Online Journal of Rural Research & Policy

Volume 4
Issue 1 *Special Issue: Rural Sociology*

Article 3

2009

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Recommended Citation

Loveridge, Scott; Yi, Dale; and Bokemeier, Janet L. (2009) "Why are They Moving Away? Comparing Attachment to Place in the Great Plains to the Rest of the Nation," *Online Journal of Rural Research & Policy*: Vol. 4: Iss. 1. https://doi.org/10.4148/ojrrp.v4i1.56

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Recommended Citation Style (MLA):
Loveridge, Scott, Dale Yi, and Janet Bokemeier. "Why are They Moving Away? Comparing Attachment to Place in the Great Plains to the Rest of the Nation." The Online Journal of Rural Research and Policy 4.1 (2009): 1-22.

Key words: Great Plains, migration, survey, community attachment, social capital, natural amenity, economic development, community, Census, zip code, policy, Native American.

This is a peer-reviewed article.

Abstract

We combine a telephone survey of working-aged adults in the continental US with Census 2000 county and zip code tabulation area data to explore attachment to place. Using results of the 2000 US Census, we define cultural and economic regions. Our modified "Great Plains" area is that portion of the region that is experiencing population decline. We explore how attachment to place is different between the Great Plains and other regions of the US. Our measure of attachment to place is a question on the amount of additional income respondents would require to move to a similar community 500 miles away. We identify three respondent groups: unconditional migrants, conditional migrants, and unconditionally rooted. Basic tabulations and regression analysis reveal differences between the Great Plains and other regions. Natural amenities present in the community appear to play a role in shaping respondent attitudes towards relocation.

Why are They Moving Away? Comparing Attachment to Place in the Great Plains to the Rest of the Nation

A large proportion of the Great Plains has faced substantial out-migration in recent years. To better cope with this situation, policy makers need information on reasons why people choose to leave or stay in a community. It is easy to attribute human movement to simple job opportunities, but the true picture is more complex. A community is more than just a dot on a map. It is where our lives take place. It is the group of friends we've known for years. It is the office where we got our first jobs. All of our institutions, our activities, and our identities are emplaced in a

community (Gieryn 2000[1]). So when an individual is deciding to move away from a community, there is more at stake than dollars and cents.

The United States population is highly mobile, with fully 45.7% of persons over age 5 moving between 1995 and 2000 (U.S. Census, 2003[2]). Nationally, the majority of these moves are within a region (U.S. Census, 2003[3]), but the Great Plains is notable for its propensity for outmigration. Montana, North Dakota, South Dakota, Nebraska, Iowa and Kansas all experienced net outmigration in the 1995 – 2000 period. A declining place wishing to stabilize its population must reduce movement away, increase inward movement, or both. From a practical standpoint, keeping current residents seems less challenging, and motivates our focus on the determinants of attachment to place in the Great Plains.

A migration decision involves more than comparing incomes and costs of living in a potential destination and origin together with the out-of-pocket expenses of closing the old house and setting up a new house. In addition to job prospects, people consider many other conditions and attributes of the sending and receiving communities when deciding to migrate. A decision to move out of a community also reflects an individual's (and household's) utility that considers an array of different factors.

In addition to these factors, attachments to place change over time. As we finish our education, have children, or buy a retirement home, our attachment to community changes to reflect our tastes and preferences at the time. So attachment to place varies not only from person to person, but across the lifespan.

In addition to local amenities and community attributes, individuals are tied to broader regional culture systems and institutions that shape individuals' utility. For example, an individual living in a place with a unique regional identity and culture, like Appalachia, may have a different attachment to place than a person who lives in a more culturally homogenized location. In this paper, we test to see if it is reasonable to assume that attachment to community is uniform across the United States, or if different regions exhibit differing levels of attachment to place *ceteris paribus*.

The various regions in the United States exhibit very different cultures, values, and preferences. The Great Plains region in particular has been experiencing lower net migration rates than other regions in the United States for many decades (Rathge & Highman, 1998[4]). Migration trends have been traditionally explained by economic and amenity factors, but perhaps determinants of migration are different in the Great Plains. The relationship between an individual's willingness to move and various other factors may help in the understanding of problems and solutions that are specific to the Great Plains.

To explore how attachment to place differs between the Great Plains and other regions, we developed and analyzed a national telephone survey to measure attachment to place. Respondents were asked how much additional income it would take for them to move from their current community to a similar community 500 miles away. Answers ranged from $0, by those who are apparently desperate to move, to infinity (no amount could ever move me) for individuals firmly anchored in their communities.

This financial representation of willingness to move reflects individual-specific utility, and is expected to vary from person to person, from county to county, and perhaps region to region. In this paper we explore the relationship between willingness to move and individual, community, and regional characteristics. We also test to see if willingness to move is uniform throughout the continental United States, or if certain regions, the Great Plains in particular, demonstrate significantly higher or lower willingness to move.

By better understanding willingness to move, policy makers can be equipped to make more informed decisions regarding population retention and growth in their respective communities, and understand which demographic characteristics and community amenities are most critical.

Literature Review

In neoclassical economic theory, migration occurs because there are spatial discrepancies in the demand and supply of labor. In Sjaastad's (1962[5]) human capital model of migration, individuals migrate to another place if the net present value of living (income minus cost of living) was higher in the receiving region than in the sending region. The model was expanded by Todaro (1969[6]) and Harris & Todaro (1970[7]) to include expected values in the calculation of the discounted financial benefits. In these models the expected income stream and age of migrant determine net benefits of a migration decision.

