

The Effects of Occupational Aspirations and Other Factors on the Out-Migration of Rural Youth

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Abstract

Out-migration of youth from rural areas persists as one of the most serious threats to the sustainability of rural communities. This study provides a more rigorous examination than has been previously possible of whether occupational aspirations held by youth affect their long-term out-migration. The analysis is accomplished by examining the effects of occupational aspirations and known predictors of migration with five logistic regression models. We utilize data on rural youth in the 1979 National Longitudinal Survey of Youth (NLSY79) which include a measure of occupational aspirations at a youthful age and allow for a long-term measure of subsequent migration. Results show that rural youth aspiring to professional and managerial occupations are more likely to be rural out-migrants at age 35 than are youth aspiring to blue collar occupations. This greater likelihood is true even with other recognized influences on migration being controlled. Other variables introduced in our logistic models are gender, race/ethnicity, mother's education, length of residence, change in educational status, change in marital status, and actual occupation at age 35. We find that the effects of these variables on migration out of rural places largely persist when occupational aspirations are controlled. Our findings further substantiate the need for rural communities to increase career opportunities in professional and managerial occupations in order to reduce the out-migration of a large and vital segment of rural youth. Better knowledge about the odds of out-migration for other important determinants of migration should also be helpful in efforts to lessen the loss of rural youth.

Keywords: rural out-migration, NLSY79, occupational aspirations, Blue collar, managerial, professional

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1.0 Introduction

The extensive out-migration of rural youth has been a long-standing concern in studies of rural community development (Garasky, 2002; Looker & Taylor, 2009; Taves & Coller, 1964). Even during recent periods of overall in-migration to rural areas of the United States, youth left rural areas in much larger numbers than moved into rural areas (Johnson, 2006; Johnson, Voss, Hammer, Fuguitt, & McNiven, 2005). This out-migration devastates rural communities because it selectively drains communities of individuals in the late teens and early adult years who have the capacities to help make broad and lasting social and economic improvements in rural communities (Foulkes & Newbold, 2008). Occupational aspirations are often portrayed as a major underlying motivation for rural out-migration but have not been rigorously examined in migration research (Hunt, Hunt, & Falk, 2008; Lee, 1966; Rieger, 1972). A high proportion, typically two-thirds or more, of rural youth report aspirations for finishing college and pursuing professional types of occupations (Bajema, Miller, & Williams, 2002; Stracuzzi, 2009). The major reason for the gap in empirical research has been a lack of panel data that include information on occupational aspirations and other likely determinants of rural out-migration collected at a youthful age together with information gathered at older ages when individuals have typically put down roots. In this study we employ panel data for rural youth in the 1979 National Longitudinal Survey of Youth, commonly referred to as the NLSY79. When respondents were between ages 17 and 22 the NLSY79 asked the usual questions about their socioeconomic characteristics and what occupation respondents would like to be working in at age 35. These data and information on place of residence when respondents in fact reached age 35, as well as data collected during intervening rounds of surveying, are utilized in this study to address this important gap.

The purposes of this study are to augment our understanding of factors leading young people to leave rural communities, and to provide evidence that will be useful in identifying ways to lessen rural out-migration. The foremost objective is a more rigorous multivariate analysis of the effects of occupational aspirations on the rural out-migration of youth than has been possible in past studies. A second objective is to examine the effects of more well-researched determinants of migration with occupational aspirations included as one of the control variables. Other variables in our models, viewed alternatively as control and independent variables, are gender, race/ethnicity, mother's education, length of residence, changes in educational status, changes in marital status, and actual occupation at age 35. It is not possible to disentangle the effects of these variables on rural out-migration with customary cross-sectional surveys that measure characteristics at the time of the survey, typically the end of a time-interval over which migration is measured. Longitudinal data can provide more persuasive evidence for community developers and policy makers who must consider how much effort and resources are needed to invest in attracting developments that offer rural areas different types of occupational opportunities.

We use logistic regression models to test whether occupational aspirations at a youthful age affect long-term out-migration from rural places and whether effects of the more well-researched influences on migration remain, even when occupational aspirations is controlled. The main comparisons are between youth

who express aspirations for professional and managerial occupations with youth who express aspirations to work in blue collar types of occupations. Categorization of occupations into these three broad categories is similar to a classification used by the Bureau of Labor Statistics (Hodson & Sullivan, 2002). We want to point out that the way we operationalize changes in education and marital status controls for whether life-transitions, such as attending or graduating from college or changing marital status, between the time when aspirations are measured and age 35 account for any observed effects of occupational aspirations. Examination of occupational aspirations jointly with the seven other likely determinants of migration is an important augmentation to the rich body of research on rural out-migration.

