

Evidence of a Housing Decision Chain in Rural Community Vitality*

Christine C. Cook

*Department of Human Development and Family Studies
Iowa State University*

Marilyn J. Bruin

*Department of Design, Housing and Apparel
University of Minnesota*

Becky L. Yust

*Department of Design, Housing and Apparel
University of Minnesota*

Sue R. Crull

*Department of Human Development and Family Studies
Iowa State University*

Mack C. Shelley

*Department of Political Science and Department of Statistics
Iowa State University*

Sharon Laux

*Center for Entrepreneurship & Economic Education
University of St. Louis*

Jean Memken

*Department of Family & Consumer Sciences
Illinois State University*

Shirley Niemeyer

*Department of Textiles, Clothing and Design
University of Nebraska–Lincoln*

B. J. White

*Department of Apparel, Textiles, & Interior Design
Kansas State University*

ABSTRACT The purpose of this research was to explore and explain the role housing plays in rural community vitality. Community vitality refers to economic strength and social well-being. In spring 2002 we collected primary interview data from informants in 134 small rural communities in nine north-central states and identified related secondary data from the U.S. census. We developed a structural-equation-path model, which supported a “housing decision chain” that influenced community vitality. Based on this

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research, local housing decisions do play an important role in community vitality. Strong local leaders use housing planning to secure funding to produce a change in the quantity of housing, which in turn positively influences community vitality. Housing inventory also mediated the effects of total population and percentage population change on community vitality, indicating that housing supply is a fundamental ingredient in community-growth strategies. These findings support the conclusion that a combination of housing plans and strategies orchestrated by skilled, committed leadership strengthens rural communities. Heretofore the link between housing and community vitality has not been investigated; evidence-based data has been missing from the debate on viable rural community-development strategies.

Introduction

Understanding the mechanisms necessary to sustain or improve rural community vitality is a priority among local planners as well as state and national policymakers. Recent literature suggests that community-development strategies intended to foster community vitality should be broad, taking a comprehensive approach in which the development “of” the community is distinct from development “in” the community (Cavaye 2001; Flora 2002; Sharp et al. 2002). Successful development efforts must attend to more than economic dimensions of the community and should include social, human, and environmental components as well (Flora 2002). Local decisions and activities, particularly economic and development strategies, have come under scrutiny in an attempt to answer the question “What promotes rural community vitality?”

We hypothesized that local housing decisions affect the vitality of rural communities by promoting or failing to promote strategies that improve local housing availability. We examined the role of housing in predicting rural community vitality in order to provide convincing research-based information for local decision makers that “housing matters” in small rural communities (Housing Assistance Council [HAC] 2000). We tested a model of rural community vitality using data from 134 rural communities in nine north-central states. In particular, we examined the notion that rural communities are enhanced when local leadership builds a network of relationships and resources to invest in and plan for the maintenance and expansion of local housing options. The extent to which communities are able to mobilize resources to meet housing demands is an underlying question. We tested and found evidence for a chain of housing variables that influences community vitality.

It seems obvious that local housing and the decisions that affect housing also affect community vitality. The sequence of housing activities

that we hypothesized as influencing community vitality mirrors that suggested by housing planners. Planners recognize that if housing is the largest form of private investment in a community, the state of housing is critical to a community and, by extension, decisions about housing are critical as well¹ (American Planning Association 2006; White, Jensen, and Cook 1992; Ziebarth, Brown, and Elgatian 2000;). Rural development strategists must better understand how housing decisions strengthen communities (HAC 2007). Although anecdotal evidence exists to suggest that the need for housing in rural areas stymies economic-development efforts, the role of housing in promoting successful rural development and community vitality has gone largely untested (Eller 2004; Knox 1993; Mayfield 2002; Okamoto 2000; Schaffhauser 2007).

Literature Review

A fundamental tenet of community vitality is that local actions and decisions are the essential elements of managing in a changing environment (Walzer 2003). Recent trends such as the devolution of federal programs, social restructuring, and economic challenges have revived interest in locally based policies and the role of the local community in the face of macro structural changes (Deweese, Lobao, and Swanson 2003; Luloff and Swanson 1995; Swanson 2000). Local capacity differs across rural areas (Weinberg 2000) and many forces work against rural economic well-being. In the sections that follow we examine the literature that has shaped not only our view of the complexity of rural community vitality but our appreciation for the resources and collaboration needed to sustain it.

Economic Development in Rural Communities

Economic development is one of the most important issues facing rural communities. Officials say that it is a major challenge and that an inadequate amount of development is taking place in their rural counties (Deweese et al. 2003; Kraybill and Lobao 2001). Traditional

¹ We are grateful to this well-articulated argument of an anonymous reviewer, and while the relationship to housing and vitality may be intuitive, we are aware of no research that examines the relationship or makes explicit the role of the housing assessment and planning process in improving or thwarting community vitality. Each of the members of this research team has been a housing professional and specialist for more than 25 years. We undertook this research because our collective observation of rural community economic development was that it frequently failed to recognize (1) housing as a potential economic development strategy, (2) housing needs of existing and new residents, and (3) housing shortages precipitated by implementation of community economic-development strategies.

“exogenous” development strategies, in which winning new businesses and industry is pivotal, are more likely to be employed in remote, rural areas (Deweese et al. 2003; Terluin 2003). Using financial incentives such as tax abatements, low-interest loans, and infrastructure improvements to recruit industries can generate substantial and easily enumerated impacts on local economies. Exogenous strategies, however, are externally determined and often a poor fit with local goals and values (Terluin 2003 citing Lowe, Murdoch, and Ward 1995:89–91). Participation in a wide range of economic-development programs in which mixed models of exogenous and endogenous or local grassroots strategies is viewed increasingly as necessary to promote local economic growth (Deweese et al. 2003; Gabe and Kraybill 2003).

