to keep us afloat, but some of them are more geared toward the community."*

Quantifying officials' background information

The officials who participated in these interviews contain a range of experiences and backgrounds in the Eastern UP, although a majority are from Michigan originally. The majority have been living in the region for over 20 years, but the amount of time spent in their current positions range from less than five years to over 15 years (Table 11). Not surprisingly, officials in similar positions typically have similar responsibilities. As other studies have observed, many elected officials such as township supervisors and county commissioners are employed in businesses outside their elected positions. Additionally, many elected and non-elected officials mentioned taking on additional responsibilities in their communities such as public boards or volunteer organizations. Table 12 summarizes the background information that was used as independent variables to measure whether these items influence their preferences for future growth and development.

Table 12. Background characteristics of local officials

Years living in the Eastern UP	
1 to 20 years	14
Over 20 years	22
(missing)	(2)
TOTAL	38
Years serving in current position	
1 to 5 years	12
6 to 13 years	12
14-44 years	12
(missing)	(2)
TOTAL	38
Elected vs. non-elected status	
Elected	17
6 to 13 years	21
TOTAL	38

Connecting with constituents

Public input methods

An important focus of this study is to determine the extent to which local officials communicate with their constituents, to have their "finger on the pulse" of their community. One of the ways to gain an understanding of this is to determine what methods officials use to get input from the public, and how officials share information with them when decisions are made. One the most common methods of gathering public input consisted of formal public meetings or hearings. A majority of participants, especially elected officials, mentioned bi-monthly, monthly, or annually held meetings to discuss business and financial affairs within their juristiction. Several mentioned a poor turnout for

such meetings, unless a controversial event or proposal was taking place. For instance, one official from Luce County said, *"There's a few that come to the meetings and stuff. Usually if they've got a problem they're at the meetings, otherwise nobody shows up."* A wide array of opinions were expressed about such efforts at gathering input. Once official from Mackinac County explained, *"Ah, when I first was elected, the first year I was I elected I tried to have some town meetings...all I found was that it was a, uh, an opportunity for people just to come and complain..."* One township supervisor mentioned that the township board stopped conducting annual meetings because of the low turnout. There were, however, some positive remarks about their constituents' involvement in public hearings, as with this official from Chippewa County:

> *"I've attended other townships [meetings] and so forth and a lot of times it's the same few peope. They show up. They sit there....but when it comes to [township name], I think the independence kinda breeds...we have a very high number of people that attend the meetings and ask questions or, you know, offer their opinion."*

Other meetings mentioned by participants that are structured to gather public input are more issue-specific, including stewardship programs, planning or zoning changes, forest management plans, and even "visioning sessions" for future economic development in a community.

Other formal methods of gathering public input included various kinds of surveys. Five of the participants reported having used, or are currently using, this method. One of the officials in the Michigan DNR mentioned using a "report card," which is a specialized form of a standard comment card, to measure consituents' satisfaction with the property personnel's performance. Report card responses have not only focused on the negative, according to the participant: *"...there are some, some positive things. And ah, they*

mention people by name. So, it is a good opportunity to give people some recognition, too." Other survey work included general mail questionnaires sent to residents to gather public opinion on current issues, including local economic issues, master plans, and bond issues.

Public meetings and other formal public input processes are only half the story, however. The majority of participants in the study mentioned events or circumstances where their constituents approach them on an individual basis, either in their respective offices, or just through everyday informal contact, such as when going to the store or walking down the street. Several officials mentioned having an "open door policy." When asked about how input is gathered about local policy, one participant remarked, *"See that door right there? That door is um, open, we have an extremely open door policy and anybody can come in at any time and sit down and talk with us."* Although many of the elected officials in the region have regular full-time jobs outside of their elected office, some can make themselves available on a regular basis. *"You know, I'm here every day from 8:30 until 3:30...I can't solve the problems if I'm not where people can get a hold of me and listen to 'em..."* explained one official from Mackinac County. Plenty of participants also mentioned interacting with others outside the office during the course of their everyday lives. Some specifically mentioned being approached regularly, both in their homes and on the street. *"People know they can call me at home any time, and they do,"* mentioned one Mackinac County official. Another county official responded, *"I have a lot of people tap me on the shoulder when I'm out in public and want to bend my ear. I guess that's the political process."* Others expressed a sense of being part of the community through these everyday interactions. As one Chippewa County official put it, *"..and I go*

out and ask people ah, if I'm in a discussion with somebody, I usually bring it around to that issue eventually as to what, what things they would like to see done in the community." Another explained, *"I live with them. I live up in the village and I'm an islander. And I'm as silly as they are and I'm here in the wintertime."* Additionally, some mentioned hearing about resident concerns or local issues through family members and acquaintances. When one local official in Luce County was asked how she learned about local happenings, she answered, *"...at the beauty shop."* Another from the county has a spouse who is involved in another branch of local government, therefore keeping each other informed of issues they might not already be aware of. A few others described typical rural connections, through the proverbial grapevine, to get information. *"...it is such a wide open community and we are so intertwined that any murmurings out there ususally hit my desk pretty quickly."* These kinds of comments suggest that many local officials in these rural communities get a feel for public concerns just by being an active member of that community.

Information to the public

The methods they use to share information with their constituents are just as diverse. Besides responding to direct requests for certain information, officials mentioned using local media channels, newsletters and other mailings, workshops and presentations, signs and brochures, public meetings, and even the Internet. Use of newspapers and other media were the most often mentioned method of "getting the word out." Most papers in the region are distributed weekly, while one, out of Sault Ste. Marie, is daily. Half of the participants interviewed mentioned using local newspapers for anything ranging from

making general meeting announcements to writing their own columns. Most stick with using only the newspaper located closest to them, while some others use more than one, depending on the topic. Many elected officials mentioned usually having effective media coverage during all of their public meetings. One such official from Mackinac County said, *"At our council meeting, we have both the weekly newspaper and the , and the, uh, daily newspaper...plus a guy from the radio station."* A few even maintain a regular column in the local paper, including a township supervisor: *"I have what's called, a "Supervisor Speaks" column in the local paper...and if it is something that I really want some, really want wide dissemination on I'll even get the editor to put it in his column..."* Other participants mentioned other kinds of media that have been effective for them, including local radio. When talking about a landowner stewardship program, one Chippewa County official said, *"When...the [stewardship] program first became available, I went on the local radio and did a little 15 minute spot and I came back to the office and somebody walked in and said, you know, he had heard it on the radio and came in and wanted to sign up."*

Several local officials mentioned writing and/or distributing a newsletter on a regular basis to inform constituents of current policies, events and issues. Most who did mention using this method were in non-elected positions, such as directors of local Chamber of Commerce offices or Michigan DNR officials who are in charge of specific programs. Newsletters are particularly valuable in reaching certain audiences, especially when some recipients may be seasonal residents or other absentee landowners. One DNR official described the time and effort-intensive nature of this medium:

"We also, not all the districts do this but it's something we started a long time ago and that's writing a newsletter. It's we've got a list, I don't know, probably 300 different, 300 to 400 different people on it that want to receive it. We used to do it four times a year and that clearly got way too much work. So over the years we've cut it back to, we do one in the wintertime..."

Since newsletters can be expensive and time consuming, smaller letters or flyers sent directly to constituents were also mentioned by some participants. These information distribution modes are generally less involved than a newsletter, and can be mailed more infrequently. Depending on the circumstances, these are sent to summarize meeting events that have taken place, to announce meetings or events, or to inform constituents of policy decisions. *"...we send everybody and their brother agendas, you know, every of course, every newspaper, the TV stations, radio stations, all the Chamber, the tourist association, all the utilities, everybody gets copies of our agendas, so they know what's going on,"* said one Mackinac County official regarding public hearings. In the case of either newsletters or other mailings, these methods of sharing information require maintaining a mailing list and spending money on reproduction and distribution.

Most public meetings held to gather public opinion also serve as opportunities to inform. Additionally, some officials mentioned conducting workshops or making presentations at other organizations' meetings to inform or educate. Some of these workshops can occur in unexpected places. For instance, one official mentioned hosting a special program for prisoners in the community. *"...the Master Gardener [program] is a, we just did a program here in the prison. So I went in and taught house plants this past year with the prison. I wasn't expecting that in the job description."*

Many officials once again suggested that word of mouth is an effective mode of information distribution in their communities. Some mentioned sharing information

informally in casual conversations, while others hinted that this mode of communication is something that is essentially out of their control. *"...I try to get, you know, articles in the district newsletter but I think a lot of it is word of mouth, which is the best way, rather than having some government person telling you how popular their programs are,"* suggested one participant from Chippewa County. One township supervisor concluded that this was the main way residents are informed of local decisions. *"Yeah, well, they pretty well, they pretty well know what's going on...it's a small township. Most of 'em know."* Interestingly, no one suggested that information obtained through the grapevine becomes distorted or inaccurate as the message is transmitted through the various social channels in the community.

