United States Department of Agriculture

Economic Research Service

Rural Development Research Report Number 56

What Attracts New Residents to Nonmetro Areas?

Linda L. Swanson

WHAT ATTRACTS NEW RESIDENTS TO NONMETRO AREAS?
by Linda L. Swanson. Agriculture and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture. Rural Development Research Report No. 56.

Abstract

Most changes in the size and composition of a population occur because of the movement of residents rather than birth and death rates. Migrants from metro areas, who have provided much of the growth in rural areas since the 1970's, have tended to move to nonmetro counties that ranked high in amenities. Job-related reasons were less important to these new residents. Knowing the causes of nonmetro growth is important because today's mobile society makes planning by small communities difficult. This report assesses migration to nonmetro counties during 1975-80, whether the migrants came from metro or other nonmetro areas, and to what region they were most likely to move.

Keywords: Migration, retirement, nonmetro population growth.

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Washington, DC 20005-4788 April 1986

Summary

New residents from metro areas, rather than a shift in birth or death rates, contributed most to nonmetro growth during the 1970's. Migrants from metro areas tended to move to nonmetro counties that ranked high in amenities rather than in job-related advantages. Movement from one nonmetro county to another was not strongly based on any specific county characteristic; these nonmetro migrants mainly avoided metro adjacency and chose counties with high proportions of agricultural occupations.

This report examines migration to nonmetro counties during 1975-80, whether the migrants came from metro or other nonmetro areas, and to what region they were most likely to move.

The presence of a large community of retirement-age people was the county characteristic most strongly associated with high levels of migration from metro areas. Apparently, once retirement-age people begin moving to a nonmetro county, other retirement-age people are likely to follow over time.

The steepest growth in metro-to-nonmetro movement occurred in States west of the Mississippi River and in Florida and New Jersey during 1975-80. The Pacific Coast States plus Nevada, Arizona, Wyoming, and Alaska posted at least a 20-percent gain in nonmetro residents who had lived in cities or suburbs 5 years earlier.

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Linda L. Swanson*

Introduction

America has become such a mobile society that it is often difficult for communities to anticipate accurately the makeup of their population in the years ahead. Nearly 20 percent of the Nation's 1980 population had moved across county lines at least once in the preceding 5 years. This intercounty mobility pattern has continued in the 1980's. Migration into and out of an area can sharply alter the size and composition of an area's population in a short period of time, particularly in sparsely settled areas or small towns. For example, in the course of a year, 10 families leaving Chicago for an outlying village of 500 people would scarcely alter Chicago's population, but would generate a substantial increase for the village.

This report assesses migration into nonmetropolitan (nonmetro) counties during 1975-80, whether the migrants came from metropolitan (metro) or other nonmetro areas, and in which parts of the country these rates of inmigration were highest. The author examined the rates of migration from metro and nonmetro areas to determine which source was most strongly associated with population growth. The report, based on the publicly available 1980 Census data, shows how the type and rate of inmigration can be explained by two categories of county characteristics which the author created for this study: employment-related reasons and opportunities for a leisure lifestyle. The author examined the characteristics for their impact on movements from either metro or other nonmetro areas.

A high rate of migration to open country and small towns from another region or a metropolitan area can create both positive and negative changes in a small population. For example, more new residents can boost revenues but severely strain local capabilities to serve a rapidly expanding population. During the 1970's, when attraction to nonmetro areas was at its peak, more people moved into nonmetro areas as a whole than into metro areas. However, data were not yet available that could indicate which nonmetro areas got their inmigrants primarily from metro areas and which had people shifting from other nonmetro areas. Using 1980 Census data, one can assess inmigration during 1975-80 and determine whether the migrants came from nonmetro or metro areas.

The Migration Reversal of the 1970's

The nonmetro population boom of the 1970's caught many experts by surprise. From the early 1900's to the 1960's, with a short respite during the Depression in the 1930's, the number of people leaving the countryside for the city far exceeded the number moving to rural areas from cities. However, several factors combined to disrupt this country-to-city migration trend. By the 1960's, most rural areas had advantages common to urban areas, such as high-speed highways, telecommunications, electricity, public water supply, and community colleges. Taking advantage of lower land values and cheaper labor, manufacturing companies found it profitable to place certain types of operations in nonmetro areas with good transportation access and communications (*12, 19, 22, 27*).[1] Other types of nonmetro employment growth, particularly in service occupations, accompanied population growth (*3, 13, 16*). Workforce data show that a net gain of people in nonmetro areas between 1970 and 1975 was due both to more people staying in nonmetro areas and to more people moving in from metro areas (*7*).

National surveys of residential preferences, conducted over several decades, showed that an increasingly large proportion of metro residents preferred to live in a nonmetro area (*26*). Both the responses to survey questions (*6, 18, 21, 23*) and the association of noneconomic county characteristics with population growth in nonmetro counties indicated that much of the recent nonmetro growth may have been triggered by noneconomic motives (*2, 4, 14, 17*). Regarding employment, it is not clear whether people moved to nonmetro areas in response to the availability of jobs, or whether employers located in areas which attracted people and provided a pool of labor (*8, 23, 24*). Analysts speculate that both processes occurred and were mutually reinforcing.

By the early 1970's, the nonmetro-to-metro migration pattern of the century's first 70 years had reversed. More people were moving from metro to nonmetro areas than were moving in the opposite direction. Using data from the 1980 census, we can calculate the percentage of a nonmetro county's 1980 population which consisted of people who lived elsewhere in 1975. This gross rate of inmigration may be further

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[1]Italicized numbers in parentheses cite sources listed in the References section.

analyzed to determine whether people came from a metro area or from another nonmetro county.

Figures 1 and 2 show the percentage of residents of nonmetro counties in each State who had recently come from metro and nonmetro areas, respectively. The percentage of the population that had come from a metro area during 1975-80 was somewhat higher than for those who had come from other nonmetro counties (12.3 percent and 8.3 percent, respectively). Inmigration from metro areas was highest in the West, in Florida, and in New Jersey, whose closeness to large metropolitan areas, such as New York City and Philadelphia, boosted its population. The highest regional inmigration rates from nonmetro areas were in the Mountain and Central regions, with the highest State rates in Montana, Wyoming, and South Dakota. Except for Wyoming, the nonmetro areas of States that had a high percentage of new arrivals from metro areas did not attract great numbers of migrants from other nonmetro areas.

Nonmetro Population Growth and Migration during the 1970's

An area that is declining in population can, paradoxically, have a large number of people moving in compared with other counties. Such a situation may occur when the area's decline is caused by a higher number of deaths than births, or more commonly, when even more people are moving out than in.