Sustainable economic development usually relies on local, or “endogenous” development, “produced mainly by local impulses and grounded largely on local resources” (Terluin 2003:332 citing Picchi 1994:195). Successful economic development in rural regions occurs when local leaders are involved “in both local networks and external networks ... [and] in which resources are mobilized and the control of the process consists of interplay between local and external forces” (Terluin 2003:333). Community-led initiatives that enhance knowledge and skills among local leaders are recommended, for example: building the capacity of policy leaders to select and formulate projects, strengthening cooperation and coordination among local and external “actors,” and creating linkages between local, regional, and national levels. Encouragement should come from “upper administrative levels or other external actors such as development agencies and universities” (Terluin 2003:343).

The development of leadership opportunities and skills among the residents of rural communities has been linked to rural community vitality (Beery and Almquist 1993; Flora and Flora 1993; O’Brien et al. 1991). Leaders who engage in “growth promotion” activities have been able to exert influence on community growth (Humphrey and Wilkinson 1993). Local leaders must continually increase their capacity to generate the types of actions needed to produce the desired results, thus building trust among citizens (Walzer 2003). Rural areas that will achieve the greatest success focus on local decision making with community residents taking the lead in identifying issues and initiating action (Walzer 2003). These leadership characteristics have often been referred to as social capital and, while the notion can be difficult to operationalize, it has been shown that communities with leaders who had the ability to identify alternatives, obtain resources, and establish networks had high entrepreneurial social infrastructure that influenced community economic development (Fey, Bregendahl, and Flora 2006;

Flora et al. 1997). It falls to local decision makers to provide the leadership necessary to appreciate the scope of the changing rural economy (Johnson and Scott 2003) and to meet the increasing demands posed by the devolution of federal programs (Deweese et al. 2003). The capacity of governmental staff in rural counties varies considerably yet there is evidence that many communities possess high levels of human and social capital (Deweese et al. 2003; Flora and Flora 1993). Active community organizations and businesses engaged in community-wide projects form an “entrepreneurial social infrastructure” (Sharp et al. 2002:405). For rural towns “improving capacity for self-development may be the only realistic option for maintaining or creating new economic activity” (Sharp et al. 2002:416).

Stimulating and strengthening local entrepreneurial growth and the local workforce has become the mantra of current economic-development literature. Bolstering social cohesion among local business owners and increasing residents’ participation in social and civic organizations contributes to community-level outcomes (Putman 1998). The social networks of leaders are associated with community viability; differences in these networks delineate success among rural communities with similar economic, ecological, and demographic conditions (O’Brien, Raedeke, and Hassinger 1998). Despite major events in the interim decade since O’Brien et al.’s 1998 study, “leaders in more viable places continue to work with a larger number of fellow leaders and to be more involved in community development organizations than their counterparts in less viable places” (109). Green et al. (2002) assert that local development organizations (LDOs), for example, may be more successful in promoting self-development projects than governmental entities because they have extensive networks, access more funding, and acquire the professional staff members needed to expand and retain businesses. Critical to communities’ economic-development successes and, in turn, their vitality, LDOs are “a form of social capital that connects citizens with public officials across the public-private divide” (Green et al. 2002:399).

“Rural community development is in a state of flux” (Flora 2002:637), therefore strategies to revitalize, sustain, and enhance the economic health of rural communities are a priority. Recognizing the interconnectedness of local institutions is imperative (Lyson and Tolbert 2003). “In most places economic development has broadened from job creation and retention and provision of land and infrastructure for business to promotion of prosperity and quality of life... .Thus, economic development is increasingly linked with education, culture, affordable housing and perseverance of the environment” (American

Planning Association 2006:34). Attention has shifted toward models contingent on local labor and local capital: those that emphasize the local milieu. Local community groups and organizations are at the heart of problem solving. “The reemergence of an economy organized around locally coordinated, smaller-scale, technologically sophisticated, and globally competitive enterprises is both theoretically and practically possible” (Lyson and Tolbert 2003:238).

Housing Matters in Rural Communities

“There is accumulating evidence that communities which are good places to live have an advantage in generating economic activity” (Flora 2002:643–44). The quality of schools, health care, parks and recreation opportunities, and available housing influences quality of life. The spillover effects of these assets benefit existing residents as well as newly recruited employees—professionals, middle managers, and hourly wage earners. Small communities, however, have unique housing problems; older housing stock does not align with the preferences of young workers (Crull and Cook 2000; HAC 2000, 2002, 2007; Okamoto 2000; Ziebarth, Prochaska-Cue, and Shrewsbury 1997). In order to thrive, communities need to be able to attract and retain residents and provide housing choices appropriate for those individuals and families (Yust et al. 2005). “Broad national studies of housing ignore the reality that housing markets are location-specific” (Ziebarth et al. 1997:112). Ziebarth et al. (1997) found that local housing decision makers indicated that housing availability was limited and the quality of the available local housing often was inadequate in their small communities.

Traditionally, attracting new job opportunities as well as bringing new residents into communities is a goal of local economic-development policies. More recently, experts suggest that sustainable development relies on local resources. In either case, local or extralocal, sustainable development is accomplished by planning to provide “high-quality infrastructure—roads, bridges, waste disposal, telecommunications, transportation and highly skilled labor” (Harrison 1997:33 cited in Weinberg 2000). Noticeably missing from this list is housing, yet it is an important economic indicator critical to sustaining employment and population. A lack of high-quality housing can stymie economic development. Old, deteriorating housing, more than actual shortages of housing, hurts many rural counties (HAC 2002; HAC 2007; Okamoto 2000). Declining or stagnant housing markets are a serious problem in the Midwest and raise the question of how attractive those communities will be to potential employers. When and where it is missing, housing

should be identified as a necessary ingredient in the mix of rural economic-development strategies (American Planning Association 2006; HAC 2007; Merton, Allen, and Li 2003; Powers, Davis, and Loza 2000; Ziebarth et al. 2000; Ziebarth et al. 1997).