Quantifying formal and informal public input methods

A public input index can be constructed based on the results from the open-ended interview questions related to participants' discussions on public input methods and other ways of sharing information with constituents. Both formal and informal methods appear to be very important, and some participants emphasized one type over the other. It therefore was more appropriate to lump the responses into one "public input" index that will be used as an independent variable. Each input method that was mentioned by a participant is coded and counted, but some methods appear to show extra effort toward attempting to understand public sentiment. For instance, most elected officials mentioned holding regular public meetings because it's required by law. These mentioned required public meetings will be given a weight of one. Occasional, point-in-time ways of gauging public concern, such as public meetings or surveys related to a specific project or issue, also given a weight of one. Committee meetings mentioned where it's not required for the

official to be involved are given a weight of two, since they're efforts above and beyond what's necessary for their job. In the informal input realm, many participants mentioned receiving calls or contacts, or having an "open door policy" during regular office hours. This is given a score of one. If the official mentioned getting input because they're recognized on the street, in the supermarket, and other places outside the office are also given one point. Some visit landowners as part of their job, and get input that way. Again, this is a required part of their job and thus receives a score of one. Mentioning being contacted via their home phone, home visits, or personal e-mail, is given a score of two. Officials who suggested making themselves accessible during their private home time suggests a greater openness toward their constituents. After coding the responses to this question and quantifying the number of public input opportunities each participant mentioned, the public input index "scores" ranged from a low of zero to a high of seven. Scores are summarized in Table 13.

Table 13. Summary of public input scores, quantified from personal interviews.

"Public input" score	Frequency	Percent
0-1	12	31.6
2-4	13	34.2
5-7	11	28.9
(missing)	2	5.3
TOTAL	38	100.0

Connecting with other officials

Local connections

Based on previous literature, maintaining connections with other officials—especially long-term connections—in local communities are important in attaining and

maintaining economic viability (O'Brien et al., 1998). Officials in the Eastern UP who participated in the interviews mentioned various relationships that they maintain with others within the region. Both formal relationships (resulting from duties conducted within ones position) and informal relationships (resulting from participation in personal activities) serve as important conduits in exchanging information and news about current events. Many local contacts result from duties performed on an "as needed" basis, such as special projects or to address local issues that occur infrequently. For instance, land use planning updates must be conducted periodically by many of the local officials interviewed. These efforts require contact with various local boards and commissions as well as sources of geographic and demographic information. One county commissioner mentioned, *"...if you were to talk to...the EDC office, we have just set up a planning commission and zoning that's 20 years old...and they are looking into our zoning and starting to do the plan again."* Other occasional efforts require generating relationships with other local entities, including businesses. For example, a few officials mentioned getting businesses to advertise special events or public meeting dates on their outdoor signage. A township supervisor in Mackinac County said, *"Okay, uh, the business owners, if you've got a public meeting about something, bang, it's right up there right now, and they're great about stuff like that."* Fraternal organizations such as the Lions Club serve as important connections in many communities because they can take on smaller local projects that local agencies may not have the time or money to address. *"...we developed the cemetary a little bit...,"* mentioned one township supervisor, *"we built, with, in conjunction with the Lions Club we built a, I don't know what you want to call it, it's not quite a gazebo, it's more like...if it's raining outside, you want to be under cover."* Many

relationships are maintainted among other agencies or organizations simply because they're an integral part of performing necessary professional duties. Merely maintaining that relationship, however, does not guarantee immediate success in attaining ones goals. For instance, most of the township supervisors who were interviewed discussed regular interaction with their respective county road commission. *"We've been trying to work with the county in improving [road conditions], and the county has acknowledged constantly over the last two years since I kind of started hounding them that, yes, we have the worst road system of any township in the county,"* one supervisor complained. Many local officials must coordinate emergency services with neighboring townships or municipal entities, including ambulatory and fire. Since wildfire risk in these rural areas can be relatively high, this coordination is often vital to the safety of residents. As one Mackinac County official described, *"Yeah, we have a fire agreement with both [surrounding townships], mutual aid. In fact, we had [a] little leaf fire up here yesterday, so Hendricks, uh, Garfield and Hudson and, and the DNR. But it was, it could have gotten serious, you know..."* All of these interactions serve not only as a means to deliver necessary services to constituents, but also to gain a sense of local conditions and resident attitudes.

Many local relationships are maintained through organizations and committees in which the officials actively participate. While some of this involvement is mandated by law, most participants mentioned serving on committees because they felt it was an important way to maintain involvement in the goings-on of their community. The extent of such participation varies from person to person. An official in Mackinac County bemoaned

his extensive involvement in various groups: *"...well, last year, with meetings and with, uh, committee meetings and so forth, I had, uh, ninety-four meetings for the year..."*

A few officials have made conscious decisions to reduce or minimize the number of entities they are involved in. *"I could go to meetings every day of the week if I wanted to but I don't...I can't afford it,"* mentioned one official from Luce County. Another in Mackinac County explained, *"I kind of developed, you know, I don't belong to, I used to belong to all the service clubs and all that, but I stopped because...I didn't have any free time, it was business all the time."* Others, on the other hand, express a sense of pride in being so active:

> *"I'm on the human services coordinating body and a member of Kiwanis and my church. You never know where people will come up to you and bring things or talk to you about whatever needs to be done...you're also in a leadership position to do something about [local issues] and have a say in how the money gets spent and the grants are gotten."*

For those officials who are involved in committees and organizations, there appears to be some sense of control of how issues are handled. These activities also help to color the picture officials have of conditions in their communities.

Tribal connections

The Native American tribes who live in the region play an important part of the Eastern UP's social and economic conditions, especially in the last ten years. Development of casinos by both the Bay Mills and the Sault Tribe of Chippewa Indians have provided needed job opportunities and a boost to their own economy, making serious contributions to local support services and development projects. As one official from St. Ignace stated, however, "Gambling is a mixed bag." A few of those interviewed mentioned witnessing individuals who face destitution due to their excessive gambling habits. Others complained

that, although casino jobs do provide year-round employment, these positions rarely pay high wages or offer health benefits. Regardless of personal reactions to the development of these casinos, many officials interviewed recognize how the success of this kind of economic development has contributed to the growth and fiscal importance of the tribes. Many officials in municipal or county government mentioned arranging contracts with tribal governments who pay annual lump sums to support social services such as fire protection and law enforcement. Others mentioned maintaining relationships with tribal members who are taking a more active role in cooperative projects, including workforce development, a fisheries commission, and other natural resource-related efforts. An Natural Resources Conservation Service (NRCS) employee and two DNR employees mentioned that they were in the process of developing stronger ties with tribal members who are employed in forestry, wildlife, and fishery management for their respective tribes. Relationships are not limited to those maintained out of an obligation to address economic and natural resource issues, however. At least one official talked about how she felt personally enriched because of her relationship with tribal members. "*I met a lot of people that I didn't know existed in Sault Ste. Marie, and that's too bad because they are, uh, Native Americans are unique people, and I was surprised at some of the information I, I did get.*" Land and fisheries management, casino development, and other tribal activities ensure that the Native Americans will remain important players in social and economic decisions in the region.

Extralocal connections

Of course, connections to individuals within the region are not the only ones maintained among local officials. Participants mentioned regular interaction with statewide, federal, and international agencies and organizations. State officials, including the state senator, representative, and governor, were also mentioned. If officials were employees of a statewide agency or organization, such as the DNR or Nature Conservancy, direct and regular connections were maintained with fellow employees who operate outside the Eastern UP borders. One DNR employee, for instance, describes the process he follows when putting together management prescription recommendations:

> *"We try and get our prescriptions reviewed by somebody who is in Pontiac. They have a whole different perspective on things...sometimes if you've been in one area for a long time...you lose a little bit of statewide perspective and you also lose perspective from other areas of the state."*

Other DNR officials reported that they regularly include fellow employees from other divisions and disciplines in Eastern UP projects and events. One agency member discussed including the forestry, fish, wildlife, and law enforcement divisions in their eighth annual Smokey Bear event in Chippewa County. Another statewide organization employee in Mackinac County discussed her involvement in project teams with others who are housed downstate. "*...for instance, like with [public] work days, I had our land steward come up and help lead that. So there's expertise that I just don't have that I really need to pull on.*" All agency and organization officials in the Eastern UP therefore appear to recognize the value of maintaining statewide connections among their fellows to maintain perspective and provide constituents with knowledge or experiences that they themselves may not be qualified to provide.

Local officials outside these agencies often mentioned having regular involvement with statewide agencies, especially the DNR. It is questionable in most cases, however, whether this would be considered a true extralocal connection, since most who discussed interaction with such agencies referred to an employee who is housed locally. For instance, many township officials discussed regular contact with the DNR to maintain local road systems that provided access to state timber resources. This contact, however, is usually limited to one or two local employees who coordinate such tasks. In fact, only one of the thirteen participants who mentioned some involvement with the DNR mentioned an individual who was not located within the region. Contacts with universities outside the region, however, were mentioned occasionally. These institutions, particularly Michigan State University, were mentioned as sources of technical information in more specialized fields, or were involved in research activities that eventually offered the results as tools for local communities to work with. One natural resource-based organization in Mackinac County regularly uses interns from universities downstate, providing additional connections to others outside the region.

Connections with other agencies, such as the Michigan Department of Environmental Quality (DEQ) or the Environmental Protection Agency (EPA), were mentioned less often. Discussions about entities serving a more regulatory function were not always positive, often portraying them as outsiders who have little compassion for, or understanding of, their local area. As one Sault Ste. Marie official commented, "*...you never know what the EPA is going to come down on, you know, or the DEQ or any other government agency...there is always something that they want you to do and it costs money and it has to be passed on* [to taxpayers]."