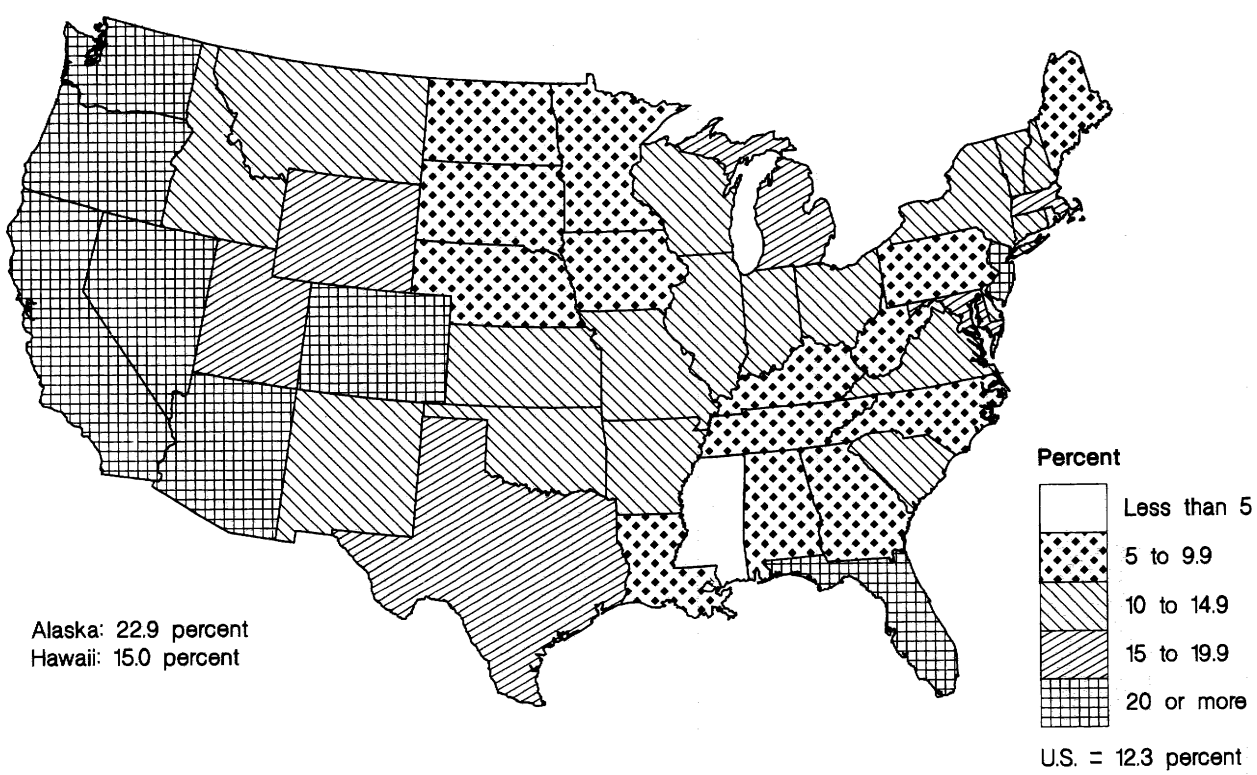
The percentage of 1980 residents who moved in since 1975 was used as the measure of recent inmigration. The author divided newcomers into those who moved from a metro area and those who came from another nonmetro county. The migration measures and all but one of the nonmetro county characteristics were calculated for all nonmetro counties in the United States from 1980 census figures.[2]

Figure 3 shows the relationship between rates of 1970-80 nonmetro population growth and 1975-80 inmigration, from both metro and nonmetro counties. Growth for the entire decade was used because it was likely that migrants not only contributed to the rate of growth themselves, but also were attracted to nonmetro counties that were growing and changing. Counties with high rates of overall growth (ranging from 20-percent growth to more than doubling in size) tended to have a high rate of inmigration of people from metro areas. However, both the nonmetro coun-

[2]Counties in New England are counted as nonmetro "receiving" counties only if they are entirely nonmetro. Census metro area boundaries do not follow county lines in New England. Thus, many counties there have both metro and nonmetro parts.

Figure 1

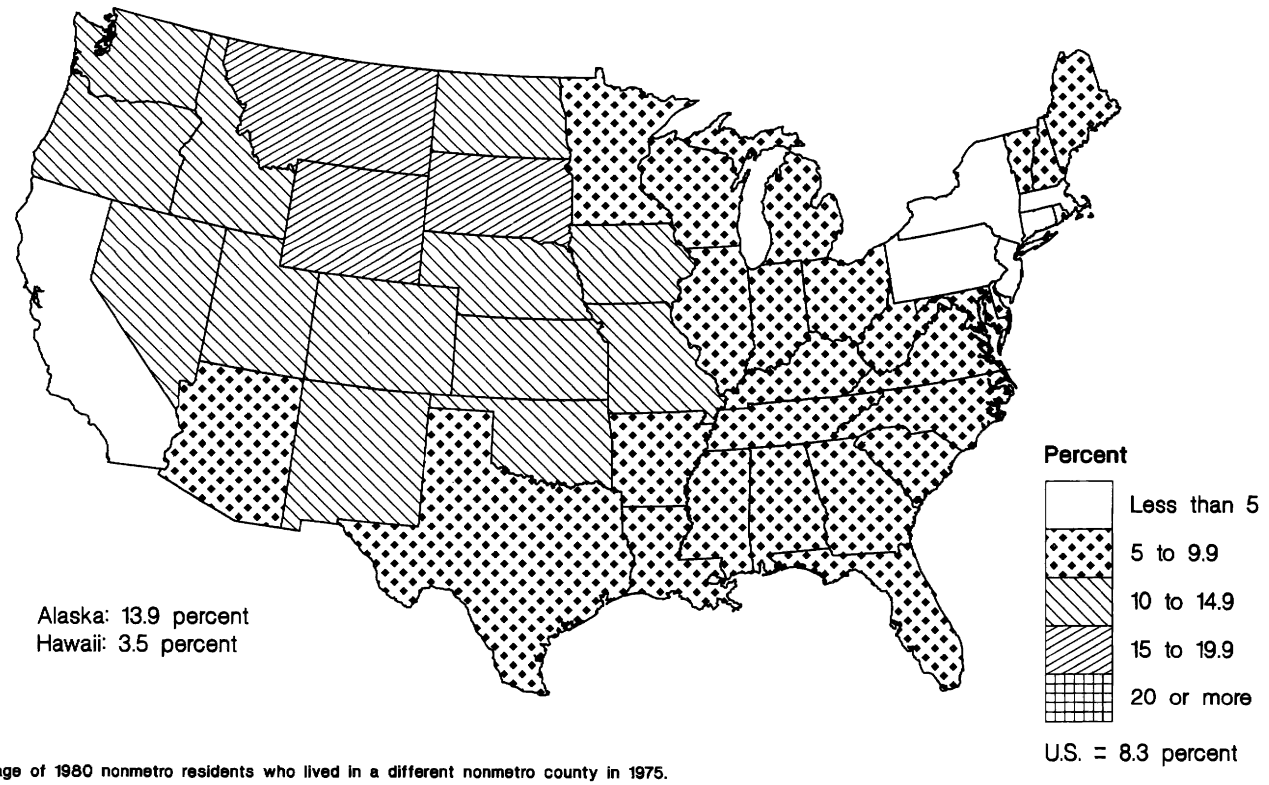
Metro to Nonmetro Migration, 1975-80[1]



1/ Percentage of 1980 nonmetro residents who were metro residents in 1975.

