

RETURN MIGRATION: SOCIOECONOMIC DETERMINANTS
FOR STATE IN-MIGRATION

by

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A dissertation, like other social products, is not an individual effort. It begins with the sweat and toil of long hours of creative activity and quiet perseverance, but is submitted to the public domain for criticism, revision, the exchange of ideas, and editing. The end result of this process is a product which is not wholly one's own. I must, in the final analysis though, take responsibility for its content. Support and contribution for a project like this comes from two levels, the professional and the personal. Ultimately, both influence future attitudes toward the discipline and concern for students as well as one's future professional contribution. As a result, I would like to acknowledge those individuals who had the greatest impact on the completion of this dissertation.

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CHAPTER I

Background and Introduction

Migration is a complex social phenomenon. It is social in that the decision to move or not to move is made in a social context. A move influences not only the origin and destination at large and the individual specifically but also the hundreds of established role relationships and group memberships at the origin and the hundreds of perspective role relationships and groups at the destination. Thus, the choice to move is a decision to tear oneself from the social fabric of one community and establish oneself anew in another. Migration is a processual activity in which the actor must constantly evaluate both the costs and benefits of the move. These costs and benefits are associated with characteristics of both the area of origin and the area of destination and personal factors as well as what Lee (1966) calls intervening obstacles.

Before the turn of the century, E. G. Ravenstein "postulated a number of 'laws' of migration which formed the first theoretical analysis of migration and gave the subject the beginning of its theory" (Willis, 1974:8). Ravenstein's work provides the framework within which modern demographers can study the phenomenon of migration. It was Ravenstein who first identified the limitations of

distance on migration and recognized different characteristics of migrants versus nonmigrants. Much migration research has been built on Ravenstein's laws in the past century especially with regards to the relationship of migration and distance (Zipf, 1946; Stouffer, 1940; Rose, 1958), selectivity of migration (Shaw, 1975; Petersen, 1975), and determinants of migration (Lowry, 1966; Lee, 1966; Lichter and Fuquitt, 1982). In comparison with demographic research on fertility and mortality, however, relatively little has been done in migration. This is due to two factors: (1) most migration data is very poor and (2) regional differences in fertility have been the major cause of differential population growth rates (Goldstein, 1976). Goldstein (1976) argues that as fertility becomes more regionally homogeneous migration will become increasingly important as an explanatory factor in differential growth and changing population composition. In a country like the United States where overall growth is approaching zero and regional differences in fertility are becoming nonexistent, knowledge of migration, its trends, correlates and characteristics will become increasingly essential.

Historically, population in the United States has flowed from the south to the north and from nonmetropolitan to metropolitan areas. Studies in the

past decade have pointed to major shifts in this pattern of population redistribution and migration trends in the United States (Berry and Dahmann, 1977; Long and Hansen, 1975; Beale, 1975). Since about 1970, two major changes in population redistribution have been documented: (1) population appears to be flowing towards the south and west from the northeast and northcentral portions of the country and (2) nonmetropolitan counties are now growing faster than metropolitan counties due to high rates of in-migration to nonmetropolitan counties and out-migration from metropolitan counties (Berry and Dahmann, 1977).

Distinctions between metropolitan and nonmetropolitan are not the same as rural/urban distinctions. Metropolitan counties include those counties which make up Standard Metropolitan Statistical Areas (SMSAs) designated by the U.S. Bureau of the Census. These counties can include both rural and urban population. Nonmetropolitan counties include counties which do not possess a city of 50,000 or greater population or are not part of a SMSA designation.

This break from traditional population flows has been referred to by several names including the nonmetropolitan turnaround, the migration reversal, the migration turnaround and population dispersal. In addition, this turnaround has been both sudden and pervasive. For instance, migration patterns that were documented with the

1970 U.S. Census of Population were reversed with preliminary data from a 1973 Current Population Survey (Beale, 1975). Further, the turnaround has not been limited to any one region of the country and it includes a wide variety of individuals (Campbell and Garkovich, 1984).

Concomitant with this reversal in the traditional flows of population is a disruption in the traditional motivation of migrants. Past migration studies had emphasized the importance of economic factors in the decision to migrate. Micro studies cited variables like perceived level of unemployment and wage levels as central to the individual's decision to migrate (Todaro, 1976) while studies of aggregate data found that migration rates were closely associated with wage rates, unemployment rates and changes in employment in manufacturing (Lowry, 1966). Those involved in the present migration reversal have given different reasons for migrating including location of family, recreation facilities and dislike for cities (Ploch and Cook, 1982). In addition, individuals indicate a preference for nonmetropolitan areas within commuting range of metropolitan areas (Fuquitt and Zuiches, 1975).

Recent studies of aggregated data have documented the reduction in the association of migration rates and a variety of economic variables (Lichter and Fuquitt, 1982).

Thus, migration to areas of destination has been found to no longer be as closely tied to economic determinants as it once was and this is true both for interstate migration and metro-nonmetro migration (Sommers, 1981; Lichter and Fuquitt, 1982).

These noneconomic reasons or determinants for migrating have been grouped together under the generic term, "quality of life." Because of its breadth of scope and variety of use, quality of life is a difficult concept to define and has been dealt with very little in migration research. For the most part, aggregate migration studies have used dubious proxy variables like percent of forested land or percent of hotels and motels in an area which are supposed to represent some quality of life explanation for migration (Williams, 1981; Lichter and Fuquitt, 1982).

Despite the obvious and admitted problems with their utility, these variables have consistently helped to explain migration. In these studies, "quality of life" appears to be defined as simply an amenity or ecological factor. This only partially resembles a definition of quality of life employed in micro studies that include an array of "perceived" qualities associated with education, income and housing as well as ecological and amenity qualities (Sofranko and Flieqel, 1984; Sofranko and Cook, 1982).

The most comprehensive index of quality of life in an aggregate study is presented by Heaton, Clifford and Fuquitt (1981) in an article that refers to "noneconomic" rather than quality of life determinants of migration. They use several noneconomic measures including an amenity index that combines the number of hotels and motels per capita, percentage of seasonal housing, and percentage employed in leisure and recreational industry. In addition, they use a climate variable which combines average temperatures from January and June. This is the most comprehensive and logical array of variables representing noneconomic or quality of life determinants of migration.

Because of the volatile nature of the concept of quality of life, the great variety of interpretations of this concept, and its potential confusion with economic determinants, this study will follow the lead of Heaton, et al. (1981) and refer to these determinants as noneconomic rather than quality of life factors. It is felt that the concept of noneconomic determinants of migration will be less confusing and create fewer problems in the discussion of the results of the study. In addition, it is hoped that this will provide the groundwork for future literature to avoid the concept of quality of life in migration analyses.

Despite inconsistencies in definition and measurement, noneconomic reasons for migrating are playing an increasingly important role in both micro and macro level studies. Reasons for this change from economic to noneconomic reasons for migrating have, at best, only been hypothesized. Campbell and Garkovich (1984), for instance, have attempted to explain the nonmetropolitan turnaround in particular as an "episode of collective behavior." Five characteristics led them to this conclusion, but no empirical evidence has been used to support this contention. The remainder of the literature documents the changes from economic to noneconomic determinants of migration but do not attempt to explain why there has been a change (Sommers, 1981; Lichter and Fuquitt, 1982).

A small body of literature on return migration documents trends, characteristics and determinants that reflect those experienced in the recent migration reversal (Miller, 1977; Lee, 1974; Campbell and Johnson, 1976). Return migration can be broadly defined as that movement of individuals back to previous areas of origin whether that be a birthplace, a place where one was raised, or simply a place of prior residence. In this respect, return migration is one of several components that make up total migration to an area. As a result, return migration is one component of the nonmetropolitan turnaround or

migration reversal. This study argues that contrary to Campbell and Garkovich (1984) the "new" trends in migration patterns and determinants are rooted in this more traditional component of migration rather than in a model of collective behavior. If return migrants share common characteristics and reasons for migrating with those migrants involved in the reversal, an abundance of return migrants in this stream is potentially the reason why demographers have found that migration rates are increasingly related to noneconomic rather than economic determinants of migration.

E. G. Ravenstein postulated seven "laws" of migration which provide the theoretical framework within which modern demographers can study the phenomenon of migration. Among these laws, Ravenstein (1885/1976:199) proposed that "migration occurs in a stream from one point to another with a concomitant counterstream." Not until Eldridge (1964), however, did any research decompose the migration stream into "primary" and "return" components. In addition, not until the 1960 Census was a direct measure of return migration possible in the United States. As a result, relatively little has been written regarding return migration. That which does exist has largely dealt with the characteristics of return migrants and how they differ both from other types of migrants and nonmigrants (Long and Hansen, 1975, 1977; Lee, 1974; White, 1983).

There is very little research that focuses specifically on the impact of return migration on the migration stream or on the differential determinants of return and primary migration.

DaVanzo and Morrison (1981) have briefly alluded to a connection between return migration and the recent shifts that have occurred in traditional population redistribution and determinants of migration. Sommers (1981) documents the disruption in traditional determinants of migration between 1960 and 1970. He finds that the strength of the economic determinants of interstate migration in 1960 has been undermined by quality of life factors in 1970. No additional work has been done incorporating the 1980 Census data for interstate migration. As far as metro--nonmetro migration is concerned, Lichter and Fuquitt (1982:211) found that "traditional ecological and economic base variables have been of diminishing utility in explaining deconcentration during the 1970s." These studies have not considered the role of return migration in their findings. This is partially explained by the fact that there is no data which can directly identify return migrants to nonmetropolitan areas using the U. S. Census. Return migration can, however, be identified at the state level.

The return migration literature has identified characteristics of return migrants that are similar to

those migrants in the reverse streams. Return migrants are older, more often white, and of higher educational attainment than nonmigrants (Campbell and Johnson, 1976). These characteristics are similar to those of migrants involved in the nonmetropolitan turnaround (Beale, 1975; Lichter and Fuquitt, 1982). Further, return migrants tend to be drawn less by economic factors and more by quality of life factors (Miller, 1973). Trends in the determinants of state in-migration show that in-migrants as a whole are now being drawn less by economic factors and more by quality of life determinants of migration (Sommers, 1981). Further, "returning migrants appear to have figured prominently in recent streams of movement that have reversed the direction in which net migration has traditionally flowed" (DaVanzo and Morrison, 1981:86). Thus, not only do return migrants share characteristics with migrants involved in the reversal but they represent a larger portion of that stream.

Tracing these two bodies of literature, return migration and migration reversal, leads to a possible connection between the two. It appears that the recent reversal in traditional migration trends and determinants can be tied to the phenomenon of return migration. This dissertation will explore the hypothesized relationship between return migration and the recent reversal at the state level. In so doing, it will ascertain the

determinants of primary, secondary, and return migration as well as identify the differences between these three types of migrants. This effort will hopefully illuminate the role of return migration in the broader migration stream.

Statement of the Problem

The central concern of this dissertation is return migration and its potential role in the broader reversal in migration. In order to address this issue, I will look at two aspects of the migration phenomenon: the characteristics of the migrants themselves and the characteristics of the states to which they move (the area of destination). Traditionally, these two aspects are dealt with separately because they deal with different levels of aggregation and two different kinds of questions. Since I am interested in the whole phenomenon of return migration and its relationship with immigration, I will look at them at first as separate issues but then bring them together in a discussion of the phenomenon of return migration. Specifically, I am interested in two major issues: (A) determining the selective characteristics of the migrants themselves, i.e., how return migrants differ from primary and secondary migrants and nonmigrants and (B) discerning apparent changes in the determinants of migration at the

macro level explained by the fact that a large proportion of migrants are return migrants who have different motives for moving than either primary or secondary migrants.

Migration Selectivity

The first thrust of this dissertation is the identification of the selective characteristics of the three types of migrants and the nonmigrant population at destination. In other words, how do return migrants differ from primary and secondary migrants and nonmigrants? Several studies have identified the characteristics of return migrants (Lee, 1974; Campbell and Johnson, 1976; Long and Hansen, 1975). In addition, research has identified selective characteristics of migrants in general (Petersen, 1975; Shaw, 1975). Return, primary, and secondary migrants and nonmigrants will be compared on eight socio-demographic characteristics: age, sex, education, occupation, marital status, household size, income and race. The first order of business is to establish that return migrants are generally different from other types of migrants and nonmigrants. This results in the first hypothesis:

- H1: Return migrants differ from primary and secondary migrants and nonmigrants on eight sociodemographic characteristics.

Particular differences between return, primary and secondary migrants and nonmigrants on each of the eight characteristics are hypothesized in eight sub-hypotheses.

H1A: Mean age of return migrants is higher than both primary and secondary migrants, although it is closer to secondary migrants.

Migrants are generally younger than the population at destination (Shaw, 1975; Petersen, 1975). A disproportionate number of return migrants are retirees or are returning after unsuccessful first moves and are thus older than other types of migrants (Eldridge, 1965; Lansing and Mueller, 1967).

H1B: No difference exists in the propensity to migrate between males and females.

Sex differences are related to distance moved but not to propensity to return (Rose, 1958; Lee, 1974).

H1C: Mean education of return migrants is higher than primary migrants and nonmigrants but equal to that of secondary migrants.

Migrants tend to have higher median education than nonmigrants (Shaw, 1975; Petersen, 1975). First time movers (primary migrants) tend to have lower average educational attainment than other migrants (Lee, 1974; Miller, 1977).

H1D: A higher proportion of migrants will be from white collar occupations than nonmigrants. Return migrants will have lower occupational status than secondary migrants but higher status than primary migrants.

Research has shown that migrants tend to be from white collar occupations (Shaw, 1975), that primary migrants tend to be from lower skilled occupations and

professionals are chronic movers (Long and Hansen, 1977; Miller, 1977).

H1E: A larger percentage of return migrants will be from the single, separated, or divorced categories than primary, secondary, or nonmigrants.