Nine local officials mentioned having regular contact with their state representative and senator. Mayors who were interviewed pointed out that one of their biggest roles in their city is public relations, and therefore served as the "first contact" when the governor or other state dignitary came to visit. Officials in the St. Ignace area were especially connected with the state senator, because his permanent residence is there. As one participant mentioned, "*Ah, our elected, our state senator is from St. Ignace, Walt North and he is on our harbor authority board and so we meet with him all the time. I see him all the time.*" One commissioner from the same area suggested his strong connection with the senator originated from previous work experience outside the region. "*...a lot of my, I guess, involvement comes right through being a state employee, too. I deal with Lansing quite a bit and my former boss here is now a state senator. I know him very well...*" These direct connections with state government appeared to give some of these local officials a sense of voice in how their local community is governed.

Extralocal connections that seemed to provide the greatest amount of information and outside perspective came from memberships in statewide or national professional organizations. One-third of participants mentioned being actively involved in an organization that is directly related to their particular field. For instance, the local newspaper editors who were interviewed both are members of the Michigan Press Association. A Chamber of Commerce director is a member of the association for Michigan Chamber of Commerce Executives. DNR employees who are in some way involved in forest management are members of the Society of American Foresters. These types of associations were reported as vital to maintaining access to technical information and providing social support in their respective positions, as well as having some input on

how their respective fields are professionally maintained. Many of these official mentioned being involved in these associations in order to get to know others in their profession. "*I was president of the Michigan Municipal League one year...which was a real honor...I traveled all over the state...And ah, my philosophy was like that of ah, of a former president who wanted to get out and see those who belonged to your association. And you want feedback, you know,*" stated one official in Sault Ste. Marie. Another from the same community who is relatively new to her position enjoyed membership in her respective area of expertise because of the mutual support it provides. "*...through [the association] I met a lot of people and kind of developed this network...So I can sort of send out feelers via e-mail and other methods to sort of say, here's an issue we're having. Have you guys ever had this and how have you dealt with it...*" Yet another participant who is the editor of the local newspaper uses her professional membership as a source of technical information. For instance, she mentioned making regular contact with an attourney hired by the Michigan Press Association that provides free legal advice on common issues related to writing and publishing. These types of connections that provide direct contact with others in an official's position help keep them up to date on current issues and trends. Some mentioned getting regular news via the Internet. One local official in the Newberry area, for instance, said, "*I tied into, for example, the city of Midland's web page and other cities and municipalities' web pages in order to share ordinances and ideas and you know, it is just um, it really has changed...the way of doing business and it has been really, really valuable.*"

Quantifying local and extralocal connections

Quantifying the responses to the questions that targeted the local and extralocal

connections that they must maintain were more challenging. Based on the context participants used in the interviews to describe these relationships, not all connections are equally important or strong (for both locals and extralocals). Some connections are made strictly to accomplish a given task, while others have been maintained on a regular basis for many years. The strength of the connection is quantified by attaching greater numeric weight to those ties that appear to be stronger, based on the context of the response. For instance, connections that are made occasionally or just once in order to complete a project or address a problem are assigned a value of one. If the mentioned connection appears to be fairly regular, it's assigned a two. If the connection is maintained because of the participant's membership in a club or organization, it's given a value of three. This latter distinction is made since an official is more likely to be engaged in the community when they're members of an organization. Local and extralocal connections are tabulated using the same numeric system, but they were constructed as separate variables. The local connection index scores across the officials ranged from a low of two to a high of twenty-seven. Participants' extralocal index scores ranged from a low of zero to a high of thirteen. Summarized results of officials' local and extralocal connection scores are summarized in Table 14.

Overall findings of influential/opinion leader questionnaire

Results from the questionnaire on officials' sense of personal influence and opinion leadership are divided into two parts. The first part includes the series of nine statements based on Weimann's (1994) measures of an individual's overall personal influence. The second part focuses specifically on measurement of opinion leadership, where this

Table 14. Summary of local and extralocal connection scores, quantified from personal interviews.

Local connections	Frequency	Percent
0 to 9	11	28.9
10 to 19	13	34.2
20 to 27	12	31.6
(missing)	2	5.3
TOTAL	38	100.0

Extralocal connections	Frequency	Percent
0 to 4	21	55.3
5 to 8	8	21.1
9 to 13	7	18.4
(missing)	2	5.3
TOTAL	38	100.0

leadership is specific to a particular discipline or field. The mean scores corresponding to the influential statements in Part I are all well above the mid-range value of five (Table 15). Local officials in the sample seem to be generally strong in their sense of personal influence. The three statements with highest mean scores relate to personal feelings of confidence and responsibility. The remainder in some way associate the respondent with others in the community. Officials who completed the questionnaire generally appeared to shy away from statements that set their own status higher than that of others. In fact, two provided written comments corresponding to these statements, suggesting that they felt it would be egotistical of them to indicate strong agreement. Although there were moderate differences in statement means between elected and non-elected officials (with non-elected often having lower mean scores), there were no significant differences.

Table 15. Summarized frequencies of influential section of followup questionnaire.

PART I. Generally speaking, on a scale of 1 (strongly disagree) to 10 (strongly agree), which of the following statements do you feel apply to you? [n=29]

Statement	Mean	Std. Dev.
I usually count on being successful in the things I do	8.34	1.97
I am confident about how I should behave in most situations	8.10	1.95
I like to assume responsibility	7.83	2.12
I like to take the lead when a group does things together	7.17	2.44
I enjoy convincing others of my opinions	6.76	2.40
I often notice that I serve as a role model for others	6.59	2.11
I am often good at getting what I want	6.83	2.42
I am often a step ahead of others	6.86	1.88
I often give others advice and suggestions	7.14	1.98

In order to test whether these statements can be aggregated as an overall measurement of influence, a factor analysis was conducted. Using the maximum likelihood extraction method, the analysis resulted in one factor, of which all nine statements were included (Table 16). This factor explains 61% of the total variance. This suggests, as with Weimann's findings, that these nine statements are an acceptable aggregate measure of self-reported influence among the respondents. When the values of each statement are summed for each official, however, there is still no significant difference between the aggregate scores of elected officials and those of non-elected officials.

Responses to the open-ended question in Part II asking about the issues officials find themselves discussing most were grouped into several broader categories (Table 17). Many of the items listed corresponded directly to the position of the official. For instance, an elected official who is also employed as a high school teacher wrote "improving public

Table 16. Factor analysis of influential variables (maximum likelihood extraction method).

Communalities

Influential variable	Initial	Extraction
Count on being successful	0.858	0.698
Confident about behavior	0.680	0.505
Assume responsibility	0.840	0.585
Take the lead	0.675	0.461
Convincing others	0.806	0.699
Serve as a role model	0.679	0.602
Good at getting what want	0.894	0.657
Step ahead of others	0.759	0.605
Give others advice	0.823	0.710

Total variance explained

	Initial eigenvalues		Extraction SS loadings	
Factor	Total	% variance	Total	% variance
1	5.908	65.639	5.521	61.342
2	0.939	10.436		

Factor matrix

Variable	Factor 1
Count on being successful	0.835
Confident about behavior	0.710
Assume responsibility	0.765
Take the lead	0.679
Convincing others	0.836
Serve as a role model	0.776
Good at getting what want	0.810
Step ahead of others	0.778
Give others advice	0.842

Goodness-of-fit test

Chi-square	df	sig.
68.181	27	0.000

Table 17. Summarized frequencies of opinion leader section of followup questionnaire.

PART II. In your everyday life, what do you find yourself discussing with others?

Question 1. What TWO issues do you find yourself discussing MOST OFTEN with your friends, neighbors, and acquaintances?* [n=29]

Issue	Frequency
Economic development	12
Politics/Government	10
Recreation/Outdoors/Environment	8
Education/Children/Parenting	8
Other town issues/Infrastructure	6
Taxes	3
Tourism opportunities	2
Agriculture-related	2
Other (mentioned once each):	7
The Nature Conservancy infiltration	
Reactions to change	
Crime, corruption	
Ethics & freedom in lifestyles	
Population influx	
Planning/Development	
Events that enhance the area	

11. In general, how much do you like to talk about each issue with your friends and acquaintances? [n=29]

	Issue #1 Percent	Issue #2 Percent
I enjoy talking about it very much	69.0	48.3
I somewhat enjoy talking about it	31.0	41.4
I would prefer not to discuss this issue with others, but feel obligated to do so	0.0	10.3

Table 17 continued next page

Table 17, continued.

12. Would you say you give very little information, an average amount of information, or a great deal of information about each of these issues to them? [n=29]

	Issue #1 Percent	Issue #2 Percent
I give a great deal of information	55.2	41.4
I give an average amount of information	44.8	55.2
I give very little information about it	0.0	3.4

13. Compared with your network of friends and acquaintances, are you less likely, about as likely, or more likely to be asked for advice about each issue? [n=29]

	Issue #1 Percent	Issue #2 Percent
More likely	69.0	44.8
About as likely	27.6	44.8
Less likely	3.4	10.3

14. When you and your friends or acquaintances discuss these issues, what part do you most often play? Do you mainly listen to their ideas or do you try to convince them of your ideas? [n=27]

	Issue #1 Percent	Issue #2 Percent
I mainly would listen to acquaintances' ideas	59.3	66.7
I mainly would try to convince them	40.7	33.3

15. Do you have the feeling that you are generally regarded by your friends and acquaintances as a good source of advice about each of these issues? [n=28]

	Issue #1 Percent	Issue #2 Percent
I'm regarded as a very good source of advice	53.6	28.6
I'm somewhat regarded as a good source of advice	42.9	67.9
I'm not considered to be a source of advice on this issue	3.6	3.6

* Since each respondent listed two issues, there are a total of 58 issues reported.

education" as one of the issues. Those mentioned most often related to economic development and governmental politics. Issues related to the outdoors/environment and youth/education were also common. Responses to Questions 11 through 15 are difficult to summarize, since each participant is referring to a different issue when answering them.