Planning for housing is complex and for a number of reasons has been found to be problematic for rural decision makers. Common housing issues in rural communities include mismatches between residents' housing preferences and existing housing stock, older housing units in need of maintenance and remodeling, limited access to mortgage credit, low housing values, lack of homebuilders or those with remodeling expertise, community population losses, perceptions that the market will not readily adjust to changes in housing demand, and so on (HAC 2002, 2007). Thus local needs, the condition of local housing stock, and local resources emphasize the importance of endogenous housing activities that begin by identifying, encouraging, and supporting community members interested in housing. "Overcoming the barriers to providing sufficient housing in rural communities often begins with the development of local expertise" (Ziebarth et al. 2000:17).

Professional planning guidebooks detail the steps necessary to assess housing and, more importantly perhaps, to developing local capacity to address existing and future housing needs (American Planning Association 2006; White et al. 1992; Ziebarth et al. 2000). Invariably these step-by-step guides begin with the formation of a steering group or housing coalition (Ziebarth et al. 2000). Even in the smallest communities, local leadership should identify at least one or two people who care deeply about local housing needs. Such individuals are likely found among local lenders, business owners, contractors and home builders, social-service professionals, local housing activists, and citizens. The group of concerned citizens articulates communities' goals and gets "information about the local housing situation [which then] provides the basis for developing a housing strategy" (Ziebarth et al. 2000). These preliminary activities are critical to making local housing decisions and instigating housing activity.

The steps in the housing planning process represent a sequence of activities and decisions, conceptualized as a housing decision chain. The chain begins with the formation of a committee composed of local citizens and leadership passionate about housing. Committee members articulate community values, conduct a needs assessment, formulate goals, and identify funds and resources needed and available to meet community housing needs. This planning process ideally results in implementation of housing development that changes local housing inventory. Planning for housing in communities can be integrally

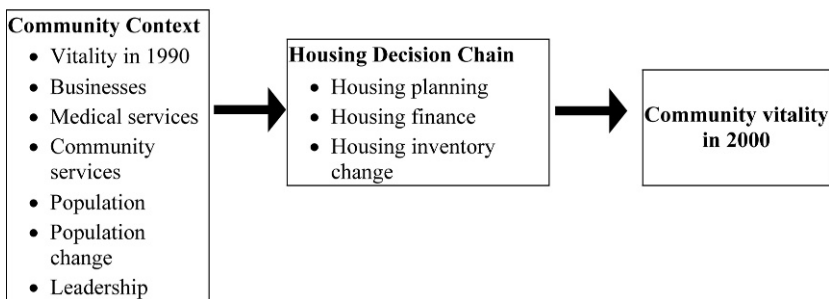
Exogenous variables**Endogenous variables**

Figure 1. Conceptual model of influences on community vitality

interwoven with economic-development planning. Ensuring “that sufficient housing is available for the expected or desired type of business and job growth” is an important part of economic development (American Planning Association 2006:35).

A recent publication by the Housing Assistance Council (HAC 2007) determined that most rural community organizations found it necessary to engage in both housing and economic-development work. In fact, most groups were involved with holistic housing and community-development projects in an effort to stabilize or promote growth in their communities. Local communities developed “a variety of community development strategies to address the housing and concomitant issues caused by population loss... . While they have been implemented in unique ways in response to the housing issues in each local community, these strategies share certain commonalities, such as an asset based approach, meeting needs, stopping population loss, expanding capacity, and improving the housing stock” (HAC 2007:1, 17). The HAC (2007) publication described the extent to which various planning practices and strategies were adopted, but detailed examination and testing of the process of housing decisions and improved community vitality remains to be done.

Conceptual Framework

There appears to be no shortage of information on how *to* plan successfully for housing in rural communities. However, questions remain: How *do* rural leaders plan for community housing needs? and How do the processes employed influence rural community vitality? To examine these questions, we articulated a conceptual framework, which is illustrated in Figure 1. The model draws on several theoretical perspectives, including social-systems theory (Deacon and Firebaugh

1988) and resource-mobilization theory (Jenkins 1983; Warren 1978), to examine rural community vitality. In keeping with investigations by O'Brien et al. (1991, 1998), we define viable communities as those that provide basic everyday services and maintain a stable or growing population. Therefore, both physical and human resources provide the contextual underpinnings. The supply of resources includes the businesses, medical care, and community services available to residents, including elements of public infrastructure. Population and its stability or change over time reflects the human resources and shifting needs within the community.

Resources within, labeled as endogenous, local, or horizontal, and outside resources, labeled as exogenous, external, or vertical, must be mobilized as inputs (Jenkins 1983; O'Brien et al. 1998) to the community-development process. We included measures at community and county levels to highlight that the community context is influenced by the surrounding county. Local-level inputs included characteristics of local leadership. County vitality in 1990 and the experience local leaders bring to the community were expected to affect community vitality.

We expected the effect of contextual variables to be mediated by the housing decision chain and expected housing planning activities and resources to finance development and improvement of existing housing, along with changes in housing inventory, to influence community vitality. The housing decision chain is conceptualized as the sequence of necessary processes for community success— vitality. The housing decision chain contains three variables conceptualized as a series of housing activities necessary to meet communities' housing needs (American Planning Association 2006; White et al. 1992; Ziebarth et al. 2000). More vital communities were expected to have formed groups to identify housing goals, conducted a needs assessment, secured funding to meet local housing needs, and improved housing inventories. Resource-mobilization literature suggests that for community action to occur, mobilization of human, financial, and social resources is necessary (Hunter and Staggenborg 1986), reinforcing "the need to treat community development, social development, and economic development in an integrated policy framework" (Cavaye, Shaffer, and Wraith 2000:59).

Research Design

Research Plan

This study utilized a mixed-methods approach to the design of the research, data collection, and analysis. Primary data collected through

structured telephone interviews with key community informants measured activities and decisions within the community. Secondary county-level 1990 and 2000 census data provided support to the primary interview data. Data from interviews and 1990 and 2000 county-level census were combined to measure activities and outcomes at a community level within a county context (Creswell and Clark 2007).