Figure 2

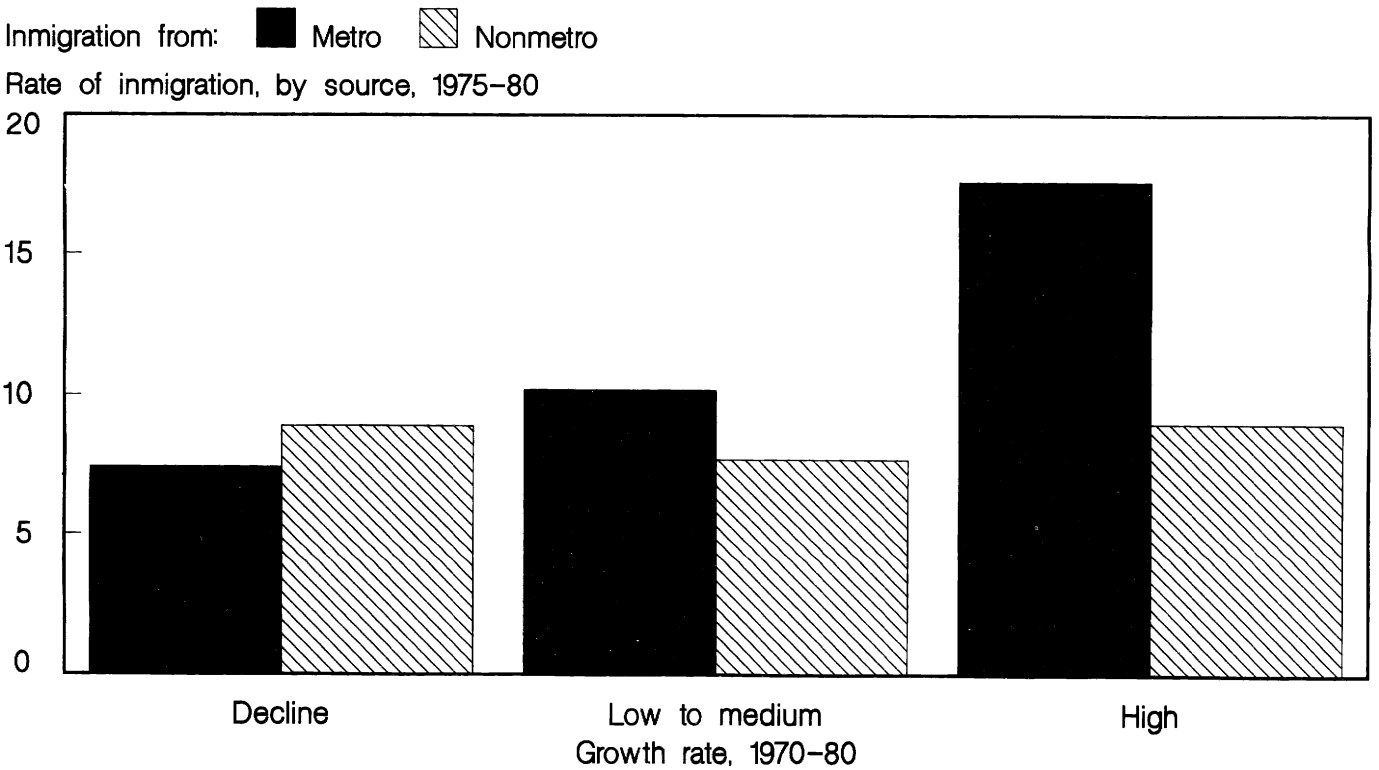
Nonmetro to Other Nonmetro Migration, 1975-80[1]



1/ Percentage of 1980 nonmetro residents who lived in a different nonmetro county in 1975.

Figure 3

Growth of Nonmetro Counties and Source of Inmigration



ties that were growing rapidly and those with declining populations had about the same rates of inmigration from other nonmetro counties.

Based on the data, the attractiveness of a nonmetro county to migrants from metro counties appeared to have little to do with its attractiveness to people moving from other nonmetro areas. Nonmetro counties that had a high rate of inmigration from one source (metro or nonmetro) did not necessarily receive many migrants from the other source.

Explanations of Inmigration to Nonmetro Areas

People move to an area because it holds some attraction for them. It can be attractive because they are familiar with the area, they were born or brought up there, or they have family or friends who live there. Potential migrants also may know about job opportunities or attractive amenities in the area. The area itself may be well placed geographically to receive migrants spilling over from a nearby growing area.

Adjacency to a Metro Area

Rapid expansion of a metro area's suburban fringe is a factor in nonmetro growth. Metro areas may grow at such a rate that the nearby nonmetro areas begin to function as suburbs, yet retain their nonmetro classification in the early-growth stage. However, as shown in figure 4, less than a 5-percent difference existed between adjacent counties and not-adjacent counties in the average proportion of residents who arrived during 1975-80 from a metro area. Migrants from other nonmetro areas were far more attracted to counties that were not adjacent to a metro area.

Job Opportunities or a Leisure Lifestyle?

Taken together, the results of research on residential preferences, on outmigration from metropolitan areas, and on the recent population growth of nonmetro areas imply that a shift from job-related considerations in destination choice toward lifestyle considerations occurred during the 1970's. Metro area residents may have reevaluated the quality of city life and searched for alternatives by moving to nonmetro areas. If quality-of-life considerations became primary, then the nonmetro areas with characteristics supportive of a more leisurely lifestyle will most likely attract new residents, particularly from metro areas. Although job-related advantages may have become less important, the economic characteristics of a destination must be taken into account.

Measuring Migrant Attraction Using Information on their Destinations

Measuring quality-of-life opportunities based on county characteristics is difficult because quality is subjectively interpreted by individuals according to their values or stage in life. Many of the reasons people give for wanting to move to a nonmetro county, such as "a better life for children" and "the closeness of a small community," are difficult to measure objectively (*20*). Other reasons, however, are more easily reflected in census-based measures. For instance, "enjoy the recreation opportunities" or "loved it as a vacation spot," can be measured as county characteristics by calculating the proportion of people employed in recreation and the proportion of houses used as second homes, both indicators of what could be called a leisure lifestyle. County characteristics have been selected to reflect both job-related and leisure lifestyle opportunities, but neither set of characteristics can be regarded as a complete measurement of either type of opportunity.

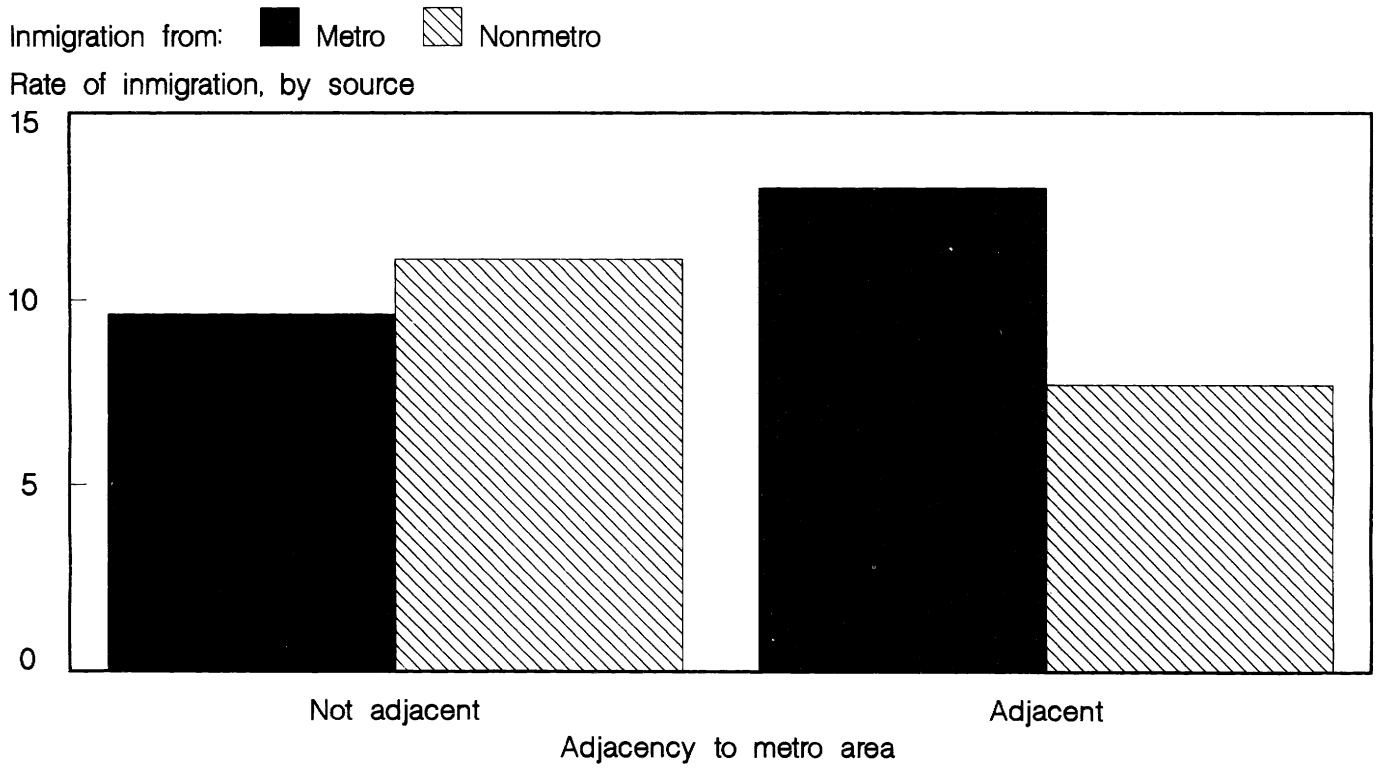
The job-related group of characteristics has four measures. First, median family income in 1979 is a proxy for the availability of either lucrative employment, or sufficient employment opportunities for one or more family members. The proportion of residents who commute to jobs outside the county gauges how much a county functions as a residential community which has employment opportunities within commuting distance. Also included in the job-related category are two specific types of employment, one which has been considered an attraction and one which indicates poor job prospects. The difference between 1970 and 1980 in the number of people who work in manufacturing as a proportion of people employed in 1970 denotes the increase (or decrease) in the prevalence of a type of employment which had been a source of increasing job opportunity in nonmetro areas. Nationally, the 1970-80 growth in manufacturing employment was 7 percent in metro areas and 20 percent in nonmetro areas (*14*). Employment in agriculture, forestry, or fisheries denotes an economy's dependence on traditional rural industries which have declined or have shown little growth.