Generally speaking, respondents enjoyed talking about the issues they listed (Question 11), were more likely than their acquaintances to be asked for advice on these issues (Question 13), and would be more likely to listen to acquaintances' ideas about their issue than to try to convince others (Question 14). On the other hand, responses were mixed when asked how much information respondents gave on the listed issue (Question 12), and when asked if they were regarded by their acquaintances as a good source of advice (Question 15). In order to get a clearer picture of opinion leadership in the same way that Weimann (1994) did, respondents were grouped according to the issue categories they listed in Question 10, and a total opinion leadership score was created by adding the values from Questions 11 through 15. Opinion leadership scores can range from a minimum of 0 to a maximum of 9. Results are presented for the four issues that were most prominent among the respondents: education/youth, outdoors/environment, economic development, and politics/government (Table 18). It is possible that local officials who reported an environmental or related issue about natural resources are stronger opinion leaders in their field than those who listed the other topics.

There are some concerns, however, relating to the reliability of this opinion leader measurement. First, the frequencies are too low to comfortably conclude the differences are significant among the issue categories. Second, if the five questions used to measure opinion leadership are effective, they should factor together in a factor analysis. Factor

Table 18. Opinion leader scores for the four most frequently reported issues among officials.

Issue category	Mean opinion leader score	Frequency of respondents reporting this issue
Education/Youth	5.13	8
Outdoors/Environment	7.00	8
Economic Development	6.33	12
Politics/Government	5.78	9

analyzing these questions shows that no factor appears to capture the majority of the questions (Table 19). Therefore, aggregating these questions as a way to measure opinion leadership does not appear to be appropriate. Examining these statements individually, however, still provides some insight on officials' involvement in, and willingness to discuss, these important local issues.

Identifying relationships among personal influence, social connections, and preferences for growth

A characterization of local officials in the Eastern UP can now emerge based on the combined results of the conjoint survey, the personal interviews, and the influential questionnaire. If these officials have a strong preference for growth, have extensive connections with others both within and beyond their local communities, have low propensities for gathering input from their constituents, and believe they're influential, then these officials may be members of a growth machine, according to Molotch's portrayal. In order to examine these relationships, it must first be determined whether there are significant differences in preference for an overall growth scenario, based on the conjoint survey results from both residents and local officials. If there are differences, the

Table 19. Factor analysis of opinion leadership variables (maximum likelihood extraction method).

Communalities

Opinion leader variable	Initial	Extraction
Talk about issue	0.265	0.999
Give info about issue	0.366	0.392
Asked for advice on issue	0.344	0.404
Try to convince others	0.085	0.090
Source of advice on issue	0.493	0.855

Total variance explained

	Initial eigenvalues		Extraction SS loadings	
Factor	Total	% variance	Total	% variance
1	2.273	45.454	1.367	27.332
2	1.021	20.413	1.372	27.436
3	0.884	17.685		

Factor matrix

Variable	Factor 1	Factor 2
Talk about issue	0.999	-0.002
Give info about issue	0.465	0.419
Asked for advice on issue	0.050	0.633
Try to convince others	0.169	0.247
Source of advice on issue	0.347	0.857

Goodness-of-fit test

Chi-square	df	sig.
0.238	1	0.626

qualitative results from the interviews must be quantified so that local connection, extralocal connection, and public input indices can be created. These indices, along with the compiled influential scores, can then be applied as independent variables to examine relationships between them and the dependent growth preference scores.

Identifying officials' characteristics that influence development preferences

Using the public input, local and extralocal connection indices from the interviews and the influential index from the followup questionnaire, relationships with preferences for local development can begin to be explored (Figure 9). Other quantitative variables including officials' elected/not elected status (dummy variable), the number of years they've been in their position, and the number of years they've lived in the region (dummy variable over 20 years) were also included in the analysis. Finally, a dummy variable was

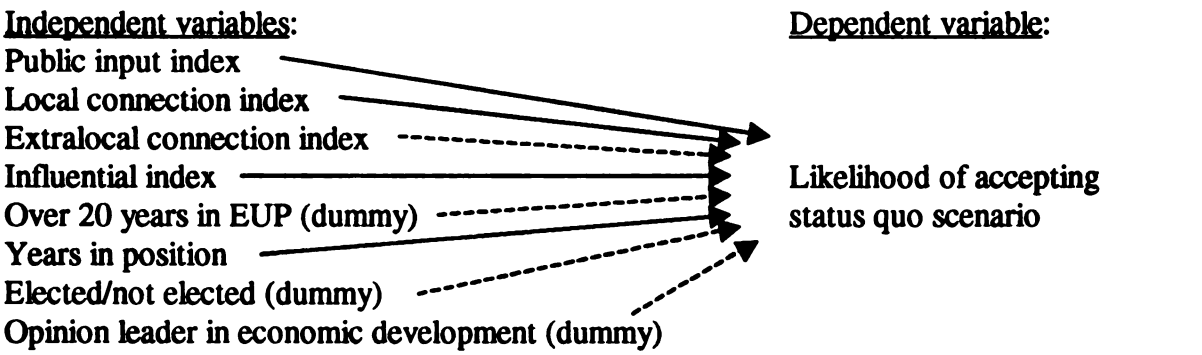


Figure 9. Proposed relationships between independent variables and dependent variable (Dashed lines indicate negative relationships).

also constructed from the opinion leader portion of the followup questionnaire to indicate whether or not officials mentioned talking about economic development in their everyday lives.

To examine these relationships, a series of bivariate regression equations were first used to determine the influence of each independent variable on the likelihood of accepting the status quo scenario. A stepwise regression technique was then used, incrementally removing variables based on those having the lowest significance in the model. Few of the independent variables held any significant relationship with preferences for the status quo scenario based on the results of the bivariate regressions (Table 20). Both the dummy variable that accounts for officials' tenure in the Eastern UP and the elected/not elected dummy variable were significant at the $\alpha = 0.05$ level. The coefficient for the elected/not elected dummy variable is in the direction that suggests the preference for the status quo scenario for elected officials is lower than that of non-elected officials. Similarly, as the amount of time officials lived in the area increases, their preference for the status quo also decreases. This result corresponds with previous findings by Green et al. (1996) on land use attitudes in northern Wisconsin.

The stepwise regression exercise examines the effect of these independent variables holding all others constant. The model that explained the greatest amount of variance (i.e., the highest R^2) is provided in Table 21. Using the adjusted R^2 value due to the small sample size, the model explains approximately 26% of the variance in the dependent variable. The overall model is significant at the $\alpha = 0.05$ significance level. There are no significant independent variables, however, in the model. This is due to the significant interaction of the tenure and the elected/not-elected dummy variables, according to the Pearson correlation table of independent variables (Table 22). The elected/not elected dummy and the length of time living in the Eastern UP are highly

Table 20. Results of the bivariate regression models, measuring each independent variable's influence on the dependent variable (preference for status quo scenario).

Public input bivariate model $R^2 = 0.013$
Adjusted $R^2 = -0.016$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.254	0.085		3.001	0.005
Public input index	0.019	0.028	0.114	0.666	0.510

Local connection bivariate model $R^2 = 0.006$
Adjusted $R^2 = -0.023$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.257	0.110		2.341	0.025
Local connection index	0.003	0.008	0.077	0.452	0.654

Extralocal connection bivariate model $R^2 = 0.029$
Adjusted $R^2 = 0.000$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.244	0.073		3.338	0.002
Extralocal connection index	0.013	0.013	0.170	1.009	0.320

Influential index bivariate model $R^2 = 0.004$
Adjusted $R^2 = -0.033$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.236	0.218		1.086	0.287
Influential index	0.001	0.003	0.060	0.310	0.759

Table 20 continued next page

Table 20, continued

Tenure dummy bivariate model $R^2 = 0.230$
Adjusted $R^2 = 0.208$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.444	0.059		7.564	0.000
Years in EUP > 20	-0.253	0.077	-0.479	-3.277	0.002

Position tenure bivariate model $R^2 = 0.047$
Adjusted $R^2 = 0.019$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.371	0.070		5.331	0.000
Years in position	-0.006	0.004	-0.217	-1.294	0.204

Elected/not elected bivariate model $R^2 = 0.108$
Adjusted $R^2 = 0.083$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.374	0.055		6.793	0.000
Elected/not elected dummy	-0.172	0.082	-0.328	-2.086	0.044

Opinion leader bivariate model $R^2 = 0.069$
Adjusted $R^2 = 0.035$

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.359	0.062		5.750	0.000
Opinion leader dummy	-0.138	0.097	-0.263	-1.417	0.168

Table 21. Summary of model that explained the greatest amount of variance based on adjusted R^2 value.

