RELATIONSHIP BETWEEN COMMUNITY SATISFACTION AND MIGRATION INTENTIONS OF RURAL NEBRASKANS

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ABSTRACT– Though many non-metropolitan counties in the United States experienced population gains in the 1990's, many of the non-metropolitan counties in the Great Plains continued to experience population declines. Thus, the reasons that people are moving need to be explored. This paper examines possible reasons by analyzing the relationship between community satisfaction and migration intentions of non-metropolitan Nebraskans. Data used for this analysis were from an annual survey mailed to 7,000 residents living in non-metropolitan counties in the state. The survey data were analyzed at two levels. First, demographic comparisons were made between those who planned to stay in their communities and those who planned to leave. Second, a multivariate model was developed to examine the independent effects of several different concepts on the decision to stay or leave. These concepts included community satisfaction, residential preference status, and the individual characteristics of the respondents. It was found that residential preference status, community social attributes, satisfaction with economic and environmental factors, household income and residential tenure all influenced migration intentions.

Key Words: Nebraska, population, migration, community satisfaction

Introduction

Much has been written about the population turnaround in the non-metropolitan United States in the 1990's. While only 45% of the non-metropolitan counties experienced population growth during the 1980's, it was estimated that nearly 74% of these counties grew between 1990 and 2000. However, the Great Plains was one of the few areas that was still experiencing widespread losses (Johnson and Beale 2001). Only six counties in North Dakota gained population during the 1990s and four of those were urban hubs. And, 57% of Nebraska's non-metropolitan counties lost population during the last decade. Most of these counties lost population as a result of both net outmigration as well as natural decline (Deichert 2001). The question then remains, "Why are people moving from non-metropolitan counties in Nebraska?" This paper addresses this question by analyzing the migration intentions of non-metropolitan Nebraskans.

Background

Prior research on migration intentions has included such variables as community satisfaction and residential preference status, which compares current and preferred community size. Community satisfaction has been hypothesized to be particularly relevant in shaping mobility intentions (Speare 1974; Bach and Smith 1977; Landale and Guest 1985). When various dimensions of community satisfaction are explored further, certain dimensions have had more influence on migration intentions than others. Stinner and Van Loon (1992) found perceptions of local economic opportunity and the quality of the infrastructure of public service to be statistically significant in predicting migration intentions. Sofranko and Fliegel (1984) found respondents' assessments of school quality and the friendliness of neighbors made

significant contributions to the explained variance of likelihood of moving. Using a multidimensional view of community satisfaction, one can determine if certain community attributes vary in their influence on migration decision making (Stinner and Van Loon 1992).

Residential preferences have also been shown to have an important influence on migration decision-making. Heaton et. al (1979:571) found that "people who prefer to live in a community having different size or location characteristics than their present residence are five times more likely to intend to move than those who have attained their preferred type of residence." Fredrickson et. al (1980) used the concept of community satisfaction to explain the relationship between migration intentions and residential preferences. In their study, they found that residential preferences and community satisfaction are interrelated and each has an independent effect on migration. Also, they adopted the concept of "preference status" used in their earlier study (Heaton et. al 1979), which indicates a discrepancy between the respondent's current residence and the size and location of the community identified as most desired.

Certain demographic variables have also been shown to influence migration intentions. Such variables as age, income, duration of residence and education have been shown to be significant predictors of migration intentions (Landale and Guest 1985; Speare et. al 1982; Bach and Smith 1977; Sofranko and Fliegel 1984).

The goal here was to analyze the migration intentions of non-metropolitan Nebraskans at two levels. First, comparisons were made of various demographic characteristics between those who were planning to stay in their communities and those who were considering a move. Then, a multivariate model was developed to examine the independent effects of several different concepts on the decision to stay or leave. These concepts include community satisfaction,

residential preference status, and individual characteristics of the respondents.

Methods

The data used for this analysis were collected in February and March of 1998. A self-administered questionnaire was mailed to approximately 6,500 randomly selected households living in non-metropolitan counties in Nebraska. A total of 4,196 completed questionnaires were received. A response rate of 65% was achieved using the total design method (Dillman 1978). This method, based on social exchange theory, utilizes multiple, personalized mailings to increase response rate to surveys. Variables were defined from the survey as follows.

