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Retirement, Health, and Migration from Nonmetro Counties: Evidence from the Health and Retirement Survey

by

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ABSTRACT

Using an Event History Analysis of six biennial waves of the Health and Retirement Survey (1994 - 2004), I examined the pre-migration characteristics of older adults living in nonmetro counties in 1994 to see who stayed, who migrated, where they went (a metro or nonmetro county), and why. Retirement within the past year was the most powerful predictor of migration from a nonmetro origin, but did not predict the destination (metro vs. nonmetro). Consistently with Litwak and Longino's theory, nonmetro migrants who went to live nearer, or with, kin and friends were more likely to go to metro than nonmetro destinations. Contrary to the theory, prior changes in four measures of health could not distinguish nonmetro nonmigrants from nonmetro outmigrants nor discriminate their destinations (metro from nonmetro). Thus, the first observable migration by nonmetro-origin older adults may have been in expectation of future needs for assistance.

INTRODUCTION

In the 1960s, older adults began migrating more heavily into than out of nonmetropolitan (nonmetro) counties. This trend has persisted into the twenty-first century (Johnson and Cromartie, 2006). Because earlier migration studies had focused on nonmetro-to-metro migration by job-seeking young adults, it is not well understood why older-adult migrants favor nonmetro destinations.

Litwak and Longino (1987) provided a theoretical framework. When young-old adults first retire from the labor force, they are released from the need to live near a job (usually in a metro area). If they choose, they may move into nonmetro counties to pursue leisure activities in amenity-rich natural environments. The popularity of nonmetro destinations among young-old adults should be highest when they are healthy enough to participate in outdoor activities. It is reasonable to think that these migrants could choose a nonmetro destination where they had grown up or previously vacationed (Litwak and Longino, 198, p. 267).

Eventually, older adults will develop chronic disabilities that make it hard for them to carry out such daily routines as shopping, cooking, and cleaning. If they have no children living with them or near them who will offer informal assistance, then the stage is set for “the second move” (Litwak and Longino, 1987, p. 267). This help-seeking relocation would more often than not be nonmetro-to-metro (Litwak and Longino 1987: 270). However, the

second move may be unnecessary if the first move brings the older adult closer to the next-of-kin.

A “third move” (Litwak and Longino, 1987, p. 269) might become necessary if the older adult changes from a moderate to a severe level of disability and makes heavier demands for informal help by the next-of-kin than the latter can meet. In this case, the older adult might move into an institutional setting nearby so that the next-of-kin can visit often and provide complementary services (Litwak and Longino, 1987, p. 269). However, this third move is usually not picked up as a “migration” in studies of geographic mobility, since the U.S. Census Bureau recognizes migration as occurring only when the mover relocates across a county line. (Litwak and Longino, 1987, p. 269).

The literature review (next section) reveals at least four limitations in testing this theory: a failure to take the migrant’s nonmetro/metro origin and destination into account; a narrow focus on only one or two measures of health; a failure to assess the timing of retirement and health transitions relative to the timing of the migration; and an absence of recent, national analyses of the reasons why migrants say they migrate. To close these gaps, I derive three working hypotheses from Litwak and Longino’s theory which I test with 10-years worth of recent longitudinal data. I focus on nonmetro counties, since declining health is theorized to impel older adults to leave

these areas (Litwak and Longino 1987). The final section discusses the implications for Litwak and Longino's developmental theory of older adult migration, for future studies, and for nonmetro community developers.

THE EVIDENCE

Until recently, studies based on longitudinal surveys of older adults have not examined the health-based selection of older adults into migration streams. An important exception is Halliday and Kimmitt's (2008) analysis of the effects of self-rated health status (SRHS) on the annual probability of migration in 1984 - 1993 by adults in the Panel Study of Income Dynamics. Men aged 60 or older had a higher propensity to become an interstate migrant in year "t" if they had rated their health either above average or below average (rather than average) in year "t-1." The authors speculated that being above average in health can reduce men's costs of interstate migration, but being below average in health can increase the benefits, if the relocation brings men closer to family members who can care for them. Women's own SRHS was unrelated to their propensity to become interstate migrants, but having an unhealthy husband increased the propensity. Nevertheless, the small amounts of variance explained by the full Probit models are unpersuasive that health statuses strongly select older people into interstate

migration streams.

Sabia (2008) used the Panel Study of Income Dynamics to track household heads and their spouses ages 50 or older in 1972 - 1992. The dependent variable was the hazard rate of making the first housing move during that 21-year period. Having a physical limitation consistently throughout membership in the study was associated with a higher hazard rate of making the first move. In addition, for those initially aged 71 or older, experiencing the onset of a physical limitation after starting the study limitation-free raised the hazard rate of a subsequent move. In short, this study offers stronger evidence than Halliday and Kimmitt (2008) that becoming physically disabled causes older adults to become residentially mobile. But Sabia studied any kind of mobility, while Halliday and Kimmitt focused on interstate migration.