Model R^2 = 0.373
Adjusted R^2 = 0.259
Model coefficients and variable significance:

Variable	B	Std. Error	Standardized	t	Significance
(Constant)	0.371	0.099		3.745	0.001
Years in EUP > 20	-0.189	0.105	-0.356	-1.805	0.085
Public input index	0.052	0.030	0.306	1.753	0.093
Elected/not elected	-0.128	0.108	-0.237	-1.184	0.249
Opinion leader	-0.132	0.095	-0.240	-1.395	0.177

Model profile:

	Sum of squares	df	Mean square	F	Significance
Regression	0.710	4	0.177	3.270	0.030
Residual	1.194	22	0.054		
Total	1.904	26			

Table 22. Pearson correlation table of independent variables.

	Status quo acceptance	Public input score	Local connections	Extralocal connections	Influential score	Years in EUP > 20	Years in position	Elected/ not elected	Opinion leader
Status quo acceptance	1.000								
Public input score	0.114 (0.510)	1.000							
Local connections	0.077 (0.654)	0.175 (0.308)	1.000						
Extralocal connections	0.170 (0.320)	-0.015 (0.932)	0.209 (0.221)	1.000					
Influential score	0.060 (0.759)	0.345 (0.078)	-0.196 (0.328)	-0.001 (0.995)	1.000				
Years in EUP > 20	-0.479* (0.002)	0.085 (0.623)	-0.165 (0.337)	0.003 (0.988)	0.123 (0.525)	1.000			
Years in position	-0.217 (0.204)	-0.136 (0.431)	0.143 (0.404)	0.117 (0.499)	-0.121 (0.547)	0.286 (0.091)	1.000		
Elected/ not elected	-0.328* (0.044)	0.193 (0.259)	-0.138 (-.421)	-0.176 (0.304)	-0.126 (0.517)	0.446* (0.005)	-0.034 (0.843)	1.000	
Opinion leader	-0.263 (0.168)	0.103 (0.610)	-0.230 (0.249)	-0.254 (0.202)	-0.103 (0.596)	0.029 (0.881)	0.014 (0.946)	0.005 (0.980)	1.000

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

correlated, with a p-value of 0.005. This suggests the above specified model contains relationships among the explanatory variables, where the length of time living in the region influences who is elected. In this case, it appears that elected officials have lived in the region longer than the non-elected officials in the study. To determine how much of the contributed variation is due to uniqueness and how much is due to commonality among these variables, three additional R^2 values were computed, corresponding to regression models that systematically omitted one of the three independent variables. The results of these variables uniqueness contribution and their commonality are outlined in Table 23. These figures show that the commonality contributes approximately one-third of the

Table 23. Uniqueness and commonality of the three independent variables of the regression equation that explained the greatest amount of variance.

Independent variable	Bivariate coefficients	Std. partial slope
Public input score	0.019	0.306
Years in EUP > 20 dummy	-0.253	-0.356
Elected/non elected dummy	-0.172	-0.237
Opinion leader dummy	-0.138	-0.240

Uniqueness of predictors

Public input score	$R^2 - R^2_{Y.234} = 0.259 - 0.187 = 0.072$
Years in EUP > 20 dummy	$R^2 - R^2_{Y.134} = 0.259 - 0.186 = 0.073$
Elected/not elected dummy	$R^2 - R^2_{Y.124} = 0.259 - 0.246 = 0.013$
Opinion leader dummy	$R^2 - R^2_{Y.123} = 0.259 - 0.250 = 0.009$

Commonality = $R^2 - (0.072 + 0.073 + 0.013 + 0.009) = 0.092$

variance in the model. This supports, in a limited manner, the growth machine model, where elected officials are proposed to be more likely to want changes from current conditions. It would appear, however, that the length of time living in the region is the

variable that primarily affects these preferences. Intuitively, this finding is reasonable—non-elected officials were often MDNR or other agency personnel who have transferred within the agency in previous years. Conversely, elected officials were often township supervisors or city officials who indicated a desire to serve or "give back to" the communities that have been a part of their lives for a long time.

The ultimate conclusion is that none of the included independent variables appear to significantly influence an official's preference for the future, as defined in this case by their likelihood to accept the status quo scenario. Elected officials may on the surface be less likely to accept this scenario, but it is not conclusive that this preference is due to being part of an elite class of growth pushers, as described in the growth machine image. Further evidence that, in general, local officials in the Eastern UP are not interested in large increases in growth and development is provided by the fact that neither local officials nor residents are particularly interested in the high growth scenario. As all members of the region face the growth in population and development that is currently taking place, it will be important for them to recognize their common interests in protecting the natural resources that are so special to them.

Qualitative evidence supporting quantitative findings

A primary advantage of qualitative research is its ability to capture the context surrounding the answers that participants give. For instance, supplemental qualitative evidence from the interviews with local officials provides some clues as to why the results show few significant relationships between development preferences and their social connections or personal levels of influence. Although specific questions were not asked

about their personal concerns for the Eastern UP during the interview, several themes seemed to appear over the course of the conversations. Not surprisingly, many mentioned having concerns about the economic conditions of their area. Several mentioned the desire to diversify the local economy, including an EDC director who discussed his view of the Upper Peninsula as a region with great potential. *"People know, what they know of the UP as a place to go to vacation. What they don't know and what they don't see is that it is a year-around region. It has year-around communities and it has year-around business activity."* Usually, however, these desires to improve the region's economic base are expressed for two reasons—to improve the living wage for current residents, or to keep the community's young talent from moving elsewhere to find promising careers. *"One of my goals [is to] create jobs or businesses that will create jobs to keep our kids here, to give them a form of income that they can stay here and raise their families..."* proclaimed one township supervisor from Chippewa County. Not one official from the Eastern UP said they wanted to attract business in order to provide a greater incentive for additional in-migration. In fact, several mentioned a desire to keep additional population growth from happening. *"...we're not crowded like [Houghton Lake], and we want to keep it like that,"* said a township supervisor from Mackinac County. A commissioner from Luce County had similar feelings when discussing the population changes that he has seen in other natural resource-oriented locations in the state, *"And first it was Houghton Lake, then it was Traverse City, and then it is going to be us. So, do we want to be like Traverse City?"*

During the personal interviews, over one in four officials mentioned issues related to development, while about 21% expressed concerns about increasing land values. A few

mentioned using zoning as a way to address these problems. These efforts were summed up by the director of a regional planning office, *"And there are a lot of townships that are anxious to do that [update land use plans] now because there is a lot of migration of ah, retired people coming up here now...And so that's causing some consternation."* A few discussed the dilemma they face with their constituents concerning the balance between zoning and property rights. Local residents may see zoning as a limitation to their freedom when they wish to add further development to their properties. One township supervisor from Chippewa County expressed his ambivalence on this issue, *"I try to take a stance, we're not trying to limit a property owner from doing what they want with their property but, you know, try to explain to 'em it's more of a protection process..."* These expressions by officials in the Eastern UP provide important clues that, although they are very much interested in improving the economic quality of life for their constituents, they are also interested in protecting aspects of the region's rural character.

Although authors such as Logan et al. (1997) and O'Brien et al. (1998) mention the importance of extralocal connections in successful development efforts, interviews with officials in the Eastern UP suggest that these types of connections are important for more than just economic development. Non-elected employees from such agencies or organizations as the MDNR, MSU Extension, and The Nature Conservancy often mentioned maintaining regular contact with others in their respective agencies who are located outside the Eastern UP. These contacts provide technical expertise in disciplines that the local official does not have. Most of these agencies are centralized in Lansing, which makes this urban center a common reference. *"...any time there is a project going on or any time I have questions...we have a park planner on this assignment who works*

out of Lansing," mentioned one MDNR park official in Chippewa County. These extralocal connections are examples of assistance that lie beyond growth-related partnerships. In other words, soliciting aid in *conserving* natural resources can come from outside the region just as much as aid in *exploiting* those resources.

Memberships in statewide or national organizations are also important ways to connect with others extralocally. *"I'm chair-elect of the land use planning and design working group, the national one for the Society of American Foresters..."* stated one MDNR official from Luce County. Active membership in such organizations help to give officials a sense of empowerment in driving the future direction of their community. Several officials mentioned taking advantage of on-line services to maintain regular contact with the organizations they're involved in. A member of a local tribal council in Chippewa County said, *"I do a lot of 'Net surfing and I'm linked with a lot of the Native professionals throughout the state."* This tribal member was relatively young, and had only been in his position for two years. But age did not seem to be a barrier to using computer technologies. A township supervisor, who has been a resident of his township for over 30 years, also accesses the Internet regularly. *"I'm on the Internet and we, uh, I call up, uh, Michigan Township Association on the 'Net, read all their latest things..."* he said.