Information symmetry has been assumed in the previous models, but this is not the case in reality. Although individuals have perfect (full) information regarding their own abilities, the employer in the receiving region cannot know the migrant's full capability. Therefore, the new potential employers, having only generic résumé criteria, rely on social networks to gather and process relevant information regarding applicant's marginal productivity. This suggests that social capital plays a large role in signaling information in the labor market (Stark, 1991[8]). Bauer and Zimmerman (1997[9]) also find that social networks are important for migration decisions.

Although these models explain a large proportion of migration behavior, they leave out important elements regarding individual tastes and preferences that have been developed in sociological literature regarding "attachment to place".

Previous work on attachment to place has largely relied upon Likert-scale survey instruments that measured attachment to place by constructing an index of "interest in community" variables ("How interested are you to know what goes on in your community?") and sentiment regarding place variables ("Would you say you feel 'at home' here?") In these models, attachment to place was measured primarily as an affective attachment (Kasarda & Janowitz, 1974[10]; Goudy, 1990[11]).

The respondent's length of residency in the community has been the primary variable of interest in this literature and has been found to significantly affect attachment to place by allowing for social and place based ties to build up over time (Elder, 1996[12]; Herting, 1997[13]; Beggs et al., 1996[14]; Goudy, 1990[15]; Kasarda & Janowitz, 1974[16]).

Recent works also include other community attribute variables in the modeling of migration and attachment to place. Natural amenities (McGranahan, 1999[17]; Cromartie & Wardwell, 1998[18]; Rudzitis 1998[19]), proximity to services, population density (Brown et al., 2000[20]; Allen & Filkins, 2000[21]), social ties (Brehm et al., 2004[22]), and presence of creative class (McGranahan & Wojan, 2007[23]; Florida, 2002[24]) have all been found to be associated with migration patterns and attachment to place.

Albrecht (1993[25]) has also found that the determinants of migration in the Great Plains are changing over time. This suggests that push and pull factors are not consistent over time, but adapting to the tides of broader regional culture. Also, Mincer (1978[26]) finds that migration is not only an individual decision, but a decision made by the household collective. This suggests that household size, number of children, and marital status are important determinants of a respondent's willingness to move.

Working in the social capital paradigm, attachment to place can be thought of as "socio-emotional goods [that] become associated with or embedded in objects such as … place" (Robison et al., 2002[27]). Attachment to place is expected to reflect the value of socio-emotional goods invested by the individual in their communities. So individual attachment is expected to reflect not only the tangible attributes and benefits of a community, but also the socio-emotional goods embedded in the community by the individual. These attachments are expected to vary from individual to individual.

Attachment to place in this study was measured by the amount of additional income a respondent required to be convinced to move away from their community. This variable is expected to reflect not only the individual's affective attachment to place, but also the individual's monetary valuation of community attributes, use values of social networks, and perception of local economic conditions.

This study explores willingness to move (attachment to place) in the context of a migration decision. Migration behavior and willingness to move are different concepts. While migration explains actual behaviors, willingness to move describes utility functions in regards to attachment and reliance on communities. In this study we explore the pushing and retaining factors of migration that individuals consider when deciding to migrate out of their communities.

The model we use to explain willingness to move (WTM) is as follows:

$$WTM = \alpha I + \beta H + \gamma C + \delta R \qquad (1)$$

I~Individual={Age, Race, Gender, Employment Status, Marital Status, Length of residence}
H~Household ={Household Income, Household Size}
C~Community={County demographics, Economic Outlook, Natural Amenities, Social Capital}
R~Region={Great Plains, Borderlands, Appalachia, Plantation Belt}

Survey Data Collection

The data were collected via a telephone survey of English-speaking adults aged 18 to 64 in the continental United States. The survey was administered using computer-assisted telephone

interview (CATI) equipment. The sample was designed to represent a representative cross-sectional sample of English-speaking, non-institutionalized individuals in each of two geographic strata: Census-designated rural counties and Census-designated urban and suburban counties.

Respondents for the survey were found using random digit dial telephone methods. Samples were obtained from Survey Sampling, Inc. Respondents with directory listings were mailed advance notice letters approximately one week prior to contact. The within household selection technique was a modified version of the Trohldahl-Carter procedure.

The survey began on April 4, 2006 and concluded on October 29, 2006. A total of 3,019 interviews were completed. Each interview lasted roughly ten minutes (standard deviation: 2.5 minutes). The overall completion rate was 40.9%, the refusal rate was 15.9%, the cooperation rate among eligible households was 71.9%, and the contact rate was 92.2%. To obtain sufficient numbers of responses from rural areas, the rural counties were over-represented in the sample. Analysis of the US without distinction between rural and urban areas would use somewhat different weights and produce slightly different results. Overall sampling error is estimated to be roughly 2.3%.

Variables and Estimation

Respondents were asked to supply their zip code. Local socio-economic variables were added to the dataset by importing Census 2000 ZCTA (Zip Code Tabulation Area) data to provide respondent community characteristics such as racial composition, age composition, population density, poverty levels, and percent employed by sector. The ethnic diversity variable was generated by summing the squares of racial percentages in the ZCTA. The same was done to measure age diversity in each ZCTA.