Unlike the preceding researchers, De Jong et al. (1995) used two dimensions of physical disability in their analysis of the Longitudinal Study of Aging (LSOA, 1984-90). They measured Physical Activities of Daily Living (PADLs; such as difficulty in bathing, toileting, dressing, eating, or walking, etc., without assistance) and Instrumental Activities of Daily Living (IADLs; such as difficulty in preparing meals, shopping, or doing housework) at the baseline interview. They also measured change in the PADLs or IADLs after the baseline. The dependent variable

was the first (if any) change in residence. The **levels** of the two dimensions of disability in 1984 were unrelated to the chance of making a first move. However, those who had a **change** in the PADL score were 4% more likely than those with a stable score to move than to age in place. Contrary to Litwak and Longino's theory and Sabia's findings, having a metropolitan (metro) residence in 1984 did not affect the risk of moving.

Longino et al. (2008) used the most recent national data set (the 1994 - 2002 waves of the Health and Retirement Survey) to explore a large number of predictors of "non-local moves" by older adults. Respondents with local community ties, as reflected in being home owners or natives of the area or having children or parents living with them or within 10 miles, had much lower odds of making a subsequent non-local move, in comparison to other respondents. In addition, travel experience, as indexed by having a secondary residence/condo or a regular vacation spot (other than a secondary home), increased the odds of a non-local change in residence. One innovation was examining whether the recency of retirement raised the chance of a non-local move; and it did so, but more strongly in the first year after retirement than later. However, contrary to the findings in the other studies cited above, Longino et al. saw no relationship between their only measure of health (self-rated health status) and the risk of a non-local move.

All of these longitudinal studies report important demographic characteristics of older individuals that raise their chances of a subsequent move/migration. Complementing these works are a sparse number of analyses of the reasons actually reported by the movers for why they had moved to their current address. For example, the Cornell Retirement Migration Study (Brown and Glasgow 2008) found that life-course transitions (retirement, divorce, or widowhood) were mentioned almost as often as desires to locate nearer children, grandchildren, siblings, or aging parents. For at least one-third of these inmigrants to nonmetro counties, the motives seemed to combine amenity-seeking with assistance-seeking. Perhaps a significant share of older adults migrate to minimize the number of their later-life moves by choosing a location that provides access to both natural amenities and significant people in their personal lives. This special combination of goals may have been specific to the older adults going to the 14 “retirement-destination counties” non-randomly selected for inclusion in the Cornell Study. In addition, the Cornell Study cannot show the reasons why older adults leave nonmetro counties, as it focused exclusively on older adults who migrate into nonmetro counties.

The next phase of research to test Litwak and Longino’s theory should analyze a recent, nationally representative data set on older adults that contrasts their reasons for migrating

into any type of county (nonmetro or metro) and should expressly include their reported economic motives. Plausibly, many late-middle-aged people start to think about where they will want to live after retirement and will select a location where their retirement income will stretch.

This idea is supported by Farnham and Sevak's (2006) analysis of inter-county migration recorded in the U.S. Health and Retirement Survey (HRS). They found a stronger tendency for older adults to migrate into counties with lower property taxes. Farnham and Sevak's study, unlike Brown and Glasgow's work, represents all kinds of nonmetro counties but infers economic motives rather than asking directly for these.

AIMS OF THE STUDY

Litwak and Longino's theory remains untested for at least four reasons. First, the nonmetro or metro origins and destinations of older-adult migrants are not analyzed simultaneously. Second, health is a multi-dimensional phenomenon, but only one of the above-cited studies (De Jong et al., 1995) uses more than one measure of health to predict a change in residence. Third, Litwak and Longino emphasize **transitions** in health or retirement-status that should trigger migration by older adults; but only two studies (De Jong et al, 1995; Sabia, 2008) examine a **change** in health; and only one study (Longino et

al., 2008)looks at the recency of retirement in relation to mobility. Fourth, no nationally representative study of older-adult migrants has yet looked at a range reasons they report for favoring a metro v. nonmetro destination. To fill these gaps in the literature, the current investigation will test three working hypotheses. Due to page limitations, this study report will be limited to testing Litwak and Longino's theory about the "first move" made by older adults who originate in a nonmetro county. In taking this focus, the current study will break new ground by looking at the previously ignored nonmetro-to-nonmetro migration stream of older adults as well as at their nonmetro-to-metro migration stream.

Hypothesis 1: (a) Worsening health reduces the risk that a nonmetro older adult will become a nonmetro-to-nonmetro migrant rather than to stay in the same nonmetro county, but (b) retiring from the labor force increases that risk. Rationale: Litwak and Longino's (1987) hypothesis links good health and recent retirement to migration to a nonmetro destination.

Hypothesis 2: (a) For older nonmetro adults who decide to migrate, worsening health exerts a stronger pull into a metro (v. nonmetro) destination; but (b) retiring from the labor force exerts a stronger pull into a nonmetro (v. metro) destination.

Rationale: Litwak and Longino (1987: 269), link help-seeking to a move into metro destinations, and retirement migration to amenity seeking, thus nonmetro destinations. In addition, the medical infrastructure is more complex in metro than nonmetro counties and should reinforce the decision to migrate to metro counties when health is failing.

Hypothesis 3: Nonmetro-origin older-adult migrants are more likely to migrate to metro than nonmetro destinations (a) because of a desire to get closer to children, other relatives, or close friends; (b) due to worsening health; or (c) in order to return to a previous place of residence. On the other hand, these migrants are less likely to migrate to metro than nonmetro destinations (d) in search of natural amenities or (e) for positive or negative economic reasons.