Campbell and Johnson (1976) argue that a larger percentage of persons in the midst of marital disruption return home to their families and close friends than move on to entirely new locations or move for the first time.

H1F: Mean household size will be larger for migrants than nonmigrants but no difference exists between types of migrants.

Migration can be prompted by the needs of increased household size (Petersen, 1975).

H1G: Mean income is higher for migrants than nonmigrants. Mean income is higher for return migrants than primary migrants but lower than secondary migrants.

Like education and occupation, income has been found to be positively associated with migration (Petersen, 1975). Differences should exist between types of migrants to the extent that differences exist in the relative success of migrants (Lansing and Mueller, 1967).

H1H: The percent of migrants will be higher for whites than for blacks.

Migration as a rule is primarily a white phenomenon (Petersen, 1975). The nonmetropolitan turnaround has also been found to be a white phenomenon (Lichter and Fuquitt, 1982). Despite a large amount of literature on black

return migration, no comparison between black and white return rates has been drawn.

The above hypotheses pertain to single time periods. It is important to establish whether the differences on these eight characteristics between return, primary and secondary migrants and nonmigrants persist over time. The persistence in these differences from 1960 to 1970 and then to 1980 is hypothesized below:

H2: The selective characteristics of migrant types remain stable over time.

A close look at the stability of migration selectivity over time is crucial in determining the relationship or lack of relationship between these selectivities and migration determinants. The literature has already shown that determinants of migration have changed over time. If primary, secondary, and return migrants differ on the eight socio-demographic variables and these differences persist for all three decades, then the reason why the determinants of migration have shifted from economic to noneconomic factors can be due to a change in the relative proportion of each of these migrant types in the stream of state in-migration. It is assumed from this that the kinds of persons who are return migrants in 1960 must be the same as the return migrants in 1970 and 1980. It is assumed that persons with similar characteristics will move for similar reasons. Under

conditions of the increasing proportion of return migration, if return migrants have different characteristics from decade to decade, some factor other than proportion of return migration could be operating in the changing determinants of in-migration. Stability of selective characteristics over time acts as a form of control in the relationship of return migration and the changing determinants of in-migration.

Determinants of Migration

The second thrust of the dissertation deals with the determinants of return migration. A number of studies look at the determinants of net migration or in-migration in general (Lowry, 1966). Many of the findings of these studies have shown that migration is tied to economic factors whether they be rates of unemployment, wage levels or perceived potential for jobs. In recent years, however, a growing body of literature has found that migration is decreasingly linked to economic determinants and increasingly associated with noneconomic determinants (Sommers, 1981). This is especially the case with regards to the nonmetropolitan turnaround literature (Lichter and Fuguitt, 1982; Heaton, et al., 1981; Williams and Sofranko, 1980). In fact, the turnaround has appeared to be such a unique event in this regard that Campbell and Garkovich (1984) have argued that it is an episode of collective behavior and not traditional migration.

Interestingly, the return migration literature points out that return migrants are also drawn back primarily for quality of life or noneconomic reasons and less for economic reasons (Campbell and Johnson, 1976; Miller, 1973). In addition, the relative proportion of return migration has increased through 1970. Lee (1974) states that in 1960, return migrants constituted 17 percent of all white interstate migrants and 14 percent of blacks. For 1970, these figures had increased to 20 and 21 percent respectively. No comparative figures for 1980 have been published. A logical deduction is that the growing proportion of return migration is one reason why migration is decreasingly linked to economic determinants. This deduction leads to the central hypothesis of the second thrust of the study:

- H3: Increases in the noneconomic reasons for state in-migration are explained by an increase in the proportion of migrants that are return migrants.

This overarching hypothesis is supported by three sub-hypotheses:

- H3A: Between 1970 and 1980 return migration has increased as a proportion of all in-migration.
- H3B: Between 1970 and 1980 noneconomic determinants of migration have increased as a proportion of all determinants of in-migration.
- H3C: Noneconomic characteristics of a state are more important causal factors in return migration than they are in primary or secondary migration.

The first order of business will be to determine the proportion of return, primary and secondary migration in the total in-migration to states. In addition, the study will ascertain whether the proportion of return migration to total in-migration has changed over time. It will deal exclusively with two periods: 1965-1970 and 1975-1980. The 1955-1960 period is least important to the study of the migration reversal. Even though the 1960 census was the first time that "data were available for systematically analyzing the volume and effect of return migration" (Lee, 1974:283), many of the noneconomic variables used to predict migration in 1970 and 1980 cannot be reproduced for 1960. As a result, an adequate comparison of economic and noneconomic determinants for 1960 is impossible.

Second, the study will identify the determinants of in-migration to states. It will look first at the determinants of total in-migration in each of the two time periods. This will reveal how these determinants change over time. Then it will decompose total migration into primary, secondary and return migration and compare the determinants of each within decades. It will also be able to examine changes in the determinants of each type of migration across decades. This will answer two questions: (1) do determinants of migration differ between return, primary, and secondary migration and (2) have the

determinants of each changed over time? Finally, it will attempt to ascertain whether the determinants of total in-migration change in importance (from economic to noneconomic factors) as the proportion of return migration increases.

Conclusion

The significance of this study is apparent from a theoretical standpoint. Some impact can potentially be measured from a policy standpoint. Movement of population is responsible for cultural diffusion, social change, and changes in the demands on city, state and federal monies and can influence policy in three ways. First, Goldstein (1976) argues that with the increased homogeneity of fertility rates for states and regions in this country, migration has become the primary cause of population redistribution. Thus, knowledge of migration and of the components of migration is integral to the development of future population policy. Policy that once was centered on fertility must now take account of migration. Second, it is important to know what the characteristics of the three types of migrants are and whether these are changing over time. Migration affects both areas of origin and destination. If return migrants exhibit unique characteristics that are consistent over time and their relative proportion of the total in-migration stream

increases over this same time period, then both the origin and destination will be affected by changes in one component of the migration stream. As a result, policy changes must be made based on the level of different components of the migration stream and the particular demands of these migrants. Third, it is essential to know what draws migrants to an area. If the characteristics of an area attract return migrants but not primary or secondary migrants the eventual regional population composition will become increasingly different. For example, differentials in the trends of return, primary and secondary migration to a state can result in more homogeneous or less homogeneous socioeconomic and ethnic composition of the population which can, in turn, result in social change. Thus, decisions to invest money into particular kinds of industry with specific occupational needs will potentially draw different kinds of migrants. Rarely, however, does migration research have the opportunity to influence policy development to the extent that Fuller, et al. (1983) have in Thailand. The present work does not have the illusion of being able to affect population policy to this extent.

Theoretically, this dissertation can potentially make several major contributions. First, it offers one reason for the migration turnaround. It empirically addresses one half of the turnaround, i.e., the reversal in state

flows. Increases in return migration can be seen to contribute to the reversal. Second, it offers an explanation for changes in the determinants of migration. Increases in return migration can potentially play a major role in changes from economic to noneconomic reasons for migration. Third, it indirectly explains why the turnaround was not predicted. Gross migration estimates like gross birth estimates are made by demographers. The postwar baby boom was not predicted by demographers using these gross estimates. Similarly, the nonmetropolitan turnaround like the postwar baby boom was not foreseen. If increases in return migration are a major contributing factor to the turnaround, then estimates of the components of a migration stream may have revealed the beginnings of the turnaround that gross estimates could not predict. Fourth, this study offers further empirical support for established migration theory, especially that of Lee (1966). Finally, this dissertation brings together micro and aggregate theory and evidence in an effort to look at a whole topic, namely return migration.

CHAPTER II

Review of the Literature

The reversal in traditional patterns of migration has created cause for alarm among a number of demographers. Not only were they unable to predict the phenomenon but they have been sorely pressed to explain the phenomenon itself or the reason why the traditional reasons for moving are also changing (Wardwell, 1982). The most recent and most comprehensive theoretical explanation for the turnaround to date argues that the reversal has been an episode of collective behavior (Campbell and Garkovich, 1984). The authors attribute this to five characteristics:

"(1) its size; (2) the quickness with which it began and developed into a large net in-migration to nonmetropolitan areas; (3) it was pervasive in its coverage (i.e., it was not limited to any one region of the country or one type of ecology); (4) the migrants were diverse in characteristics (e.g., age, occupation, etc.); and (5) more than other migrations, it was a migration by choice (i.e., most of the migrants were not forced by economic necessity [availability of jobs] to migrate to a given area but migrated for other reasons)" (Campbell and Garkovich, 1984: 89-90).

The core of their theory is based on Smelser's theory of collective behavior. From it, they argue that there are six factors or determinants of the migration turnaround as collective behavior: structural conduciveness, structural strain, growth and spread of a generalized belief,

precipitating factors, mobilization of the participants for action, and the operation of social controls. To Campbell and Garkovich (1984) not the push and pull of economic factors, nor the quality of life or environmental amenities of rural areas, nor the preferences of migrants for living in rural areas are enough to explain the dramatic reversal in migration.

The focus of this dissertation was conceived as a reaction to Campbell and Garkovich (1984). Contrary to their reliance on a model of collective behavior as an explanation of the turnaround, this dissertation argues that many of the characteristics of the migrants, the size of the reversal, the reversal's pervasiveness and changes in the determinants of state in-migration can be rooted in more traditional migration theory. The nonmetropolitan turnaround and the larger migration reversal are a logical outcome of past population redistribution. The history of population redistribution in the United States from the turn of the century to the late 1960s or early 1970s has been one of dominant flows of population to cities and to the northeast and northcentral regions of the country (Boque, 1959; Hawley, 1971). Part of this traditional flow of migrants has included a stream of rural Appalachian movement to urban industrial locations in the northcentral and northeast (Hillery, et al., 1965; Schwarzweller, et al., 1971). The period of heaviest out-

migration from rural and nonmetropolitan areas occurred in the late 1940s and 1950s (Hillery, et al., 1965). Since about 1970, both the trends in regional redistribution and rural-urban migration have been reversed (Berry and Dahmann, 1977).

Given the traditional flows of population for more than half a century and the especially large amount of migration in the 1950s, one potential explanation for the turnaround is the disproportionately large percentage of migrants returning to their places of birth. The large amount of out-migration from the south and rural areas has drained these areas of potential out-migrants. Further, a larger pool of potential return migrants exists for these areas. Miller (1973) found that states with the highest rates of return migrants are those that had built up the largest pools of out-migrants. In addition, the time gap between the decade of the reversal and the period of heaviest out-migration for these areas is between 20 and 30 years.

In addition, much of the migration reversal has been found to consist of the elderly population, a hitherto relatively nonmobile segment of the population (Heaton, et al., 1981; Beale, 1975). Thus, it could very well be that those who migrated from the south and/or rural areas in the 1950s for employment reasons are now retiring to their places of birth. In many cases, these individuals have

family, friends and possibly land and homes in the areas to which they are returning. All of these factors ease the transition and make it easier to return.

Further, those variables which have been associated with the reversal in migration and characterize the metro-nonmetro migrant in an aggregate sense are the same determinants and characteristics of return migrants (Lichter and Fuquitt, 1982; Beale, 1975; Miller, 1977; Lee, 1974; DeJong and Humphrey, 1976). Most important in this respect are the noneconomic or quality of life reasons for moving given by both return and metro-nonmetro migrants (Campbell and Garkovich, 1984; Lichter and Fuquitt, 1982; Sommers, 1981; Miller, 1973; DaVanzo, 1976; Campbell and Johnson, 1976).

Quality of life as a concept encompasses a variety of indexes, definitions and indicators depending upon the level of analysis and the focus of the research (Heaton, et al., 1981; Campbell, et al., 1976; Pierce, 1984; Sofranko and Fliegel, 1984). For micro level studies, quality of life is measured by "perceived" happiness or satisfaction with the community, neighborhood, etc. (Campbell, et al., 1976; Sofranko and Fliegel, 1984). With this indicator, quality of life implies an entire array of social, psychological, economic, and individual factors.

Both economic and noneconomic variables are included as quality of life characteristics. In addition, it is difficult to differentiate between objective economic or social conditions and the perceptions of these conditions by respondents. Macro level studies have taken two separate approaches to quality of life indicators. First, quality of life is equated with ecological or environmental amenities. Under this scheme, one proxy index is used to measure the concept quality of life (Williams, 1981; Lichter and Fuquitt, 1982; Sommers, 1981). Problems with this approach center around the validity of the indicators. It is unclear whether the indicators are actually measuring a concept known as quality of life.

The second direction of macro studies has been to isolate a set of objective indicators around which a notion of quality of life is subjectively attributed. The best of these studies develops an amenity index and uses environmental variables (water and temperature) to measure noneconomic determinants of migration (Heaton, et al., 1981). One nonmigration study attempting to rank cities with a variety of quality of life indicators includes nine characteristics with which each city is rated (Pierce, 1984). These characteristics include: the arts, climate, crime, economics, education, health care, housing, recreation, and transportation. Based on the Places Rated

Almanac, Pierce (1984) uses approximately eighty variables in these nine categories to rate quality of life in U.S. cities.

Since both the migration turnaround and return migration are so closely associated with changes from economic to quality of life or noneconomic reasons for moving, the concept of quality of life must either be clearly delineated or dropped as a concept pertinent to the indicators actually used in in this study. For purposes of clarification in this study, quality of life must neither be considered as broad a concept as used in micro level studies nor as narrow a concept as simply an ecological factor as used in some macro level studies. Rather, it must be defined in a social, cultural and ecological amenity context. It is a set of objective, noneconomic characteristics which individuals subjectively include in attributing satisfaction or happiness with an area. In other words, it is a set of noneconomic reasons associated with affinity to an area.