Data from Rupasingha et al.'s (2006[28]) study describing the number of important social associations in a county was added to the dataset. This variable is a count of the number of businesses, religious, political, and various other social organizations that were present in the county.

A natural amenities scale obtained from McGranahan's (1999[29]) study was added to the dataset. The scale was constructed by adding standardized measures of natural amenities that individuals typically value. The scale describes the presence of natural amenities such as climate, sunlight, humidity, topography, water area, and other measures of natural amenities. Data used was a standardized scale of natural amenities by county. See Appendix A2 for more information on the mean, standard deviation, and range of this variable by region.

Data measuring the percent of the population was considered part of the "creative class" obtained from McGranahan & Wojan's (2007[30]) study was also merged with the data. This data describes the relative size of the creative population in a given county and it was measured as the percentage of jobs held in a county requiring high levels of creative thinking (ie. designing, developing, creating new applications and ideas).

Willingness to move is the main dependent variable of this study. Willingness to move was determined by respondent's answer to the following question:

> *If you had an opportunity to move to a similar community 500 miles away, what amount of increased income would it take for you to agree to move?*

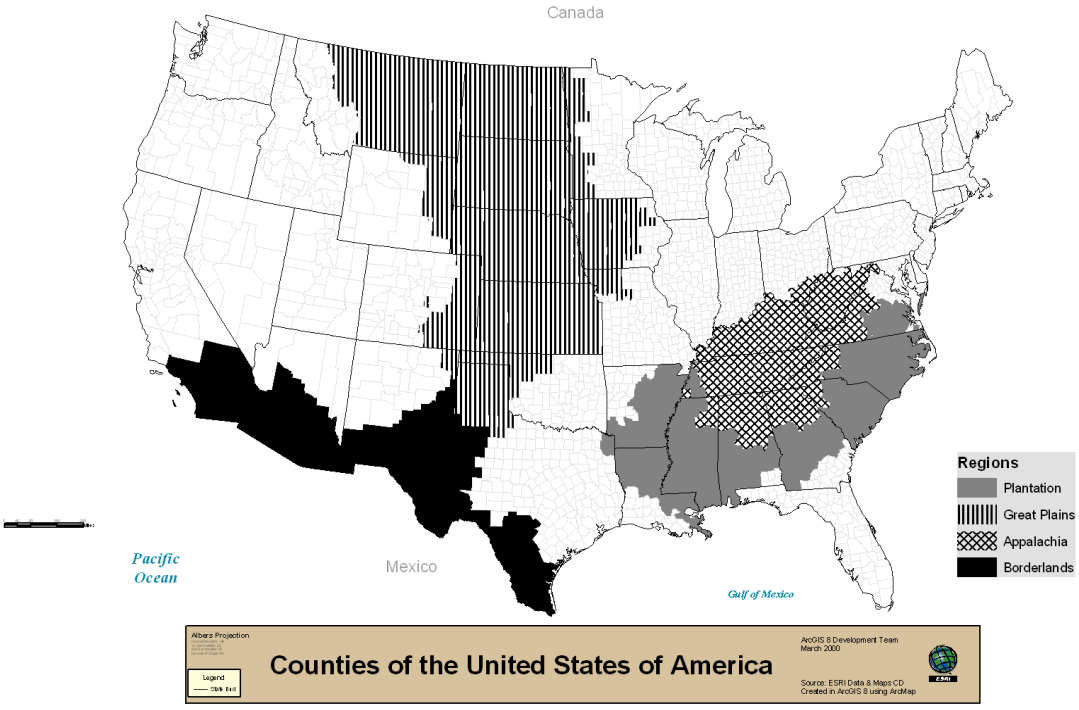
This question was constructed to measure an individual's attachment to place embodied in social networks and cultural artifacts of the community that is independent of the individuals' preferences for other types of communities (Cordes et al., 2003[31]). By asking individuals to move to a *similar* community instead of *any* community, we remove potentially confounding factors from our dependent variable of interest.

Answers ranged from zero to "no amount of money could make me want to move". Respondents requiring more than $500,000 to move and respondents responding "no amount of money could make me want to move" to this question were coded to be unconditionally rooted. Respondents answering $0 to move were coded as being unconditional migrants.

Regional Delineations

Observations were coded to be in one of five cultural regions: The Great Plains, The Plantation Belt, Borderlands (Southwest), Appalachia, and Rest of Continental US (RoCUS). Census migration statistics and physical geography were used to delineate the Great Plains region. The other regions were delineated using Census demographic statistics using an approach similar to that employed by Nostrand (1970[32]), with emphasis on the region's modal ethnic group. Some considerations were given to physical geography. Figure 1 shows which counties are included in the regions.

Figure 1. Regional Delineations



Great Plains

The Great Plains region is experiencing rapid population decline, particularly in rural counties. The agriculture sector is employing fewer people and population density is low (Johnson, 2006[33]). These trends may have become cultural norms, which could be manifest in respondent's willingness to move.

The Great Plains was delineated to be the contiguous set of counties in the general Great Plains physical geographical region that demonstrated net outmigration. It must be noted that although not an ethnic majority, Native Americans make up a substantial proportion of the population and are a crucial part of the culture in this region. We hypothesize that Native Americans living in tribal areas are more rooted than the general population, which may act as a partial brake on Great Plains outmigration.