Leisure lifestyle opportunities are assessed by three variables: retiree settlement, second homes, and recreation employment. The net migration rate of people age 60 and older between 1960 and 1970 is used as a proxy for the presence of a settlement of people who have moved to the county to retire. Past research showed that many retirees moved from metro to nonmetro areas (*see 4, 10, 24*), and one would expect an established community of peers to be attractive to them.

The proportion of all housing in 1980 that was seasonal housing or housing held for occasional use denotes the prevalence of second homes in a county and indicates the area's desirability as a vacation spot. Another dimension of recreation was the proportion of people employed in the recreation or entertainment industries in 1980. High values in the recreation-entertainment variable indicated a resort or recreation economy, while a high proportion of second homes

Figure 4

Adjacency Status and Rate of Inmigration from Metro or Nonmetro Sources, 1975-80



identified more informal vacation areas where a resort economy may not be present.

Because of perceived disparity in quality of life between metro and nonmetro areas and the continuing lower average income levels in nonmetro areas, people moving from metro to nonmetro areas were probably more attracted to nonmetro counties with quality-of-life or leisure lifestyle opportunities, with job-related factors less important. People from other nonmetro counties were probably more affected by job-related conditions than were people moving from metro areas.

Methods of Analysis

For each county characteristic in the job-related and leisure lifestyle categories described above, the author grouped the nonmetro receiving counties by whether they ranked high, medium, or low on a given characteristic.[3] People moving into the counties were separated by whether they came from another nonmetro county or from a metro area, in order to examine the patterns of relationship of both types of inmigration to county attributes.

The advantage of this type of analysis is that the relationship between a county characteristic and inmigration can be seen one characteristic at a time in an easy-to-understand format. A problem with this, however, is that county characteristics are, in some instances, related to each other. For example, retirement areas are often vacation areas as well. From a graph of the association between retirement and migration, one cannot tell whether retirement was an important factor independent of the recreation opportunities available. A somewhat more complicated method of analysis, known as ordinary least squares regression, will be used later in this report to handle such problems. Because attraction to nonmetro areas as a whole is the concern, the nonmetro destination counties were weighted according to their population size. This was done so that the relationship between inmigration and county characteristics in small counties did not influence the analysis more than would be warranted given their size.

Job-related Characteristics

An increase in manufacturing employment, a sector that has recently grown faster in nonmetro counties than in metro areas, was expected to attract migrants

[3]The categories of low, medium, and high for each county characteristic are defined below. (See Appendix B for the numerical values of these categories for each variable.)
Low = ½ standard deviation or more below the mean,
Medium = within ½ standard deviation above or below the mean,
High = ½ standard deviation or more above the mean.

from both metro and nonmetro sources. However, manufacturing growth did not generally stimulate migration into nonmetro counties (fig. 5).

Dependence on agriculture was not expected to draw new people into a county. The second graph of figure 5 shows that the more agricultural a county, the less likely that metro people would move in, although the difference in inmigration among levels of agricultural employment was less than 5 percentage points. While migrants from other nonmetro counties constituted a somewhat higher percentage of total population in counties with greater concentrations of agricultural employment, these differences were also fairly small.

The median family income of a county signifies the relative availability of lucrative employment or, in some cases, it may indicate that more family members can contribute to the family income. The third graph of figure 5 shows that counties with a higher level of median family income were significantly higher in their average percentage of recent migrants from metro areas than counties with a relatively low median family income. The average percentage of nonmetro-origin inmigrants, however, was not sufficiently different between high-income and low-income counties to enable us to say that family income was clearly related to migration from other nonmetro counties. Cause and effect is not easily distinguished because it is possible that median family income levels were raised since 1975 by metro-origin inmigrants bringing with them outside sources of income, such as pensions. Hence, use caution in interpreting the relationship between metro-origin migrants and county income levels.

The percentage of residents who commute to jobs outside their county helps gauge a county's function as a residential community with a number of employment options within commuting distance, even though few job opportunities may exist in the county itself. Figure 5's last graph shows that the difference in the percentage of inmigrants from either metro or other nonmetro sources among counties, grouped according to the percentage of the workers who commute to a job outside the county, was insufficient to support the expectation that nonmetro counties were functioning simply as residential communities. Because nonmetro counties that lie adjacent to a metro area are most likely to become "bedroom" or commuter communities, counties were grouped into adjacent-to-metro and not-adjacent categories and related commuting and inmigration. Neither the adjacent nor the not-adjacent groups revealed any substantial differences in inmigration among counties with little commuting versus those with much commuting.

Of the job-related county characteristics, only the level of family income was substantially associated with the percentage of recent inmigrants, and this only with the percentage of metro-origin inmigrants.

Leisure Lifestyle Characteristics

The three county characteristics chosen to represent leisure lifestyle were intended to indicate a county's potential for residents interested in a way of living that includes a number of amenities. Employment in recreation or entertainment industries reflects the extent to which a county has a resort or vacation atmosphere. The first graph in figure 6 shows that counties with a relatively high percentage of recreation employment had a high average percentage of residents who moved in from metro areas. Although some migrants may have moved in to take the recreation jobs, the number of jobs available in recreation was low even in counties where such employment was concentrated. Much of the recreation attraction probably focused on the amenities themselves while any employment attraction focused on jobs in trade and services that the presence of recreation had generated. In contrast to the influence on metro-origin inmigration, recreation opportunities failed to attract migrants from other nonmetro counties.

Another dimension of the appeal of a county as a vacation spot can be measured by the proportion of housing that is held for seasonal or occasional use. Consistent with our expectations, where this measure of second homes was highest, metro-origin inmigration was also high (fig. 6). Again, no such relationship marked inmigration from other nonmetro counties.