METHODS

The Data

This investigation uses the 1992 - 2004 waves of the Health and Retirement Survey (HRS). The original target respondents were a national systematic random sample of people born in 1931 - 1941 (thus aged 51 - 61 at Wave 1 in 1992), plus their spouses, regardless of the latter’s year of birth. To the maximum extent possible, the original respondents (Rs) have been re-interviewed every two years since 1992. For details of the sampling design,

see Juster and Suzman (1993).

At each interview, the numerical Federal Information Processing Standards (FIPS) code, uniquely identifying the county and the state of the interview, was entered into each R's record. In 1996, R was asked for the first time: "In what month and year did you move to your current home in [ASSIGN MAIN RESIDENCE]"; and this question has appeared in every subsequent wave. Following the U.S. Census Bureau's definition of "migration" as a residential relocation across a county line, I defined a migrant as a respondent who affirmed moving to a new main residence since the previous interview, who stated a valid month and year as the date of that move, and whose FIPS codes were different for the current and the previous wave.

Of the 8,606 respondents to the HRS in 1994, 1,114 (= 13%) reported migrating at least once between January 1, 1994 - December 31, 2003. This is consistent with the 13% of older adults reported by Longino et al. (2008) to make at least one "non-local" move in 1994 - 2002.

To discern the nonmetro/metro origin and destination of migration, I matched the FIPS code for each year of interview to the 2004 County Typology Codes, downloadable from the website of the U.S. Department of Agriculture (www.ers.usda.gov/Data/TypologyCodes/,last accessed on May 16, 2008). The 2004 County Typology Codes define a county as

“nonmetro” or “metro” according to the results of the 2000 U.S. Census of Population. Thus, of the 8,606 respondents to the 1994 wave of the HRS, 2,107 (= 24.5%) were living in nonmetro counties. That was higher than the 20.1% of the whole U.S. population estimated to live in nonmetro counties in 1994 (U.S. Bureau of the Census 2001). In fact, nonmetro counties were over-sampled by the HRS in order to increase the representation of older Mexican Americans and African Americans. Therefore, the data in the tables below are weighted to take into account the non-randomness of the sampling plan and the intercorrelation of error terms for respondents clustering in the same household. The post-stratification weights were based on the March, 1994, Current Population Survey.

The Dependent Variables

For Hypotheses 1 and 2, the dependent variable consists of four mutually exclusive and jointly exhausted categories: (1) nonmetro-to-nonmetro migrant; (2) nonmetro-to-metro migrant; (3) nonmetro nonmigrant; or (4) attriter (decedent or drop-out). For Hypothesis 3, the dependent variable is the migrant’s destination, dichotomized as a nonmetro (“0") or a metro county (“1").

Only the first observed migration is studied. The survey data set, described below, tracked 2,107 nonmetro residents with

an average age of 58.7 in 1994 from 1994-2003. This yielded an unweighted count of 109 nonmetro-to-nonmetro migrants and 120 nonmetro-to-metro migrants.

The Independent Variables

Hypotheses 1 and 2. At each wave, respondents were asked if they had any trouble performing - or could not or did not do - any of 12 activities (running/jogging about a mile; walking several blocks; walking one block; sitting for about two hours; getting up from a chair after sitting for long periods; climbing several flights of stairs without resting; climbing one flight of stairs without resting; stooping/kneeling/crouching; reaching/extending arms above shoulder level; pushing/pulling large objects, like a livingroom chair; lifting or carrying weights over 10 pounds, like a heavy bag of groceries; and picking up a dime from a table). The affirmative responses were summed to compute the number of functional limitations, which ranged from 0 to 12. In 1994, respondents had an average of 2.92 functional limitations (Table 1). Since interviews were conducted in even-numbered years between 1994 - 2003, the total number of functional limitations was updated biennially. Therefore, for an even-numbered year, t, the **change** in the total number of functional limitations was the remainder obtained by subtracting that number reported in year t-2 from the number reported in year

t; and this remainder was also assigned to year (t+1) as the measure of change in the number of functional limitations. The typical respondent reported 1.14 more functional limitations in 1994 than he/she had reported in 1992 (Table 1).

(Table 1 about here)

At each wave, respondents were asked to compare their health then to what it had been at the previous wave (two years ago) and to classify it as: (1) much better; (2) somewhat better; (3) about the same; (4) somewhat worse; or (5) much worse. Thus, a higher score meant worsening health during the interwave interval. This change score was updated every two years, at the next wave. The typical respondent rated his/her health about the same in 1994 as in 1992 (mean score = 3.08; Table 1), but about 5% rated it somewhat or much worse in 1994.

Moreover, each R was asked at each wave to rate his/her eyesight and hearing (with a hearing aid, if worn). The possible replies were: (1) excellent; (2) very good; (3) good; (4) fair; and (5) poor. Change in vision/hearing between two consecutive waves was calculated by subtracting the self-rated vision/hearing at the previous wave from the self-rated vision/hearing at the present wave. The higher the result from the subtraction, the worse was the change. These change scores were updated every two years, at the next wave. Most respondents reported no shift in vision or hearing between 1992 - 1994 (Table 1). But about 30%

reported a worse vision score in 1994; and about 26%, a worse hearing score.

In addition, respondents were asked their work status at each interview. If they affirmed they had ever retired, they were asked the month and year of that retirement. I scored their retirement status as whether they had ever retired more than 12 months prior to the interview date (1 = “yes”; 0 = “otherwise”) or during the 12 months leading up to the interview (1 = “yes”; 0 = “otherwise”). In 1994, 22% of the respondents had ever retired, 4% having done so within the past year (Table 1).