Appalachia

This region has been described by many as a "colony" where absentee owners strip the land of its resources (Hurst, 1992[34]). This relatively isolated region is known to have a distinct regional culture and identity and is hypothesized to have a very low willingness to move.

We deviate from more traditional delineations of the Appalachia region by putting more emphasis on demographic rather than physical geographic variables when demarcating the borders. In particular, Appalachia is designated as a contiguous region in which counties report "American" as the modal response to Census questions of ethnic origin. For example, we have excluded parts of Pennsylvania and New York which have traditionally been included in the region and are part of the federally funded Appalachian Regional Commission service area.

The Plantation Belt

The Plantation Belt (aka Black Belt) is arguably the nation's most underdeveloped economy. It is home to 45% of the nation's rural poverty. The rural economy remains stagnant as conditions in the agricultural sector slowly deteriorate, which may have led to increased willingness to move in the region (Baharanyi et al., 2000[35])

Similar to Appalachia, the Plantation Belt is a contiguous region including parts of several states in the southeastern region of the US in which the majority of counties report Black/African American as the modal ethnic origin.

Borderlands

The Borderlands (Southwest) are contiguous counties in the desert Southwest physical geographical region where the modal ethnicity is Hispanic. Formerly a part of Mexico, this region has always been culturally distinct from the rest of the United States. Though it is now separated by a political border, cultural and economic exchanges with Mexico remain strong, which has produced a unique cultural identity in the region. The institutions of Hispanic culture

in the Borderlands are constantly reinforced and the Borderlands cultural identity is secured (Nostrand, 1970[36]).

Rest of Continental US (RoCUS)

The remaining region encompasses all parts of the continental US not contained in one of the defined regions. Thus "RoCUS" is quite large, encompassing regions of the US that have more mixed patterns of ethnicity and migration.

Basic Results

Table 1 below shows the means of the "Money to Move" variable, and the percentage of those who are unconditional migrants, and unconditionally rooted by region. The mean in the Great Plains and Borderlands are below the RoCUS region which demonstrates a higher willingness to move overall in these regions. While, the Plantation belt and Borderlands regions, on the other hand, have higher means, demonstrating lower willingness to move. Also, the percentage of unconditional migrants is relatively similar across the regions, while the percentage of unconditionally rooted individuals show more variation among the regions.

Table 1 also shows some curious results. The Borderlands has a lower mean for money required to move (thus more willing to move), while there is a higher percentage of people in the region that are unconditionally rooted (less willing to move). These seemingly conflicting results suggest that there are different processes determining the amount of money required to move and the probability of being an unconditional migrant. In other words, attributes that make a community more valuable, and attributes that make a community priceless could very well be different. We explore this further in the next section with OLS and logistic regressions.

Figure A1 in the appendix provides additional information on the spread and standard deviation of our variable of interest by region.

Table 1: Basic Results, Willingness to Move

	Additional Income to Move*	Unconditional Migrants**	Unconditionally Rooted**
Great Plains	49.59	2.20	32.09
Plantation	63.95	2.74	23.17
Appalachia	95.91	3.73	38.38
Borderlands	43.17	2.76	39.83
RoCUS	61.25	2.79	33.31

* Means in Thousands of dollars

** Percentages

Estimation

To explore further these variables we turn to regression analysis. Ordinary Least Square and Multinomial Logit regressions were used to explore the relationship between our independent variables and willingness to move.

First, OLS regression was used in analyzing the relationships between the independent variables and the additional income required for individuals to move. In this OLS regression, respondents that required an amount greater than $500,000 and those who answered "no amount of money could make me want to move" were considered to be "unconditionally rooted" and were excluded from this regression.

Second, because many individuals responded as unconditionally rooted ("no amount of money could make me want to move") and unconditional migrant (requiring $0 to move), a multinomial logit regression was used to explore the qualitative dimensions of this variable. Multinomial logit regression was utilized to analyze the likelihood of being an unconditionally rooted resident and the likelihood of being an unconditional migrant. Individuals that were neither unconditionally rooted nor unconditional migrants were treated as the base category for our multinomial logit model.

Regression Results

Table A1 in the appendix provides detailed results for each of the regressions used. Table 2 below provides a summary of the fit for the two regressions.

Table 2

Multinomial Logit			OLS		
Pseudo R-Squared	*Log Likelihood*	*Observations*	*R-Squared*	*F Statistic*	*Observations*
0.1526	-1640.006	2671*	0.1885	4.02	1674

* 348 observations dropped due to missing values in independent variables

Respondent Individual Characteristics

As expected, the number of years that an individual has lived in their community was a significant factor in explaining willingness to move. Individuals who had lived in a community longer were much less willing to move (requiring more money to move). Interacting this variable with the Great Plains showed that respondents who had lived longer in the Great Plains were significantly more likely to be unconditionally rooted in their communities.

Respondents who were born in their current communities required significantly more money to move away, but were not any more likely to be unconditionally rooted or to be an unconditional migrant.

Also, respondents with graduate degrees were more attached to their communities than the base

of high school graduates. Although it has been hypothesized that individuals with advanced education relied less on local social capital, this seems to demonstrate that those with graduate degrees value their communities more than individuals with less education. It may be that persons with advanced degrees have more choice in their location decision after completing university studies, and, having made that choice, are satisfied with it.