Research and frequent stories in the press have implied that many migrants came to nonmetro areas in retirement, and one would expect an established community of peers to be attractive to retirees. By using county rates of net migration during 1960-70 of people 60 years or older, the presence and size of an existing community of retired inmigrants was estimated. Counties with a community of such retirement-related movers had a much higher average percentage of residents who were recent inmigrants from metro areas than did counties with smaller such communities (fig. 6). However, as with the other leisure lifestyle measures, the presence of retirement communities had little association with inmigration from other nonmetro counties. The retirement nature of an area seemed to differentiate counties by their metro/nonmetro source of newcomers more than any other characteristic.

All of the quality-of-life aspects measured here attracted people from metro areas. By contrast, none appeared to influence people moving from other nonmetro counties. However, before one can make a definitive statement about the comparison between job-related and leisure lifestyle characteristics and their association with migration into nonmetro counties, one must rule out any possible distorting effects of the characteristics on one another.

Figure 5

Economic Characteristics of Nonmetro Counties and Rate of Inmigration from Metro or Nonmetro Sources, 1975-80

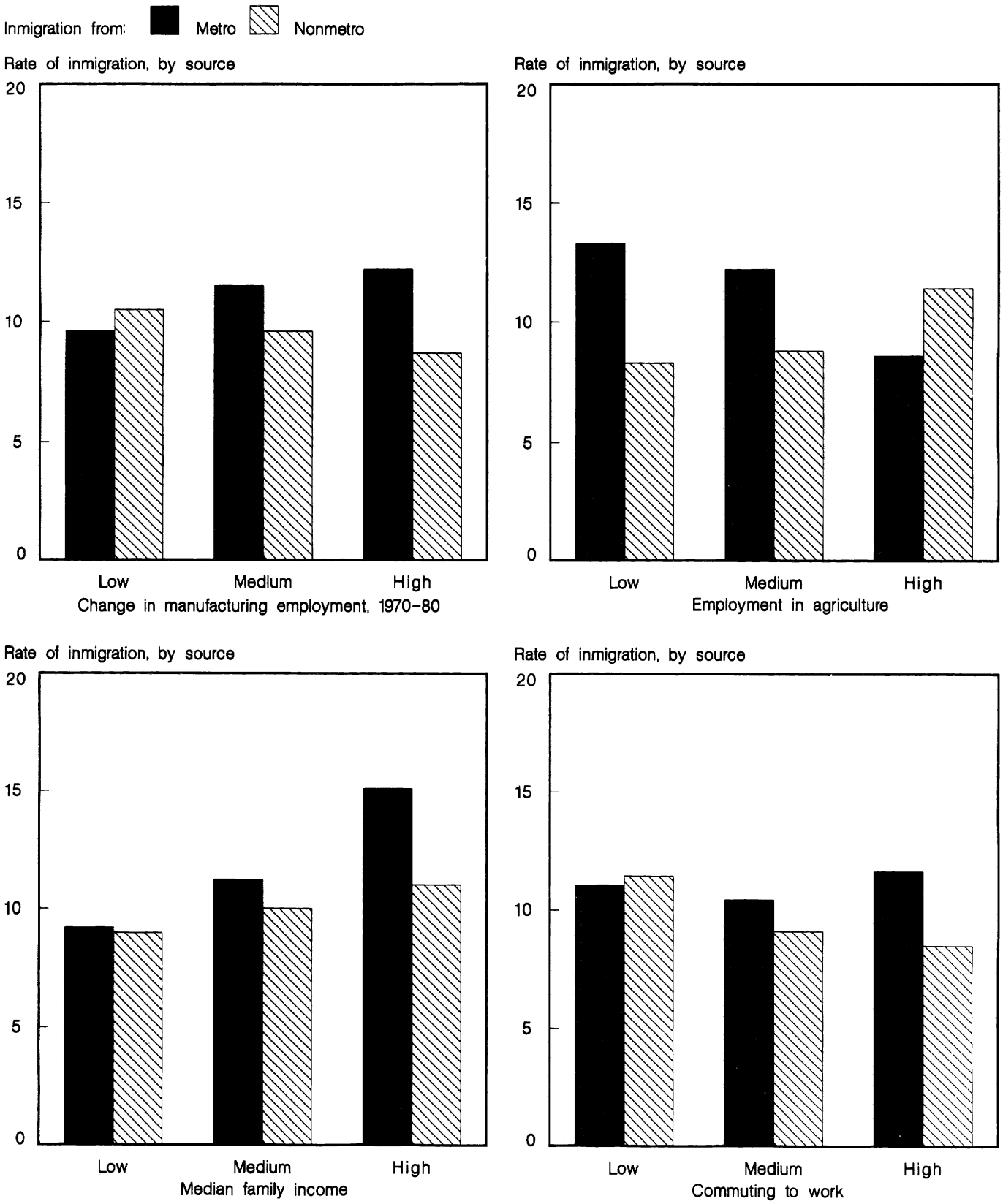
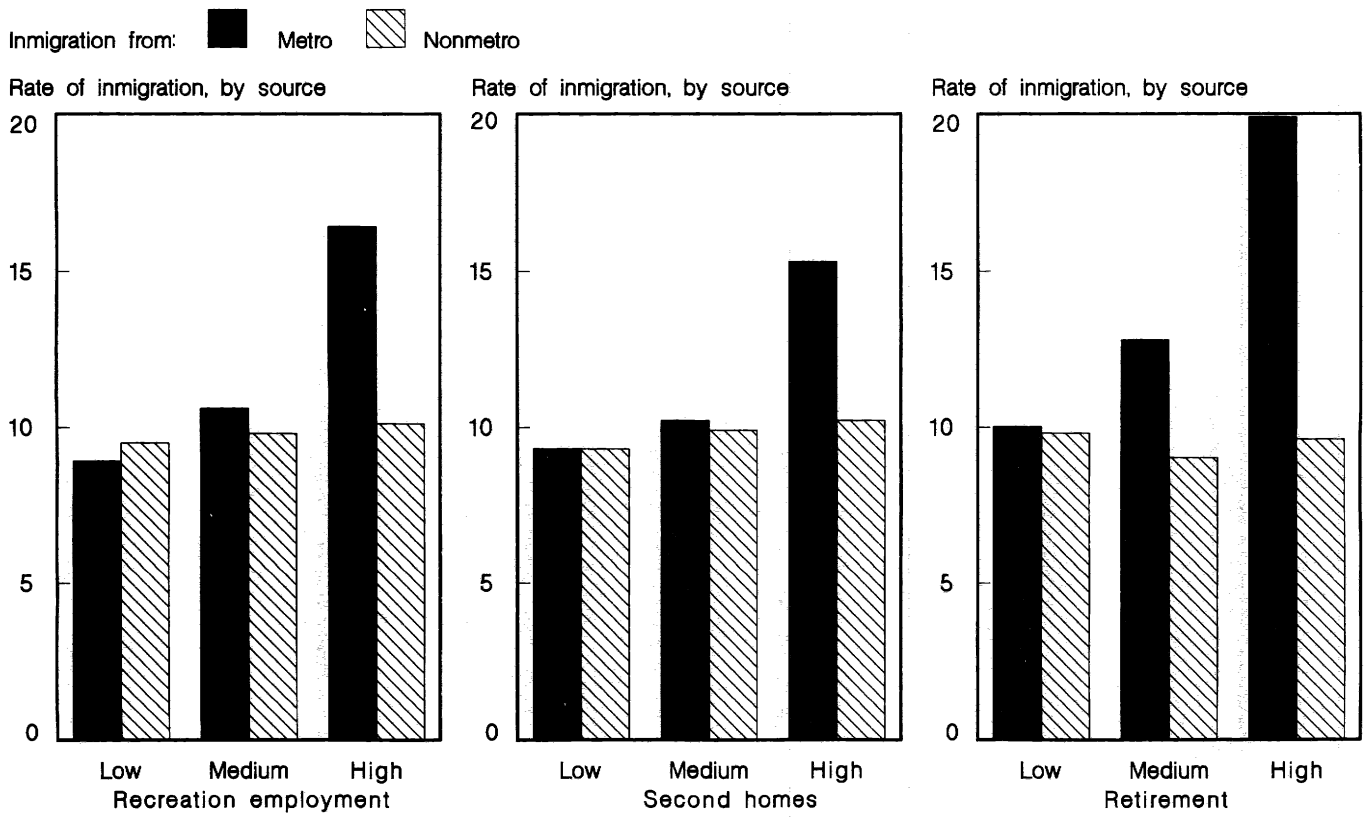


Figure 6

Leisure Lifestyle Characteristics of Nonmetro Counties and Rate of Inmigration from Metro or Nonmetro Sources, 1975-80[1]



1/ See appendix for construction of the characteristics.