Hypothesis 3. Starting in 1996, those who changed their main residence during an interwave interval were asked the open-ended question of what motivated them to do so. They were allowed to state up to five reasons in the 1996 and 2000 waves, up to six reasons in the 1998 wave, and up to two reasons in the 2002 and 2004 waves. Their replies have been used to construct six discrete categories of reasons, which are the independent variables for Hypothesis 3: affiliation, amenity-seeking, health, returnee, positive economic motivations, and negative economic motivations. The migrant was scored “1" if he/she mentioned a reason that fell into a category of response and “0" otherwise. The reasons for migration occurring in an odd-numbered year were reported in the wave conducted the following year. The reasons for migration occurring in an even-numbered year were taken from

the wave conducted in that year if the migration month preceded or equalled the interview month and from the wave conducted two years later if the migration month was after the interview month.

Control Variables: Demographic Factors

Each respondent's age in completed years was calculated as the difference between the interview date in 1994 and the birth date and was not allowed to vary across the 10 years of the observation period. The ages of all respondents in 1994 ranged from 42 to 67 and averaged 57.8 years (Table 1).

Other demographic control variables that were constant across the decade of observation were gender and race. The study sample was 91% white and 51% female (Table 1).

The marital status of the respondent was updated at each new wave. In 1994, 10% were divorced or separated, 8% were widowed, nearly 3% were never-married, and 79% were currently married (Table 1).

Control Variables: Resources

Lee (1970) argued that higher education causes migration by placing the educated person into regional, national, or international labor markets. Respondents reported their number of years of schooling at the beginning of the survey in 1992, and this education score was held constant throughout the observation

interval (1994-2003) of the current study.

The value of the respondent's net household wealth was calculated by subtracting the sum of all household debts from the sum of all household assets. The respondents' households averaged $166,922 in net wealth (Table 1) in 1994. I used the natural logarithm of net wealth (taken after adding unity to it) in the regressions below. The household's net wealth was updated at each new wave.

Control Variables: Travel Experience

In comparison to those who seldom travel, experienced travelers might find it easier to formulate intentions to migrate and to act on those intentions (Longino et al. 2008). Three measures of travel experience were available in the household module only for the 1992 wave. A representative from each sampled household was asked if he/she or the spouse/partner owned a second home or condo. In addition, he/she was asked if there were some place where he/she/they vacationed regularly (other than the second home or condo). Likewise, he/she were asked: "Do you own a recreation vehicle or a motor home?" Having a regular vacation spot was more common than owning a second home/condo or a recreation vehicle (respectively, 23.55%, 11.80%, and 10.34%; Table 1).

Control Variables: Community and Personal Ties

People with a lot of location-specific social capital must find it more difficult to migrate than people with a little. In 1992, respondents were asked how many adult neighbors they knew by name. The great majority knew at least some (Table 1).

Frequency of attendance at religious services symbolizes the degree of commitment to a religious community. In 1994, most respondents said they attended two-to-three times monthly (Table 1). Since this question was not asked at every wave, the 1994 reply was assigned at each new wave.

In 1994, Rs were asked: “Are you living in the same general area where you were born?” Almost 61% replied affirmatively (Table 1).

Longino et al. (2008) demonstrated that home ownership discourages residential mobility by older adults. In 1994, about 85% of respondents owned their residence (Table 1). The respondent’s status as a home owner was updated at each new wave.

Previous work has shown that the presence of children or parents in a respondent’s household or nearby deters migration (Longino et al. 2008). I developed separate counts of the number of children, step-children, or children-in-law living in the same household with the respondent and living within 10 miles (but not in the same household). The respondent averaged 0.3 child living in the same household and 1.02 children living within 10 miles

(Table 1). These data were updated at each new wave.

Finally, the presence of elderly parents in the same household as the respondent or nearby could discourage migration. I counted the number of parents, step-parents, parents-in-law and step-parents-in-law living with the respondent or within 10 miles. The average was 0.44 (Table 1). This variable was updated at each new wave.

Statistical Approaches

To test Hypotheses 1 and 2, a discrete-time Event History Analysis was used. The time unit of analysis was a person-year. Each of the 2,107 nonmetro respondents to the survey in 1994 contributed one person-year of observation every year up through, but not after, the year when they died, dropped out, or migrated, whichever event occurred first between January 1, 1994 - December 31, 2003. Those who did not die, drop out, or migrate between 1994 - 2003 contributed the maximum of 10 person-years each; and they were right-censored by the close of the observation decade.

Because the person-year(s) contributed by each respondent from 1994 - 2003 were a discrete, ordered number of years, these units of observation were entered into a multinomial logistic regression that predicted the four possible categories of the dependent variable. The regression was computed with the “mlogit” routine in the STATA 9.0 software package, and the “cluster”

function was used to correct standard errors for the inter-correlations of variables from respondents from the same households. For discussions of the statistical theory undergirding discrete-time Event History Analysis, see Allison (1984) and Blossfeld et al. (1989). Other examples of discrete-time Event History Analyses of longitudinal data can be found in De Jong et al. (1995), Rogers et al. (2000), Sabia (2008), and Zhang et al. (2008).