Quality of life as a concept is extremely difficult to measure as well as distinguish from economic factors associated with migration. Indicators used to measure this concept in the migration literature have included ecological, social and cultural variables. The use of these variables has followed no pattern and the rationale for inclusion of several of them is weak (Lichter and

Fuguitt, 1982). As a result, no consistent measure of quality of life can be found in the migration literature. Pierce (1984), among others, has also included economic dimensions to the quality of life concept. Logically, "quality of life" for a particular individual can be clearly tied to such economic factors as income and occupation.

All of the problems surrounding the concept "quality of life" dictate the need to move to a less volatile, more consistently accepted concept. Heaton, et al. (1981) employ the use of "noneconomic" determinants of migration and have the most comprehensive set of these types of variables to be found in the migration literature. Therefore, there is precedent in the literature for using noneconomic determinants of migration. In addition, noneconomic factors unlike quality of life factors are mutually exclusive from economic factors. Thus, there is less chance of confounding the two concepts. Finally, there are fewer value judgements surrounding the concept "noneconomic" than there is "quality of life." The concept "quality of life" implies good and bad quality to which persons tend to attach value judgements. Noneconomic factors are not so value-laden. As a result of all these arguments, noneconomic determinants of migration will be used throughout this study rather than quality of life. A set of noneconomic indicators will be discussed in the next chapter.

The change to noneconomic reasons for moving as well as the characteristics of the migrants in the reversal, the pervasiveness of the reversal, its quickness and its size, then, might all be attributed to the components of the migration stream itself (i.e., the proportion of return migrants). All five characteristics of the turnaround that Campbell and Garkovich (1984) attribute to a collective behavior model can be associated with traditional migration theory in the light of return migration. In order to justify this departure, a closer theoretical examination of the components of migration, the selectivity of migration and the determinants of migration must be made.

Components of Migration

Ravenstein (1885/1976) was the first to identify streams of migrants. Stream movement is made up of a number of components or parts. These components of migration refer to the various "types" of migration or migrants within a stream of migration. Any aggregate stream to a destination is made up of return migrants, those persons who are returning to a location in which they have lived before, and nonreturn migrants, a residual category including all other types of movers. The nonreturn category has been further broken down using Census definitions into primary migrants, individuals who

left their state of birth less than five years before the Census, and secondary migrants, persons who were living outside their state of birth five years before the Census and in a third state the year of the Census (Eldridge, 1965). Eldridge (1965) more specifically identifies return migrants as individuals living in their state of birth at the time of the Census but not five years prior to the Census.

Although these definitions do not include every type of migrant, they do identify three broad categories of movers that have been shown to differ in their motivation for moving and socio-demographic characteristics. For instance, it is generally accepted that persons who have prior migratory histories have a higher probability for moving than persons who have never moved (DaVanzo, 1981; Goldstein, 1954). Whether this is due to differences in personality or differences in familiarity with the migration experience is difficult to sort out. Either way, both return and secondary migrants should share characteristics by virtue of frequency of moves that they do not share with primary migrants. Further, those who return to an area where they have lived previously migrate to a location of familiarity, closer to family or friends. Those who are not familiar with an area are faced with a more uncertain future in an area of which they know little. Lansing and Mueller (1967:218) found that

although "...familiarity does not shorten the length of the planning period;...return moves are associated with lack of consideration of alternative locations and with use of only one (or no) information source." It would appear that familiarity itself does play a role in the propensity to return.

Many migration decisions depend upon information costs and location-specific capital (assets that are more valuable in one location than they would be elsewhere). A migrant often goes through a decision-making process weighing the costs and benefits associated with the area of origin and the area of destination. The surplus of benefits over costs associated with a particular location is known as location-specific capital. Usually, location-specific capital is more valuable in the present location than in the potential destination. In light of the Lansing and Mueller (1967) findings, however, return migrants not only invest less in information costs than other types of migrants, their location-specific capital is more valuable in the area of destination than other migrants (DaVanzo and Morrison, 1981). Thus, a decision to return should be easier to make than a decision to move to a brand new location. Some research has shown that return migrants move back soon after a first move. This has prompted study of the "success" of migrants. This research has shown that return migrants are less

successful than other migrants. Both Vanderkamp (1972) and Lansing and Mueller (1967) argue that return migrants are less successful than their counterparts in the migration stream. This lack of success revolves around disappointment about income or job opportunity as a result of the first move or simply failure to cope with the demands of the new situation. The growing literature that points to the higher income, education and occupational achievements of return migrants would tend to refute this body of research, however (Lee, 1974; Campbell and Johnson, 1976).

Much of the return migration literature has dealt with trends in return migration associated with specific racial groups or geographic regions. The growth of black return migration to the south has been of particular interest (Long and Hansen, 1975, 1977a, 1977b; Campbell, Johnson and Stanqler, 1974, 1975; Lieberman, 1978; Li and Randolph, 1982; Randolph, 1982; Johnson, 1973). This literature has documented the reduction of black migration from the south to the north as well as the increased return of blacks to the south through the 1970s. These black return migrants tend to be younger, better educated, and employed in higher status occupations than the total black population in the south (Campbell, Johnson and Stanqler, 1974, 1975). In addition, trends in the selectivity of return migrants have not changed (Long and Hansen, 1977b).

A number of studies have investigated return migration to the Appalachian Region (Deaton and Ansel, 1974; Schwarzweller, et al., 1971; White, 1983). Mountain Families in Transition (Schwarzweller, et al., 1971) emphasizes the role of the family in the migration of mountain families to the urban industrial centers of the northcentral United States. The family itself acts as a source of information for potential migrants as well as a home to which a migrant can return. Based on an intensive study of one community, it supports the theory that family, familiarity and support networks ease migrant transition to a new environment as well as return to the area of origin. Deaton and Ansel (1974) argue that much of Appalachian return migration is due to the marginality of the migrants or their inability to obtain satisfactory employment in the city. Return migrants generally are selective of the less educated and the middle-aged and are consequently considered less successful. White (1983) finds that Appalachian Kentucky is experiencing a larger proportion of return migration in its migration reversal. He argues that the characteristics of the reversal in Appalachia are thus different from those in the remainder of the nation. He does not, however, test this difference. My argument is that White's (1983) findings for Appalachia are, in fact, regional evidence of a nationwide trend.

Several broad findings in the literature have been made regarding the characteristics of return migrants, the determinants and the role of return migration. First, return migrants have been found to be older than primary migrants (Campbell and Johnson, 1974). This is logical considering that to return one must have moved at least one time previously. Age differentials should be smaller between return and secondary migrants due to their similarity in frequency of migration experiences. Second, research on the proportion of the sexes in the return migration stream is inconsistent. Both Campbell, et al. (1974) and Campbell and Johnson (1976) find that return migration consists of a larger proportion of females. Lee (1974), however, reveals inconsistent patterns between males and females for return migration and concludes that there probably is no difference between return, primary and secondary migrants on the basis of sex. Third, because of the lesser investment in information and location-specific capital for the return migrant, not only education but also income and occupational prestige have been found to be similar to slightly lower for return migrants than for other types of migrants (Long and Hansen, 1977; Miller, 1977). Return migrants do, however, rank higher on all three variables than nonmigrants (Miller, 1977). No differences on marital status or household size have been found to exist between the three

types of migrants (Long and Hansen, 1977; Lee, 1974). When compared to nonmigrants, however, migrants have been found to have larger households (DeJong and Humphrey, 1976; Petersen, 1975). Finally, return as well as the migration reversal are primarily white phenomena (Lichter and Fuquitt, 1982; DaVanzo and Morrison, 1981).

Return migration has been linked to both quality of life or noneconomic determinants of migration and, at least indirectly, to the reversal in migration trends. Miller (1973) in particular has separated return and nonreturn migration when looking at the determinants of migration. Included as determinants in his equation are income levels, rates of employment growth, unemployment rates, educational levels, nature of employment available and birth rates. Miller (1973) finds that those states with the largest pools of individuals born in the state but living outside the state have higher proportions of return migrants. These states are also those with the weakest attraction for individuals not born there. Past accumulated out-migration is responsible for the large pool of potential return migrants. These states also have fewer economic reasons for attracting nonreturn migrants. As a result, he employs the use of another concept, back migration or a ratio of return migrants to the number of persons born in a state but living outside the state of birth. Using his operationalization of return migration,

the ratio of return migrants to the total population in the destination state, he finds that return migration does not respond to the economic incentives in his model. Using the concept back migration, the correlation with economic determinants remains the same as that for nonreturn migration. In sum, when return migration is separated from nonreturn migration, nonreturn is found to be more closely associated with economic determinants. There appears to be little association between economic factors and return migration. With either concept, back migration or return migration, he finds that nonreturn migration is more directly related to economic determinants of migration than return migration. Miller (1973) argues that since return migrants spend less in information cost and their location-specific capital is more valuable in their "home" location, migration to these areas would logically be tied to noneconomic rather than economic reasons for moving. Family ties, homesickness or other social rationalizations including crime rate, environmental amenities, etc. will more likely be given for returning than income, job possibilities or other economic reasons. If this is the case, states which have a larger proportion of return migrants should reflect more of a tendency toward noneconomic correlates of immigration.

Finally, return migration, at least in part, has been tied to the current reversal in migration trends. Despite the amount of literature pertaining to the nonmetropolitan turnaround, only two studies have hinted at the relationship between return migration and the new trends (DaVanzo and Morrison, 1981; White, 1983). White's (1983) research specifically deals with Appalachian Kentucky and points to the amount of return migration in this area as the reason why its reversal is different from nationwide trends. The DaVanzo and Morrison (1981) work refers to this relationship in passing but also ties the reversal of black migration from the south to return migration. Many of the blacks currently moving from north to south are those who were from the south originally (DaVanzo and Morrison, 1981; Lieberman, 1978; Lee, 1974).

Selectivity of Migration

As Boque (1959) has pointed out, the various aggregate rates of migration are generally taken as dependent variables while factors of push and pull operate as independent variables. These independent variables fall into two classes: attributes of persons and conditions in the community. A major problem of dividing independent variables into these two classes is that it tends to confuse the notion of micro versus macro units of measure. Despite this criticism, however, it is important

to investigate the "whole" or entire phenomenon of return migration and include both micro and macro aspects. Not only do conditions in the community affect migration generally and return migration specifically, but individual characteristics also affect the propensity to migrate. In addition, this differential selection of migrants can also affect change in the social and demographic makeup of both the areas of origin and destination. As Petersen (1975:287) has noted:

A general analysis of migration, in other words, must begin with the various motives that determine why in any situation some leave and others stay, and since these motives are not usually established directly, they must be inferred from the differential migration rates.

Thus an integral step in determining the role of return migration within the migration stream is the investigation of migratory selection or how the various types of migrants (return, primary, and secondary) and nonmigrants differ on various socio-demographic characteristics.

Migratory selectivity is a major branch of traditional migration research. A number of socio-demographic characteristics have become accepted as correlates of the propensity to migrate and will be considered in the present study. The study of the selective characteristics of migrants is beset with problems based on using Census data. Each of the characteristics are determined "post factum."

Characteristics like age, sex and race are not affected. However, income and occupation can be influenced by the move itself. Recognizing this shortcoming of Census data is important although it is a limitation that cannot be avoided. These variables include: age, sex, education, occupation, marital status, household size, income and race.

Age. Migration is generally thought to be an experience of the younger members of the society but this can depend on the type of migrant and direction of migration (Petersen, 1975; Shaw, 1975). Internal migration is highest for ages 15 to 24 years. More recent findings pertaining to the nonmetropolitan turnaround and return migration have found that these migrants are older on the average than other types of migrants. DeJong and Humphrey (1976:526) find that metropolitan-to-nonmetropolitan migrants are "more selective of younger, higher socioeconomic status household heads with a smaller household size than are migrants who compose the nonmetropolitan-to-metropolitan stream." This contradictory finding may be attributed to the use of data from only one state. Lichter, et al. (1978) find exactly the opposite as the nonmetro-to-metro stream is especially selective of the younger, upper socioeconomic groups. Importantly, they find that nonmetro-to-metro migrants are younger than metro-to-nonmetro migrants. They are using

national data as well as the 1975 Current Population Survey. Findings for return migration show the exact trend as Lichter and Fuquitt (1982), i.e., older migrants in the stream. Return migrants are thus hypothesized to be older than other types of migrants. This seems a logical conclusion since return migrants must be primary migrants before they can return (Eldridge, 1965; Campbell and Johnson, 1976; Campbell, et al., 1974). A disproportionate number of return migrants are retirees or are returning after unsuccessful first moves and are thus older than other types of migrants (Eldridge, 1965; Lansing and Mueller, 1967).

Sex. One of Ravenstein's laws was that females are more prone to migrate shorter distances than males but contemporary research is less conclusive. Petersen (1975) argues that females are more prone to internal migration, males to international migration. For internal migration in the United States only, Lichter, et al. (1978) found sex to vary little with migration behavior between metropolitan and nonmetropolitan areas. Likewise, Lee (1974) found males and females to differ little in return migration. Miller (1977) finds that males are more likely to be primary movers as well as return and "chronic" (secondary) movers. Most of the reverse and return migration literature agrees that there are no differences between the sexes in the propensity to migrate.

Education. Migration tends to be selective of the highly educated, i.e., migrants tend to have higher median education than nonmigrants. For internal migration in general, migrants tend to have more education than those in the area of origin but less than those in the area of destination (Shaw, 1975). Within the metro-to-nonmetro stream the findings are consistent--this stream is differentially comprised of those with higher median education. Not only do they have more years of schooling than those in the nonmetro-to-metro stream but they also have more education than the population at the area of destination regardless of whether that destination is metro or nonmetro (Lichter, et al., 1978; DeJong and Humphrey, 1976). Similarly, return migrants have been found to have the same characteristics. They have more years of schooling than primary migrants as well as nonmigrants in the area of destination (Campbell and Johnson, 1976; Lee, 1974; Miller, 1977). Much like the comparability of the age composition of the metro-to-nonmetro stream with the return stream, nonmetropolitan turnaround migrants and return migrants share similar educational characteristics.