Although most officials mentioned some kind of connection with other local governmental entities, most were in relation to emergency services or infrastructure coordination between jurisdictions. In fact, township supervisors mentioned connections with their county or nearby towns only in the context of financial assistance for infrastructure and social service improvements. One commissioner from Chippewa County

summarized these relationships by saying, *"...we have a city liaison, uh, that works with the city commissioners, but we don't really uh, have a lot of uh, discourse with them. We, uh, we run the county, they run the city."* This commissioner also described the relationships held with the townships with the county. *"We try not to push [the townships] around. I mean, they're doing a good job in this area...we can't tell the townships what to do. They know how to do it."* One official from Mackinac County mentioned an attempt at better coordination among units of government in the county through the Mackinac County Governmental Advisory Board. The objective of this board is to gather together officials from all units of government within the county to discuss common issues and needs. Although one particular official from the city of St. Ignace was positive about the board's formation, he was not sure of its future existence. *"Ah, I kind of get the feeling that some of the county commissioners are somewhat opposed to this idea [the advisory board], but I don't know for sure."* Groups of this sort can be difficult to coordinate when the majority of its members have full-time job responsibilities outside their elected positions.

Based on the interviews, the context around which local officials responded to the questions about local connections provides some clues about their effectiveness in coping with recent changes. Their ambivalence toward zoning efforts, their limited contact with other local officials, and a lack of available time and funding suggest that local ability to address change is limited. Although some participants did mention taking proactive steps to plan for the future, such as conducting "visioning sessions" in the community, these visions grow dim as officials look beyond their own municipal borders.

Explorations of the qualitative findings from the interviews therefore illustrate not only *how many* connections officials make in their positions, but also the *kinds* of relationships these connections consist of. This context helps to draw appropriate conclusions about the nature of local officials in such rural regions as the Eastern UP. For example, the importance of informal contact with constituents as a way to understand local sentiment about issues would not have been apparent if the standard list of public input methods (e.g., public meetings, surveys, and committee memberships) was offered for selection on a quantitative survey. The next chapter summarizes the purpose, theoretical basis, methods, and results of this study. It also outlines some implications from these findings. This chapter will also describe some of the important limitations of this study, and suggestions for additional research in understanding the role of local officials in economic development, and how the existence of social networks influence them.

CHAPTER VI:
CONCLUSIONS

Many rural resource-dependent regions across the country have faced similar problems of economic instability over the past century. The resulting poverty is often accompanied by an underinvestment in social infrastructure and a loss of young people to other areas with more promising job opportunities. At times, circumstances beyond a single community's control creates new growth patterns, such as the formation of bedroom communities along a central travel corridor. At other times, a community chooses to focus on a particular economic sector, such as tourism, to overcome their particular conditions. Usually these are only partial solutions that focus on only economic improvements at the expense of social and environmental conditions. Both rural sociologists and economists have studied the successes and failures of these types of regions, using very different tools and theories on which to base their efforts.

Both disciplines, however, have in one way or another included the role of local officials in their studies. Some researchers have attributed the successes of a community to the ability of these officials and their constituents to mobilize and overcome their social and economic problems. A vital component to these efforts is the set of well-established connections among decision makers, local individuals, and organizations both within and outside the community. On the other hand, local officials have been seen by other researchers as potential barriers to alternative solutions that do not fit their individual preferences. They are viewed as members of an elite class that can effectively prevent individuals or groups from voicing opinions that run counter their preferred alternative, the alternative that provides the elites the greatest economic gain. Little

attention has been given, however, to local officials in these rural areas as decision makers who must strike a balance between encouraging economic opportunities and maintaining rural character that serves as a central source of local identity.

The purpose of this study was to determine whether local officials differ from their constituents in preferences for economic development and resource protection, and to examine these local officials' self-perceived personal influence and social connections to determine whether these characteristics influence preferences. Using the Eastern Upper Peninsula as a setting for this work, classic rural resource-dependent conditions can be found. With a historic background of timber harvesting and the resulting declines in that industry, along with the closing of some significant government facilities, economic conditions are far from ideal. Many communities as a result depend more heavily on amenity-based opportunities in various recreation and tourism markets. These industries carry their own problems, including seasonal or minimum-wage employment and a boom in the development of second homes by nonresident landowners. As the communities in this region struggle to attain a balance among stable economic, environmental, and social conditions, their local officials stand at the center either as facilitators or barriers to these efforts. This study is primarily based on two bodies of literature to examine the role of these officials. First, particular portions of the social capital concept are used to identify the social networks that can be maintained to build the capacity to address local concerns. Second, another theory described as the growth machine is used to look at the possibility that the social networks created by decision makers intentionally exclude competing concerns or interests of constituents. Using these theories as a foundation, both residents and local officials in the Eastern UP were asked about their preferences for future

economic growth and natural resource protection. Interviews, followed by a brief mail survey, were conducted with the officials to gain a clearer understanding of their connections with local residents and other decision makers (both within and outside the region), levels of involvement in their respective communities, and personal sense of being influential in making things happen. Putting these different pieces together helped form a clearer picture of what it means to be a local official in a rural resource-dependent region of Michigan.

Summary of findings

There were three stages to the study's methods. First, a conjoint survey was administered to Eastern UP residents and local officials to measure preferred future economic and environmental conditions in the region. Next, a set of qualitative interviews was conducted with those same local officials to examine their public opinion efforts and their existing local and extralocal networks. Finally, a follow-up mail survey was sent to these officials asking them about their perceived level of influence and opinion leadership in their respective communities.

Examination of the Eastern UP officials' attitudes and social networks began with a conjoint survey of their preferences for future conditions in the region. The survey was structured to have respondents make tradeoffs among various levels of growth, economic development, and resource protection. Results from the 38 elected and non-elected officials were compared with those of 45 residents who were also presented with the survey. Comparing the resulting mean utility scores of each attribute level presented in the survey revealed few significant differences between officials and residents. Residents were more likely to want small increases in the amount of protected natural areas and an

increase in the number of government jobs in parks or forests. Although only these four levels of the thirty-seven that were included in the conjoint survey were significantly different, those four did correspond to desired changes among residents that favored some sort of resource protection.

Looking at the conjoint survey results in another way, the combinations of attribute levels can be combined to simulate possible future scenarios. For instance, a combination of levels described as the 'status quo' scenario includes such levels as no changes in water quality and amount of game fish, no changes in the number of permanent and seasonal residents living in the region, and no changes in the amount of timber harvesting or protected natural area acreage. Another combination, called the 'pro growth' scenario, includes moderate increases in residents, hotel/motel development, additional clearcutting, more opportunities for snowmobiling/four-wheeling, and a moderate decrease in protected natural area acreage. The likelihood that a respondent would choose one of these scenarios for future conditions can be computed by summing the utility scores for each included level (x), and using the formula $e^x / (1 + e^x)$ to find the odds of accepting the scenario. Comparing the likelihood of accepting the presented scenarios between local officials and residents, only the 'status quo' scenario is significantly different. Residents are more likely to accept this scenario than local officials, which would in part support the supposition that officials are more interested in growth than their constituents. However, officials were no more likely than residents to prefer a pro growth scenario. The lack of a significant difference may relate to some officials' suggestions in the qualitative interviews that a tourism-based growth model is not what they want. Manufacturing or light industrial businesses were not included in the

conjoint survey, yet many mentioned wanting these opportunities while they were responding to the survey.

Both elected and non-elected officials were included in the 38 qualitative interviews. These included county commissioners, township supervisors, mayors, tribal leaders, DNR employees, Economic Development Corporation directors, county extension directors, newspaper editors, and others. The selected participants ranged from relative newcomers to those with lifetime residency in the area. The amount of time officials spent in their respective positions ranged from a year or less to over 30 years. Their educational backgrounds varied widely as well. Nearly half mentioned having some sort of postsecondary education, usually from a college or university within the state. Many of the elected positions are only part-time, therefore many of those participants were either employed in some other occupation, or were retired. Being employed in a full time job outside the elected position greatly affected the amount of time these officials could devote to listening to their constituents. Many of the elected county, township, and city officials are charged with managing the day-to-day operations of their geographic area, while the majority of the non-electeds are heavily involved in various forms of planning in their jurisdictions. For example, EDC and Chamber of Commerce directors discussed planning for business development, employees of the DNR are involved in planning for multiple uses of the natural resources, and county extension directors worked on planning strategies for various social services they provide.

Local officials were asked about the kinds of public input that they gather when making decisions for their area. Participants mentioned a wide range of formal and informal methods to gather this input. Most elected officials mentioned formal monthly,

bi-monthly, or annually held public meetings or hearings that are required by law. Several of these officials indicated that these types of meetings bring in few residents unless there is a controversial topic or issue at hand. Other participants discussed more issue-specific meetings, including meetings for planning or zoning, forest management plans, or special landowner stewardship programs. Surveys were also mentioned by five of the officials as a way to formally gather input. Subject matter for these included state park performance, local economic issues, and questions related to a local master planning process.

Informal input methods were commonly mentioned as well. Several officials mentioned having an "open door policy" in their offices. If an official has a full-time job outside of his/her position, however, this office time is clearly limited. Some, however, have specifically set regular office hours to make themselves available to the public. Participants also often mentioned getting informal input outside their offices in the course of their everyday lives. Some even mentioned receiving phone calls at their homes on a regular basis. Often this interaction takes place when running errands at the local store or at the beauty/barber shop. Everyday interactions with friends and relatives also provide information on what is happening in their communities.