Selection of Communities and Leaders

The population for this study consists of the communities in nonmetropolitan (nonmetro) counties within nine states in the north-central region of the United States.² A total of 48 counties were randomly selected for the sample, including six counties in Illinois, Iowa, Kansas, Minnesota, Missouri, and Nebraska, and four counties in North Dakota, South Dakota, and Wisconsin. We selected the counties based on 1990 county-vitality rankings for each state (Crull and Cook 2000) in order to predict community vitality in 2000,³ using only the lowest and highest quartiles of vitality-ranked nonmetro counties in each state and excluding counties in the middle two quartiles. We limited the selection to counties exhibiting high and low economic vitality to accentuate differences that may exist at either end of the rural community-vitality continuum.

² The United States Census Bureau describes the north-central region as 12 states, composed of the western north-central region including Iowa, Kansas, Minnesota, Missouri, Nebraska, and North and South Dakota and the eastern north-central region including Illinois, Indiana, Michigan, Ohio, and Wisconsin. We collected data in nine states, all of the western north-central region and Illinois and Wisconsin. These nine states were selected for two reasons, both pragmatic and substantive. The six states with collaborators on the project were from Illinois, Iowa, Kansas, Minnesota, Missouri, and Nebraska. We did not have representatives from North Dakota, South Dakota, and Wisconsin. Since our protocol included visits to rural communities and pretesting, we selected fewer counties in the latter three states. We reasoned that these nine states had large agricultural traditions and had been particularly affected by rural economic restructuring over the last three decades. Two north-central states not included in the study were excluded because we did not have representation from Ohio and Michigan and because these two states contained large proportions of metropolitan counties (U.S. Bureau of the Census, 1998).

³ We calculated county vitality as an index of three economic variables: per capita earnings in all industries, per capita money income, and proportion of persons living above poverty. Three counties within the lowest quartile and three counties within the highest quartile in each state were randomly selected. A county's vitality score could range from 3 to 30, but we recoded them as high, middle, or low vitality levels based on scores one standard deviation above and below the mean vitality score for the nine-state north-central region. We coded the counties with economic-vitality index scores outside the standard deviation as "low" or "high" and the counties with scores within the standard deviation as "middle." Use of this method resulted in 172 counties in the region with low and 126 with high vitality levels. Additional information about the sampling of counties and communities can be found in Crull and Cook 2000.

We then identified a pool of communities from each of the high- and low-vitality counties with populations in 1990 between 100 and 10,000 residents, selecting a sample of three communities when more than three communities were available in the pool. Four counties had only two communities that met the size criterion; three counties had only one community each that met the size criterion. The final sample of 134 communities included 67 from 24 low-vitality counties and 67 from 24 high-vitality counties within the nine states.⁴

The telephone interview sample frame consisted of a pool of 12 key informants for each community. We contacted extension offices, community libraries, and knowledgeable individuals in the counties to identify each pool of key informants. Key informants included mayors, community elected officials, community-government staff (planners and assessors), county-government staff, bankers, community project members, chairpersons of the Chamber of Commerce, real-estate agents, local media persons, contractors and builders, business owners, educators, and service providers. From the pool of informants, 5 to 9 (mode = 8) key informants were actually interviewed for each community, yielding 951 respondents. Trained support staff of the Center for Survey Statistics and Methodology, Iowa State University conducted interviews by telephone in spring 2002.

Community was the unit of analysis, and we combined information from community informants to construct a profile for each of the 134 communities. Procedures used to construct the profiles followed the suggestions of Krannich and Humphrey (1986), with factual or behavioral information aggregated by using the majority response. Variables that incorporated the majority response were housing planning, housing finance, business establishments, medical amenities, and community services. We aggregated attitudinal or opinion information using the mean response of informants. Variables that used the mean response method were community vitality, housing-inventory change, and community leadership. Variables that used census data were 1990 county vitality, total community population in 2000, and community population change between 1990 and 2000.

Variable Definitions – Outcome Variable

Community vitality was an index based on the mean scores of the informants' responses in each community to three statements using a 5-

⁴ The sample of 134 communities also represented 30 communities from 10 counties adjacent to metropolitan counties and 104 communities from 38 nonadjacent counties, determined by Beale codes (Butler and Beale 1994).

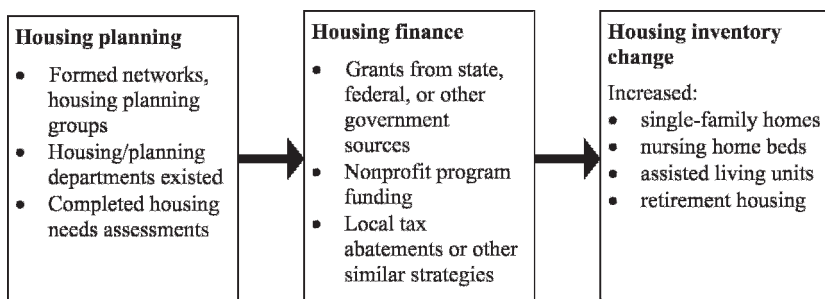


Figure 2. Intervening variables of the conceptual model: Steps in the housing decision chain

point Likert-type response ranging from 1 = strongly disagree to 5 = strongly agree ($\alpha = .86$). The three items included in the index were (1) “economically, this community is better off than most communities of similar size,” (2) “the quality of housing is better here than in most communities of similar size,” and (3) “overall, this community has more things going for it than most communities of similar size.” These questions are inspired by and similar to those employed in previous studies (Simons et al. 1997; CD-Dial 1999). The vitality index scores ranged from 5.33 to 14.38.

Variable Definitions – Mediating Variables of the Housing Decision Chain

The variables housing planning, housing finance, and housing-inventory change were viewed as a sequence of decisions influencing rural community vitality (Figure 2).