Respondents in the 40 to 49 age group required a significantly larger amount of money to move than the base group (age 30-39). In addition, the 18-21 age group was found to be much more likely to be unconditionally rooted than the base. A significant proportion of this age group may be attending college, or emotionally or otherwise dependent on family support, causing them to be unconditionally rooted in their current community. Also, individuals in the 50-59 and 60+ (because the survey focused on working age adults, no respondents were older than 65) were found to be both more likely to be unconditionally rooted to their community, and more likely to be unconditional migrants. This may be because those who are retiring soon want to move away to their retirement destination now, and those who have already found a place to retire are firmly rooted in their communities.

Respondent Household Variables

Contrary to predictions, after controlling for other variables, neither the number of children nor the number of adults in respondents' households had significant effects on the respondent's willingness to move or on the likelihood of being an unconditional migrant or unconditionally rooted.

The respondent's proportion of household income was also significantly related to reported willingness to move. Respondents earning smaller shares of household income were also significantly less likely to be unconditionally rooted in their communities. This suggests perhaps that the quality and availability of spousal employment in the community influences a household's decisions to move out of a community.

Also, respondents from households earning between twenty and sixty thousand dollars were significantly more willing to move than respondents in other income categories. They required significantly less additional income to be convinced to move, but the household income variables had little effect on the likelihood of the respondent being a unconditional migrant or of being unconditionally rooted.

Community Demographic Variables

As expected, population density in the respondent's ZCTA had a significant relationship with willingness to move. Respondents demonstrated lower willingness to move in areas with higher population densities.

Age composition of the ZCTA was also a significant determinant in willingness to move. Respondents from communities with higher proportions of people in the 10-19 age group were much less likely to be unconditionally rooted. The increased presence of retirement age individuals in a community decreased the likelihood of the respondent being an unconditional

migrant. It may be that a certain age structure with many retirees creates a kind of tipping point for individuals in age groups most likely to consider moving. This may have implications for communities considering pursuit of retirees as a local economic development strategy.

Although the racial composition of the ZCTA did not have a significant impact on the amount of additional income a respondent required to move away, the composition significantly affected a respondent's likelihood of being an unconditional migrant. Respondents from counties with larger African American and Native American populations were significantly less likely to be an unconditional migrant. Respondents from ZCTAs with higher racial diversity (Hirschman-Herfindahl Index with racial composition) were significantly less likely to be unconditionally rooted, and more likely to be unconditional migrants.

Community Attributes and Outlook

The number of associations (social businesses and organizations) in a county had no significant effect on respondent's willingness to move. However, respondents from the Great Plains region were significantly more likely to be unconditionally rooted when there was a higher availability of natural amenities in the respondent's county. This suggests that the valuation of natural amenities is contingent upon the region. Natural amenities in the Great Plains are an important determinant of willingness to move while they are not an important determinant in the rest of the nation.

Figure A2 in the appendix gives additional information on the mean and spread of the Natural Amenities scale by regions. We can see from the figure that the Great Plains region has lower levels of natural amenities relative to the nation. Due to the relative lack of natural amenities in the Great Plains region, residents of the region may have become more attached to communities with relatively greater availabilities of natural amenities. In other words, scarcity of the good (in this case, amenities) may increase its value within the Great Plains region.

The size of the creative class in a county also showed regional differences in preferences. While the presence of the creative class had no discernable effect on willingness to move, when it was interacted with the Great Plains region, significant effects were detected. The significance of the squared term and linear term in both of the regressions demonstrates that the Great Plains demonstrates preference regarding the relative size of the creative class in a county. This may be due, in part, to the region's high reliance on the volatile agricultural and natural resource sector. The Great Plains may be under heavier pressure to diversify jobs and business opportunities than the rest of the nation. This may have resulted in a higher demand for the skills and resources of a creative class base. In contrast to the increasing number of natural resource based communities that are depopulating in the Great Plains, perhaps the presence of the creative class is perceived by residents to provide assurances of longer term economic viability of the community. Again, this result demonstrates that regional differences exist in the valuation of and attachment to community attributes.

Percentage of people employed in agriculture was not a significant determinant of willingness to move. However when interacted with the Great Plains variable, results show that respondents in the Great Plains region from ZCTAs with higher dependence on the agricultural sector required

significantly less additional income to move away. Again, this variable was related to willingness to move of respondents in the Great Plains in a very different way than respondents in the rest of the United States.

Regional Variables

Controlling for other variables, the respondents from the Great Plains were less likely to be unconditional migrants while residents in the borderlands were significantly more likely to be unconditional migrants.

Interviewer Gender

The gender of the interviewer significantly affected respondent's willingness to move. Those interviewed by female enumerator were significantly more likely to state that they were unconditional migrants. By controlling for interviewer gender, we remove this potential source of response bias.

Summary & Conclusion

A national telephone survey of 3019 households explored individual's willingness to move. Respondents were asked how much money it would take to convince them to move to another similar community 500 miles away. Answers ranged from zero dollars to "no amount of money could convince me to move".

Supporting previous research, significant relationships were detected between willingness to move and economic conditions, income, length of residency, age, population density and poverty levels. However, further analysis with regional interaction terms show that these variables affect regions differently.

It appears that individuals under the age of 25 are not as footloose as thought. Because they have a significantly lower probability of being an unconditional migrant, this age group may be the group to target in efforts to retain population in a community by developing career strategies and amenities. Conversely, our results provide some evidence of a previously undetected potential disadvantage to retiree recruitment as an economic development strategy. Areas with a higher proportion of retirees enjoy less attachment from residents who are working-aged adults.