Rural out-migration is measured by comparing county of residence at the time aspirations were measured, when respondents were between the ages of 17 and 22, with county of residence at age 35. Age-specific migration rates have stabilized at a very low rate by age 35 and therefore our long-term interval for measuring migration serves as a good indicator of permanent rural out-migration. An analysis of the frequency and types of the migrations made during the young adult years would be a different analysis. Instead, we recognize that many of the youth living in a rural community at age 35 will have spent some time in urban areas before settling in a rural place. Research utilizing a year-to-year interval to measure migration yielded very similar results to those obtained in this study. This unreported research also accounted for return migration.

2.0 Background and Literature Review

2.1 Occupational Aspirations

Powers and Wojtkiewicz (2004) defined aspirations as those traits or goals which an individual ideally wants to have or achieve. Aspirations are understood to be motivators that help direct an individual's planning and behavior (Sherwood & Richard, 1989). Further, a particular aspiration, such as to work in a specific occupation, may compel an individual to develop elaborate plans and prompt a set of disparate actions to increase the chances of achieving the aspirations. Aspirations begin to be instilled during the early childhood years by families, schools, and peers (Dubow & Boxer, 2009; Sewell & Shah, 1968; Shu & Marini, 2008). Classic sociological research indicates that social status of origin substantially influences occupational aspirations (Sewell et al., 1968). Differences in the kinds of information, encouragement and other resources transmitted by class are major reasons why social class has a strong influence on the development of occupational aspirations (Shu et al., 2008). By the time individuals start to transition into adulthood occupational aspirations and plans of action for achieving them are relatively stable (Auger, Blackhurst, & Wahl, 2005; Schoon, 2001). Aspirations become more salient to important decisions as the transition into adulthood takes place and consequently exert a great influence on various types of actions meant to increase chances of achieving the aspirations (Dubow et al., 2009). Actions taken during the transition to adulthood to enhance achieving aspirations set individuals on a path that has long-lasting effects in many areas of their lives (Dubow et al., 2009; Steward, 2003).

Most research on aspirations has been concerned with their possible determinants and the extent to which aspirations held at an early point in life are achieved at later ages (Mello, 2008). Another substantial body of research has examined

aspirations along gender and race/ethnic groupings (Lloyd, Leicht, & Sullivan, 2008; Mello, 2008; Powers & Wojtkiewicz, 2004). Although there are some inconsistencies in findings, these studies offer evidence that 1) aspirations held in the young adult ages are significant determinants of long-term socioeconomic attainment of individuals in American society and 2) that substantial differences in occupational and educational aspirations exist between socioeconomic groups in American society (Marini & Fan, 1997; Mello, 2008; Sewell, Hauser, & Wolf, 1980).

Stewart (2003) notes that while most studies on occupational aspirations investigate the effects of occupational aspirations on occupational attainment; occupational aspirations clearly have effects on many other important outcomes that emerge in mid and later life. These effects occur because the achievement of important aspirations often requires that individuals make choices that affect many areas of their lives. Occupational aspirations are considered to be among the most important aspirations because their achievement highly influences educational and other outcomes. As one example, Stewart's (2003) multivariate analysis of data from the National Longitudinal Survey of Youth found that aspirations for professional types of occupations were a strong predictor of a later age at first motherhood. Of course, bearing a child at an early age makes attaining a professional occupation problematic, and often early motherhood and low career aspirations both correlate with low socioeconomic status.

In formulating one of the earliest studies on the relationship between occupational aspirations and migration, Taves and Collier (1964) posit, like Stewart, that efforts directed toward achieving aspirations will affect the migration of rural youth. Specifically, Taves and Collier (1964) expected youth would use migration to seek communities they perceived as offering the best opportunities to achieve their aspirations. Their results, based on retrospective data, supported their hypothesis. In his 10-year follow-up of high school students who had been asked about their occupational aspirations, Rieger (1972) found that migrants aspired to higher status occupations than non-migrants. The mean score on the Duncan socioeconomic index (Duncan, 1961) was 48.7 for rural youth who out-migrated compared to a score of 40.9 for those who remained in the community where they resided when graduating from high school.

There are some reasons to expect that occupational aspirations will not affect migration. Young people have many aspirations that vie with one another, and in some cases the aspiration to live in a particular location, often near relatives, may be stronger than the aspiration to work in an occupation that is not available in the area where relatives live (Elder, King, & Conger, 1996; Hecktner, 1995). Finally, some evidence suggests that rural youth are drawn to cities for more exciting social opportunities and that youth, regardless of their personal characteristics or dispositions, are apt to migrate (Glendinning, Nuttall, Hendry, Kloep, & Wood, 2003).