Community Satisfaction

The variables used to measure community satisfaction consisted of respondents' evaluations of twelve general community attributes. Factor analysis, that is, principal factor extraction with varimax rotation, was used to generate eleven of these variables. Factor analysis makes it possible to simplify a number of measures into groups that are highly correlated and are presumed to reflect common characteristics (Child 1970).

The social attributes variable combines the respondents' assessments of three social attributes of the community. Specifically, respondents were asked if they would describe their communities as friendly or unfriendly, trusting or distrusting, and supportive or hostile. For each of these three dimensions, respondents were asked to "rate" the community using a seven-point scale between each pair of contrasting views. Each scale was coded so that 7 indicated friendly, trusting and supportive. The Cronbach's alpha value for this variable was 0.91, which means these items have a high degree of internal consistency. Cronbach's alpha usually takes values between 0 and 1, with values near 0 corresponding to unreliable scales and values near 1

corresponding to scales with a high degree of internal consistency.

The next nine variables represent how satisfied respondents were with different community services and amenities, taking into consideration availability, cost and quality. A five-point scale was used by the respondents to rate the services and amenities, with 1 being very dissatisfied and 5 being very satisfied. The environmental services variable includes evaluations of sewage disposal, water disposal and solid waste disposal. The consumer services variable consists of evaluations of retail shopping, restaurants and entertainment. The local government services variable includes evaluations of two levels of local government, i.e., county and city/village government. The health services variable is composed of evaluations of nursing home care, basic medical care services, and mental health services. The human services variable consists of evaluations of head start programs, day care services, and senior centers. The transportation services variable includes evaluations of air service, bus service, rail service, and taxi service. The local transportation infrastructure variable is made up of evaluations of streets as well as highways and bridges. The wellness support services variable includes evaluations of parks and recreation, as well as library services. The evaluation of K - 12 education is the final community services variable. This variable did not load on any of the above factors, but was included in the analysis based on previous findings of its influence on community satisfaction (Campbell et. al 1976; Sofranko and Fliegel 1984).

The last two variables measure satisfaction with economic and environmental aspects of their community. These two variables were derived from a question in which the respondents were asked how satisfied they were with various items that can influence their sense of well-being. The respondents rated their level of satisfaction using a five-point scale, with 1 being

very dissatisfied and 5 being very satisfied. The economic factors variable consists of evaluations of two different aspects of their income, their current income level and their future financial security during retirement as well as evaluations of three employment factors: their job satisfaction, their job security and their job opportunities. The environmental factors variable includes evaluations of environmental factors: clean air and water as well as greenery and open space. Cronbach's alpha values range from 0.55 to 0.91 for the set of items included in each of these variables (Table 1).

Residential Preference Status

To determine respondents' preferred community size, they were asked the following question, "In terms of size, if you could live in any size community you wanted, which one of these would you like best?" The answer categories included: a large metropolitan city over 500,000 in population; a medium-sized city 50,000 to 500,000 in population; a smaller city 10,000 to 49,999 in population; a town or village 5,000 to 9,999 in population; a town or village 1,000 to 4,999 in population; a town or village less than 1,000 in population; or in the country outside of any city or village.

This question was compared to a combination of two other questions asking about the respondent's current residence. First, respondents were asked the size of their current community. Six answer categories were given: less than 100; 100 to 499; 500 to 999; 1,000 to 4,999; 5,000 to 10,000; and over 10,000. Respondents were also asked if they lived within or outside the city limits. These two questions were combined to create one variable denoting current residence, ranging from living in the country to living in a community with a population greater than 10,000.

The respondents' current and preferred community size were then compared to create a residential preference status variable. This dichotomous variable is coded 0 if the respondent does not currently live in their preferred community size and 1 if they do live in their preferred community size.

Individual Characteristics

The final category of variables included in this analysis were the personal characteristics of the respondents. Age and number of years lived in the community were both metric variables. Education and household income were ordinal variables coded so that higher numbers represent higher levels on these variables. The final variable, representing family life cycle stage, is a dichotomous variable where 1 indicated there are children in the home, and 0 indicated there are none.

Migration Intentions

The dependent variable in this analysis was the migration intentions of the respondents. Respondents were asked whether or not they planned to move from their community in the next year. Three answer categories were used: yes, no and uncertain. A dichotomous variable was created where either yes or uncertain was coded 1 as a potential mover.