Another question posed to local officials asked about the connections that must be maintained with others, both within and outside the Eastern UP, in order to get their jobs done. Officials mentioned forming these types of relationships both as part of their duties in the position and on a more personal basis when participating in various social activities. Some of these connections were made when addressing a specific point-in-time project or issue, while others have been maintained over the course of their lives in the

region. Locally, connections are often made with surrounding communities or townships when emergency services or road improvements need to be coordinated across political boundaries. Extralocal connections are often maintained with state or federal agencies for financial or regulatory purposes related to governmental procedures. Many elected city and county officials mentioned keeping in touch with their state senator, representative, and/or the governor. Employees of a statewide agency or organization who participated in the interviews have direct connections with colleagues who operate outside the borders of the region, especially in Lansing where many of the central offices are located. Often officials must be able to rely on expertise or knowledge housed outside their region in order to complete their work. Relationships are also maintained through memberships in organizations and committees, which can be local, statewide, or even nationwide in scope. Besides the typical standing committees on which many elected officials are required to serve, many mentioned being members of local fraternal organizations that allow them to feel that they're making a contribution to their community. Others mentioned having memberships in professional associations to share questions and issues with others who may have experienced similar situations.

The final stage of information gathering in the Eastern UP consisted of a brief questionnaire sent to all the officials who participated in the qualitative interviews. This survey was designed to measure their sense of how they serve as influential and/or opinion leaders in their communities. It was divided into two sections, one to measure their influential behavior according to Weimann's (1994) index, and the other to identify the types of information, such as economic development or social issues, these officials share most often with their acquaintances. The second section measured their opinion

leadership in the subjects the participant specified. Factor analyses conducted on the compiled results from the questionnaire indicated that the statements used to measure influential behavior could be grouped into one factor. The mean influential score for all officials on a scale from 0 to 90 was approximately 66, ranging from a low of 12 to a high of 85. Results from the opinion leadership section of the survey, however, were inconclusive. Generally speaking, officials stated that they most often discuss issues related to economic development or politics/government with friends and acquaintances, and that they enjoy discussing or sharing information about these topics with others.

In order to determine whether any of these characteristics of local officials influence their preferences for economic growth, quantitative indexes were created from the qualitative results of the interviews as well as the results from the follow-up influential questionnaire. These included three from the interviews: one for levels of public input, one for local connections, and one for extralocal connections. An index was also created from the influential portion of the follow-up questionnaire. These four indices were each included in the regression analysis as independent variables. Four other independent variables included: 1) the number of years participants had been living in the Eastern UP, 2) the number of years serving in their positions, 3) whether they were elected or non-elected officials, and 4) whether or not they mentioned discussing economic development in the opinion leader section of the follow-up questionnaire. These eight resulting independent variables were included in a regression model, using the odds of accepting the status-quo scenario as the dependent variable.

The model which explained the greatest amount of variance in the status-quo preference at 25.9% included only four of the independent variables: the number of years

living in the Eastern UP greater than 20 years (dummy variable), the public input index, the elected/not elected dummy variable, and the (economic development) opinion leader dummy variable. Although the overall model was significant at $p = 0.030$, none of the independent variables in the model were significant. The beta values for the bivariate regression equations revealed, however, that both the elected/not elected dummy independent variable and the years in the Eastern UP dummy variable both significantly influenced the dependent variable. For instance, the preference for the status-quo scenario declines as officials' position ranges from not elected to elected. Similarly, preference declines as officials' years living in the Eastern UP increase. This supports, in a limited manner, the assertion that elected officials are more likely to favor growth. However, there is a high Pearson correlation between the elected/non elected dummy variable and the number of years the official has lived in the region. Elected officials in this study generally have lived in the Eastern UP longer than those who are not elected. Therefore, in this study, there appears to be little evidence to support the growth machine scenario that portrays officials who favor economic growth have many extralocal connections, are disconnected from their own communities, or are particularly influential in pushing their growth agendas.

Implications

Based on the findings from this study, local officials are not particularly different from residents in their preferences for moderate economic growth and strong resource conservation. Additionally, local officials in rural regions that are experiencing development growth use various ways to connect with constituents they serve. However, they do not seem to be exceptionally connected with local or extralocal elites. According

to the qualitative interviews, however, they do express concerns about current conditions in their communities. Although questions about economic growth or resource protection were not directly asked of the participants, many expressed their feelings about these issues. Responses from the questions related to local connections also hint that local officials in the Eastern UP are not active members of a growth machine as defined by Molotch. On the other hand, they do not appear to possess the social connections that allow them to effectively manage the development the region is experiencing. The region would therefore not be described as having high levels of social capital.

Economic concerns

With such high unemployment rates and low median household incomes in the region, it is no surprise that economic factors are important to local officials. Several of them mentioned over the course of the interviews that they were very much interested in attracting businesses that would diversify their local economy beyond minimum wage-dependent tourism. At the same time, concerns about improvements in economic diversification and population increases are often expressed in relation to the local increases in parcelization and land values. Land value increases were generally seen as a barrier for many residents who wish to find affordable housing. And although higher land values usually equate to additional available tax money for local governments, many officials felt that it still wasn't enough to cover the increased demand for infrastructure improvements like paved roads and upgraded utilities. Although no one had suggestions how these land values should be addressed (other than improving local incomes), several mentioned taking active steps to review local zoning ordinances or at least improve their efforts in land use planning. In many cases, officials have seen what has happened to

communities outside their borders, and are not particularly interested in having such population growth and uncontrolled development spread to their area.

Social connections

Proponents of high economic growth, according to the literature, should have many connections with others who live outside their local area. These connections provide important technical and financial assistance to local development projects. The results from this study, however, find no relationship between high extralocal connections and preferences for growth. Based on the interviews with non-elected officials in natural resource-related positions, this may be due to the fact that conservation assistance is also sought extralocally.

Another important source of extralocal information, both for elected and non-elected officials, is membership in statewide or national organizations. These connections would appear to be especially vital in such isolated, rural regions as the Eastern UP. Not only do these memberships provide a source of salient news and information to local officials, but they also provide opportunities to exercise their existing knowledge base for the ultimate benefit of their own communities. Widespread use of technologies such as the Internet have made these relationships easier in the past few years. Regular communication through computer technologies will continue to reduce geographic barriers and provide easier access to information and technical assistance outside the region.

Although participants in the personal interviews also gave numerous examples of local connections they make in their jobs, there seemed to be a distinct lack of connection among local municipalities, townships, or counties. Two particular instances of

cooperation were often mentioned—when emergency services needed to be coordinated, or when needed road maintenance crossed political borders. Instead of thinking of the Eastern UP as a partnership of communities who share similar concerns over economic, social and environmental conditions, each political agent is more likely to see itself as an isolated entity who competes with others in the region for new opportunities. There are other clues that different segments of the Eastern UP are not well connected. For instance, the entire region has four EDCs who, as one EDC director observed, do not typically coordinate activities with each other. In fact, one official from Kinross Township viewed the city of Sault Ste. Marie strictly as a competitor when attempting to attract new businesses to the area. This lack of local connection hampers opportunities for capacity building (Brown and Glasgow, 1991). The current situation, as described by the officials in this study, could very well invite growth-related problems despite their personal desires to avoid these unwanted conditions. More cooperative and coordinated efforts to attract businesses, identify financial and social service needs, and secure environmentally sensitive areas would reduce the burden of each community's limited financial and technical capacities. Additionally, expanded connections with entities such as the Cooperative Extension Service would assist in gaining the technical expertise in community development that is necessary to improve local economic opportunities without placing excessive burdens on social or environmental conditions.

Study limitations

Four particular issues limit the strength of the conclusions in this study. The first limitation relates to the selected attributes used in the conjoint survey. Although the survey in general was well received by participants, several were concerned about the

lack of alternatives that included manufacturing jobs or other industrial development opportunities. The overall economic focus of the survey centered on resource amenity and extraction activities because of McDonough et al.'s (1999) observations that the Eastern UP economy's amenity growth patterns (such as in various tourism sectors) are growing substantially. The concerns expressed by local officials during the conjoint survey suggest that the natural resource amenity and extraction focus may be too limiting. Other survey participants, including the residents, were uncomfortable with the options provided in the snowmobiling/four-wheeling recreation opportunity category. Respondents seemed either to support snowmobiling or four-wheel motorized recreation, but not both. The resulting utility scores, therefore, were not particularly useful unless a respondent disliked all motorized recreation as a whole. Some officials who had a familiarity with forest management techniques were also concerned about the attribute levels that related to timber harvesting. For example, many felt that additional clearcutting would be acceptable in certain areas and among certain tree species, but not in other areas of the region.

The second limitation relates to the various types of residents who participated in the conjoint survey. Although both permanent and seasonal residents were included in the sample, they were treated as if there is no variation in their preferences toward growth and conservation. Based on observations from Green et al. (1996), Cantrill (1998), and McDonough et al. (1999), the length of time a resident has lived in a rural resource-oriented area strongly affects his or her attitudes toward these issues. Unfortunately, the small sample of seasonal residents in this study made an analysis of potential differences infeasible. As seasonal home development and increased parcelization increases in the

Eastern UP, examining these differences in attitudes toward development will become even more vital.

Another limitation relates to the way social connections were measured among local officials. A formal social network analysis was not used in this study, which may have provided a more thorough picture of who worked with whom, and how often. Sociometric methods often use techniques that list all leaders in a community—initially generated by known community leaders—and ask each survey participant to indicate which ones on the list are considered to have social ties (strong or weak) with him/her. Elaborate social network "maps" are then created to determine the amount and strength of the connections in a community. These formal networks are also commonly used to determine who the local community leaders are. Unfortunately, measuring the extent and breadth of extralocal ties in this manner would be difficult, if not impossible. Because no listing of leader names was provided for participants in this study, however, officials may have forgotten to mention key connections during the brief interview opportunity they had.