Occupation. Contemporary migration research in the United States has shown nearly universally that migration is selective of the more skilled and white collar occupational categories. This finding pertains to

migration in general (Shaw, 1975), the nonmetropolitan turnaround (Lichter, et al., 1978; DeJong and Humphrey, 1976), and return migration (Miller, 1977; Long and Hansen, 1977; Campbell and Johnson, 1976). Professionals in particular tend to more often be chronic movers than return migrants (Miller, 1977).

Marital Status. Less research has been conducted comparing migrants with nonmigrants based on marital status than the other characteristics included in this discussion. What has been confirmed is that internal migrants in general are as likely to be married as single as the general population. In fact, Landis (1946) found that interstate migrants are slightly more likely to be married than nonmigrants. Thus, little difference seems to exist between migrants and nonmigrants with respect to marital status. Migration, however, may be motivated by factors of marriage. A move to a new location may accompany marriage itself or persons experiencing divorce or separation may move as part of their adjustment to new conditions. Contrary to findings that point to no marital status differences between migrants and nonmigrants, return migration appears to be made up disproportionately of persons who are either single, separated or divorced (Campbell and Johnson, 1976). Campbell and Johnson (1976) argue that a larger percentage of persons in the midst of marital disruption return home to their families and close

friends than move on to entirely new locations or move for the first time.

Household Size. The broader migration literature points to a positive correlation between household size and migration (Petersen, 1975). Migrants tend to have larger families than nonmigrants. Differences in household size between migrants do exist depending on the direction of the migration. DeJong and Humphrey (1976) found that household size was smaller for metro-to-nonmetro migrants than nonmetro-to-metro migrants, although household size for both streams was larger than that for nonmigrants. No research to date has identified differences in household size for return migrants versus other categories of migrants or nonmigrants. Generally, migration can be prompted by the difference in needs of increasing household size.

Income. Income, like education and occupation, appears to be consistently related to all forms of migration (Petersen, 1975). Migrants tend to have higher median incomes than nonmigrants at the area of destination. This is the case both for the nonmetropolitan turnaround (Lichter, et al., 1978; DeJong and Humphrey, 1976) and return migration (Miller, 1977; Campbell and Johnson, 1976; Kiker and Traynham, 1973). Differences in median income should exist between types of migrants to the extent that differences exist in the relative success of migrants (Lansing and Mueller, 1967).

Race. Differences between black and white migration propensity have prompted some researchers to include separate models for each (Sommers, 1981) as well as calculate separate trends in return migration (Lee, 1974). Whites are more likely to ever migrate than blacks but blacks are more likely to return to some regions (particularly the south) than whites (Lee, 1974). Sommers (1981) found that when comparing two models of migration (one for whites and one for blacks) the determinants were, in essence, of the same magnitude. Despite the large propensity of blacks to return to the south (43.9 percent of all black in-migrants to the south atlantic, 54.7 percent to the east south central, and 40.8 percent to the west south central regions for 1965-1970) (Long and Hansen, 1975; Campbell, et al., 1974), return migration tends to be a predominantly white phenomenon (DaVanzo and Morrison, 1981; Campbell and Johnson, 1976). Likewise, the nonmetropolitan turnaround is also largely a white phenomenon (Lichter, et al., 1978).

Determinants of Migration

Since Ravenstein, a great deal of research on the migration phenomenon has been conducted. This research has resulted in a number of models which attempt to explain migratory behavior. These models, although they have developed from a number of different directions of

research, can be classified as either deterministic or probabilistic (Shaw, 1975). Probabilistic models occur in the form of the mover-stayer continuum or stochastic model. As the name implies, a statistical evaluation of the likelihood of a migration occurrence is made in order to describe the process of migration for specific times or locations rather than as an effort at causal analysis of the sociodemographic and economic determinants of migration behavior. Because this study is attempting to address changes in the determinants of in-migration due to the changing size of the return migration stream, the probabilistic approach is of limited usefulness. In the deterministic approach, on the other hand, a precise relationship between the migration event and the predictor or explanatory variables is the objective. Logically, the theory in this study has grown out of these deterministic kinds of models.

Shaw (1975) includes within the deterministic approach behavioral aspects of the decision to migrate, spatial aspects of migration, the selectivity and differentials of migration, and the economic aspects of migration. From the deterministic viewpoint, migration is seen as an adaptation to changing social and economic conditions in the environment. Many variables have been found to be correlated with migration. For instance, selectivity and differentials in migration have been found

along age, sex, education, occupation, life-cycle and career pattern characteristics. Such spatial aspects as distance, direction, intervening opportunities, and competing migrants have been found in the gravity and stage migration models. Further, structural economic considerations like income, unemployment, education, urbanization, and industrial change have been found to effect migration (Shaw, 1975). Thus, both the study of the selectivities of migration and the determinants of migration that are employed here are born out of the same theoretical tradition.

Two of the most notable models of migration, Zipf's (1946) distance model and Stouffer's (1940) intervening opportunities model, are both considered gravity models and are essentially psychological in nature (Petersen, 1975). Both, however, employ the spatial dimension as an explanation of migration. Endemic to the decision to migrate are certain spatial factors or intervening opportunities that restrict migration streams. The factors entering into the decision to migrate, according to Lee (1966), are associated with characteristics of the area of origin and destination, intervening obstacles, and personal factors. Both Zipf (1946) and Stouffer (1940) are concerned with only the intervening obstacles involved in the decision to migrate.

The Zipf (1946) model is classified as a distance or gravitational model in the sense that distance from place (P1) to place (P2) is used as the intervening variable and acts to restrict migration. In other words, the greater the distance between P1 and P2, the fewer the number of migrants between the two places. Zipf (1946: 677) explains "that the number of persons that move between any two communities in the United States whose respective populations are P1 and P2, and which are separated by the shortest transportation distance D, will be proportionate to the ratio $P1 \times P2/D$, subject to the effect of modifying factors." Simply, the number of migrants between any two cities is dependent upon the shortest distance between the two. Thus, distance behaves as a geographical barrier to migration.

Stouffer (1940) argues that the number of people going a given distance is not a function of distance directly but of the spatial distribution of opportunities. These opportunities are defined as the particular vacancy a given migrant occupied and similar vacancies within a range of comparable rent prices anywhere in the city which he might have occupied but did not. In a later article, Stouffer (1962) redefines opportunities to a given city as the number of migrants to that city from all other cities of 100,000 population or more, except from that city's suburban satellites. Further, migrants compete for the

vacancies open in a given city and determine the attractiveness of that city. Finally, the opportunities intervening between two places act to discourage migration between them. Thus, when migration between two cities (a and b) is being studied, three factors must be considered: (1) migration is a direct function of the opportunities at place b; (2) migration is an inverse function of the intervening opportunities between places a and b; and (3) migration is an inverse function of the number of migrants competing for opportunities at place b (Stouffer, 1962). In his study of 116 migration streams, Stouffer (1962) found that the use of competing migrants and intervening opportunities model erased large discrepancies in the distance models.

Although these models seem to show promise, both have drawn criticism from various directions. Stouffer's model amounts to a sophistication of Zipf's use of distance as a spatial restriction to migration. Stouffer (1940, 1962) argues that a distance model such as Zipf's is inadequate and too simplified to deal with the complexities of migration. Shaw (1975) points out that the major problem of gravity models lie in the inadequacy of their assumptions. These assumptions tend not to take into account the diversity of individuals and personal needs, the irregularity and inconsistency of migration with respect to direction, or that migration is not necessarily

a function of population size. The major criticism leveled at both these models is that they tend to confuse unit of analysis by explaining aggregate movement in terms of individual decisions. In addition, there has been little effort to elaborate Stouffer's model theoretically. Some empirical research incorporating distance with other factors has been done, however. For instance, Rose (1958) found that the distance moved steadily declined with descending class order except for the lowest class.

It seems evident that there are major problems using the gravity models to explain migration. The importance of these models is in the use of the spatial dimension as a factor restricting migration. Because the present study is dealing exclusively with in-migration, location of prior residence is impossible to identify. As a result, distance moved will be virtually impossible to calculate. Further, since this study is using state level data, distance of move would be highly inaccurate if it could be calculated. Since specific location within the state is not identified, accurate calculations of distance moved could not be made. These limitations severely restrict the utility of distance as a variable in the present work.

The most potentially fruitful theoretical avenues open for the present study include an examination of the selectivities and determinants of migration. Selectivities of migration has been discussed in an

earlier section. After having systematically eliminated other deterministic approaches to migration, I will discuss that body of literature pertaining to the determinants of migration.

Research on the determinants of migration and many of the tenets of this approach are based on the work of Ravenstein (1976), Lee (1966), Todaro (1976) and Lowry (1966). From this perspective, the flow of migrants from one location to another is determined by characteristics of the area of origin, the area of destination and intervening obstacles that act to either push or pull migrants to particular locations (Lee, 1966). These characteristics can act in either a positive or negative manner in influencing an individual migrant. It was Ravenstein who first identified the limitations of distance on migration. He argued that "the rate of migration is inversely related to distance between points" (Ravenstein, 1976:198). Thus, distance acts as a control on the migratory process. Using the rather large rural-urban migration in nineteenth century England as a point of reference, he identified many processes of contemporary migration including stage migration, stream migration, movement towards industrial and commercial centers and characteristics of migrants.

Building on Ravenstein's theory, Everett Lee (1966) uses the concepts of push and pull, characteristics of the

area of origin and area of destination, respectively, which are involved in the decision to migrate. In addition, personal characteristics are taken into account. In other words, different people can be affected in different ways by the same set of obstacles. Further, volume of migration is determined by the degree of diversity in the area, the degree of diversity in the people, the difficulty in surmounting the intervening obstacles and fluctuations in the economy. In addition, while migration is selective of the younger, better educated members of an area, the characteristics of migrants tend to be intermediate between the characteristics of the population at the area of origin and the population at the area of destination (Lee, 1966). For example, migrants tend to have less median education than the population at the area of destination. He emphasizes individual decisions to migrate, personal evaluations of obstacles, and differences between individuals in response to the same set of obstacles. Implicit in both Lee and Ravenstein, however, is the notion that certain characteristics of an area of destination act to either pull or repel potential migrants. In this way, these theories form the groundwork of more recent determinants of migration research.

Michael Todaro (1976) builds upon Ravenstein's theory, emphasizing the role of economic motivation. His

model has four major features: (1) migration is determined by rational economic considerations; (2) it is based on expected rather than actual rural-urban wage differentials; (3) the probability of obtaining an urban job is inversely related to urban unemployment rates; and (4) high rates of expected unemployment determine individuals' decisions to migrate. A given potential migrant, whether through hearsay from other migrants or relatives, information presented in newspapers or other literature, or simply from the acceptance of a stereotype of the city as the economic promised land, creates an expected probability of employment and level of wages. Todaro (1976) has found that the potential migrant makes his or her decision to move based on the expected rather than actual employment and wage opportunities.

Additional research concerning the determinants of migration is centered on the work of Ira Lowry (1966). In Migration and Metropolitan Growth (1966:22) he argues "...that the choice of destinations does reflect a knowledge of and interest in labor market conditions there." From this perspective, migrants choose destination locations based on economic characteristics of the location and, thus, migration rates can be directly tied to macro-level economic characteristics of a location. Lowry (1966) found that rapidly rising incomes in a given locality are indicative of a tight labor market

and act as an inducement to in-migration. Three further findings of his work include: (1) places experiencing prosperity generally have labor market conditions which attract in-migrants from a national pool of persons, especially from nearby places; (2) net migration to a given place is a function of the size and composition of the resident population, which determines the amount of out-migration, and the availability of jobs and the level of wages, which determines the amount of in-migration; and (3) measured over a substantial time interval (a decade), net migration to a given place has a direct relationship to the growth of employment in that place and an inverse relationship to the natural increase of the resident labor force. This is reflected in changes in the total number employed in the area.

The primary focus of the Lowry study is the economic determinants of the rate of in-migration. Because it deals with the factors associated with the area of destination involved in determining migration, this study can be classified as a gravity model or a pull model. The variables explaining most of the variance in his model are rate of unemployment, number of persons in the civilian nonagricultural labor force, and hourly manufacturing wage in dollars. Similar to Todaro's model, Lowry recognizes the importance of rate of unemployment and wage level in explaining the rate of in-migration.

The decade or so following Lowry's (1966) classic study witnessed numerous studies linking migration to economic determinants. Following from a human ecological point of view, migration is seen as an adaptation to social and economic conditions in the environment (Shaw, 1975). As such, fluctuation in migration rates depends on such structural variables as income, unemployment, education, urbanization and industrial change. Migration, in essence, is seen as the method by which labor demands are met. Morrison (1977:69) clearly ties economics in the form of employment growth and migration:

In-migration and employment growth reinforce one another. Employment growth acts as a magnet to attract available migrants (jobs draw migrants). Alternatively, differential employment growth itself may result from differential in-migration and its invigoration of local demand for goods and services (addition of migrants stimulates new jobs).

Conversely, out-migration is seen to stagnate an area as productivity of the labor force is reduced and thus the attractiveness of the area. This has been particularly applied to the Appalachian Region (Photiadis and Schwarzweller, 1971; Hansen, 1970).

The publication of the 1970 Census and the 1975 Current Population Report called into question the theory that migration fluctuation was dependent upon economic determinants alone. Beale (1975) identified the "new" nonmetropolitan turnaround and Berry and Dahmann (1977)

among others documented the regional shifts in net migration. As these two nontraditional trends have taken shape a discussion has arisen in the literature pitting those supporting an "economic determinants" stance against those following a "quality of life" or "noneconomic determinants" stance.