For policy makers in the Great Plains, it appears that conserving and enhancing natural amenities may be one way to decrease willingness to move away from the region. Counties in this region that move away from an agriculture-dominated local economy will also decrease willingness to move away from the area. The Great Plains has also demonstrated a size preference for the creative class. Retaining and growing the creative class in the Great Plains may help in decreasing willingness to move of other residents of the county. Lastly, because the length of residency in the Great Plains resulted in significantly decreased willingness to move, investments into population retention, or recapture of those who have moved away for college or military service may help stabilize the population base.

When interpreting these results it is important to keep in mind that migration is a segmented process that does not include everyone who wants to move. People who were very willing to move (requiring $0 to move) in the survey had not yet moved away. This study is on pushing and pulling forces originating from the region of origin. To gain a larger picture of migration, we must not only take into consideration the push and pull factors presented in this study, we must also take into account pulling factors in the region of destination.

This research was supported by the Michigan Agricultural Experiment Station and USDA/CSREES National Research Initiative Competitive Grant Number 2005-35401-16000. The authors thank anonymous reviewers, Peter Schaeffer, and participants in November 2008 Regional Science Association International annual conference rural development sessions for feedback on earlier versions of the work.

Appendix

Figure A1: Unconditional and Conditional Migrant Income Required to Move to a Similar Community 500 Miles Away. (Range, Standard Deviation, and Mean) [back to top]

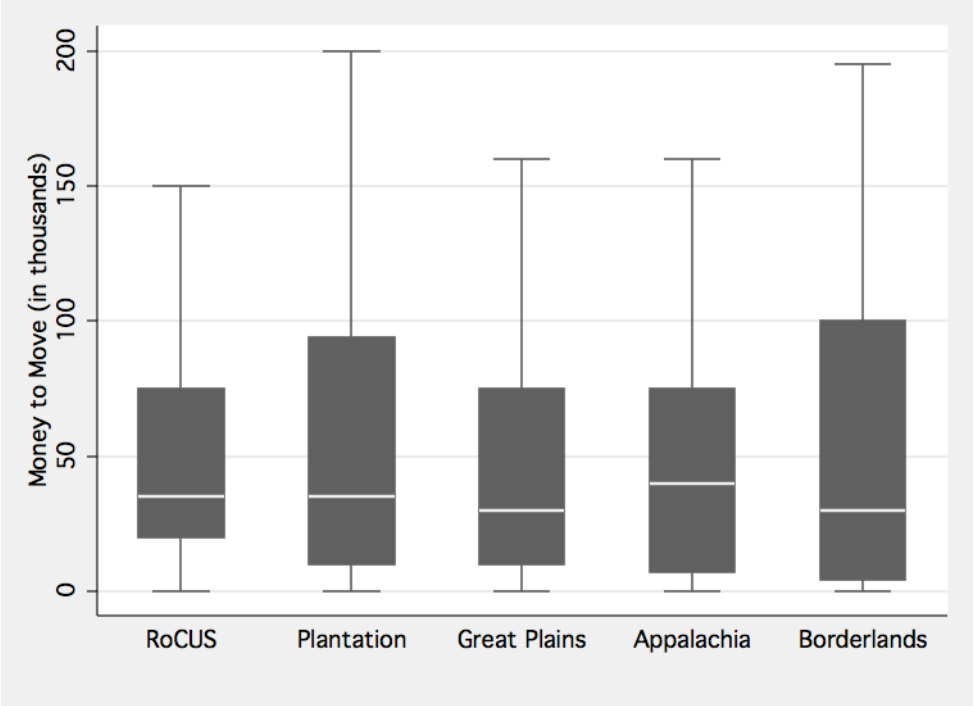
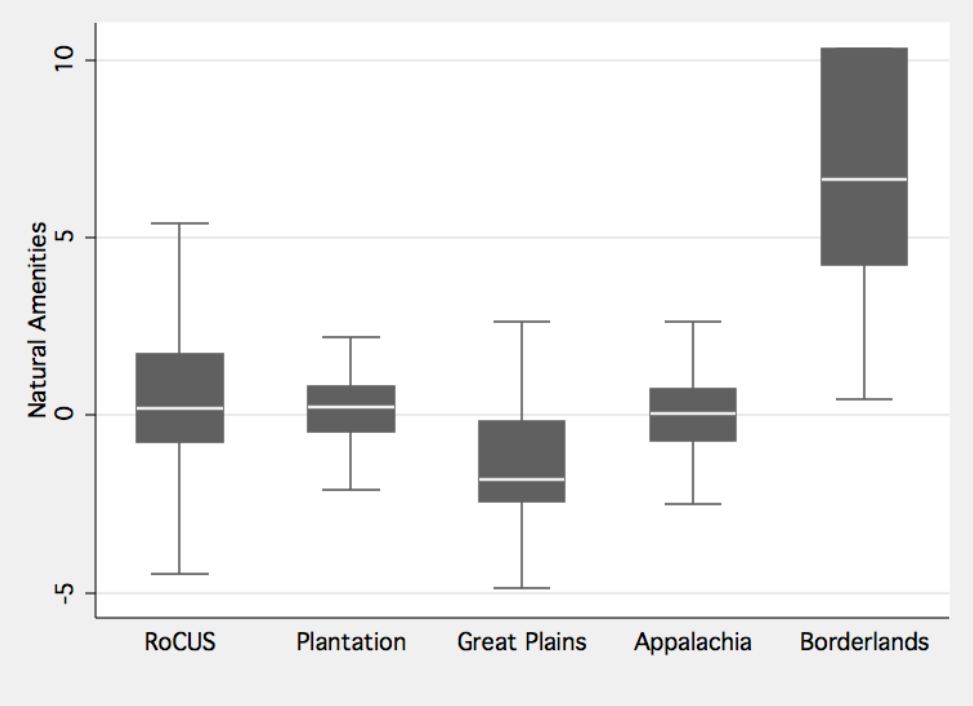