Model

The analysis was done in two stages. The first stage consisted of demographic comparisons between those considering a move from their community and those with no plans to move. Chi-square analyses were used to make these comparisons. The second stage consisted of a multivariate logistic regression analysis that will include the three different concepts discussed above, i.e., community satisfaction, residential preference status, and individual

characteristics. This analysis was used to gain a more thorough and precise view of each independent variable's unique contribution to and importance in explaining the variance in migration intentions.

Results

Statistically significant differences between those contemplating a move from their community in the next year and those who had no plans to move occurred in three areas: age, number of years lived in their community, and whether or not they currently live in their preferred community size (Table 2). Respondents considering a move from their community were, on average, younger than those not considering a move. Thirty-one percent of those considering a move were between the ages of 19 and 39; compared to only 24% of those not considering a move who fell into this same age category (Table 2).

Those considering a move were also more likely to have lived in their community for shorter periods of time, compared to those not considering a move. Forty-one percent of those considering a move had lived in their community for 10 or fewer years, while only 20% of those not considering a move had lived in their community for this shorter time frame (Table 2).

Finally, just over two-thirds of those considering a move (68%) did not live in their preferred community size. Only 46% of the respondents not considering a move were not currently living in their preferred community size (Table 2). There were no statistically significant differences between these two groups in household income, education and family life cycle status.

Next, the multivariate logistic regression analysis, which included the community satisfaction, residential preference status, and individual characteristics concepts described

earlier, provided a more precise view of the unique contribution and importance of each of the independent variables in explaining the variation in migration intentions (Table 3).

Community Satisfaction

This analysis showed that social attributes of the community influenced migration intentions. The higher the respondent rated their community in terms of its friendliness, trusting nature and supportiveness, the less likely they were to be considering a move from that community (Table 3).

Satisfaction with employment and environmental factors were also statistically significant predictors. The more satisfied respondents were with these factors, the less likely they were to

be considering a move from their community (Table 3).

Community satisfaction variables that did *not* show a statistically significant relationship to the migration intentions variable were: satisfaction with environmental, consumer, local government, health, human, wellness support, education, transportation and transportation infrastructure services (Table 3).

Residential Preference Status

Residential preference status also proved to be an important influence on migration intentions. If a respondent lived in their preferred community size, the likelihood of a consideration to move was reduced (Table 3).

Individual Characteristics

The two individual characteristic variables that were statistically significant in explaining migration intentions were the number of years lived in the community and household income.

The longer a respondent had lived in their community, the less likely they were to be considering a move (Table 3). Also, the higher their household incomes were, the less likely they were to be considering a move from their community (Table 3).

Variables that did *not* show a statistically significant relationship to the migration intentions variable were: age, education, and family life cycle status (Table 3).

Conclusions

Residential preference status is clearly an important determinant of migration intentions (Table 3). If a respondent is currently living in their preferred community size, the likelihood of a consideration to move is greatly diminished. This finding is consistent with that of Heaton et. al (1979), who found that residential preference status had a somewhat larger effect on mobility intentions than did community satisfaction.

Certain community attributes were also statistically significant in predicting migration intentions: social attributes, employment factors and environmental factors (Table 3). This is consistent with the findings of Stinner and Van Loon (1992) and Sofranko and Fliegel (1984), where evaluations of local economic opportunity and friendliness of neighbors were all found to influence migration intentions. Stinner and Van Loon (1992) also found satisfaction with environmental amenities decreased migration intentions among non-metropolitan respondents in their study.

Only two characteristics of individuals were statistically significant in explaining migration intentions: number of years the respondent had lived in their community and household income. The longer a respondent had lived in their community, the less likely they were to be planning a move. This finding is consistent with that of Speare et. al (1982) where

duration of residence had the strongest effect of all the background variables used in their analysis on migration. And, the higher their household income was, the less likely they were to be planning a move.

Our findings are important for planning in Nebraska since, as mentioned, over one-half of the non-metropolitan counties in the state have continued to experience population declines during the 1990's (Deichert 2001). Thus, by considering the community attributes shown to influence migration intentions, community leaders can determine how to improve conditions to retain the current population.

The population used for this analysis, non-metropolitan Nebraskans, needs to be considered when examining the results. Further research is needed with both metropolitan and more diverse non-metropolitan populations. Stinner and Van Loon (1992) found that slightly different attributes influenced migration decision-making for metropolitan residents compared to non-metropolitan residents. Research that examines regional, urban/rural and ethnic differences would provide specificity for communities who want to enhance or maintain a viable population base.