2.2 Variables Associated with Migration

Migration is widely recognized as being a complex process with a large number of potential determinants. Of all of its potential determinants, no set of factors appear to be more important than those associated with career formation (Franklin, 2003; Rieger, 1972). Further, many of the correlates of occupational aspirations are associated with migration. Gender, race/ethnicity, and the mother's education are socio-demographic background characteristics associated with occupational aspirations that have been shown to influence the migration decisions individuals

make as they move through the young adult years (Elder et al., 1996; Falk, Hunt, & Hunt, 2004; Looker & Taylor, 2009; Ni'Laoire & Fielding, 2006; Rieger, 1972). Prior research suggests that females are more likely to leave rural areas, possibly due to the occupational structure of rural communities being more oriented towards males (Ni'Laoire et al., 2006). Also, when socioeconomic status is controlled, blacks appear to experience rural to urban migration more frequently than whites, but blacks are also more likely to return to their place of origin (Falk et al., 2004). Finally, youth whose mothers have higher educational attainment levels are more likely to migrate (Elder et al., 1996).

The length of time individuals have lived in a place is strongly associated with migration and usually considered to reflect the strength of attachments to community (Goldstein, 1954; Toney, 1976; Wilson, Toney, Berry, Kim, & Cromartie, 2009). Educational attainment is also a strong predictor of migration for rural youth, due to out-migrating being associated with leaving for college and higher levels of educational attainment (Domina, 2006). Marital status and changes in marital status are also related to migration with marriage being one of the life events that typically occurs during the young adult years and helps bring the highly migratory years to an end (White, Crowder, Tolnay, & Adelman, 2005). Again, because of the potentially strong effect of changes in education, particularly going away to college, we take advantage of strength of panel data to construct a measure that allows us to test whether occupational aspirations affects rural out-migration independent of changes in educational attainment between ages 17 to 22 and age 35. Similarly, our measure of changes in marital status helps account for the role changes in marital status, such as getting married or divorced, may have on rural out-migration as respondents enter and pass through the young adult ages.

3.0 Hypotheses

There are fewer job opportunities in rural areas than in urban areas. Proportionally, there are fewer service sector positions in rural than in urban areas for those hoping to work in professional and managerial jobs as opposed to blue collar types of occupations. Farm employment, construction, and manufacturing employment have declined in rural areas in recent years, while service and government jobs have remained steady or increased, but the number of jobs in urban as compared with rural areas remains higher, (Vias & Nelson, 2006). In accordance with both this and migration theories that typically portray migration as a response to differences in levels and kinds of opportunities between locations, our main hypothesis is to assess whether there is greater out-migration by rural youth aspiring to professional and managerial types of occupations than for rural youth aspiring to work in blue collar occupations. For our other control variables we anticipate results for rural youth in the NLSY79 survey that are consistent with findings reported in prior research. More specifically we expect: (1) higher out-migration for females than for males; (2) higher out-migration for Hispanics and blacks than for whites; (3) higher out-migration for youth whose mothers have higher levels of education; (4) higher out-migration at shorter rather than at longer lengths of residence; (5) higher out-migration for youth who go to college (6) higher out-migration for youth who experience a marital disruption; and (7) higher out-migration for people who are working in professional and managerial occupations than for blue collar occupations at age 35.

4.0 Data and Methods

The NLSY79 is a national panel study of 12,686 respondents who were between the ages of 14 and 22 when first interviewed in 1979. Respondents were interviewed 19 times between 1979 and 2000, the latest interview data utilized in this study, with annual interviews until 1994 and biannual interviews thereafter. The original sample consisted of four subsamples: a nationally representative sample of 6,111 respondents and supplemental samples comprised of 1,480 Hispanics, 2,172 blacks, and 1,643 poor, non-blacks/non-Hispanics (referred to as poor whites), and 1,280 respondents who were enlisted in the military. Although it would be advantageous to include respondents in the military over sample, respondents in that group, as well as in the poor white sample are not included in this analysis because interviews with both groups were terminated prior to the collection of the information that is essential to our analysis, that is, prior to the respondents reaching age 35. Retention rates for survey respondents in 2000 were 81% for the nationally representative subsample and 80% for the Hispanic and black subsamples (Center for Human Resource Research, 2001); retention rates were even higher in prior waves of interviewing.