To test Hypothesis 3, I constructed six two-way tables of a category of reason for migrating (stated or not stated) by the type of destination county (metro or nonmetro). Unlike the data to test Hypotheses 1 and 2, these data have not been weighted, since the unweighted numbers in several cells were so small. A Pearson chi-square statistic was used to determine if the observed and expected cells means were significantly different.

FINDINGS

Hypothesis 1: (a) Worsening health reduces the risk of becoming a nonmetro-to-nonmetro migrant rather than staying in the same nonmetro county, but (b) retiring from the labor force increases that risk.

An odds ratio that is not significantly different from unity means that a change in a value of the predictor variable has no effect (even odds) on a change in the category of the dependent

variable. Thus, worsening health on any of the four dimensions of health was unrelated to the risk that a nonmetro resident would become a nonmetro-nonmetro migrant (col. 1, rows 1-4; Table 2) or a nonmetro-metro migrant (col. 3, rows 1-4; Table 2) rather than to remain living in the same county. Hypothesis 1a is rejected.

(Table 2 about here)

On the other hand, retirees had almost four times the odds of non-retirees of migrating to another nonmetro county (OR = 3.77, P < .001; Table 2) and about five times the odds of non-retirees of migrating to a metro county (OR = 5.17, P < .001) rather than continuing to live in the same nonmetro county. The effect of retirement on the propensity to migrate to either type of destination disappeared after the first year of retirement (respective ORs = .85 and -.54, n.s.; Table 2). Hypothesis 1b cannot be rejected.

Place-based social and financial ties were related to the risk of leaving a main home in a nonmetro county to become a nonmetro-to-nonmetro migrant. For example, each parent or parent-in-law living with the respondent or within 10 miles reduced the odds of becoming a nonmetro-nonmetro migrant or a nonmetro-metro migrant (rather than remaining a nonmetro nonmigrant) by 40% (OR = .60, P < .10; last row, cols. 1 and 3 of Table 2). Furthermore, nonmetro residents who owned a second home in 1992 had a higher risk than others of becoming a nonmetro-nonmetro migrant. It

cannot be determined whether the second home was, like the main residence, in a nonmetro county or whether the nonmetro-nonmetro migration observed in 1994-2003 was to this second home. These questions await future research.

Hypothesis 2. (a) Worsening health makes the odds of becoming a nonmetro-to-metro migrant greater than the odds of becoming a nonmetro-to-nonmetro migrant, but retiring from the labor force has the opposite effect.

Table 3 is Table 2 reorganized so that nonmetro-nonmetro migrants are the comparison (omitted) group. The odds ratios representing the four dimensions of health change and the two measures of retirement timing are not significantly different from unity (Table 3, col. 1, rows 1-6). These results refute Hypotheses 2a and 2b.

(Table 3 about here)

One factor that distinguished the risk of entering one migration stream rather than the other was race. Whites had a higher risk than nonwhites of becoming nonmetro-metro migrants rather than nonmetro-nonmetro migrants. If the purpose of nonmetro-metro migration is to get closer proximity to children (Litwak and Longino 1987), then the historically lower fertility of nonmetro whites than nonmetro nonwhites (Rindfuss and Sweet 1977) may have left the former with fewer children living close

by in the nonmetro county.

In addition, ownership of a second home in 1992 more strongly selected nonmetro residents into a nonmetro-nonmetro migration stream than into a nonmetro-metro migration stream. A second home may be an attempt by young-old adults to try out another area as a future main home, or it may represent a family dwelling inherited from a relative. Future migration research should explore how and why second homes are acquired by nonmetro residents.

Hypothesis 3: Nonmetro-origin older-adult migrants have a greater probability of reporting that they migrate to metro instead of nonmetro counties due to (a) desires to get closer to children, other relatives, or close friends, (b) worsening health, or (c) to return to a previous place of residence, and (d) a much lower probability of reporting a quest for natural amenities or economic reasons.

For the 229 older adults migrating from a nonmetro origin, the most popularly reported reason was to get closer to children, other relatives, or friends (Table 4). Of the 69 migrants who volunteered this reason, a significantly larger share went to a metro than a nonmetro destination (68.12% v. 31.88%, $p < .01$). This result is consistent with the much smaller odds that nonmetro residents living with their children or within 10 miles

of them had of migrating to a metro county than of staying within their nonmetro county (Table 2). This result cannot contradict Hypothesis 3a.

(Table 4 about here)

Health or medical reasons for migrating were cited by only 14 of the 229 nonmetro outmigrants. However, the odds of citing health/medical reasons were six times as high among those who migrated to a metro as to a nonmetro county (85.71% v. 14.29%, $p < .01$; Table 4). These results are congruent with Hypothesis 3b but incongruent with the failure of four measures of health change to predict the odds of migrating to either type of destination county (Table 2) rather than continuing to live in the nonmetro origin county. A possible reason is that the data in Table 4 are bivariate, while the data on Table 2 hold constant the effects of a large number of control variables.