The finding that rural Nebraskans continue to place a great deal of value on the social attributes of their community when indicating whether or not they plan to move is encouraging. Yet, economic opportunities continue to plague rural residents when deciding where to live. This particular study suggests a strategy to improve retention of the existing population in rural Nebraska communities. First, enhancing the social attributes within a community setting influences whether or not individuals want to continue to live there. Social gatherings of the past have often been replaced by more individual interaction patterns, even among our rural citizens

(Putnam 1995). A clearly focused program to enhance social interaction within a community may provide additional satisfaction with living in a small community. It may also provide an opportunity to develop new entrepreneurial activities which may enhance the local economic opportunity structure.

In addition, local leaders can work to bring varied employment opportunities to their communities and protect the quality of the natural environment. Enhancing economic opportunities is particularly critical in retaining the younger residents of the community. In a survey conducted by Allen et. al (2001), the most important factors for considering a move from their community for persons under the age of 40 were lack of economic opportunities and to find a better job. By working on these areas, leaders can reduce the likelihood that the current population will consider moving from their community.

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TABLE 1

DESCRIPTIVE STATISTICS OF VARIABLES USED IN ANALYSIS

Predictor Variables	Mean	Standard deviation	Cronbach's alpha
Social attributes	15.13	3.82	0.91
Environmental services	11.06	2.50	0.85
Consumer services	9.11	3.01	0.77
Local government services	6.43	1.92	0.77
Health services	10.74	2.28	0.69
Human services	10.71	2.14	0.67
Transportation services	10.96	2.74	0.81
Transportation infrastructure	6.81	1.93	0.62
Wellness support services	7.95	1.69	0.55
Economic factors	15.97	3.81	0.79
Environmental factors	8.39	1.76	0.76

TABLE 2

DEMOGRAPHIC COMPARISONS BY MIGRATION INTENTIONS

	Not Considering a Move	Considering a Move	Chi-square value	Significance
Age:				
19 to 39 years	24%*	31%		
40 to 64 years	56%	53%		
65 years and over	21%	16%	$P^2 = 14.0$	(.001)
Education:				
High school or less	39%	34%		
Some college	37%	40%		
College degree	24%	27%	$P^2 = 5.0$	(.080)
Household income:				
Under $10,000	3%	4%		
$10,000 - $39,999	47%	51%		
$40,000 - $74,999	41%	38%		
$75,000 and over	10%	8%	$P^2 = 3.8$	(.279)
Years lived in community:				
0 to 10 years	20%	41%		
11 to 30 years	37%	34%		

	Not Considering a Move	Considering a Move	Chi-square value	Significance
31 to 50 years	28%	18%		
51 years and over	16%	7%	$P^2 = 110.3$	(.000)
Family life cycle status:				
No children in home	39%	36%		
Children in the home	61%	64%	$P^2 = 1.4$	(.127)
Residential preference status:				
Do not live in preferred community size	46%	68%		
Live in preferred community size	54%	32%	$P^2 = 73.4$	(.000)

* Column percentages sum to 100%.

TABLE 3

PREDICTION OF MIGRATION INTENTIONS BY COMMUNITY SATISFACTION,

RESIDENTIAL PREFERENCE STATUS AND INDIVIDUAL CHARACTERISTICS

	B	(S.E.)
Community Satisfaction Variables:		
Social attributes	-.084***	(.02)
Environmental services	-.021	(.02)
Consumer services	-.020	(.02)
Local government services	-.030	(.03)
Health services	-.021	(.03)
Human services	-.038	(.03)
Transportation services	-.024	(.02)
Transportation infrastructure	.017	(.03)
Wellness support services	.020	(.03)
Education (K - 12)	-.092	(.05)
Economic factors	-.049***	(.01)
Environmental factors	-.094**	(.03)
Residential Preference:		
Residential preference status	-.835***	(.11)
Individual Characteristics:		
Age	.000	(.01)
Years lived in community	-.029***	(.00)

	B	(S.E.)
Household income	-.082*	(.03)
Education	.022	(.04)
Family life cycle status	-.277	(.15)
Model chi-square	335.27***	
d.f.	18	

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; B is the logistic regression coefficient, S.E. is the standard error of the coefficient; and d.f. indicates the degrees of freedom in the model.