Using US Census criteria the CHRR identified 1,837 respondents as living in rural areas at the time that aspirations were measured. The NLSY79 designated a county as being rural if at least 51% of its population lives outside an urban area of the county (Center for Human Resource Research, 2001). For this study data were utilized for the 1,176 of these respondents (64% of the total rural respondents) who expressed an occupational aspiration and for whom complete information to measure all variables is available. The question regarding occupational aspirations when reaching age 35 was posed in 1979 and 1982. To center the data on a narrow point in the young adult years, we begin data files for some respondents with the 1979 survey and for others we begin data files with the 1982 survey. Hence, for this study respondents were between the ages of 17 and 22 when their aspirations were measured, thereby eliminating age as a likely explanatory variable.

4.1 Variable Description

The specific question utilized to measure our foremost independent variable, occupational aspirations, is “What kind of work would you like to be doing when you are 35 years old?” This question has been used to indicate occupational aspirations in a number of prior studies (Fiorino, 1994; Gottfredson & Becker, 1981). The NLSY79 used the three digit 1970 Census classification to code responses to the question on occupational aspirations and to code jobs held by respondents from 1979 to 2000 (Center for Human Resource Research, 2001). Ladinsky (1967) notes that it is difficult to sub classify occupations into meaningful and mutually exclusive categories. After much investigation of the literature and data, we settled on occupational categories as classified by the Bureau of Labor Statistics (See Table 1). We collapsed the census three-digit occupation categories into three categories that are consistent with schemes that recognize skill and educational levels associated with occupations (Gibbs, Kusming, & Cromartie, 2005). Our occupational categories are 1) professional, 2) managerial, and 3) clerical, sales, and blue collar. To improve the readability our third category will be referred to as blue collar. Like other researchers we recognize that any coding of occupations into meaningful and mutually exclusive categories is problematic (Ladinsky, 1967; McLaughlin & Coleman-Jensen, 2008;

Powers et al., 2004). Further, we acknowledge that using broad categories of occupational aspirations are particularly problematic in relation to gender, largely because women and men aspire to different occupations within categories (Powers et al., 2004). Five of the explanatory variables, introduced primarily as control variables, are measured at the beginning of our migration interval. These variables are gender, race/ethnicity, mother’s education, and length of residence.

Table 1: *Coding of Occupational Aspirations Using 3-digit 1970 Census Classification of Occupations to Identify Professional, Managerial and Blue collar Types of Occupations*

Census Occupational Codes	Occupation Titles
001 TO 195:	Professional, Technical and Kindred (<i>Referred to as Professional</i>)
201 TO 245:	Managers, Officials and Proprietors (<i>Referred to as Managers</i>)
260 TO 984:	Sales, Clerical, Craftsmen, Operatives, Laborer, Farmers, Service, Private Household, (<i>Referred to as Blue Collar</i>)

We developed the longitudinal measures for changes in educational level and marital status, each of which are time-varying variables, to delineate changes in educational and marital status between the beginning of the interval over which migration is measured and age 35. The operational procedures for these variables entailed comparing a respondent’s educational and marital statuses at the beginning of their migration interval with statuses at all subsequent interviews to age 35. These variables allow us to control for the effects of respondents’ status at the beginning of our measurement interval and specific changes during the interval. In essence the variables control for going away to college or getting married (or divorced) as reasons for rural out-migration. Categories for the two variables, along with all other independent variables, are shown in Table 2. Our final control variable is the actual occupation of the respondents at age 35, again measured at the end of the migration interval. The same coding scheme was employed to code actual occupation as was utilized to categorize occupational aspirations.

Table 2: *Independent variable and Their Respective Categories*

Occupational Aspirations	Professional	Managers	Blue collar	
Gender	Male	Female		
Race/Ethnicity	White	Black	Hispanic	
Changes in Marital Status between survey year and age 35	Remained	Never Married to Married (no disruptions)	Remained Married (no disruptions)	Experienced Divorce
Mothers Education in years	Less than High School	High School	Some College	College Graduate
Changes in Education between survey year and age 35	Did not Finish High School	Remained HS Graduate	Became HS Graduate	Became College Graduate
Length of residence	0-3 years	4-9 years	10-14 years	15+ years
Occupational Achievement	Professional	Managers	Blue collar	