At this point, the issue of quality of life versus economic determinants of migration is a confusing body of literature. Much of this has to do with the variety of definitions of quality of life. This plethora of definitions can be classified under three categories: one micro level approach and two macro level approaches. First, the micro level approach tends to define quality of life in terms of "perceived" satisfaction or happiness with where the respondent is living. This perception is based on a variety of subjective evaluations of objective criteria including economic situation, social conditions, housing and others (Campbell, et al., 1976). As a result, both economic and noneconomic variables play a role in defining quality of life. From this perspective, there is an overlap between economic determinants and quality of life determinants of migration. They are indistinguishable in the subjective perception of the individual respondent. Second, one macro level approach has only superficially approached the issue of quality of life. This approach equates quality of life with

ecological or environmental amenities like the percent of forested land or an index of the proportion of hotels and motels in an area (Williams, 1981; Lichter and Fuquitt, 1982). Generally, no theoretical discussion of quality of life is addressed and the remotest relationship between the variables chosen to measure quality of life and the concept itself are left to conjecture.

The third approach falls between the first two on a continuum of breadth of definition. Two articles exemplify this approach (Heaton, et al., 1981; Pierce, 1984). This macro level approach defines quality of life as a set of objective social, cultural and environmental indicators. Important here is that they are objective in nature. Heaton, et al. (1981) uses an amenity index plus several environmental measures (presence of water, average temperature). Pierce (1984) uses the Places Rated Almanac to rate United States cities with approximately 80 variables which are placed in nine categories. These categories or broad characteristics include: the arts, climate, crime, economics, education, health care, housing, recreation, and transportation (Pierce, 1984). Although economics is included as one of nine variables measuring quality of life, it can be easily separated from the others because of the nature of the indicators.

Because of the nature of the problem of defining quality of life and the level of analysis, the third

approach is the most appropriate for the present study. In addition, it will use the concept noneconomic determinants rather than quality of life determinants of migration. As stated earlier, quality of life poses too many problems to be considered operational in a study such as this.

Williams and Sofranko (1979) found that at the micro level of analysis the major stated motivations for leaving places of origin, especially among those from metropolitan areas, are quality of life or noneconomic considerations. Among both the economic and quality of life variables they found associated with the new migration trends were: economic--(1) employment growth resulting from industrial decentralization; (2) suburbanization and exurbanization; and (3) growth associated with extractive industry; and quality of life--(1) the movement of urban elderly to rural retirement areas; (2) the development of rural recreation areas; (3) growth in opportunities for higher education in nonmetro areas; and (4) changing residential preferences.

Paul Sommers (1981), analyzing 1960 and 1970 Census data for states as well as Current Population Reports between 1970 and 1979, found that the 1960 to 1970 migration pattern has fallen apart--that between 1960 and 1970 economic factors played a major part in the rate of specific net migration but since 1970 quality of life

factors have played an ever increasing role in the determinants of migration. Economic variables that he included as explanatory factors include median family income, mean unemployment rates and average monthly family AFDC payments in the state. The quality of life factor that he includes is a dummy variable for region "employed to capture the regional pattern of net migration that emerges after economic factors have been taken into account" (Sommers, 1981: 295). Although the adequacy of his quality of life indicator can be called into question, it is significant that the noneconomic factors have been found to have a larger role in the determinants of net migration. Sommers (1981) recommends further study using such quality of life indicators as crime rate, pollution, climate and environmental amenities.

James Williams (1981:183) finds that "no evidence is found of declining importance of traditional employment related factors as determinants of migration." Using gross migration data for nonmetropolitan State Economic Areas of the Midwest, he regresses in and out-migration on a set of determinants that include employment change, percent of workforce in the military, presence of a university, population size, unemployment rate, income, education and percent of land area which is forested. Since one of the central features of this article was to argue against the hypothesis that economic determinants

were "losing ground" as explanations for migration, it would appear inadequate that he include only two quality of life measures, percent of land area which is forested and presence of a university. Ploch and Cook (1982:37) responded to Williams arguing that "the turnaround migration movement is a highly complex phenomenon that is, as yet, not well enough understood to be reduced to a set of equations." Citing data from Maine, they contend that quality of life circumstances may play a larger role than Williams allowed. Williams' (1982) response to the Ploch and Cook (1982) comment focuses on the differences in conclusions drawn from micro versus macro oriented approaches to studying the turnaround and its determinants. He contends that micro level approaches will generally find quality of life determinants to be more important and more macro or ecological approaches will support the traditional economic determinants of migration argument. This has to do with differences in the definition of quality of life and in the scope of quality of life indicators between micro and macro level studies.

In a more macro level approach to explaining the trend in deconcentration, however, Lichter and Fuquitt (1982) do not support Williams' argument. Employing Census and Current Population Report data for 1970 and 1975, they find that "it nevertheless remains clear that

traditional ecological location and economic base variables have been of diminishing utility in explaining deconcentration during the 1970s" (Lichter and Fuquitt, 1982:220). Not only are their findings at odds with Williams' (1981) but they discover these trends using macro level data. The pertinent variables used as determinants include adjacency to metropolitan counties, location of an interstate highway, density, a regional variable, percent employed in manufacturing, percent employed in agriculture and a proxy quality of life variable. This proxy variable attempted to tap some sort of leisure scale by "creating a dummy variable indicating whether the county had twice the number of hotels and motels in 1967 that one would expect on the basis of its 1970 population" (Lichter and Fuquitt, 1982:217). It is crucial to note that despite the obvious inadequacy of this indicator (as the authors themselves admit) that it, like the quality of life measure in Sommers (1981), plays such an important role as a determinant of migration in the post-1970 period.

Shaw (1975) has pointed out that migration is determined by a combination of social and economic factors associated with the areas of origin and destination. Much of traditional literature has focused entirely on the economic aspects of these determinants, but increasingly research has shown that migration, especially that in the

past decade or so, is less dependent upon economic factors and more dependent upon noneconomic or quality of life factors. This has been especially found in regards to the migration that has broken with tradition--that of the nonmetropolitan turnaround and regional redistribution. What is important is that not only are the trends different and the determinants changing, as has been pointed out, but that the selectivity of the migrants involved in this new migration also have characteristics that differ from more traditional migrants (Lichter, Fuquitt and Heaton, 1978; DeJong and Humphrey, 1976). The crux of this logic is that both the changing determinants and changing selectivity of the migration for the past two decades increasingly resemble the determinants and selectivity of one component of the migration stream--return migration (Miller, 1973; Lee, 1974; DaVanzo and Morrison, 1981).

CHAPTER III

Methodology

Methodologically, this research focuses on two distinct thrusts: (1) identifying the selective characteristics of primary, secondary and return migrants and nonmigrants and (2) determining the role of return migration as a factor in the relative importance of economic and noneconomic determinants of in-migration. Since both issues employ a unique array of variables, use a different set of data, and ask separate questions, I have separated the two in this chapter. Operationalization of variables and discussion of the data and method have been divided so that they are first discussed for the selectivity of migration and second for the determinants of migration.

Census Data and Unit of Analysis

Because migration is a complex social phenomenon, much of what can be learned or explained about it is limited by the kinds and amount of available data. In this respect, data themselves limit the definitions of primary, secondary and return migration, the unit of analysis, and the scope of the study itself. Data encompassing the components of migration come from two types of sources: longitudinal surveys and Censuses.

The two most heavily used longitudinal studies that incorporate migration data are the Panel Study of Income Dynamics (PSID) from the University of Michigan and the Continuous Work History Sample (CWHHS) of the Social Security Administration. The former renders information on approximately 5,000 families between 1968 and 1982. The latter is a large sample of workers who pay social security. The shortcoming of the PSID is that it is not applicable to the determinants of migration question. Problems in the CWHHS are many including the age of the data (last available year was 1974), errors in the data, and its unsuitability for identifying return migrants (Brown and Wardwell, 1980).

The advantage of the longitudinal data is that they render more continuity in the presentation of the migration phenomenon. The vast array of moves and returns can be identified for individual migrants. For instance, a longitudinal study could reveal that a particular individual had migrated thirty times in a lifetime and had actually "returned" to four separate locations at different periods of his migration history.

This depth of analysis is lost using Census data which takes a snapshot of the population once every ten years and then asks only several migration related questions. As a result, the picture of migration's complexity is lost. For instance, the above hypothetical

individual's migration history could look quite different using Census data. The advantage of Census data, however, is that the major streams of migration can be identified and the scope of the migration phenomenon becomes clear. Census data, although it identifies residence for only three points in time, sheds light on the societal role of migration and its determinants. Community characteristics associated with migration can much more easily be identified with Census data.

Considering the advantages to Census data, especially as they pertain to the kinds of questions that this study seeks to answer, I have decided to employ Census data in this research. As far as migration is concerned, the Census delineates three points in time as reference periods--place of birth, residence five years before the time of the Census, and residence at the time of the Census. Despite a county distinction for residence both five years before and at the time of the Census, place of birth is coded only for state. Thus, the lowest common denominator for residence is the State of Birth. As a result, I must limit my discussion of the role of return migration on the determinants of in-migration to the state.

Dependent Variables

The concern of this research is the selectivity and determinants of return migration. Because Census data do not allow for tracing migration history, a return migrant is defined as an individual who was born in state A, lived in state B five years before the Census, and has moved back to state A at the time of the Census. Obviously, using these data greatly underestimate not only migration propensity but the various types of migration. Lansing and Mueller (1967) show that return migration to place of birth is a small part of the total return migration picture. In fact, it amounts to less than half of return migration. Return to places where one grew up represents the largest percentage of return migration, followed by return to place of birth and return to place where one had lived previously but was not born or raised. As a result, one must recognize the vast under-representation of the element of return migration used in this study.

Return migrants may be compared to primary and secondary migrants and nonmigrants. Following from Eldridge's (1965) terminology, primary migrants are individuals who left their state of birth less than five years before the Census. The state in which they were born is the same as that in which they were residing five years before the Census. A secondary migrant is one who is born in state A, lives in state B five years before the

Census, and lives in state C at the time of the Census. The secondary migrant has moved at least twice and each time to a different state. A nonmigrant is a person who lived in the same state in all three points in time. The Census also identifies individuals who reside outside their state of birth both five years prior to the Census and the year of the Census. Although these individuals have not been identified in the literature, I will recognize them as five-year nonmigrants. Individuals who live in the same state in all three points in time will be referred to as lifetime nonmigrants. Table 1 clarifies the distinction in types of migrants and nonmigrants.

When focusing on the determinants of migration, I look first at the total stream of migration into a state and then break this stream into primary, secondary and return migration. The total stream is called immigration, the ratio of all persons moving into a state for a given Census year to the number of persons residing in that state.

Selectivity of Migration--Variables

Eight socio-demographic variables will be used to determine differences between primary, secondary, and return migrants and nonmigrants. I have selected out those variables that the literature has found to distinguish migrants from nonmigrants: age, sex,

Table 1: Definitions of Migrants and Nonmigrants

Migrant/Nonmigrant	Birth	Place of Residence 5 years ago	Census Year
Lifetime Nonmigrant	A	A	A
Five-year Nonmigrant	A	B	B
Primary Migrant	A	A	B
Secondary Migrant	A	B	C
Return Migrant	A	B	A

education, marital status, occupation, income, household size and race. Standard Census categories and definitions will be employed for each. Definitions can be found in the Description and Technical Documentation for the Public Use Samples (U.S. Bureau of the Census, 1963, 1973) or the Description and Technical Documentation for the Public Use Micro Sample (U.S. Bureau of the Census, 1983).

Selectivity of Migration--Data and Method

The analysis of migration selectivity is based upon data secured from Public Use Samples (PUS) from 1960 and 1970 and Public Use Micro Samples (PUMS) from the 1980 United States Censuses of the Population. (U.S. Bureau of the Census, 1963, 1973, and 1983). All three files are from the 1 sample. These include the 1/1000 samples from 1960 and 1980. The data have been secured on tape from ICPSR.

The 1960 and 1980 samples are representative of the total U. S. population and include individuals from all fifty (50) states. There is, however, some variation between census years in sample size. This is due to a difference in the way that the files were created. For 1960 and 1980, the 1/1000 sample literally means one-one-thousandth of the total U.S. population. This translates into a total sample size of 180,047 for 1960 and 226,674 for 1980. The sample size for 1960 and 1980 is further

reduced by the fact that "residence five years before the census," the migration question is not asked of everyone and this is the basis for the migration analysis. In addition, only one-half of the sampled households were coded for the migration question in 1980 due to budgetary problems. "Thus, the 5-percent sample includes only a 2 1/2-percent sample for migration and place of work" (U.S. Bureau of the Census, 1983: 8). As a result, the sample sizes that are directly applicable to the kinds of questions asked in this analysis are 154,960 for 1960 and 97,312 for 1980.

The data for 1970 are selected in a somewhat different manner than those for 1960 and 1980. They are taken from a 1/100 sample of the 15% state sample data. This means that if the population of the U.S. was 200 million in 1970 (which is a low figure), 15% of that number is 30 million. One-one-hundredth of that figure is 300,000. Since this is a 1/1000 sample, a subsample of 1/10 from the 300,000 primary sample is what is taken. In my hypothetical example, this results in a sample size of 30,000, not far from the 34,539 actually found in the 1970 file. In addition, all of the cases in the 1970 file are part of the migration sample.

The data for this study are all from the state, A samples to assure representation by state and, thus, generalizability to the U.S. population. The Census

Bureau samples along three geographic divisions resulting in three different samples. There is the A sample or sample of individuals by state, the B sample or sample of county groups of 250,000 or more population, and the C sample or sample of the nine geographic divisions with neighborhood characteristics included.