Regression Analysis of Inmigration

Ordinary least squares regression analysis includes all of the county attributes at the same time in measuring their influence on migration. This controls for their effect on each other. The analysis results show the independent effect of each characteristic. Another advantage of regression analysis is that we can use the exact percentage or level of a characteristic for each county, rather than the rougher grouping of high, medium, or low status. With this method, the difference between the median family income of $20,000 and that of $50,000 for example, is taken into account rather than saying that both those counties have "high" income levels. In this regression analysis, migration into the counties is the dependent variable on which the independent variables, the county characteristics, were expected to have some effect.[4]

The two regression analyses the author used have the same set of independent variables (county characteristics) but different dependent variables. The first regression analysis attempts to explain migration from metro areas (fig. 7), the second, migration from other nonmetro counties (fig. 8). All of the job-related and leisure lifestyle measures covered earlier, as well as a third group of measures, were included in the two regression equations.

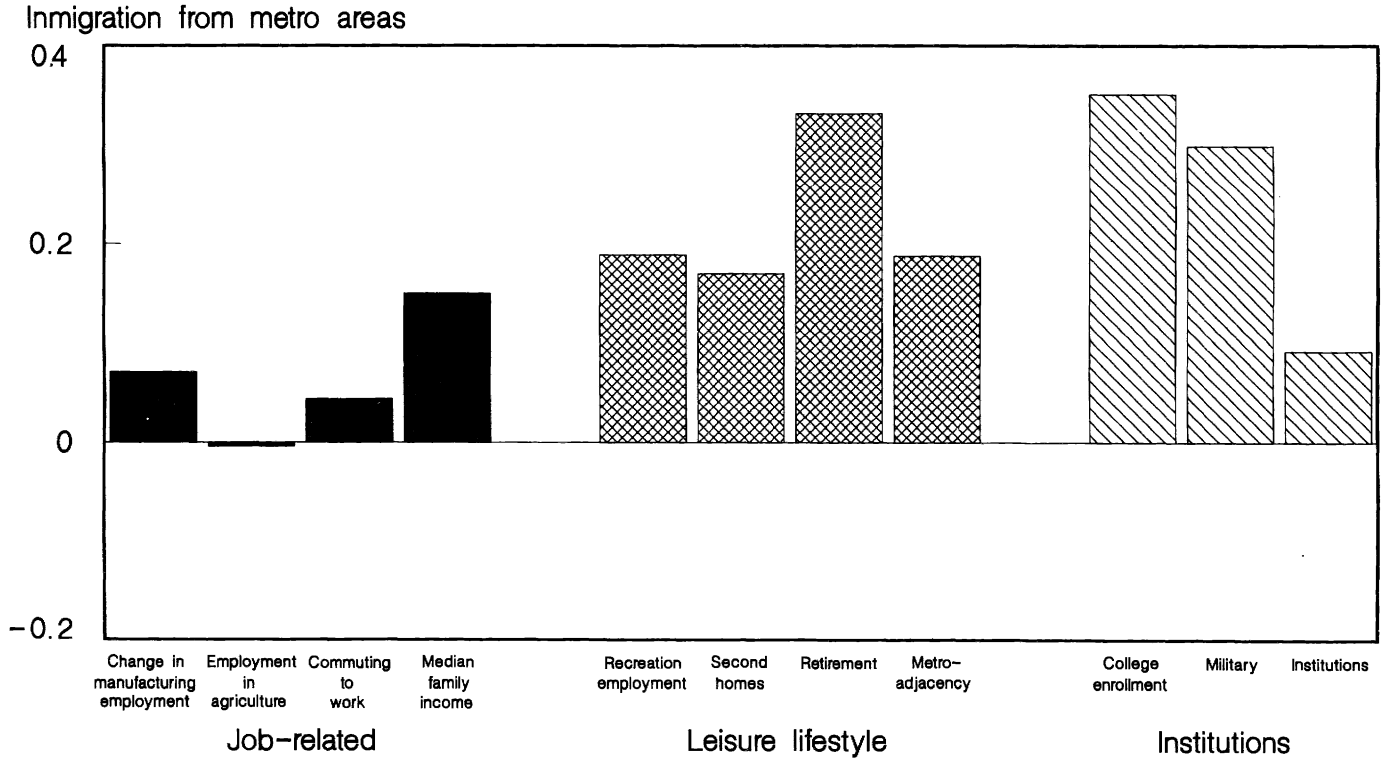
This third group of county characteristics reflected the presence of institutions which pulled people from outside the county. These institutions included colleges and universities, military bases, mental hospitals, and prisons. The population in these institutions tends to reflect the predominantly metro character of the Nation and most States. A false impression could have been given of the county's attractiveness to metro residents if the presence of such institutions had not been taken into consideration, because, for example, few of the residents of prisons chose their place of residence.

The institutions category contains three measures. The author assessed the presence and size of colleges or universities by the number of residents enrolled in college as a proportion of all residents who were enrolled in school of any type. The proportion of the labor force that was in the armed forces reflected the existence and size of a military base in or near the county. The author gauged the presence and size of other institutions drawing people from outside the

[4]See Appendix C for a more detailed explanation of regression analysis.

Figure 7

Standardized Regression Coefficients of Inmigration, 1975-80, from Metro Areas to Nonmetro Counties, by Characteristics of the Destination Counties



county by calculating the proportion of the total population residing in correctional institutions; psychiatric hospitals; or in homes, schools, hospitals, or wards for juveniles, the chronically ill, or the physically or mentally handicapped.

Results of the Regression Analysis

Figure 7 shows the effect of each county characteristic on inmigration from metro areas, which can be compared with its effect on inmigration from other nonmetro counties, shown in figure 8. Each bar represents a standardized coefficient for a county characteristic from the results of the regression analysis. The coefficients have been standardized (in a process somewhat similar to finding a common denominator for a set of fractions) so that the effect of one county characteristic on inmigration can be compared to that of another.[5]