The dependent variable, rural out-migration, measures whether a rural respondent had or had not out-migrated to an urban area at age 35. Our operational procedure was to first compare a respondent's county of residence at the year when their occupational aspirations were measured between the ages of 17 and 22 with that of the county of residence when the respondent reached age 35. Federal Information Processing Standards (FIPS) codes that identify county of residence at the time of each review allow this comparison. As a second step, we determined if the rural youth whose counties at age 35 did not match their place of residence when asked about their occupational aspirations were living in an urban or rural county at age 35, according to the NLSY79 census based classification of counties (Center for Human Resource Research, 2001). Accordingly, our dependent variable has two categories. Respondents whose county of residence at the time when aspirations were measured and county of residence at age 35 do not match and who lived in an urban area at age 35 are coded as **rural out-migrants**. Those living in their 1979 county of residence, even if the county became classified as urban, and those who migrated to a different rural county are coded as **rural stayers**. Again, we believe this is a fitting measure in relation to our interests in the long-term loss of rural youth. Counties have long been viewed as a socioeconomic meaningful spatial unit in studies of migration and county boundaries are still commonly used for measuring migration within the US (Shyrock, 1964; US Census Bureau, 2009).

4.2 Analytical Method

We first examine the bivariate relationships between the independent variables and rural out-migration. We then present five models for our logistic regression analysis. Logistic regression analysis computes the odds ratios for the independent variables on the dependent variable: residing in an urban county at the age of 35. If the odds are higher than one, the more likely individuals in that category are to be rural out-migrants compared with those in the reference group. Model 1 observes the occupational aspirations variable and residence in a rural county at the age of 35. Model 2 adds the demographic variables, while Model 3 introduces length of residence and Model 4 includes the socioeconomic variables. Finally, Model 5 introduces the occupational achievement variable.

5.0 Findings

5.1 Bivariate Findings

Over a third (35.5%) of the rural youth in the NLSY79 survey who lived in rural areas as young adults had out-migrated to urban areas at age 35 (Table 3). This substantial loss of rural youth is consistent with findings reported in numerous prior studies showing early adulthood as the age during which rural out-migration is most prominent (Johnson, 2006). Of rural youth in our study 719 (61.1%) aspire to work in professional or managerial types of occupations. Thus, those aspiring to professional and managerial occupations are a large as well as vital segment of rural youth. In connection with the focal interests on the effects of occupational aspirations on rural out-migration, the bivariate results reveal nearly half (48.0%) of the rural youth aspiring to professional occupations were out-migrants when they reached age 35 compared to just 24.9% of those aspiring to work in blue collar occupations. Of the rural youth aspiring to work in managerial types of occupations, 35.7% had out-migrated to an urban area when they reached age 35. These bivariate results are consistent with our hypothesis of higher out-migration

by rural youth aspiring to professional occupations than by those aspiring to managerial or blue collar occupations.

Of the other seven control variables shown in Table 3, five are statistically associated with the out-migration of rural youth. Gender and race/ethnicity are not statistically associated with rural out-migration. The differences between subcategories of the other variables are large. Indeed, the rate of out-migration by age 35 for youth who graduated from college is three times the rate for those who had not graduated from high school at age 35, 60.4% and 19.8% respectively. Interestingly, youth who had already graduated from high school at the beginning of the migration interval and those who completed during the measurement interval were statistically equal in their rates of rural out-migration but still more likely to leave than youth who did not finish high school. Mother's education is also strongly associated with rural out-migration with youth whose mothers had gone to college having especially high rates of out-migration. Of all the subgroups identified in Table 3, youth whose mothers graduated from college have the highest rate of out-migration, 64.7% compared to a rate of 27.6% for youth whose mothers did not graduate from high school.

Length of residence and rural out-migration are strongly associated with those at shorter durations of residence having substantially higher rates of out-migration than those with longer lengths of residence. Newcomers to rural areas, those who had lived in rural areas less than four years, had an out-migration rate of 55.9% compared to a rate of 26.0% for the youth who had lived in their rural community for at least fifteen years.

The bivariate results in Table 3 show youth who were already married at the beginning of our measurement interval and remained married were less likely to become rural out-migrants (18.9%) than other categories of this variable. Interestingly, youth who became married and remained married have a slightly higher rate of out-migration than the youth who experienced a marital disruption between the time when their aspirations were expressed and age 35.

Youth who were working in professional and managerial occupations at age 35 were substantially more likely to have out-migrated than were youth who were working in blue collar occupations. Generally, these results are similar to results reported in prior studies of the determinants of migration. However, and important to our main focus, these findings show that rural communities lose a much greater proportion of those with aspirations for professional and managerial occupations than of those aspiring to blue collar types of occupations.