Johnson and Stewart's (2005) study in WI found that 40% of owners of second homes in Walworth County, Wisconsin, a nonmetro county, believed they would move there eventually. This statistic matched the 40% of owners of secondary homes in six nonmetro Michigan counties who thought it was very likely they would convert their second home into their main home at a later date (Stynes et al., 1997). Thus, in the current study, I labelled nonmetro outmigrants as "returnees" if they said a reason for their migration was to go back to a place where they had grown up

or had previously lived or where they owned vacation property. These were not common replies in the Health and Retirement Survey (two nonmetro-to-nonmetro migrants and four nonmetro-to-metro migrants; Table 4), and the difference was not statistically significant. This outcome refutes Hypothesis 3c.

Twenty-five HRS migrants volunteered that they had relocated because of climate, weather, or leisure activities. Contrary to Hypothesis 3d, these natural-amenity seekers did not comprise a significantly larger share of nonmetro-to-nonmetro migrants than nonmetro-to-metro migrants (48% v. 52%, $p > .10$; Table 4).

Forty-six nonmetro outmigrants mentioned economic reasons for their migration. Positive economic reasons included: moving into a larger/better home or a better neighborhood; getting a new job or job transfer; moving from an apartment, mobile home, or condo into a house; wanting to own instead of rent; buying one's own home or a new home; moving from temporary housing while having a home built, fixed, or remodeled; or a positive change in the economic status of the spouse/partner. Negative economic reasons included: moving into a smaller, cheaper home or cheaper area; escaping a bad neighborhood; finding the previous home too expensive; becoming dispossessed or desperate; or a negative change in the economic status of the spouse/partner. Contrary to Hypothesis 3e, there were no statistically significant differences in the proportions of nonmetro-to-nonmetro compared

to nonmetro-to-metro migrants who stated either positive or negative economic motivations for the migration.

DISCUSSION

Litwak and Longino hypothesized three sequential types of moves that older people might make and argued that the first move (amenity-seeking) would be typically metro-to-nonmetro while the second move (assistance-seeking) would be typically nonmetro-to-metro (pp. 270-271). The third move would likely be from more or less exclusive care by kin to institutional care. Usually local, the third move would not be observed as a "migration" because it would not cross a county line (p. 269).

In light of this theory, I examined the pre-migration characteristics of older adult at risk of migrating from a nonmetro-origin county. I used six biennial waves (1994 - 2004) of the Health and Retirement Survey to analyze the first observable migration during that decade from a nonmetro-origin county. Retirement within the previous year was the most powerful predictor of who migrated from a nonmetro origin but did not determine where they went (a metro vs. nonmetro destination). The most-often mentioned reason volunteered for migrating was a desire to live nearer, or with, kin or friends. And consistently with Litwak and Longino's theory (1987), migrants who said they had migrated for this reason were more likely to go to metro than

nonmetro destinations. But inconsistently with Litwak and Longino's theory, recent changes in the number of physical limitations, in self-rated health status, or in self-rated vision or hearing could not distinguish nonmetro nonmigrants from nonmetro outmigrants nor discriminate their destinations (metro from nonmetro). To wit, the first observable migration by nonmetro-origin older adults resembled Litwak and Longino's "first move," involving no need for immediate assistance with the instrumental activities of daily living and no distancing from immediate relatives. Perhaps older adults in nonmetro areas anticipate their future needs for assistance and may often migrate towards their expected helpers in advance of health declines.

While the present study looked at the first observable migration only by nonmetro residents over a 10-year period, future investigations should examine older adults at risk of migrating from metro-county origins. This will show whether nonmetro- and metro-origin older adults undertake the "first move" for different reasons. In addition, future research should look at sequential migrations made by older adults to see whether the "second move" and the "third move" are strongly related to health declines, as theorized by Litwak and Longino. Extending the observation interval with newer waves of the Health and Retirement Survey will boost the number of second-time and third-

time migrants available for this kind of analysis.

The findings of this study can guide policies to develop nonmetro communities through population growth. A 61% majority of the nonmetro older adults were natives of the general area where they were interviewed in 1994, when they were at an average age of around 58 years (Table 1). Compared to their counterparts in metro counties, these 1994 interviewees (born in 1931 - 1941) produced higher birth rates during the Baby Boom (1946 - 1964)(Rindfuss and Sweet, 1977) and put themselves in a better position to rear at least one or two children who would stay nearby and at least one or two others who might move to distant metro locales.

Thus, nonmetro community developers can economic growth through population growth by retaining the older-adult residents while attracting their children to return. One source of attraction would be to encourage the former residents to buy second homes there or to use the locale as a vacation spot (Tables 2 and 3). However, it will become harder in the future to base community development on growth through remigration to childhood homes in nonmetro locales, since the birth rates in nonmetro and metro counties are no longer different.

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Table 1. Study Variables at 1994 Baseline of Health and Retirement Survey.