Both the 1960 and 1980 samples include individuals from all fifty states. The 1970 sample includes only thirteen states. The reduced number of states results from the sampling procedure discussed above. The thirteen states include: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. Since they all appear to be western states, they are not representative of the total U.S. population. However, this was the only Public Use Sample for 1970 available from ICPSR. In addition, the migration data in this file is compared with the migration data reported in published reports from 1970 using the entire migration sample. The percentages reported in each are similar. Therefore, the 1970 data provide an interesting comparison point for 1960 and 1980 but its value for generalizability is extremely limited. As a result, results of the data analysis concerning selectivities should be interpreted with caution.

Primary, secondary, and return migrant and nonmigrant categories are crosstabulated with each of the eight

socio-demographic characteristics for each decade. This results in a comparison of the migrant groups over eight selective characteristics for three points in time.

Determinants of Migration--Variables

Relevant explanatory indicators consist of economic as well as noneconomic characteristics of the area of destination. A number of variables have commonly been used in prior research. Economic variables found to be most highly correlated with rate of in-migration are: change in civilian nonagricultural employment, income, and rate of unemployment (Lowry, 1966; Greenwood, 1976; Hall and Licari, 1977; Shaw, 1975; Willis, 1974). Rate of in-migration can be defined as the number of in-migrants to a state divided by the population of that state aged five years or older multiplied by 1000. Further, Shaw (1975) has identified median age of the population, median education of the population, and change in employment by industry as important variables in explaining the variance in the rate of in-migration. Noneconomic indicators either suggested or used in prior research include: crime rate, pollution, density of population (population per square mile), average number of persons per room, percent of forested land area, and a proxy measure for leisure, i.e., twice the number of hotels and motels in 1967 that one would expect on a basis of 1970 population (Williams,

1981; Lichter and Fuquitt, 1982; Sommers, 1981; Ploch and Cook, 1982).

Since the central focus of this study depends on differentiating economic from noneconomic determinants of migration, a number of clearly delineated indicators will be used to predict rate of in-migration. I have chosen to follow both Heaton, et al. (1981) and Pierce (1984) in the selection of the independent variables, especially the noneconomic indicators. Four variables represent the economic determinants of migration: (1) median family income (FAMINCOM); (2) unemployment rate (UNEMPLOY); (3) percent employed in manufacturing (MANUF); and (4) percent employed in professional and technical occupations (PROF). These four variables represent a cross-section of economic influences on migration. Migrants are generally attracted to high wage, low unemployment areas where the economic base is growing. A great deal of literature supports the use of the first three variables (Lowry, 1966; Todaro, 1976; Williams, 1981; Sommers, 1981; Shaw, 1975; Greenwood, 1976). Recent literature has shown that migration is decreasingly related to manufacturing employment (Lichter and Fuquitt, 1982). This has to do with recent movement from secondary to tertiary levels of industry. To compensate for the changing composition of the workforce, I have included percent employment in professional and technical occupations. If migration is

not as clearly related to manufacturing employment, economic determinants may still be at work in the changing types of employment.

A set of objective noneconomic characteristics of a state which individuals have been found to subjectively include in attributing satisfaction or happiness with an area will also be employed in this study. These have been taken both from the migration literature and from the quality of life literature. Pierce (1984) examines the Places Rated Almanac which employs approximately eighty indicators in nine categories of quality of life. These nine categories have been rated in importance for an individual's perception of quality of life by a random sample of the population (Pierce, 1984). The categories listed in order of perceived importance are: economics, climate, crime, housing, education, health care, recreation, transportation, and the arts. Several points are worthy of note. First, economics was rated first and included indicators similar to those used in this study. Second, both transportation and the arts were considered so unimportant that they appear to play little if any role in the delineation of quality of life (Pierce, 1984).

Given the emphasis on the noneconomic characteristics which play a role in migration and the low ratings of both transportation and the arts by Pierce's sample, the noneconomic indicators for the present study will focus on

the remaining six categories. Rather than employ a large array of indicators, one variable was chosen from each category. This results in six noneconomic indicators. They are: (1) climate--average January temperature divided by the average June temperature (CLIMATE); (2) crime--the overall crime rate or the number of crimes per 100,000 population (CRIME); (3) health care--the number of hospital beds per 100,000 population (HOSPBEDS); (4) education--the ratio of students to teachers in public elementary and secondary schools (EDUC); (5) housing--percent of owner occupied housing units (HOUSING); and (6) recreation--an index of amenity development using percent of labor force employed in entertainment, recreation, and personal services, the number of hotels and motels per capita, and the proportion of housing units that are seasonal (AMENITY).

Both the climate and recreation variables are taken from Heaton, et al. (1981). The climate variable reflects the mildness of the temperature of a given state. The amenity index for recreation was transformed due to the skewness of the variables. Heaton, et al. (1981: 47) perform a logarithmic transformation on each variable, "then the transformed variables were standardized and summed to create the amenity index." An identical transformation was necessary for these data due to the skewness.

Preliminary analysis looked at both the independent effects of the six noneconomic variables and their combination in a single index to see if they did in fact tap a single concept of quality of life. In an effort to try to establish if there were an underlying core set of variables tapping "quality of life" a factor analysis with a Varimax rotation was run to see if these ten variables would load onto a single factor. This analysis rendered four separate factors. The results of this analysis are presented in Tables 6 and 7 and will be discussed more fully later. Important here is that no single factor tapping an underlying quality of life variable was discovered. Thus, no methodological justification could be brought to bear in support of quality of life as a multidimensional concept. In addition, it is an insurmountable task to justify why economic variables can or cannot be included in a quality of life concept, especially if that concept statistically does not exist. As a result, the decision to refer to these six variables as noneconomic determinants of migration not quality of life determinants was supported. Quality of life is too elusive yet volatile a concept to employ in this analysis, especially since inclusion and exclusion of variables in its operationalization is completely arbitrary.

Determinants of Migration--Data and Method

The analysis of migration determinants is based upon data secured from a variety of Census publications. Data on in-migration, return, primary, and secondary migration rates for 1970 are found in published tables in Recent and Lifetime Migration subject reports (U.S. Bureau of the Census, 1973). A comparable subject report for 1980 will not be published due to budget cuts. In order to find migration data by state comparable to the 1970 published reports, I have generated a facsimile table for 1980 using the 1/1000 state 1980 Public Use Micro Sample data. Data for the independent economic and noneconomic variables exist in published form in the State and Metropolitan Area Data Book (U.S. Bureau of the Census, 1982) and the Census of Population and Housing (U.S. Bureau of the Census, 1972 and 1982). Data for aggregate rates of migration as well as characteristics of states that have been shown to influence migration were collected for all 50 states for two decades--1970 and 1980.

In order to discuss the changing determinants of in-migration and their relationship to return migration, growth or decline in each type of migration is calculated for each of the decades. With this information, the relative proportion of return migration as well as the change in this proportion from decade to decade will be determined. Second, the four dependent variables (rate of in-migration, rate of primary migration, rate of secondary

migration, and rate of return migration) will be regressed on the ten independent variables for each of the two decades. This results in eight regression equations. The general form of the regression equations including predicted relationships is:

$$\begin{aligned} \text{MIGRATION} = & a + b\text{FAMINCOM} - b\text{UNEMPLOY} + b\text{MANUF} + b\text{PROF} \\ & - b\text{CLIMATE} - b\text{CRIME} + b\text{HOSPBEDS} - b\text{EDUC} \\ & + b\text{HOUSING} + b\text{AMENITY} + e \end{aligned}$$

where the dependent migration variables are:

INMIG = rate of in-migration

PRIMARY = rate of primary migration

SECONDARY = rate of secondary migration

RETURN = rate of return migration

and the independent variables are:

a = intercept

FAMINCOM = median family income

UNEMPLOY = unemployment rate

MANUF = percent employment in manufacturing

PROF = percent employment in professional and
technical occupations

CLIMATE = average January temperature divided by average
June temperature

CRIME = crime rate (number of crimes per 100,000
population)

HOSPBEDS = number of hospital beds per 100,000 population

EDUC = ratio of students to teachers in public

elementary and secondary schools

HOUSING = percent of owner occupied housing units

AMENITY = recreation amenity index

e = error term

Each of the four equations are run for 1970 and 1980. This procedure will tap the relative role of the economic and noneconomic determinants of in-migration in general as well as for the three components of migration. Results of these equations are compared using standardized regression coefficients (beta coefficients) (Lewis-Beck, 1980). Thus, changes in the relationship of the determinants can be observed for the different types of migration and the time period of the observation. In the regression equation, the independent influence of each variable is taken into account, controlling for all other variables in the equation.

Finally, this study will attempt to ascertain whether the determinants of total in-migration change as the proportion of return migration increases. The literature has shown that return migration is more closely associated with noneconomic reasons for moving. As a result, it has been hypothesized that the larger the proportion of return migration the more closely in-migration will be associated with noneconomic determinants. To directly determine the role of return migration, it will be entered as a eleventh

independent variable in the in-migration equation for the two decades. Proportion of return migration will be coded into low and high categories, and included as a dummy variable. This coding allows for the creation of interaction terms for proportion of return migration with each other independent variable. This allows for a direct test for the influence of the proportion of return migration on both the economic and noneconomic determinants of in-migration.

Multiple regression is the best statistical technique to use in the kind of analysis for this dissertation. The large number of variables being analyzed, the kinds of questions being asked, and the interval or ratio nature of the variables themselves point to multiple regression as a logical choice.

One problem that this study faces is criticism based on arguments of "ecological fallacy." In examining the determinants of migration, in-migration rates grouped by states which infer individual level migration behavior are being used. Because the study uses aggregated data to infer individual level behavior, it is potentially exposed to model misspecification and bias in its estimates based on the aggregation process itself. Robinson's (1950) landmark study showed that correlations of two variables at the aggregate level can differ from correlations of the same two variables at the individual level. Since that

time sociologists have been reluctant to infer individual level behavior from aggregate data.

At the same time, however, a growing body of literature has shown how to avoid the ecological fallacy and how to resolve problems caused by the ecological fallacy (Gove and Hughes, 1980; Hanushek, et al., 1974; Firebaugh, 1978; Langbein and Lichtman, 1978). These studies agree that the key to ecological inference is in theory, not in technique (Langbein and Lichtman, 1978; Hanushek, et al., 1974). If in the theory, all pertinent variables related to the dependent variable have been specified, many of the problems of ecological inference will be resolved. When there is misspecification, the error term will be correlated with one or more of the independent variables in the regression equation (Langbein and Lichtman, 1978). To deal with the problems of ecological inference, one "...must consider both the causes of the individual behavior in question and the process by which individuals were grouped" (Langbein and Lichtman, 1978: 61). The present study has attempted to theoretically explore all avenues of potential correlation with in-migration. Both micro and macro theories of migration concur with the selection of most of the variables in this model. In fact, additional noneconomic variables have been included in an effort to address shortcomings in earlier research. However, relationships

unanticipated by either myself or prior research may be at work. In this case, it is imperative that the present study be cognizant of potential model misspecification.

Data availability have not only forced the use of aggregate data but also limited the level of aggregation to the state. The fact that individual level data appropriate to the research question are dated (the last year of the CWS is 1974) forced the use of aggregate data. In addition, the availability of information on return migration is limited to the state level, dictating the use of state aggregated data. Qualities of the state itself, aside from those mentioned in the model may be related to in-migration to that state even after all of the theoretical precautions have been taken to properly specify the model. However, the diversity of the geographical area and the heterogeneity of individuals within states should randomize the selection of individuals in the aggregation process and sufficiently reduce the effect of aggregation. If these precautions do not reduce the potential for the ecological fallacy, the bulk of the analysis is based on comparisons of standardized regression coefficients (betas). Research has shown that regression coefficients are least susceptible to bias due to ecological inference (Longbein and Lichtman, 1978; Hanushek, et al., 1974). Correlations tend to be more susceptible to bias. Thus, the

coefficient of multiple determination and standardized regression coefficients (which are linear transformations of the correlation coefficient) can become biased in the presence of ecological inference.

Chapter IV

Data Analysis--Selectivities of Migration

Results of the data analysis will be reported in two chapters. The present chapter deals with the selectivities of migration for 1960, 1970, and 1980. Chapter V reports the findings of the regression analysis used to determine the role of return migration as a factor in the relative importance of economic and noneconomic determinants of in-migration. The analysis of the selectivities of migration involves crosstabulating eight socio-demographic characteristics with the types of migrant and nonmigrant categories for 1960, 1970, and 1980. These characteristics include: age, sex, education, occupation, marital status, household size, income, and race. The findings reported in this chapter will be divided into eight sections corresponding to the eight characteristics. Findings for each census year will be presented under the selectivity characteristic heading.

The results are comparable across years as the data are all one-in-one thousand samples randomly selected from all fifty states. One major difference between the tables for 1960 and 1970 and 1980 is that there is one fewer migrant category for 1960. A complete list of the migrant/nonmigrant categories includes: lifetime nonmigrant, return migrant, primary migrant, secondary

migrant, and five-year nonmigrant. Definitions are given in Chapter III. In 1960, state of residence five years ago was not coded. Rather, a generic classification including same house, different house same state, different house different state, etc. was used in the migration coding. As a result, it is impossible to determine whether an individual had lived in the same state at both the time of their birth and five years before the 1960 census. The difference between a primary and secondary migrant is based on this particular piece of information. Since these two types of migrants are indistinguishable for 1960, the categories have been collapsed into a single primary/secondary migrant classification for 1960. State of residence five years prior to the census was coded for both 1970 and 1980 so these categories remain separate for these years.

Types of Migrants and Nonmigrants-

Table 2 presents a breakdown of the migrant/nonmigrant classification for 1960, 1970 and 1980. In 1960, nearly two-thirds of the population were lifetime nonmigrants, 64.1 percent, while more than a quarter were five-year nonmigrants, 26.9 percent. Only a very small percentage, 9.0 percent, could be classified as migrants (return, primary and secondary migrants), while the percentage of nonmigrants (including both lifetime and

five-year nonmigrants) was at its highest across decades, 91.0 percent.