Figure A2: Natural Amenities Scale by Region (Range, Standard Deviation, and Mean) [back to top]



A2

	OLS	*Multinomial Logit*	
Ind Characteristics	*Money to Move*	*Rooted*	*Migrant*
Yrs in Comm	0.589*	0.00539	-0.0128
	(1.937)	(1.204)	(-1.140)
Brn in Comm	24.05***	-0.0359	0.0194
	(2.609)	(-0.214)	(0.0567)
Age (base 30-39)			
18-21	19.73	0.421	-70.29***
	(1.142)	(1.001)	(-3.865)
22-25	-14.83	-0.61	0.322
	(-1.504)	(-1.327)	(0.489)
26-29	-6.926	-0.516	-0.0243
	(-0.824)	(-1.359)	(-0.0368)
40-49	17.06**	0.287	0.36
	(1.981)	(1.421)	(0.775)
50-59	-6.06	0.397*	1.459***
	(-0.812)	(1.817)	(3.522)
60+	14.57	0.903***	1.354**
	(1.012)	(3.203)	(2.195)
Marital Status			
Gender	0.857	0.301**	0.499
	(0.137)	(2.037)	(1.455)
Married	11.55	0.506**	-1.020**
	(1.566)	(2.073)	(-2.509)
Divorced	6.192	0.238	-0.0992
	(0.674)	(0.834)	(-0.184)
Seperated	-23.37	-0.838	1.174
	(-1.596)	(-1.245)	(1.26)
Widow	-1.203	0.0629	-42.45***
	(-0.0429)	(0.153)	(-29.90)
Couple	10.37	0.182	-41.18***
	(0.654)	(0.277)	(-34.61)
Education			
High Sch	14.59	-0.278	0.618
	(1.346)	(-0.819)	(0.611)
Some Coll	6.163	-0.153	-0.076
	(0.697)	(-0.451)	(-0.0731)
College	17.64	-0.156	0.0605
	(1.565)	(-0.449)	(0.0576)
Grad Deg	28.33**	-0.0299	-0.185
	(2.502)	(-0.0786)	(-0.171)
Other	24.43*	0.699	-1.057
	(1.655)	(1.371)	(-0.820)
Ethnicity			
White	6.799	0.283	-0.64
	(0.752)	(0.91)	(-1.011)

	Money to Move	*Rooted*	*Migrant*
Black	33.85**	0.139	-0.598
	(2.183)	(0.355)	(-0.728)
Haw/Pac	21.79	-4.144***	-40.26***
	(0.802)	(-3.601)	(-32.29)
Asian	-18.92	-0.294	1.438
	(-1.118)	(-0.363)	(1.591)
Nat Amer	-5.717	-0.18	0.11
	(-0.356)	(-0.363)	(0.105)
Hispanic	-0.00116	-0.693*	-73.84***
	(-0.000122)	(-1.923)	(-2.963)
Employment			
Part time	-8.103	0.336	-0.0258
	(-0.943)	(1.384)	(-0.0464)
Part Stu	73.32*	0.239	-40.06***
	(1.656)	(0.468)	(-62.57)
No Work	15.57	1.211**	-39.25***
	(0.761)	(1.973)	(-31.91)
Unemp	-16.73	0.0765	-1.758
	(-1.102)	(0.169)	(-1.569)
Retired	-1.004	0.36	0.726
	(-0.0671)	(1.347)	(1.141)
Full Stu	-25.40**	0.795*	0.91
	(-1.996)	(1.827)	(1.119)
Home-maker	-4.904	0.217	1.454***
	(-0.341)	(0.837)	(2.947)
Disabled	-32.58**	0.752**	-0.926
	(-2.507)	(2.107)	(-0.748)
HH Characteristics			
HH Income			
10_20	-17.37	0.0704	-2.502*
	(-1.510)	(0.191)	(-1.890)
20-30	-19.58**	-0.301	-0.492
	(-2.082)	(-1.008)	(-0.839)
30-40	-21.52**	0.121	0.0411
	(-2.324)	(0.47)	(0.0811)
40-50	-21.05**	-0.705***	0.141
	(-2.081)	(-2.971)	(0.306)
50-60	-29.48***	-0.0762	-0.243
	(-3.520)	(-0.257)	(-0.375)