Variable	Description	Mean	Standard Error
Health Statuses:			
# functional limitations$_t$	0 to 12	2.92	2.90
Self-rated health$_t$	1 (exc.) to 5 (poor)	2.70	1.15
Hearing acuity$_t$	1 (exc.) to 5 (poor)	2.52	1.05
Vision acuity$_t$	1 (exc.) to 5 (poor)	2.43	1.05
Changes in health statuses since 1992:			
# functional limitations$_t$	-12 to +12	1.14	2.44
Self-rated health$_t$	1 (much better) to 5 (much worse)	3.08	.67
Hearing acuity$_t$	-4 to +4	.08	.92
Vision acuity$_t$	-4 to +4	.08	1.05
Changes in Retirement Status:			
Retired before past 12 mo.?$_t$	1=yes;0=no	17.65%	.38
Retired within past 12 mo.?$_t$	1=yes;0=no	4.03%	.20
Demographic Factors:			
White	1=yes;0=no	91.14%	.28
Female	1=yes;0=no	51.43%	.50
Age (yrs.) In 1994		57.80	3.26
Divorced/separated$_t$	1=yes;0=no	10.19%	.30
Widowed$_t$	1=yes;0=no	8.34%	.28
Never married$_t$	1=yes;0=no	2.67%	.16
Resources			
Education (# yrs.)		11.77	3.04
Net wealth (all assets - all debts)$_t$		$166,922.00	381,875.60

Total N = 2,107 nonmetro respondents to Health & Retirement Survey in 1994. Subscript “t” indicates the variables updatable at each wave (1994, 1996, 1998, 2000, 2002, and 2004).

Table 1, cont'd. Study Variables at 1994 Baseline of Health and Retirement Survey.

Variable	Description	Mean	Standard Error
Travel Experiences:			
Own a 2nd home in 1992?	"Do you [or your husband/wife/partner] own a second home or condo? 1 = yes; 0 = otherwise.	11.80%	.32
Regular vacation destination in 1992?	"Is there some place where you vacation regularly (other than your second home)? 1 = yes; 0 = otherwise.	23.55%	.42
Own recreation vehicle in 1992?	"Do you own a recreational vehicle or motor home?" 1 = yes; 0 = otherwise.	10.34%	.30
Community and Personal Ties:			
No. of neighbors known in 1992	"Among your nearby neighbors... how many of the adults would you know by name if you met them on the street?" (1) all; (2) most; (3)some; (4) none	2.46	.80
Frequency of attendance at religious services in 1994	(1) > once a wk.;(2) once a wk.; (3) 2-3 times a mo.; (4) 1 or more times a yr.; (5) otherwise.	3.20	1.44
Own home?$_t$	1=yes; 0 = otherwise	84.80%	.36
Area native in 1994?	"Are you living in the same general area where you were born?" 1=yes; 0=otherwise.	60.72%	.49

Total N = 2,107 nonmetro respondents to Health & Retirement Survey in 1994. Subscript "t" indicates the variables updatable at each wave (1994, 1996, 1998, 2000, 2002, and 2004).

Table 1, cont'd. Study Variables at 1994 Baseline of Health and Retirement Survey.

Variable	Description	Mean	Standard Error
# children living with respondent$_t$	Counts # of children, step-children, and children-in-law living with respondent	.30	.59
# children living near respondent$_t$	Counts # of children, step-children, and children-in-law living within 10 miles but not with R	1.02	1.26
# parents living with or near respondent$_t$	Counts # of parents, step-parents, parents-in-law, and step-parents-in-law living with R or within 10 miles	.44	.73

Total N = 2,107 nonmetro respondents to Health & Retirement Survey in 1994. Subscript "t" indicates the variables updatable at each wave (1994, 1996, 1998, 2000, 2002, and 2004).

Table 2. Multinomial Logistic Regression Predicting Odds of a First Migration (1994 - 2003) from Nonmetro Co. Versus No Migration, According to County Type of Destination.

Predictor Variable	Nonmetro Outmigrant to: Nonmetro Co. OR	t	Metro Co. OR	t	Attriter OR	t
Changes in:						
# functional limitations	1.05	.61	1.00	-.02	1.04	1.45
Self-rated health	.92	-.29	1.18	.90	1.18*	2.01
Hearing acuity	1.10	.65	.85	-1.35	1.08	1.32
Vision acuity	.99	-.09	.87	-1.24	.93	-1.64
Change in Retirement Status:						
R retired more than 12 mos. ago? (1=y)	.85	-.54	1.36	1.23	.80†	-1.79
R retired within past 12 months? (1=y)	3.77***	3.24	5.17***	5.26	.25**	-2.92
Demographic Factors						
Observation year	.99	-.29	.95	-1.13	.91***	-4.31
White (1=y)	.86	-.28	3.70*	2.09	1.01	.07
Female (1=y)	.67	-1.55	.81	-1.09	.81	-2.39
Age (yrs.) in 1994	.97	-.75	.91*	-2.32	1.03	1.64
Divorced/separated (1=y)	.85	-.35	1.56	-1.25	1.32	1.61
Widowed (1=y)	1.57	.94	1.61	1.48	1.31	1.49
Resources						
Education (yrs.)	1.07	1.39	1.05	1.16	.96	-1.78†
Log. of net assets	1.02	.32	1.03	.52	1.00	-.12

The omitted category is the nonmetro nonmigrant. OR = odds ratio. Weights constructed from the March, 1994 Current Population Survey are used to correct for over-sampling.
†P < .10; *P < .05; **P < .01; ***P < .001.

Table 2, cont'd. Multinomial Logistic Regression Predicting Odds of a First Migration (1994 - 2003) from Nonmetro Co. V. No Migration, According to County Type of Destination.