In 1970, the percentage of nonmigrants (both lifetime and five-year nonmigrants) declined to 86.9 percent. Only 47.4 percent of the population, however, fell into the lifetime nonmigrant category, while 39.5 percent were classified as five-year nonmigrants. There is a tremendous difference between the percentage of lifetime nonmigrants for 1970 and the percentage of lifetime nonmigrants in 1960 and 1980. Doubt regarding the randomness of the sample can be cast based on this discrepancy. A number of recalculations and checks were made in the coding, etc., to uncover an error were tried with no success. It can only be assumed that this can be associated with the sampling. Other migrant categories have reasonable sizes and are directly comparable to published reports. The proportion of return migrants changed little from 1960 to 1970, 1.7 percent as opposed to 1.4 percent. The proportion of primary and secondary migrants increased from 1960 to 1970 with a total of 11.5 percent in both categories of which 5.7 percent were primary migrants and 5.8 percent were secondary migrants.

In 1980, the nonmobile portion of the population (including both lifetime and five-year nonmigrants) decreased to a low of 80.0 percent. This marks an increase in the proportion of migrants in the population

**Table 2: Percent of Population in Migrant
and Nonmigrant Status**

Migrant/Nonmigrant	Year		
	1960	1970	1980
Lifetime Nonmigrant	64.1	47.4	65.4
Return Migrant	1.4	1.7	2.0
Primary Migrant	7.6	5.7	4.0
Secondary Migrant	-	5.8	14.0
Five-Year Nonmigrant	26.9	39.5	14.6
N of Cases	154,960	34,539	97,312

from 1960, 9.0 percent, to 1980, 20.0 percent. Lifetime nonmigrants make up 65.4 percent of the population. The five-year nonmigrants make up only 14.6 percent of the population. This is a drastically reduced figure from the 26.9 percent in 1960 and the phenomenal 44.0 percent in 1970. The proportion of return migrants has not increased much since 1960 when 1.4 percent of the population was classified as return migrants to 1980 when just 2.0 percent of the population was classified as return migrants. It appears that the major change in the types of migrants found in the in-migration stream are among primary, and especially secondary migrants. In 1960, primary and secondary migrants together made up only 7.6 percent of the population. In 1970, 5.7 percent of the population were primary migrants and 5.8 percent were secondary migrants. By 1980, however, secondary migrants alone accounted for 14.0 percent of the population. There appears to be a slight decrease in the percentage of total nonmigrants. However, this table shows that the percentage of lifetime nonmigrants has fluctuated greatly over time, but is virtually the same in 1960 and 1980. It appears that the major shift that has occurred in three decades is the change from a population that is relatively nonmobile (the five-year nonmigrants) to a population that is highly mobile (secondary migrants).

Selectivity of Migration

Return, primary, and secondary in-migrants and lifetime and five-year nonmigrants were compared on eight socio-demographic characteristics traditionally found to be selectivities of migration: age, sex, education, occupation, marital status, household size, income and race. Hypothesis one states:

- H1: Return migrants differ from primary and secondary migrants and nonmigrants on eight sociodemographic characteristics.

This hypothesis establishes that return migrants are actually different from other types of migrants and from nonmigrants. The results for 1960 are presented in Table 3; results for 1970 in Table 4; and results for 1980 in Table 5. The analysis for the eight socio-demographic characteristics shows that the clearcut acceptance or rejection of this hypothesis is not possible. The conditions of the hypothesis dictate that return migrants differ from three other categories (primary and secondary migrants and nonmigrants) on eight characteristics for three time periods. This means that to be accepted, return migrants would have to differ on a total of seventy-two comparisons. It is best to address the hypothesis pertaining to each of the sociodemographic characteristics in turn and then return to this hypothesis.

Table 3: Selective Characteristics of Migrants and Nonmigrants: 1960

Characteristic	Migrant/Nonmigrant Status			
	Life Nonmiq	Return	Prim/Second	5-Yr Nonmiq
Age				
0-14 Years	28.6	22.7	21.5	8.7
15-19 Years	9.7	5.9	10.3	4.6
20-24 Years	6.5	10.3	15.9	4.1
25-29 Years	6.2	19.1	12.3	5.2
30-39 Years	14.2	20.8	18.1	16.7
40-49 Years	13.3	9.9	9.7	18.1
50-59 Years	10.0	6.6	5.5	17.3
60-69 Years	6.7	3.3	4.1	13.9
70 and Over	4.7	1.5	2.6	11.4
Mean	31.5	28.7	28.5	44.9
Sex				
Male	48.6	52.9	52.0	47.6
Female	51.4	47.1	48.0	52.4
Education				
Less than 8 Yrs	36.2	26.4	25.1	25.6
8-11 Years	32.7	26.8	25.0	37.1
12 Years	20.2	23.8	24.8	21.2
1-3 Yrs College	6.7	12.1	13.2	9.3
4 or More	4.2	10.8	11.9	6.8
Mean	10.3	11.7	11.9	11.3
Occupation				
White Collar	68.3	66.4	73.7	58.7
Blue Collar	28.8	30.6	24.1	37.9
Marital Status				
Married	47.2	56.8	52.3	64.9
Widowed	4.8	3.7	3.0	10.5
Di/Sep/Single	48.0	39.5	44.6	23.6

Household Size

One	5.0	5.5	14.6	9.8
Two	15.8	13.8	15.7	26.6
Three	16.7	15.9	16.5	18.7
Four	20.5	25.4	19.8	17.3
Five or More	42.0	39.4	33.2	27.5
Mean	4.4	4.2	3.8	3.6

Income

LT \$5000	40.3	44.9	34.9	37.7
\$5000-\$9999	42.4	39.9	38.1	40.6
\$10,000-\$14,999	9.9	7.7	10.3	11.7
\$15,000-\$24,999	3.3	2.9	3.5	4.3
\$25,000 or more	1.3	1.0	1.1	1.8
Mean	8,940	9,300	9,985	10,400

Race

White	89.0	94.2	92.4	87.8
Black	10.1	5.4	6.8	11.4
Other	0.9	0.4	0.8	0.8

Table 4: Selective Characteristics of Migrants and
Nonmigrants: 1970

Characteristic	Migrant/Nonmigrant Status				
	Life Nonmig	Return	Primary	Secondary	5-Yr Nonmig
Age					
0-14 Years	47.0	30.5	27.4	17.6	12.8
15-19 Years	12.4	12.5	13.1	7.7	5.7
20-24 Years	8.5	17.0	24.6	12.2	6.0
25-29 Years	5.4	14.6	11.9	13.8	6.8
30-39 Years	8.0	14.6	10.3	20.1	15.2
40-49 Years	7.1	6.9	5.3	12.3	16.7
50-59 Years	6.1	3.1	3.6	6.7	14.8
60-69 Years	3.4	0.6	2.1	5.2	11.4
70 and Over	2.1	0.4	1.6	4.4	10.6
Mean	21.6	22.9	23.7	32.4	42.4
Sex					
Male	49.6	51.3	54.7	51.1	47.9
Female	50.4	48.7	45.3	48.9	52.1
Education					
Less than 8 Yrs	35.3	28.0	27.2	18.6	18.5
8-11 Years	20.4	20.9	19.2	20.6	27.0
12 Years	18.0	22.6	24.7	24.7	27.9
1-3 Yrs College	11.1	17.8	17.0	18.9	15.1
4 or More	15.3	10.7	11.8	17.1	11.5
Mean	11.2	11.9	11.9	13.3	12.9
Occupation					
White Collar	78.9	74.8	76.6	74.5	67.7
Blue Collar	21.1	25.2	23.5	25.5	32.3
Marital Status					
Married	29.4	41.5	40.9	57.1	59.2
Widowed	2.1	1.5	1.8	3.6	8.3
Div/Sep/Single	68.5	56.3	57.3	39.3	32.5

Household Size

One	5.3	7.9	15.8	10.9	12.4
Two	11.6	13.0	17.9	18.9	27.0
Three	15.4	18.6	13.7	16.5	15.9
Four	22.5	19.9	15.3	19.2	16.7
Five or More	45.0	40.6	37.5	34.5	28.0
Mean	4.5	4.2	3.8	3.9	3.5

Income

LT \$5000	16.4	17.3	20.4	16.8	20.9
\$5000-\$9999	30.4	35.8	28.8	31.0	27.8
\$10,000-\$14,999	28.4	23.9	23.9	25.8	25.1
\$15,000-\$24,999	17.6	16.4	11.4	16.6	18.8
\$25,000 or more	7.1	6.6	15.5	9.8	7.4
Mean	14,040	14,760	21,210	16,380	14,020

Race

White	94.4	94.8	98.7	97.6	96.3
Black	1.4	1.5	0.8	0.5	0.5
Other	4.2	3.6	0.5	1.9	3.2

Table 5: Selective Characteristics of Migrants and Nonmigrants: 1980

Characteristic	Migrant/Nonmigrant Status				
	Life Nonmig	Return	Primary	Secondary	5-Yr Nonmig
Age					
0-14 Years	21.0	16.4	23.2	10.0	6.7
15-19 Years	11.7	8.0	10.8	7.6	6.6
20-24 Years	10.5	14.1	20.5	11.8	3.0
25-29 Years	8.8	19.7	15.8	14.9	2.6
30-39 Years	13.3	19.6	14.3	23.7	12.3
40-49 Years	9.4	9.6	4.7	11.3	16.4
50-59 Years	10.2	4.9	4.1	8.8	20.4
60-69 Years	8.3	3.9	4.3	6.5	17.5
70 and Over	6.7	3.8	2.3	5.4	14.4
Mean	33.4	30.3	26.3	35.1	48.3
Sex					
Male	48.2	52.5	50.0	49.4	46.3
Female	51.8	47.5	50.0	50.6	53.7
Education					
Less than 8 Yrs	22.7	17.0	22.7	11.6	12.6
8-11 Years	25.7	17.6	15.1	18.4	26.0
12 Years	29.1	25.4	24.2	27.8	30.7
1-3 Yrs College	13.3	20.4	19.3	21.4	15.4
4 or More	9.2	19.6	18.7	20.8	15.2
Mean	12.1	13.5	12.8	14.1	13.4
Occupation					
White Collar	69.5	70.6	75.8	70.6	72.2
Blue Collar	30.4	29.3	24.3	29.3	28.7
Marital Status					
Married	43.9	47.3	40.6	53.1	62.2
Widowed	5.6	3.5	2.0	5.2	10.3
Div/Sep/Single	50.5	49.2	57.4	41.6	27.6

Household Size

One	9.9	12.3	16.5	15.8	12.9
Two	21.4	21.5	24.2	26.2	32.1
Three	18.1	20.6	18.1	18.6	16.8
Four	21.6	24.1	19.9	19.3	17.5
Five or More	28.9	21.6	21.3	20.0	20.7
Mean	3.6	3.4	3.2	3.2	3.2

Income

LT \$5000	18.4	22.5	29.5	26.3	18.5
\$5000-\$9999	9.9	10.8	9.7	8.7	9.6
\$10,000-\$14,999	11.6	15.8	12.8	11.1	10.2
\$15,000-\$24,999	26.5	24.1	22.2	22.2	21.1
\$25,000 or more	33.6	26.8	25.8	31.7	40.5
Mean	20,371	18,167	16,355	18,947	22,750

Race

White	85.0	87.4	87.8	86.7	84.0
Black	12.0	8.7	9.0	11.0	13.8
Other	3.0	3.9	3.2	2.2	2.1

Age-

Differences between migrants and nonmigrants with regards to age have been adequately established in the literature. For the most part, median age of migrants has been found to be in the early to mid twenties, while nonmigrants tend to average in the thirties. Migration, then, is an experience of the younger members of society (Petersen, 1975; Shaw, 1975). Differences between return migrants and primary and secondary migrants have not been as clearly established, although it is expected that return migrants are older than both primary and secondary migrants.

Hypothesis 1A attempts to differentiate among the types of migrants; that is, that return migrants have a higher median age than both primary and secondary migrants, but that median age of return migrants is closer to secondary migrants. It states:

H1A: Mean age of return migrants is higher than both primary and secondary migrants, although it is closer to secondary migrants.

The data in Tables 3, 4, and 5 show that migrants as a whole do tend to be younger than nonmigrants. Mean age of migrants is found to be in the early to mid twenties, while nonmigrants tend to average in the thirties for all three decades.

As far as the comparison of the migrant types is concerned, the present analysis shows that in 1960 mean

age of return migrants was very similar to the composite category of primary and secondary migrants. In fact, only two-tenths of a year separates the mean age of return and primary/secondary migrants. In 1970, return migrants have a lower mean age than both primary and secondary migrants. The mean is actually closer to primary migrants than it is to secondary migrants. Secondary migrants are the oldest of the migrants with a difference of nearly ten years (9.5 years) above that of return migrants. In 1980, return migrants fall between primary and secondary migrants in average age. Primary migrants are the youngest of the migrants with an average age of 26.3 years; return migrants have an average age of 30.3 years; and secondary migrants have an average age of 35.1 years. Thus, even for 1980 return migrants tend to be more similar to primary migrants than to secondary migrants in age.

Given the results of the analysis on age, hypothesis 1A must be rejected. Contrary to the hypothesis, return migrants appear to be the same or about the same age as other migrants. In addition, return migrants are closer in age to primary migrants than to secondary migrants. The data simply do not show a contingent of older return migrants moving after retirement.

Sex

The selectivities literature states that there is basically no difference between the sexes in the propensity to migrate (Petersen, 1975; Shaw, 1975). What differences do exist are usually associated with internal versus international migration or distance of migration. Hypothesis 1B follows directly from this literature and states:

H1B: No difference exists in the propensity to migrate between males and females.