The decision to examine three intervening variables—housing planning, housing finance, and housing-inventory change—is based on planning and housing assessment and professional-practice literature reviewed earlier in this article (American Planning Association 2006; White et al. 1992; Ziebarth et al. 2000). This literature describes the phases in the housing assessment and development process that are expected to yield the best results for communities. However, the literature does not provide data to confirm the part that best practices play in community vitality. Furthermore, similar previous research examining the influence of networks in community viability did not include variables measuring housing activities and decisions (O’Brien et al. 1991, 1998).

The variable housing planning was an index of three items that the community could have used to evaluate or assist with housing

development ($\alpha=.79$). Yes/no responses were summed for the following activities: (1) an organized assessment of local housing needs had occurred within the last ten years, (2) a housing committee or task force exists in the community, and (3) a city-government housing or planning department is available to oversee housing decisions. The housing planning index scores ranged from 0 to 3.

Housing finance was a dichotomous variable based on 1 = yes and 0 = no to the following question: “Think of the housing that has been added in this community over the past 10 years. Was any of it financed by grants, by specific agencies or nonprofit organizations, or by local tax abatements (such as rural development funds, HUD, Habitat for Humanity, etc.)?” Over half of the communities (58.2%) had used financial assistance from one or more sources to develop housing. The funding represents both horizontal and vertical sources (Jenkins 1983; O’Brien et al. 1998).

Housing-inventory change was a measure of nine items with response categories of 1 = decreased, 2 = stayed the same, and 3 = increased ($\alpha=.78$). The measure included a value of 0 if the community did not have a particular type of housing. Therefore, the measure covered both the range of existing housing present in the community and the change in housing over the last 10 years. The nine items in the index were high-cost, moderate-cost, and low-cost rental housing, high-cost, moderate-cost, and low-cost single-family homes, nursing-home beds, assisted-living units, and retirement housing. The index scores for the communities ranged from 2.33 to 23.87.

Variable Definitions – Contextual Variables

We defined contextual variables to represent resources available to communities, for example, county and community data and community leaders. These resources were expected to affect the variables of the housing decision chain, for example, housing planning, housing finance, and housing inventory change, which in turn would affect community vitality experienced over the decade.

County vitality, distinct from the dependent variable community vitality, is a dichotomous contextual variable based on 1 = high vitality and 0 = low vitality ($\alpha=.77$). Although there appears to be no “standardized” measure of vitality, the three economic indicators used—per capita earnings in all industries, per capita money income, and the proportion of persons living above poverty—are commonly employed in economic-development literature (Aldrich and Kusmin 1997; Kansas, Inc. 1995; Kozlowski 1977). We used census data from

1990 to create the index, and further information about its development is reported in a previous study (Crull and Cook 2000). The use of 1990 census data to predict subsequent reports of community vitality by informants in 2000 permits assumptions about the time-order sequence.

The development and measurement of three indices, business establishments, medical amenities, and community services, was strongly influenced by the work of O'Brien et al. 1991.⁵ The business-establishments index contained 10 items with responses coded 1 = yes or 0 = no for a list of possible businesses within the community ($\alpha=.89$): drug store, hotel or motel, hardware store, bank, restaurant or café, gas station (anyplace to buy gas), place for car repairs or servicing (service station or repair shop), convenience store, grocery store (not convenience store), and clothing store. The medical-amenities variable was an index of five items ($\alpha=.78$) with responses coded 1 = yes or 0 = no to a list of possible medical items within the community: a medical office with at least one doctor (MD or DO, even part-time, either family/general practice or specialist), more than one doctor, a hospital, a dentist, and in-home medical care available (home health aides or visiting nurses). The community-services variable was an index of eight items, including community infrastructure, educational and religious facilities, and senior citizen services ($\alpha=.75$). Responses were coded 1 = yes and 0 = no. The eight items included city water, city sewer, an elementary school, a high school, church, a senior-citizen center, transportation available for senior citizens or the disabled, and Meals on Wheels.

Total population in 2000 is a continuous variable from the census denoting how many people live in the community. The communities ranged in size from 91 to 10,038 people. Population percentage change is a continuous variable calculated by comparing the 2000 population of the community with the 1990 population. The percentage change ranged from -35 percent to +117 percent.

The final independent variable was an index of community leadership. The three items included in the index drew from previous research

⁵ Research by O'Brien et al. (1991) investigated community viability and leadership, and the researchers developed a viability index using five indicators: population, sales-tax revenues, education, retail business, and medical-service variables. For example, "one point was given for the presence of each of the following: bank, eating place, hardware store, clothing store, hotel/motel, drug store, farm machinery dealership and automobile dealership. The scores ranged from 2 to 8" (703). Their viability index had an alpha reliability of .61. Conceptually our indices draw from this research but instead of one index with five indicators we employ separate indices for business establishments, medical amenities, and community services.

(Flora and Flora 1993; O'Brien et al. 1991), particularly investigations illustrating the important role of leaders in resource mobilization (Sharp et al. 2002). Informants were asked to agree or disagree with three statements about community leadership: community leaders use community resources wisely, people work together to make things happen in this community, and leaders have helped this community meet changing needs. The index was based on the mean scores of the informants in each community to the three statements using a 5-point response ranging from 1 = strongly disagree to 5 = strongly agree. Community leadership scores ranged from 7.75 to 13.88 ($\alpha=.82$).

Findings

We estimated a structural-equation-path model using AMOS 16.0 statistical software. The estimated model contained four observed endogenous variables (housing planning, housing finance, housing-inventory change, and community vitality), seven observed exogenous variables (county vitality, businesses, medical amenities, services, total population 2000, population change, and community leadership), and four unobserved exogenous error terms, one for each of the dependent variables. All seven of the observed exogenous (independent) variables are significant predictors of at least one observed endogenous (dependent) variable. (See Figure 3.)