Table 3: *Bivariate Rates of Rural Out-Migration from Young-Adulthood to Age 35 and Bivariate Chi-squares Testing, Independence of Rural Out-Migration by Selected Variables*

		Rural Out-Migration Rate	(N)
Selected Characteristics		35.5	(1176)
Occupational Aspirations			
	Professional	48.0	(383)
	Managerial	35.7	(336)
	Blue collar	24.9	(457)
	<i>I</i> ² =	48.52***	
Control Variables			
Sex			
	Male	35.8	(597)
	Female	35.2	(579)
	<i>I</i> ² =	00.05	
Race/Ethnicity			
	White	34.7	(812)
	Black	39.3	(298)
	Hispanic	28.8	(66)
	<i>I</i> ² =	3.35	
Mother's Education			
	Less than High School	27.6	(507)
	H.S. Graduate	35.8	(508)
	Some College	55.9	(93)
	College Graduate	64.7	(68)
	<i>I</i> ² =	16.24**	
Length of Residence			
	Less than 4 Years	55.9	(272)
	4 – 9 Years	41.4	(169)
	10 – 14 Years	30.4	(115)
	15 or More Years	26.0	(620)
	<i>I</i> ² =	77.78***	
Education and Changes between 1979/82 and Age 35*			
	Did Not Finish High School	19.8	(106)
	Became High School Graduate	26.6	(290)
	Remained High School Graduate	27.8	(464)
	Became College Graduate	60.4	(316)
	<i>I</i> ² =	119.34***	
Marital Status in 1979/82 and Changes by Age 35*			
	Remained Never Married	34.8	(207)
	Became Married (no disruption)	39.0	(526)
	Remained Married (no disruption)	18.9	(106)
	Experienced Marriage Disruption	35.9	(337)
	<i>I</i> ² =	15.64**	
Actual Occupation at Age 35			
	Professional	49.0	(206)
	Managerial	43.7	(151)
	Blue collar	30.6	(819)
	<i>I</i> ² =	29.32***	

*p<.05; **p<.01; ***p<.001

5.2 Multivariate Results

The foremost objective of this study is to assess more rigorously the effects of occupational aspirations on the out-migration of youth from rural areas than has been possible in prior studies. As with the bivariate analysis, our basic logistic model shows significantly higher odds of rural out-migration for youth who aspired to professional and managerial types of occupations than for rural youth who aspired to work in blue collar occupations (see Table 4). The odds of having out-migrated to an urban area at age 35 are 2.78 times higher for rural youth aspiring to professional occupations than for rural youth aspiring to be blue collar workers and 1.67 times higher for youth aspiring to managerial occupations than for those aspiring to blue collar occupations. These basic logistic regression results support our hypothesis of higher rural out-migration by youth aspiring to work in professional and managerial types of occupations than for rural youth desiring to work in blue collar occupations.

When the background variables of gender, race/ethnicity, age, and mother's education are introduced in Model 2 the effects of occupational aspirations are still statistically significant. With these controls, the odds of rural out-migration are 2.48 times higher for youth aspiring to professional occupations than for youth aspiring to work in blue collar occupations and 1.66 times higher for youth aspiring to managerial occupations than for youth aspiring to blue collar occupations. With length of residence entered into the equation, the effects of occupational aspirations are not substantially different from the effects reported for Model 2. Because length of residence is one of the strongest associates of migration, the fact that controlling for it does not erase the impact of occupational aspirations, even with gender, race/ethnicity, and mother's education controlled makes an increasingly strong case for aspirations being an important underlying force behind much of the out-migration from rural places.

The dynamic variables, change in educational achievement and change in marital status are included in Model 4. In this model the odds of rural out-migration are reduced but remain statistically and substantially higher for rural youth aspiring to professional and managerial occupations than for youth aspiring to blue collar occupations. The odds of out-migration are partially explained by these variables because the odds for youth aspiring to professional occupations drop from approximately 2.59 in Model 3 to 1.65 in Model 4 and from 1.77 to 1.48 for youth who aspired to work in managerial occupations. Finally, the type of occupation the respondents are actually working in at age 35 is added as a control in Model 5. With this important variable included, the odds of rural out-migration for rural youth who expressed aspirations to be working as professionals and managers are essentially unchanged from Model 4 and are still statistically higher than for youth who aspired to work in various types of blue collar occupations. These multivariate results provide strong support for our hypothesis of higher rural out-migration for youth who aspire to professional and managerial types of occupations than for rural youth aspiring to work as blue collars at midlife. Clearly, occupational aspirations held at youthful ages affect rural out-migration independent of other determinants of migration. This finding is important for understanding the persistence of high rates of out-migration by rural youth.