	Nonmetro Outmigrant to:					
Predictor Variable	Nonmetro Co.		Metro Co.		Attriter	
	OR	t	OR	t	OR	t
Travel Experiences						
Vac. des. in 1992 (1=y)	1.52	1.34	1.75*	2.01	.68**	-2.57
2nd home in 1992 (1=y)	3.33***	3.62	1.13	.31	.85	-.82
Rec. vehicle in 1992 (1=y)	.94	-.17	.92	-.20	1.60**	2.61
Community & Personal Ties						
Freq. religious attend.	1.08	.68	.99	-.08	1.09*	1.99
Own home (1=y)	.34**	-2.79	.54	-1.61	.89	-.62
Native of 1994 area (1=y)	.64	-1.58	.63*	-1.99	.88	-1.19
R's # children living:						
with R	1.03	.14	.61†	-1.72	.96	-.40
within 10 mi. of R	.90	-.74	.63**	-2.79	.87**	-2.71
R's # parents living						
with or near R	.60†	-1.67	.60†	-1.66	1.09	.90
No. of Person-Intervals = 15,817						
Wald chi-square = 312.84, 69 degrees of freedom, p < .0001.						

The omitted (comparison) category is the nonmetro nonmigrant. OR = odds ratio. Weights constructed from the March, 1994 Current Population Survey are used to correct for over-sampling.

†P < .10; *P < .05; **P < .01; ***P < .001.

Table 3. Multinomial Logistic Regression Predicting Odds of a First Nonmetro-Metro Migration (1994-2003) Versus Other Outcomes for Nonmetro Residents in 1994.

Predictor Variable	Nonmetro-Metro Migrant		Nonmetro Nonmigrant		Attriter	
	OR	t	OR	t	OR	t
Changes in:						
# functional limitations	.96	-.48	.96	-.61	.99	-.13
Self-rated health	1.29	.73	1.09	.29	1.29	.84
Hearing acuity	.77	-1.39	.91	-.65	.99	-.10
Vision acuity	.88	-.71	1.01	.09	.94	-.45
Change in Retirement Status:						
R retired more than 12 mos. ago? (1=y)	1.61	1.21	1.18	.54	.95	-.17
Retired within past 12 months? (1=y)	1.37	.63	.27***	-3.24	.07***	-4.34
Demographic Factors						
Observation year	.97	-.61	1.01	.29	.92†	-1.78
White (1=y)	4.33†	1.77	1.17	.28	1.19	.29
Female (1=y)	1.21	.58	1.49	1.55	1.21	.68
Age (yrs.) in 1994	.94	-1.18	1.02	.75	1.06	1.39
Divorced/separated (1=y)	1.84	1.04	1.18	.35	1.57	.88
Widowed (1=y)	1.03	.05	.64	-.94	.83	-.36
Resources						
Education (yrs.)	.98	-.25	.94	-1.39	.90*	-1.98
Log. of net assets	1.01	.17	.98	-.32	.98	-.35

The omitted category is the nonmetro-nonmetro migrant. OR = odds ratio. Weights constructed from the March, 1994 Current Population Survey are used to correct for over-sampling. †P < .10; *P < .05; **P < .01; ***P < .001.

Table 3, continued. Multinomial Logistic Regression Predicting First Nonmetro-Metro Migration (1994-2003) Versus Other Outcomes for Nonmetro Residents in 1994.

Predictor Variable	Nonmetro-Metro Migrant		Nonmetro Nonmigrant		Attriter	
	OR	t	OR	t	OR	t
Travel Experiences						
Vac. des. in 1992 (1=y)	1.15	.34	.66	-1.34	.45*	-2.32
2nd home in 1992 (1=y)	.34*	-2.10	.30***	-3.62	.26***	-3.60
Rec. vehicle in 1992 (1=y)	.99	-.02	1.07	.17	1.71	1.25
Community & Personal Ties						
Freq. religious attend.	.92	-.59	.93	-.68	1.01	.05
Own home (1=y)	1.57	.85	2.92	2.79	2.60*	2.28
Native of 1994 area (1=y)	.98	-.04	1.57	1.58	1.39	1.09
R's # children living:						
with R	.58	-1.41	.97	-.14	.93	-.28
within 10 mi. of R	.70	-1.58	1.12	.74	.98	-.16
R's # parents living						
with or near R	1.00	-.01	1.67†	1.67	1.82†	1.88
No. of Person-Intervals = 15,817						
Wald chi-square = 312.84, 69 degrees of freedom, p < .0001.						

The omitted (comparison) category is the nonmetro-nonmetro migrant. OR = odds ratio.
Weights constructed from the March, 1994 Current Population Survey are used to correct for over-sampling.
†P < .10; *P < .05; **P < .01; ***P < .001.

Table 4. Reasons for Nonmetro Outmigration in 1994 - 2003, by Destination: Health and Retirement Survey.

% Giving Reason For Outmigration	Nonmetro Destination (N = 109)	Metro Destination (N = 120)	Pearson Chi-square (d.f.=1)	Probability
Affiliative: moving closer to, or in with, children, other relatives or friends	31.88% (N=22)	68.12% (N=47)	9.78	P < .01
Health	14.29% (N=2)	85.71% (N=12)	6.63	P < .01
Returnee: To previous home, childhood home, vacation home	33.33% (N=2)	66.67% (N=4)	.50	P=.48
Amenity seeking: climate, weather, leisure activities	48.00% (N=12)	52.00% (N=13)	.002	P=.97
Positive economic reasons	45.00% (N=18)	55.00% (N=22)	.13	P=.72
Negative economic reasons	36.00% (N=9)	64.00% (N=16)	1.51	P = .22