A final, important limitation relates to the inherent concerns of qualitative interview techniques. There was little opportunity in the scope of this study to verify whether the responses the participants gave were open and honest. According to Weiss (1994), respondents in interviews are especially prone to give a positive picture of themselves and of situations if they're asked questions about their attitudes, beliefs or opinions toward something. This is especially true if the interviewer is an outsider. Although the interview questions in this study were not particularly sensitive, nor were they based on the participants' values or beliefs, their views about local issues and

conditions were usually offered as part of the discussion. The best way to verify the accuracy of interview accounts is to examine public records or ask others within the community. In many cases, however, there is no way to determine the accuracy of officials' opinions, other than probing for details during the interview itself. This was occasionally done when the participant's observations seemed to contradict observations from previous interviews.

Suggestions for further research

This study's conclusions that local officials in the Eastern UP of Michigan are not members of a growth machine may or may not be generalizable across other rural resource-oriented regions of the country. One of the best ways to verify this study's conclusions would be to replicate the methods in another region that is threatened with similar pressures of second home development and high levels of poverty and unemployment. There are several areas within Michigan's borders that qualify. Important choices would have to be made regarding the adjustment of the conjoint survey's attributes and corresponding levels (based on the discussion in the previous section). Would the addition of manufacturing opportunities and adjustments in the types of land management offered in the conjoint survey significantly alter the results and conclusions of the study?

A followup study of the Eastern UP should also be conducted, examining economic development and resource protection efforts at the community level. Important questions remain about the role of local officials in determining a local community's future direction. Does active coordination with neighboring areas help to improve business attraction and allow for comprehensive planning to minimize environmental

impacts? Is there an existing "isolationist" mentality between communities that hampers these efforts?

Findings from McDonough et al. (1999) suggest that the Eastern UP is facing some important changes in the number and types of people who live in the region. Second and seasonal homes that are being built today will more than likely be retirement homes in the near future. How do these newcomers differ in their attitudes toward development and environmental protection? It would be logical to assume that these new residents located in the region to enjoy the natural, undeveloped surroundings. But is this really the case? How might local officials be influenced by the influx of retirees (and their corresponding development preferences) that are predicted to be moving in over the next decade?

Any further research on local officials, economic development, and resource protection attitudes should be accompanied by an examination of the actual, physical conditions of the region's environment. For example, an examination of land use patterns in the Eastern UP suggests that there is a significant decrease in the size of privately owned land parcels, with a corresponding increase in the amount of fragmentation of forestland and other open spaces (McDonough, 1999). Determining the effects of this parcelization on social, as well as natural, conditions would provide a more comprehensive picture of the region. These results could be compared with a community's zoning and planning efforts to determine what kinds of effects local leadership has on these conditions.

Conclusions

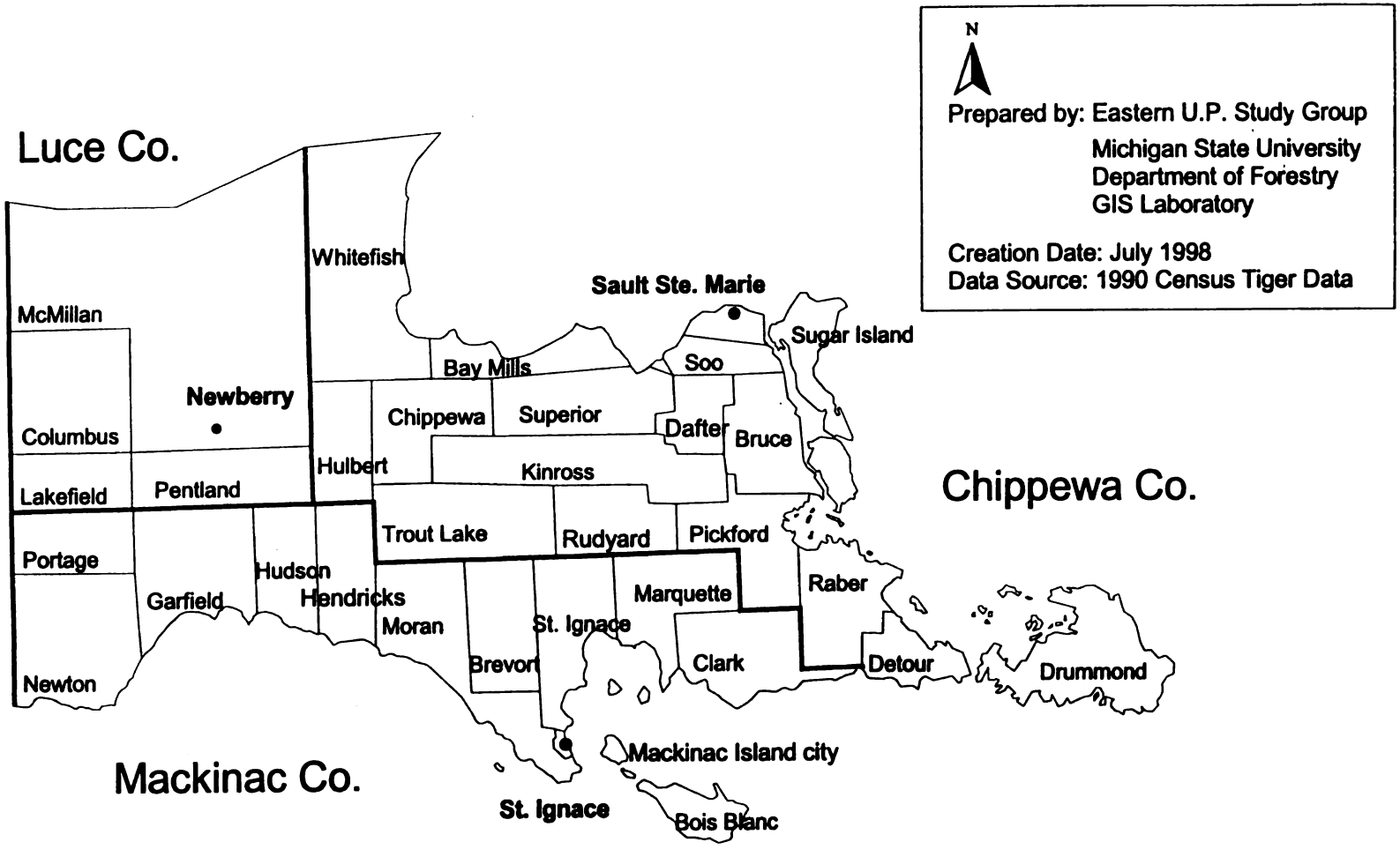
Both elected and non-elected local officials in the Eastern UP face difficult challenges in providing economic opportunities and protecting the region's priceless natural resources. Residents and officials alike have shown that they value the area's rural, natural character. Unlike Molotch's characterization of the local official as an integral member of the growth machine, those who participated in this study also appear to value more than economics. These officials are relatively well connected with their constituents, often through everyday informal interactions. Since many of the elected officials are occupied with a full-time job outside their governmental duties, time constraints often limit their ability to accomplish their goals. Connections with others outside their borders therefore serve as important sources of technical support.

Unfortunately, individual communities do not appear to posses cohesive networks with other local communities that can successfully shape their desired future. Unless road systems or emergency services are involved, local officials do not seem to see the value of working with the neighbors that share political borders in planning for future development and conservation goals. Connections with others outside the region, however, have been made easier with advancements in technology through services like distance learning and the Internet. These findings point out that, although officials appear to have a reasonable awareness of available technical resources, there are barriers to communicating across local political boundaries. Opening these connections could ultimately allow them to work together to more effectively manage their growth concerns and protect the natural, undeveloped beauty of the Eastern UP.

APPENDIX A:

Counties, townships and county seats in the Eastern UP of Michigan

Townships and County Seats



APPENDIX B:

Sample fact sheet for conjoint survey

Facts about the Eastern UP

For this survey, the Eastern UP consists of Chippewa, Luce, and Mackinac Counties. There are:

- 53,436 residents
- 30,871 households
- 9,372 seasonal homes
- 1,777,100 acres of forested land
- 1,112,436 acres of land available for public recreation
- 310 miles of off-road vehicle trails
- 150 hotels and motels
- 16,663 resident annual fishing licenses sold

This survey uses a few natural resource-related definitions:

Clearcutting harvests all trees in a given area, regardless of age or species. This method is used for tree species that require full sunlight to grow.

Group selection cutting harvests small clusters of trees in a given area, creating openings in the forest for tree seedlings that require full sunlight to grow.

Single tree selection cutting harvests individual trees while allowing surrounding trees to continue growing.

Protected natural areas are places set aside where

- there is no forest harvesting,
- there are no facilities developed for recreation,
- no motorized recreational vehicles (such as snowmobiles or all-terrain vehicles) are allowed, but
- activities like hunting, hiking, and berry picking are allowed.

In the survey, when we say there is a...

SMALL CHANGE	we mean a	10% INCREASE OR DECREASE
MODERATE CHANGE	we mean a	25% INCREASE OR DECREASE
LARGE CHANGE	we mean a	50% INCREASE OR DECREASE

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