Table 4: *Odds of Rural Out-Migration as Predicted by Selected Characteristics*

	Model 1	Model 2	Model 3	Model 4	Model 5
	Odds Ratios (Standard Error)				
Occupational Aspirations (Blue collar)					
Professional	2.78***(.149)	2.48***(.159)	2.59*** (.165)	1.65** (.181)	1.63** (.184)
Managerial	1.67***(.157)	1.66** (.166)	1.77***(.172)	1.48* (.178)	1.45* (.179)
Gender (Female)					
Male		1.17 (.134)	1.26 (.139)	1.31 (.145)	1.28 (.147)
Race/Ethnic (White)					
Black		1.63***(.153)	1.80***(.160)	1.88** (.171)	1.89***(.172)
Hispanic		.82 (.299)	.85 (.304)	.94 (.308)	.92 (.309)
Mother's Education (College Grad)					
Less than High School		.22 (.286)	.25***(.299)	.41** (.317)	.41** (.317)
H.S. Graduate		.33 (.279)	.35***(.292)	.47* (.306)	.46* (.305)
Some College>		.75 (.337)	.71 (.352)	.67 (.368)	.67 (.368)
Length of Residence (15 or More Yrs)					
Less than 3 Yrs			3.60***(.164)	3.71***(.171)	3.74***(.171)
4 – 9 Years			2.27***(.190)	2.47***(.196)	2.44***(.197)
10 – 14 Years			1.35 (.233)	1.27 (.240)	1.28 (.241)
Changes in Ed (Became College Grad)					
Did not Finish H.S.				.23***(.314)	.23***(.324)
Became H. S. Grad				.28***(.219)	.28***(.233)
Remained H. S. Grad				.34***(.182)	.34***(.191)
Changes in Marital Status					
Marriage-disrupted					
Remained Never Married				.83 (.210)	.84 (.210)
Became Married - (no disruption)				.86 (.164)	.87 (.165)
Remained Married - (no disruption)				.46* (.300)	.47**(.300)
Occupation at Age 35 (Blue collar)					
Professional					.96 (.204)
Managerial					1.21 (.212)
Constant	-1.102 (.108)	.438 (1.018)	.576 (1.054)	1.444 (1.246)	1.418 (.258)

* p<.05; **p<.01; ***p<.001 N=1176

It is useful to note that even with aspirations controlled, the effects of five of the seven control variables incorporated in the full model continue to have an influence. Thus aspirations are not claimed to be the sole driver of rural out-migration. These findings are consistent with major perspectives on migration that portray migration as a complex process with many determinants. Our full logistic model reveals that race/ethnicity, mother's education, length of residence, changes in education, and changes in marital status persist in their influence on migration even with occupational aspirations controlled. Further, in the full model, youth who migrated to a rural area of residence within the last three years are 3.74 times as likely to be out-migrants at age 35 as youth who had lived in their rural area of residence for 15 or more years. This is the strongest effect observed in the full model. Similarly, the odds of out migration are 2.44 times higher for youth who had migrated into their rural areas of residence 4 to 9 years prior to being asked about their occupational aspirations than were youth with 15 or more years of residence. The odds (1.29) of out-migration for youth who had lived in their rural places of residence for 10 to 14 years are statistically equal to the odds for youth who had lived in their rural residence for 15 or more years. These results suggest efforts to retain or draw-back individuals who resided in rural communities as youth should target subgroups with particularly high rates of out-migration.

One of our most interesting multivariate findings is the statistically equal odds of out-migration by youth actually working in professional, managerial, and blue collar occupations at age 35, particularly considering that large differences were observed between these groups in our bivariate analysis. This finding most likely points to occupational aspirations held at youthful ages strongly influencing occupational attainment and is consistent with past research on the determinants of occupational attainment (Mello, 2008).

6.0 Conclusions and Discussion

The large scale out-migration of youth continues to be a serious problem for rural communities in the United States. Recent census data show 235,000 youth left rural counties for metropolitan areas between 2007 and 2008 (US Census Bureau, 2009). Such yearly losses for rural communities is exacerbated by the selectivity of migration, higher rates of out-migration by rural youth with higher levels of socioeconomic capital than those who remain in rural areas. Aspirations for types of work not commonly available in rural areas have long been thought to serve as independent forces in motivating an array of strategies aimed at facilitating achievement of the aspirations. Our study increases the understanding of why so many youth leave rural areas and stay away by presenting the most rigorous analysis hitherto of the effects of occupational aspirations on long-term out-migration by using panel data to measure migration subsequent to the time when aspirations were ascertained and by controlling for other key determinants of migration. A secondary focus of the study was to examine the effects of the seven other variables, largely introduced as control variables, on out-migration when aspirations were controlled.