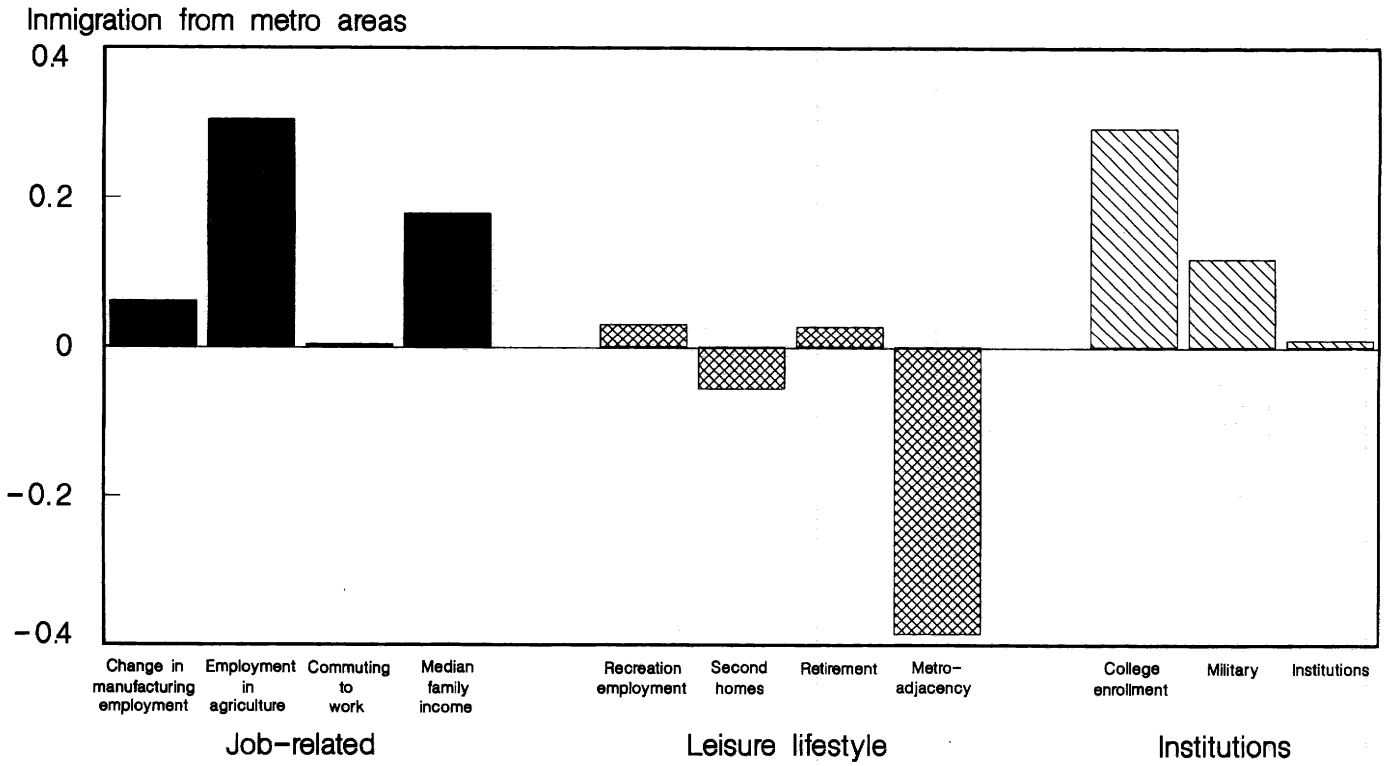
The coefficients are directional in the sense that a positive coefficient, appearing above the zero line in figures 7 and 8, indicates that when values of that county characteristic are high, the percentage of new residents is also likely to be high. A negative coefficient appearing below the zero line, indicates a reverse relationship, where a low value on that county characteristic is associated with a high percentage of recent inmigrants and vice versa.

Job-related factors comprised the first set of county characteristics in figures 7 and 8. Median family income was positively related to inmigration from both metro and nonmetro sources. Recall, however, that when figures 5 and 6 took one variable at a time, there appeared to be almost no association between income and nonmetro-origin inmigration. A strong relationship existed between adjacency to metro areas and median family income, with higher income in adjacent counties. The effect of income had been suppressed by adjacency, a disadvantage of looking at one characteristic at a time when the variables are related to each other. Median family income was higher in nonmetro areas which were adjacent to metro areas, but nonmetro migrants were more likely to choose counties that were not metro-adjacent. Note in figure 8 that the negative association with adjacency was the strongest factor in explaining migration from other nonmetro areas. Although median family income was higher in nonagricultural areas, migrants

[5]The size of these standardized coefficients cannot be strictly compared between equations which use different dependent variables as figures 7 and 8 do because the standardization is based on the variation within each equation. See appendix table C for the numerical values of metric coefficients (which can be compared between equations) and of standardized coefficients for both migration equations.

Figure 8

Standardized Regression Coefficients of Inmigration, 1975-80, from One Nonmetro County to Another, by Characteristics of the Destination Counties



from nonmetro areas tended to choose counties with higher proportions of agricultural occupations. Note that prevalence of agricultural occupations was second only to adjacency in explaining nonmetro-origin inmigration. The regression analyses indicate that, all other things (such as adjacency and industrial composition) being equal, migrants from both nonmetro and metro areas were attracted to nonmetro counties with relatively high median income.

Migrants from metro areas apparently avoided agricultural counties. However, based on statistics related to the regression analysis, this avoidance occurred because of the relationship between agriculture and several other important county characteristics, not because of an aversion to things agricultural. Migration from metro areas tended to be directed toward counties which were adjacent to metro areas and those with recreation opportunities. Heavily agricultural counties are not usually adjacent to a metro area, nor are they likely to have high recreation employment or a high percentage of second homes. Metro-origin migrants also went to nonmetro counties with high median family incomes and high college enrollments. High college enrollment was relatively rare in heavily agricultural counties as were higher levels of median family income. Thus, it was not the avoidance of agriculture itself that kept metro-origin migrants from going to heavily agricultural counties but the attraction to factors that were not usually found in agricultural areas.

Conversely, figures 5 and 6 show a weak tendency for migrants from other nonmetro areas to move to heavily agricultural counties. However, because nonmetro-origin migrants were also attracted to counties with high median family incomes and large local colleges, neither of which tend to be found in heavily agricultural areas, the attraction of agriculture to these migrants was understated. Had adjacency not been included in the same regression equation, the argument could have been made that the apparent association of agriculture and nonmetro-origin inmigration was simply because of the strong tendency of these migrants to choose counties away from metro areas. However, metro adjacency was included in the analysis, indicating that even among not-adjacent counties, nonmetro-origin migrants had a tendency to move to where agriculture, forestry, and fisheries were prevalent. The reasons for such an attraction are not clear. While the steep decline in these economic sectors during the 1960's was over by the 1970's, growth remained sluggish during this period, and employment opportunities in these sectors probably did not account for the attraction of the majority of

nonmetro inmigrants. Some people were possibly return migrants who left during the decline of the previous decade but returned to family and friends.

In explaining metro-origin inmigration, all of the leisure lifestyle variables are important factors, with retirement by far the strongest. This essentially confirms the impression given by the characteristic-by-characteristic analysis of the strong role of leisure lifestyle factors. The author included metro adjacency as a leisure lifestyle factor because once commuting had been accounted for in the equation, the remaining importance of metro adjacency was proximity to metro amenities, such as shopping, sports, or cultural events. Metro adjacency may be construed as an amenity factor for former metro residents, and was strongly related to inmigration from metro areas, as was recreation and the proportion of second homes.

For nonmetro-origin inmigrants, metro adjacency was the only amenity factor measured here that influenced destination choice, but the relationship is negative. Of the measures included in the study, not being next to a metro area seems to be the most important attribute a nonmetro county can have for these migrants.

The third set of explanatory factors, that of institutions within the county, was associated with inmigration from both metro and nonmetro sources, although more strongly with metro-origin inmigration. The presence and size of colleges and universities, as measured by the percentage of school-going residents who were enrolled in college, pulls people in from both metro and other nonmetro areas. To a lesser degree than colleges, military installations (measured by percentage of the labor force in the military) also bring metro-origin people into the county. Military installations play a marginal role in bringing people in from other nonmetro areas. Other institutions, perhaps because of their low turnover rate, have little effect on the number of people arriving from other counties, metro or nonmetro.

According to the R^2 summary measure, 62 percent of the variation in the percentage of metro-origin inmigrants was accounted for by the county characteristics included in the equation. This indicates a fairly good explanatory model. The capacity of the county attributes measured here to explain migration from other nonmetro areas was rather low, however, with only 35 percent of the variance explained.