	Money to Move	*Rooted*	*Migrant*
60+	-11.92	-0.301	0.494
	(-1.396)	(-1.139)	(1.189)
HH size	2.638	-0.0403	-0.152
	(0.719)	(-0.706)	(-1.291)
Inc Share	-7.5	-0.241**	0.427
	(-1.371)	(-1.976)	(1.53)
Community Characteristics			
Age % in community			
<10	10.85	-0.277	-1.882
	(0.295)	(-0.225)	(-0.966)
10_19	-16.01	-2.804**	-0.602
	(-0.408)	(-2.112)	(-0.212)
20-29	67.43	1.549	0.859
	(1.139)	(1.474)	(0.518)
30-39	-35.46	1.289	1.181
	(-0.696)	(0.852)	(0.46)
50_59	-60.22	-0.611	-1.605
	(-1.053)	(-0.460)	(-0.661)
60_69	35.59	-0.889	-7.892*
	(0.7)	(-0.737)	(-1.711)
70+	62.26	0.312	3.845
	(0.934)	(0.162)	(1.213)
Ethnic Composition			
Black	0.0339	0.00757	-0.0641***
	(0.165)	(1.116)	(-2.763)
Nat Amer	0.6	0.00268	-0.133*
	(0.7)	(0.136)	(-1.790)
Ethnic Div	-1.808	0.124*	-0.301**
	(-0.869)	(1.906)	(-2.156)
Attributes			
Pop Dens	0.00316*	-0.00000116	-0.000106
	(1.677)	(-0.0417)	(-0.551)
Pop Count	-0.0000309	-1.19e-05**	-0.0000172
	(-0.149)	(-2.147)	(-1.280)
Migrant %	0.0207	-0.0113*	0.0042
	(0.0741)	(-1.796)	(0.29)
Emp Ag	-0.0145	-0.011	0.0295
	(-0.0302)	(-0.969)	(1.466)
Emp Manu	0.196	-0.00585	-0.0244
	(0.622)	(-0.715)	(-1.325)
Poverty Rate	-0.962***	0.00876	0.00282
	(-2.608)	(0.869)	(0.145)
Creative %	93.75	-1.849	14.58
	(0.411)	(-0.337)	(1.089)
Creative% ^2	-170.8	2.851	-32.19
	(-0.419)	(0.292)	(-1.240)

	Money to Move	*Rooted*	*Migrant*
Natur Amen	2.489	-0.045	-0.19
	(1.561)	(-0.891)	(-1.335)
Urban Inf	-8.842	0.19	0.19
	(-0.856)	(0.884)	(0.417)
Soc Cap.	-0.00108	0.00493	-0.013
	(-0.00688)	(0.922)	(-1.033)
Bsns bad	-10.32	-0.00273	0.872**
	(-1.371)	(-0.0157)	(2.41)
Bsns nth	-6.03	0.145	0.334
	(-0.674)	(0.637)	(0.696)
Local gov eff	0.199	-0.086	0.216
	(0.0679)	(-1.094)	(1.429)
Regions			
Great Plains	21.25	-7.532	-163.3***
	(0.133)	(-1.014)	(-2.684)
South	-2.314	-0.478*	0.412
	(-0.206)	(-1.723)	(0.773)
Borderlands	-13.27	0.316	2.270***
	(-0.972)	(0.661)	(2.63)
Appalachia	31.79	0.225	0.422
	(1.34)	(0.858)	(0.726)
Interviewer Characteristics			
Interviewer Gender	-8.259	0.121	0.735**
	(-1.180)	(0.789)	(2.103)
Interviewer Age	2.418	-0.155	0.187
	(0.626)	(-0.806)	(0.316)
Interviewer Age^2	-0.0237	0.0013	-0.00532
	(-0.487)	(0.563)	(-0.793)
Interaction Terms			
Yrs Com * Natmn	-0.0914	0.00272	-0.00315
	(-1.025)	(1.491)	(-0.621)
GPLN * Natamn	0.759	0.319*	0.819
	(0.207)	(1.74)	(1.601)
GPLN * Yrs Comm	-0.694	0.0568**	0.115***
	(-0.937)	(2.111)	(3.458)
GPLN * Pop	0.0227	-0.000447	0.0685*
	(0.964)	(-0.342)	(1.769)
GPLN * Urb Inf	-12.15	-1.666	-24.71
	(-0.365)	(-0.839)	(-1.469)
GPLN * Emp Ag	-2.424**	0.0592*	0.0166
	(-2.224)	(1.957)	(0.26)

	Money to Move	*Rooted*	*Migrant*
GPLN * Retired	-30.91	1.713	-26.25***
	(-0.874)	(1.222)	(-5.373)
GPLN * Bsn Cond	17.54	-0.623	-7.209**
	(0.779)	(-0.784)	(-2.478)
GPLN * Age Div	16335	-1449	-7604
	(0.414)	(-1.046)	(-0.737)
GPLN * Ethn Div	14.98	0.263	3.694**
	(1.514)	(0.716)	(2.484)
GPLN * Creative	-1463**	66.66**	1711**
	(-2.308)	(1.985)	(2.132)
GPLN * Creative ^2	2279**	-109.1*	-5622**
	(2.113)	(-1.851)	(-2.019)
Constant	33.67	-1.153	-1.414
	(0.698)	(-0.875)	(-0.479)
Observations	1674	2671	2671
R-squared	0.189	.	.

*** p<0.01, ** p<0.05, * p<0.1
Robust t statistics in parentheses

End Notes: Loveridge, Scott, Dale Yi, and Janet Bokemeier. "Why are They Moving Away? Comparing Attachment to Place in the Great Plains to the Rest of the Nation." *Online Journal of Rural Research & Policy* (4.1, 2009).

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