The key finding of this study is much higher out-migration by rural youth aspiring to professional and managerial types of occupations than for rural youth aspiring to blue collar occupations. This is an important finding because, although an expectation of a high level of out-migration by rural youth with aspirations for professional types of occupations is common in the literature, the extent to which

differences exist when other factors are controlled has been unknown. That higher out-migration by rural youth aspiring to higher status occupations persist when mother's education is among the controls is significant in relation to past research showing an association between social class and rural out-migration since mother's education is an important factor in relation to social class of origin. Social class is also known to have a strong influence on the development of occupational aspirations with youth in higher status origins developing aspirations for higher status occupations more often than youth reared by lower status families. These results indicate youth from lower as well as higher status origins who develop aspirations for professional and managerial occupations leave rural areas in higher proportions. In our basic logistic model the odds of rural out-migration for youth aspiring to professional and managerial occupations were 2.78 and 1.67, respectively, higher than the odds for youth aspiring to work in blue collar occupations. Although reduced in our full logistic regression model, rural youth who aspired to professional occupations were 1.63 times more likely to out-migrate than were youth who aspired to blue collar occupations. Rural youth aspiring to managerial occupations were 1.45 times more likely to out-migrate than rural youth aspiring to work in blue collar occupations. These multivariate results clearly show that occupational aspirations are an important force independent of socioeconomic status and other more well researched factors in explaining why so many youth leave rural areas.

While our main focus was on the effects occupational aspirations have on rural out-migration, results pertaining to our other seven control variables are also important. We found statistically significant differences between our comparative group and associated subgroups with race/ethnicity, mother's education, length of residence, changes in education, and changes in marital status. The differences between males and females were not significant. Interestingly, once other factors were controlled the odds of out-migration were approximately equal for youth who were in point of fact working in professional, managerial and blue collar occupations when they reached age 35. Although somewhat surprising, this is consistent with prior research showing occupational aspirations as a powerful determinant of eventual occupational attainment (Mello, 2008).

Of the effects in the full logistic model, including those of occupational aspirations, the strongest effect was with length of residence: newcomers to a rural area were 3.73 times as likely to migrate as youth who had resided in their rural community for 15 or more years. The influences of changes in educational achievement were also notable, with rural youth who had not finished high school at age 35 being only 23% as likely to out-migrate as youth who went to college. Black rural youth also had notably higher odds for rural out-migration: with the odds were 1.89 times those for white rural youth. Being married at the beginning of our migration measurement interval and having a mother who had not graduated from high school reduced the odds of rural out-migration to less than .50 of those for their respective comparative groups. In addition to amplifying prior findings in migration research by including occupational aspirations in our models, the consistency of findings with prior research points to the soundness of our findings with respect to the relationship between occupational aspirations rural out-migration.

The implications of our findings are important for rural communities. The massive out-migration of their youth is likely to continue until a significant number of professional and managerial career opportunities become available. While many

rural community experts already know this, our clear-cut findings should help persuade others who are often lured by developments offering many blue collar jobs but few opportunities for individuals aspiring to professional or managerial occupations. Prior research showing strong commitment of youth to their rural communities suggests many would return in the early adult years after obtaining higher levels of education needed to achieve their occupational aspirations. The predictable alternative to attracting more youth with a more diverse set of occupational opportunities is further depletion of rural population through the heavy out-migration of a large and vital segment of youth.

Unfortunately we do not profess to know how to create opportunities in professional and managerial occupations, only that this must occur. One of the problems for rural communities is that historically many professional occupations require critical mass. This may change with technological developments, and has changed in some professions and some rural communities, but for other communities, such opportunities remain a fundamental challenge.

There is a need for additional research on the relationship between occupational aspirations and migration. While large scale out-migration is the major reason for deficiencies in younger aged residents in rural areas the lack of in-migration by youth reared in urban areas is also important. Research that simultaneously compares the determinants of the migration of rural and urban youth would further increase our understanding of net out-migration from rural to urban areas. An understanding of ways to attract some urban youth, particularly to replace rural youth with aspirations for professional and managerial occupations, would further enhance rural communities. Finally, studies that further incorporate information on youth migration with the commendable body research on ways of expanding various types of career opportunities in rural communities are needed (Stockdale, 2006). The emergence of national panel data sets, such as the NLSY79, is particularly important for advancing research on migration and other inherently longitudinal processes.

7.0 References

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