The four-equation model, estimated by maximum likelihood, resulted in an estimated covariance matrix that fits quite well with the sample covariance matrix ($\chi^2 = 16.774$, $df = 16$, $p = 0.40$; RMSEA = 0.019; AIC = 138.774; BCC = 150.873). In other words, the model closely estimates the sample relationships among the exogenous and endogenous variables, with only minimal departures from what would be expected by chance alone. The proportion of variation in each of the dependent variables explained by the model was particularly robust for change in housing inventory ($R^2 = 0.76$) and community vitality ($R^2 = 0.62$), and was rather impressive also for housing planning ($R^2 = 0.35$) and housing finance ($R^2 = 0.26$).

Leadership was the most powerful indicator of community vitality ($\beta=0.56$), followed by businesses ($\beta=0.43$) and housing-inventory change ($\beta=0.24$), services ($\beta=-0.22$), and county vitality ($\beta=0.11$). Leadership also was an indicator of housing planning ($\beta=0.15$), as was businesses ($\beta=0.55$). Housing planning ($\beta=0.31$) was a relatively strong indicator of housing finance. Medical amenities ($\beta=0.29$) was a positive indicator and county vitality ($\beta=-0.15$) was a negative indicator of housing finance. Housing finance ($\beta=0.09$) in turn was a small, but

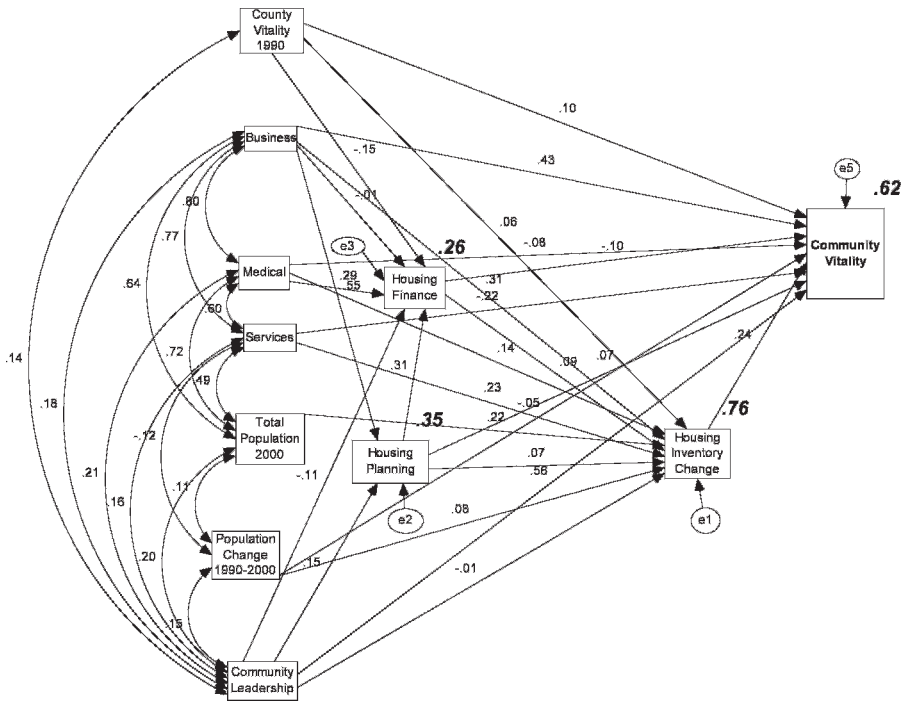


Figure 3. Rural community vitality model

significant indicator of housing-inventory change. Services ($\beta=0.23$), businesses ($\beta=0.32$), and total population ($\beta=0.22$) were relatively strong indicators of housing-inventory change, and medical amenities ($\beta=0.14$) and population change ($\beta=0.08$) were significant but less robust indicators of housing-inventory change. The path to housing-inventory change from housing finance established a significant housing decision chain of development variables, from leadership to housing planning, to housing finance, to housing-inventory change, and finally to community vitality.

Table 1 gives unstandardized and standardized regression estimates for all significant direct paths in the model, along with standard errors (SE) and critical ratios (CR), which is the ratio of the unstandardized regression estimate to its standard error. Also, unstandardized total effects are decomposed into direct and indirect components in Table 1.

We found significant direct effects of the independent variables on the dependent variables for businesses and leadership on housing planning; for county vitality, medical amenities, and housing planning on housing finance; for medical amenities, services, total population

Table 1. Indirect Unstandardized Effects and Direct Standardized Effects (β)

| Effect on Dependent Variable of Independent Variable | Total Effect | Direct (β) Effect | Indirect Effect | Std. Error | Critical Ratio |
|--|--------------|---------------------------|-----------------|------------|----------------|
| Housing planning^a | | | | | |
| Business | 0.22 | 0.22 (.55) | 0.00 | 0.03 | 7.75 |
| Leadership | 0.15 | 0.15 (.15) | 0.00 | 0.07 | 2.10 |
| Housing finance^b | | | | | |
| County vitality | -0.15 | -0.15 (-.15) | 0.00 | 0.03 | -1.41 |
| Business | 0.03 | -0.00 (-.01) | 0.03 | -0.02 | -0.09 |
| Medical amenities | 0.09 | 0.09 (.29) | 0.00 | 0.07 | -2.03 |
| Leadership | -0.03 | -0.04 (-.11) | 0.02 | 0.04 | 2.30 |
| Housing planning | 0.13 | 0.13 (.31) | 0.00 | 0.04 | 3.38 |
| Housing inventory^c | | | | | |
| Change | | | | | |
| County vitality | 0.50 | 0.65 (.06) | -0.15 | 0.19 | -0.27 |
| Business | 0.63 | 0.54 (.32) | 0.10 | 0.45 | 1.43 |
| Medical amenities | 0.53 | 0.44 (.14) | 0.09 | 0.26 | 1.69 |
| Services | 0.67 | 0.67 (.23) | 0.00 | 0.20 | 3.38 |
| Population 2000 | 0.00 | 0.00 (.22) | 0.00 | 0.00 | 3.47 |
| Population change | 2.18 | 2.18 (.08) | 0.00 | 1.17 | 1.86 |
| Leadership | -0.03 | -0.05 (-.01) | 0.02 | 0.19 | -0.27 |
| Community vitality^d | | | | | |
| County vitality | 0.45 | 0.36 (.10) | 0.10 | 0.20 | 1.80 |
| Business | 0.32 | 0.25 (.43) | 0.07 | 0.07 | 3.45 |
| Medical amenities | -0.08 | -0.09 (-.08) | 0.01 | 0.11 | -0.85 |
| Services | -0.17 | -0.23 (-.22) | 0.06 | 0.09 | -2.50 |
| Population change | -0.30 | -0.48 (-.05) | 0.18 | 0.51 | -0.93 |
| Leadership | 0.83 | 0.81 (.56) | 0.02 | 0.08 | 9.79 |
| Housing planning | 0.09 | 0.10 (.07) | -0.01 | 0.10 | 1.00 |
| Housing finance | -0.29 | -0.37 (-.10) | 0.08 | 0.23 | -1.59 |
| Housing inventory | 0.08 | 0.08 (.24) | 0.00 | 0.24 | 2.25 |