Regression Analysis Summary

Table 1 summarizes the relative contribution of job-related, leisure lifestyle, and institutional characteristics to the overall explanation of inmigration to a nonmetro county. Leisure lifestyle attributes were stronger contributors to the explanation of metro-origin inmigration to nonmetro areas than were the job-related characteristics. Even the presence of institutions within the county added much more to explaining metro-origin inmigration than did job-related factors.

Table 1–Summary of job-related, leisure lifestyle, and institutional contributions to regressions explaining migration into nonmetro counties (N = 2,380 nonmetro counties)

Independent variable sets	Explanation of percentage of residents from metro areas	Explanation of percentage of residents from other nonmetro areas
	R^2 Change[1]	
Job-related	0.03	0.10
Leisure lifestyle	.31	.13
Institutional	.21	.09
Total R^2	.62	.35

[1]The R^2 change is how much would be lost to the overall regression equation's R^2 if this set of variables were removed from the analysis.

The metro-origin inmigration associations contrast with those of nonmetro-origin inmigration where leisure lifestyle (almost entirely driven by nonadjacency), job-related factors (income and agriculture), and the presence of institutions made roughly equivalent, modest contributions to the equation. The fact that the power of explanation was relatively low (0.35), even when all three categories were added together, indicates that county characteristics not measured here, or perhaps personal factors not easily assessed with county-level data, should be examined to explain the movement of people from one nonmetro county to another.

Conclusions

Most people who moved from a metro area to a nonmetro county during the 1970's were apparently less motivated by job-related reasons than by a lifestyle revolving around amenities. Because recent nonmetro county growth has been associated with inmigration from metro areas, people who must make decisions based on a nonmetro county's projected population growth should note the lifestyle factors which provide the strongest lure.

People who moved from one nonmetro county to another seemed more motivated by job opportunities than amenities, although county characteristics in general were not particularly useful in explaining such moves. These people may have been returning or moving to the county because of personal ties, or may have been moving short distances across neighboring county lines. Further research should help determine what motivated nonmetro residents to relocate in both growing and declining nonmetro areas during an overall resurgence of nonmetro growth.

Note that 1975-80 is the latest period for which detailed migration data will be available until 1990. Since 1980, the surge of nonmetro growth beyond metro growth has abated. Nonmetro counties in the South and West still show healthy growth. Saying with certainty how migration patterns have changed in the 1980's is difficult without information for this most recent period on where people have come from when they arrive in a nonmetro county or where they go when they leave. That the movement from metro to nonmetro areas has dropped from its height in the early 1970's, however, is certain, though we do not know exactly by how much. Nonmetro counties that have shown the most promising signs of current and continuing growth are those with recreation opportunities and/or retirement communities (5). Both the presence of recreation and retirement are inherently attractive and create employment opportunities by bringing population and financial resources to the county which fosters growth and stability.

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Appendix A

The measures in this article came from decennial U.S. Census county-level data for each county defined as being nonmetro in 1980. Construction of the variables is detailed below:

Change in manufacturing — Number of manufacturing employees in 1980 and the number of manufacturing employees in 1970 divided by the employed population in 1970.

Agriculture occupations — Number in agriculture, forestry, or fisheries in 1980 divided by the employed population in 1980.

Median family income — Taken from the 1980 census measures.

Commute to work — Number working in another county in 1980 divided by the employed population in 1980.

Recreation employment — Number employed in recreation in 1980 divided by the employed population in 1980.

Second homes — Number of housing units either seasonal or held for occasional use divided by total housing units in 1980.

Retirement — Number of inmigrants minus number of outmigrants (age 60 or older, 1960-70) divided by the total population in 1960.

College enrollment — Number enrolled in college or university in 1980 divided by the total school-enrolled population in 1980.

Military — Number in armed forces in 1980 divided by the employed population in 1980.

Institutions — Number in correctional, psychiatric institutions; homes, schools, hospitals, or wards for juveniles and the handicapped in 1980 divided by the total population in 1980.

Inmigration from metro areas — Number of 1980 residents who lived in a metro area in 1975 divided by the total population in 1980.

Inmigration from nonmetro areas — Number of 1980 residents who lived in another nonmetro county in 1980 divided by the total population in 1980.

Appendix B

Following are the numerical boundaries for the categories of the explanatory variables in figures 3, 5, and 6:

	Low	*Medium*	*High*
Change in percentage of manufacturing employment	−28.6 to 3.6	3.7 to 10.0	10.1 to 55.4
Percentage of workers in agricultural occupations	.32 to 4.4	4.5 to 10.6	10.7 to 70.3
Median family income (1,000 dollars)	7.2 to 14.7	14.8 to 19.3	19.3 to 80.6
Percentage of workers commuting outside the county	.71 to 13.5	13.6 to 26.38	26.4 to 80.3
Percentage of workers employed in recreation	0 to 3.0	3.1 to 4.9	5.0 to 30.4
Percentage of housing units as second homes	0 to 1.9	2.0 to 10.5	10.6 to 74.3
Net inmigration rate of people, aged 60 and over, 1960-70	0 to 9.9	10.0 to 14.9	15.0 or more
	Decline	*Low to Medium*	*High*
Population growth rate	−44.5 to 0	.01 to 50.0	50.1 to 232.0

Appendix C

As an illustration, a regression equation explaining migration on the basis of the county characteristics, a) percentage of work commuters, b) percentage employed in recreation, and c) percentage of houses which are second homes, could be represented as follows:

Percentage of 1980 residents who lived elsewhere in 1975 =

a_0
+
a_1
(percentage who commute to work in another county)
+
a_2
(percentage employed in recreation)
+
a_3
(percentage of houses which are second homes)
+
(error term, or variation left unexplained)

The coefficients (a_1, a_2, a_3) for each county characteristic show how much that characteristic contributed to the explanation of migration. The intercept (a_0) provides a baseline indicating what the dependent variable would be if the value of all the independent variables were zero. The intercept, plus the coefficients for the three independent variables, plus the error term, or remainder, equals the variation found in the dependent variable among the counties observed. The results of the analysis would include a summary value (R^2) indicating how well the three county characteristics worked together in accounting for the variation in inmigration among nonmetro counties. If all the variation in inmigration to counties had somehow been accounted for by the county characteristics, the R^2 statistic would equal 1.00. The R^2 value is the proportion of the variation explained by the analysis. If, in the above example, an R^2 of 0.31 were obtained, a little less than a third of the variation in inmigration would have been explained by the three independent variables.

Appendix table 1 — Coefficients in regressions of the percentage of 1980 nonmetro residents who recently (1975-80) moved into the county, based on county characteristics (N = 2,380 nonmetro counties)

Independent variables	Percentage of residents from metro areas		Percentage of residents from other nonmetro areas	
	b Metric (1)	B Standardized (2)	b Metric (3)	B Standardized (4)
Job-related:				
Change in manufacturing employment	0.079	0.071	0.040	0.062
Agriculture occupation	−.005	−.004	.205	.304
Commute to work	.024	.044	.001	.003
Median family income (1,000 dollars)	.236	.150	.163	.179
Leisure lifestyle:				
Recreation employment	.728	.189	.069	.031
Second homes	.141	.170	−.027	−.056
Retirement	3.836	.332	.187	.028
Metro-adjacency (1 = Adj.)	2.681	.188	−3.162	−.385
Institutions:				
College enrollment	.222	.351	.107	.293
Military	.454	.299	.104	.119
Institutions	.440	.092	.024	.009
Constant	−2.432		3.594	
R^2	.62		.35	

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