Note: Standard error and critical ratio only for direct effects.

^a R² = .35.

^b R² = .26.

^c R² = .76.

^d R² = .62.

2000, population change, housing finance, and businesses on housing-inventory change; and for housing-inventory change, county vitality, businesses, services, and leadership on community vitality.

As shown in Table 1, some effects were purely indirect: the effects of community leadership and businesses on housing financing; leadership, county vitality, and housing planning on housing-inventory change; and housing planning, medical amenities, housing finance, and population change on community vitality. Of the 25 total effects calculated for the reduced model, 9 were purely direct.

Discussion and Implications

The goal of this research was to better understand the role of and extent to which housing activities in rural communities promote vitality. By doing so, we addressed an understudied aspect of economic development and provided research-based information for local decision-makers and housing advocates in small rural towns in the north-central United States. We examined the notion that rural communities were enhanced where local leadership can build connections and networks to mobilize internal and external resources to meet local housing demands. We tested and found evidence for a model of community vitality that included a chain of mediating housing variables using data from 134 rural communities in nine states. The sequence of housing activities includes significant direct links from leadership to housing planning, to housing finance, to housing-inventory changes, and finally to community vitality. The findings offer important insights into the process by which government officials, planners, housing advocates, and community planners can enhance their communities. Further, this sequence was in keeping with best practices espoused by housing planners. In short, it appeared that promoting or failing to promote strategies that improved local housing availability affected community vitality. The evidence of a housing decision chain linked to vitality has not been reported elsewhere.

The important structural changes that have occurred in rural communities require a proactive response and strong local leadership, that is, entrepreneurial social infrastructure (Fey et al. 2006; Flora et al. 1997). Our investigation supports previous research suggesting that communities are most successful when leaders work with one another on local projects (Flora and Flora 1993; O'Brien et al. 1998; Terluin 2003). Internal networks are enhanced by an "active attitude of local actors, solidarity, and easy communication" between and among citizens and their local leaders (Terluin 2003:339). Similarly, in this study, rural community leadership is shown to have both an indirect effect on housing processes and a large direct effect on community vitality. Leaders play a role in initiating the housing activities and clearly they are involved in other areas that make important contributions to communities' successes. While our research focuses on leadership as critical to initiating housing decisions and activities, as evidenced by the model, it is equally true that leaders who are attentive to the wise use of resources and who help communities meet change impact community vitality directly and indirectly.

Funding is often identified as an obstacle to expanding the local housing stock and renovating existing housing in rural communities

(HAC 2007; Yust et al. 2005). Financial aid for housing in small rural communities can be further limited by local emphases on others forms of economic development such as manufacturing jobs (Broadway 2000). We find that housing planning is the strongest indicator of housing finance; that is, the community is better positioned to seek financial assistance through grants or agency support when a group of concerned individuals works together to assess and plan for housing. Once residents and others come together to assess the local housing situation, resources must then be identified from within and outside the community, and leveraged to address housing needs. Although housing finance is not the strongest indicator in the model of housing-inventory change, it is a vital link in the housing decision chain.

County vitality is a robust negative predictor of housing finance. It is a difficult finding to interpret and it does raise intriguing questions. The inverse relationship between county vitality and housing finance may suggest that communities in low-vitality counties may have greater need for funding housing. Given the diverse financial tools included in our measure, Rural Development funds, for example, or Habitat for Humanity, it may also reflect that communities in low vitality counties are more likely to be eligible for financial housing development assistance. It may indicate that places with greater need are more likely to obtain funding—this may be due to eligibility for assistance, the priority placed on the need by community leaders who then apply for more assistance, or that funding priorities go to supporting projects in communities with lower vitality.⁶ Furthermore our measure of housing finance is composed of both the use of endogenous or local funds and exogenous or external funds. The finding raises questions about housing finance and community vitality that would benefit from additional research attention including the examination of discrete forms of housing finance.

Attracting new businesses to small rural towns continues to be an important dimension of community economic development (Broadway 2000). Our research findings substantiate the importance of businesses; number of businesses was a strong indicator both directly affecting community vitality and indirectly affecting community vitality by initiating and supporting the housing decision chain.

Change in housing inventory mediated the effect of total population in 2000 and population change on community vitality. Population and population change did not directly affect community vitality, reinforcing

⁶ We have benefited from an anonymous reviewer's explanation and have borrowed from it to more clearly articulate the conundrum raised by the finding.

ing the importance of changes in the housing inventory to enhance rural development efforts. Families settle into a community through housing. Increasing housing inventory and location within a high-vitality county both directly influenced community vitality.

Community services had a direct negative effect on community vitality and a positive indirect effect on housing-inventory change. The variations between services seemed to center around services for senior citizens. More communities in low-vitality counties had senior centers, senior transportation, and Meals on Wheels than did communities in high-vitality counties; the differences were most pronounced in the smallest towns. It appears that community services, especially services for seniors, were provided in small towns irrespective of the community's vitality possibly due to a high proportion of seniors in these communities.

As with all research, there are limitations of the study, suggesting a measure of caution in interpretation and consideration of implications. The model was well fitted to the data. However, limits to our data and a sample size of 134 communities did not permit testing of a larger set of important contextual variables such as measures of labor and employment, technology, and education that can affect community vitality. Our research analysis intended instead to highlight the role of housing in small rural communities. Indices used in this study are patterned after those used in previous studies, and reliability coefficients for measures in the study were strong.

Additional research is needed to establish reliability and validity of the indices. Two indices, services and housing finance, may benefit from examinations of individual indicators in future research. The availability of community services and the role they play in community vitality needs additional attention. A negative relationship between community services and vitality was puzzling. Focus on identifying community services available in each of the 134 towns in the study and the role of community services within them was beyond the scope of our study. The housing-finance index will benefit from future research in which we intend to investigate the source and the type of funds used in the study communities to support housing strategies and community vitality. A larger study would also permit teasing out measures of bridging and bonding capital now contained in one variable.

The housing decision chain, denoted by three mediating variables, represents an attempt to operationalize the sequence of housing activities occurring within rural communities and advocated by planners (American Planning Association 2006). The questionnaire and interview with informants were intended to reveal the processes

and actions of rural leaders when planning for housing and securing financing for housing that lead to changes in the housing inventory. While we may have fallen short in depicting the complex actions and intricate processes involved, we remain convinced that the research we conducted and our portrayal of the findings makes an important contribution to the literature on rural community and economic development. Local leaders in rural communities need evidence-based research to develop future strategies to enhance community vitality. Finally, the unit of analysis in this study was the community, and additional communities outside the north-central region must be added to future investigations.

Nevertheless, with these limitations in mind, we provide preliminary research-based evidence that the sequence of activities advocated by housing and planning professionals supports community vitality. The findings suggest important implications for community-development and economic-development strategists in rural communities. First, entrepreneurial community leadership is pivotal to rural community vitality. Proactive leaders acknowledge the importance of pursuing community housing goals to serve both newcomers and existing residents. Housing production and development, however, is complex, and local residents as well as community leaders may be wary of such undertakings (Bradshaw 2000). Technical assistance and information, nurturing local leadership skills, and expanding entrepreneurial capacity may be necessary to ensure success. Improving and building on local capacity results in positive outcomes. For rural towns, “improving capacity for self-development may be the only realistic option for maintaining or creating new economic activity” (Sharp et al. 2002:416).

Second, the collective pursuit of solutions to community housing needs helps determine the quality of rural community life. The housing decisions inherent in the housing chain can build community social infrastructure, both bonding and bridging dimensions (Agnitsch, Flora, and Ryan 2006). If networks are formed and trust is generated among those involved in housing planning, community social infrastructure is increased to the benefit of the community. Housing planning provides bonding opportunities through activities such as organized assessments of local housing needs as well as the formation of housing committees or task forces. An example of bridging is exhibited in the use of diverse funding mechanisms from nonprofit and public sector sources beyond the local arena to finance community-housing improvements (Agnitsch et al. 2006). One can speculate from research findings presented herein that LDOs may be an advantageous spinoff from the sequence of

activities embedded in the housing decision chain. LDOs may be a mechanism to achieve a community's interests (Green et al. 2002). Whether using LDOs or centralizing development activities through committees or governmental offices, bolstering social cohesion among local business owners and increasing residents' participation in social and civic organizations contribute to important community-level outcomes (Putman 1998).

Third, working to meet local housing needs prompts planning activities that mobilize local resources as well as bring external resources to a community (Agnitsch et al. 2006 citing Putnam 1993 and Putnam 2000). Social networks and trust are necessary to facilitate coordination of resources and cooperation of funders that contribute to rural economic development (Flora et al. 1997; Flora and Flora 1993). "Active community organizations, businesses that support local community projects, community-wide fund-raising capacity, and extra-local linkages to peer communities and state government" are essential (Sharp et al. 2002:405). It is imperative that rural residents learn to access financial resources and technical assistance from regional, state, and federal sources. A community that engages in collective action for the community's betterment is, in a word, entrepreneurial (Flora 1998).

Fourth, the findings support the conclusion that a combination of strategies, plans based on local goals and values in combination with skilled leadership and external financing, develops housing that strengthens community vitality. Though often relying on external funding, housing decisions and activities are inherently locally oriented. Unlike many traditional exogenous development strategies, meeting housing demand usually begins by detailing local goals and values in a housing plan. The plan is fitted to community-identified needs and less often motivated by winning new businesses or industry. We found support for policies and programs that encourage collaborative planning and implementation of economic and housing development. Rural communities are constantly on the search for new industries and businesses to provide jobs and economic benefits. The prospect of luring economic development with new jobs and residents, with related economic spinoffs, is compelling. However, attracting jobs without attention to the housing needs of existing residents and the introduction of new residents can significantly impact a town's social fabric (Broadway 2000). Furthermore, housing is an industry that provides jobs, but all too often housing development is believed to follow, not lead, community development.

Last, there must be a call for federal policies that support local institutions. The federal policy agenda must pay more attention to its

role in stimulating local economic development (Walzer 2003). Federal policy needs to support local institutions that encourage innovation and strengthen entrepreneurship. “Rural community vitality depends on communities maintaining adequate infrastructure, having access to services, enhancing business and economic opportunities and establishing policy settings to foster outcomes. Vitality relies on communities rethinking assets, developing networks, building local cooperation and acting on local passion and motivation” (Cavaye 2001:109). Community-development practitioners must draw from a holistic view of development, bringing together diverse disciplines. Insofar as the chain of housing variables that represents the decision process established the role of housing in community vitality, housing advocates and professionals must participate and promote housing development as critical to rural community and economic development.

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