In 1960, approximately 49 percent of nonmigrants were male while about 51 percent of migrants were male. Thus, there is very little difference between males and females in their propensity toward migration. Individual differences between migrants show that these percentages are consistent for return and primary/secondary migrants also.

For 1970, the relationship established in 1960 continues. A larger percentage of migrants are male while nonmigrants are more often female, but the difference remains very small. Differences between the types of migrants show that a larger percentage of primary migrants are male, 54.7 percent, than either return or secondary migrants. Percentages of return and secondary migrants that are male are closer to each other (51.5 percent and 51.1 percent) than to primary migrants (54.7 percent). But these differences are very small.

In 1980, this same relationship is seen again. A larger proportion of migrants are male while a larger proportion of nonmigrants are female, but these differences are small. Differences between migrant types are smaller than in 1970 but these differences do persist. A higher proportion of return migrants tend to be male than either primary or secondary migrants.

The literature has generally found that sex differences are related to distance moved but not to propensity to return (Rose, 1958; Lee, 1974). The present study finds that there is no relationship between sex and migration. What little difference that exists in the percentages is due to the fact that it deals with state in-migration which can involve a distance element not seen in other kinds of migration analyses. To be considered a mover a migrant would have to cross a state line which forces a certain space between the area of origin and the area of destination. Migration studies that deal with county divisions or Standard Metropolitan Statistical Areas require a much smaller geographical area to be crossed to be labelled a move.

Differences between males and females in the propensity to migrate cannot be established from these data. In addition, no real difference exists between the sexes in the propensity for being a particular type of migrant. Hypothesis 1B must then be accepted.

Education

The migration literature on selectivities generally argues that migrants have higher education than nonmigrants (Shaw, 1975; Petersen, 1975). In addition, first time movers have been found to have lower educations than other migrants (Lee, 1974; Miller, 1977). Hypothesis 1C follows from this literature:

- H1C: Median education of return migrants is higher than that of primary migrants and nonmigrants but equal to that of secondary migrants.

The data in Tables 3, 4, and 5 show that for the most part migrants do have a higher mean education than nonmigrants for all three time periods in the analysis. In 1960, both lifetime and five-year nonmigrants had a lower mean education than both return and primary/secondary migrants. The analysis for 1970 reveals a somewhat different trend. Lifetime nonmigrants had the lowest mean education but five-year nonmigrants had a higher mean education than either return or primary migrants. In 1980, the trend returned to that of 1960. All three migrant groups had a higher mean education than the nonmigrant groups. For three decades, then, there is only one discrepancy from the general finding that migrants have higher mean education than nonmigrants.

The mean education of return migrants and primary/secondary migrants is roughly equal in 1960. Since hypothesis 1C argues that there will be a difference between primary and secondary migrants, the 1960 results are difficult to apply to the hypothesis. In 1970, mean education of return migrants is equal to that of primary migrants and much less than that of secondary migrants. This finding refutes hypothesis 1C. Mean education of return migrants in 1980 falls midway between that of primary and secondary migrants. The means for return and secondary migrants are a little closer than those of return and primary migration in 1980. Generally, the findings comparing mean education of the types of migrants are fairly inconclusive. The only consistent finding is that secondary migrants have the highest mean education for two decades. The results of this analysis lead to the rejection of hypothesis 1C. Return migrants do have a higher mean family income than nonmigrants over the three decades but do not necessarily have a higher mean family income than primary migrants and certainly do not have similar education levels as secondary migrants.

Occupation

The migration selectivities literature shows that migrants tend to be from white collar occupations (Shaw, 1975). Nonmigrants, consequently, tend to be from blue

collar occupations. Primary and return migrants are selected from lower skilled, blue collar occupations while secondary migrants are more likely to be from professional, white collar backgrounds (Long and Hansen, 1977; Miller, 1977). There is, however, some interaction between migration and occupational status. Occupation changes with migration and thus it is difficult to tell whether professionals tend to be chronic movers or if professional status is a result of migration. Hypothesis 1D follows from this literature:

H1D: A higher proportion of migrants will be from white collar occupations than nonmigrants. Return migrants will have lower occupational status than secondary migrants but higher status than primary migrants.

The panels for occupation in Tables 3, 4, and 5 show a breakdown of white and blue collar occupations. This was generated by grouping the managers and professionals and technical and sales occupations together as white collar and grouping the remaining classifications together into blue collar occupations.

In either form (the white collar/blue collar dichotomy or more specific groups), the results are inconclusive. In 1960, migrants as a whole fell between five-year and lifetime nonmigrants in the percentage represented among white collar occupations. The 1970 results point to the same conclusion, namely that migrants

are at a midpoint between five-year and lifetime nonmigrants in the proportion in white collar occupations. The pattern that had developed in 1960 and 1970 cannot be seen in 1980. There is a larger proportion of primary migrants in white collar occupations. Further, differences that are seen in the previous decades converge in 1980. The percentage of any migrant or nonmigrant classification in white collar occupations are very similar. others. As a result, there is not much support for an hypothesis arguing that a higher proportion of migrants will be from white collar occupations.

The second part of hypothesis 1D argues that the percentage of return migrants in white collar occupations will lie between that of primary and secondary migrants. Contrary to the hypothesis, there is consistently a higher percentage of primary migrants in white collar occupations than either return or secondary migrants. Further, return migrants are similar to secondary migrants in their percentage in white collar occupations. Thus, return migrants do not have lower occupational status than secondary migrants, nor do they have higher occupational status than primary migrants as stated in hypothesis 1D.

Marital Status

There is very little literature that addresses the relationship between marital status and migration.

Campbell and Johnson (1976) argue that a larger percentage of persons in the midst of marital disruption return home to their families and close friends than move on to entirely new locations or move for the first time.

Hypothesis 1E follows from their argument:

H1E: A larger percentage of return migrants will be from the single, separated, or divorced categories than primary, secondary or nonmigrants.

The data in Tables 3, 4, and 5 show that five-year nonmigrants are most likely to be married, most likely by far to be widowed, and least likely to be divorced, separated or single. Migrants, as a whole, fall between the two nonmigrant types in the percentage that are divorced, separated or single. These findings are borne out for all three decades.

When the migrant types are compared in 1960, a larger percentage of primary/secondary migrants than return migrants are found in the divorced, separated or single category. In 1970, a larger percentage of primary and return migrants than secondary migrants can be found in this category. In 1980, the same pattern exists. A higher percentage of primary migrants followed by return and secondary migrants can be found in the divorced, separated or single category. The results of the data analysis for 1960, 1970, and 1980 all reject hypothesis 1E. A larger percentage of return migrants is not from the divorced, separated or single category.

Household Size

Very little literature exists pertaining to the relationship between household size and migration. That which does exist is inconclusive. Some literature shows that migration can be prompted by the needs of increased household size (Petersen, 1975). Other literature shows that children can be an obstacle to migration. Hypothesis 1F argues that migrant household size will be larger than that of nonmigrants:

H1F: Mean household size will be larger for migrants than nonmigrants but no difference exists between types of migrants.

The results of the analysis show that lifetime nonmigrants consistently have the largest average household size for each of the three census years. In addition, mean household size of migrants themselves differ for 1960 and 1970 but not for 1980. In fact, mean household size has consistently dropped for all categories of migrants and nonmigrants over time and differences in the means between categories are gradually converging. These findings lead to the rejection of hypothesis 1F.

Income

The migration selectivities literature has consistently found income, like education and occupation, to be positively related to migration (Petersen, 1975). Hypothesis 1G states:

H1G: Mean income is higher for migrants than nonmigrants. Mean income is higher for return migrants than primary migrants but lower than for secondary migrants.

The findings of this study do not fully support this contention, however. In 1960, the five-year nonmigrant category had a higher mean family income than the migrant categories and again in 1980 both five-year nonmigrants and lifetime nonmigrants had higher mean family incomes than the migrant groups. Thus, the first part of hypothesis 1G is not supported. In 1970 and 1980 hypothesis 1G is partially supported. All three categories of migrants had higher mean family incomes in 1970 than nonmigrants. This supports the first part of the hypothesis for this decade only. In 1980, return migrants had higher mean family incomes than primary migrants but lower mean family incomes than secondary migrants. This is the only decade in which this portion of the hypothesis is supported. These inconsistent findings may be attributed to differences in mean household size or age of the different migrant types.

Race

The last selective characteristic to be considered is race. The literature shows that migration is primarily a white phenomenon (Petersen, 1975). No difference between migrant types has ever been tested. As a result, hypothesis 1H states:

H1H: The percent of migrants will be higher for whites than for blacks.

The findings in the last panel of Tables 3, 4, and 5 address this issue. In 1960, a higher percent of nonmigrants are black. In fact, the percent of migrants that are black is only half that of nonmigrants. A higher percent of whites are found among both of the migrant groups. In 1970, whites are no more likely to be found in migrant or nonmigrant groups. In 1970, however, a higher concentration of whites can be found in the sample than is represented nationwide. Because of this, some doubt may be cast on the representation of the 1970 findings for race. In 1980, the same patterns exist that are found in 1960. Nonmigrants appear to have a larger concentration among blacks than whites. Thus, hypothesis 1H is accepted.

Chapter Summary

Hypotheses one and two present a general argument concerning the relationships of migrants and nonmigrants on eight socio-demographic factors and the stability of these relationships over time. These two hypotheses are:

- H1: Return migrants differ from primary and secondary migrants and nonmigrants on eight sociodemographic characteristics.
- H2: The selective characteristics of migrant types remain stable over time.

The previous eight headings discussed these relationships on a characteristic by characteristic basis. The broader comparison of migrants versus nonmigrants on each of these characteristics has been basically supported in this study. Migrants are, in fact, selected from the younger, better educated, white portions of the population. In addition, interstate migrants are more likely to be male and have smaller households, but do not necessarily come from white collar occupations nor are they more likely to be single, separated or divorced, and are not likely to have higher mean family incomes. The last three relationships are contrary to some prior research in these areas (Petersen, 1975; Shaw, 1975).

When migrants are broken into several categories and these categories then compared, results become less consistent with prior research. One finding of this study is that only as much as 20 percent of the population is classified as migrant through census definition for any given point in time. This is a small sample to begin with and the number of cases involved in comparison is reduced when one goes to breaking this group into two or three subgroups as has been done here. Given this qualification, it is interesting to note that the findings have been extremely consistent across time on all eight characteristics. Even though six of eight hypotheses were rejected, this was done in the same pattern each year.

For instance, a midrange position for return migrants between primary and secondary migrants was predicted for many of these characteristics. What has been found is that primary migrants actually have higher incomes or smaller households than either return or secondary migrants and that these findings persist across decades.

One major discrepancy in the analysis is the inconsistency between the findings for 1970 and the other two decades. It appears that the sample from 1970 is not representative of the U.S. population. Mean age of migrants and racial distribution of the population in 1970 are two examples of the lack of consistency between the findings for 1970 and those for both 1960 and 1970. This casts a large shadow of doubt on the results for 1970 and any interpretation of the results for this decade must be made with caution.

Based on this analysis, a general picture of return migrants can be culled out. The hypotheses point to the uniqueness of the return migrant in his/her selective characteristics. The reason for this was to establish that if return migrants were different in their characteristics from other migrants and the proportion of return migration increased over time, then these differences in orientation of the return migrant could be what is causing the shift from economic to noneconomic determinants of in-migration on the aggregate level. In

sum, return migrants are younger than nonmigrants and secondary migrants and more similar to primary migrants. There is no appreciable difference between migrant types across time. Contrary to the argument that return migrants have relatively high education, this study shows that they are less educated than secondary migrants and five-year nonmigrants and most similar to primary migrants in education. Return migrants resemble secondary migrants in occupation as they are more likely to be from the ranks of blue collar workers. As far as marital status is concerned, return migrants are less likely to be single, divorced or separated than either primary migrants or lifetime nonmigrants and so do not move home due to marital disruption as Campbell and Johnson (1976) have argued. Their households are larger than other migrant types but are smaller than the households of lifetime nonmigrants. Finally, there appears to be no clear relationship with income for return migrants and they are no more or less likely to be black than other kinds of migrants. What has been accomplished in this section has been to show that return migrants actually are different from other migrants on some of these characteristics, just not in the ways that the hypotheses have predicted.

Chapter V

Data Analysis--Determinants of Migration

While Chapter IV dealt with the selective characteristics of migrants and nonmigrants, the present Chapter will focus on the economic and noneconomic determinants of migration. The migration literature has argued that there are a number of characteristics associated with the community, city, or state that act to attract or repel potential migrants. On an aggregate level, these characteristics can be associated with employment and income potential, or certain social or environmental amenities like recreation facilities, retirement communities, etc. Chapter III outlined ten such variables which have been found to be correlated with migration in a variety of studies. The variables with their abbreviations are: number of hospital beds per 100,000 persons (HOSPBEDS); crime rate per 100,000 persons (CRIME); percent of owner occupied housing (HOUSING); unemployment rate (UNEMPLOY); median family income (FAMINCOM); a composite temperature index calculated by dividing the average January temperature by the average June temperature (CLIMATE); percent of the labor force employed in the manufacturing industry (MANUF); percent of the labor force employed in professional and technical occupations (PROP); a composite amenity index which is

made up of the percent employed in recreation or personal industry, the number of hotels and motels per capita, and the percent of seasonal housing in the state (AMENITY); and the ratio of students to teachers in elementary and secondary schools in the state (EDUC).

This chapter reports the results of a series of regression equations used to tap the determinants of state in-migration. These equations are based on a different set of data than that discussed for the selectivities of migration. Zero-order correlation coefficients and standardized regression coefficients (Betas) are reported for all ten independent variables in the analysis as well as the F-test of significance, the intercept, the coefficient of determination (R-squared), and the coefficient of determination adjusted for degrees of freedom for each equation. There are a total of four dependent variables of interest in this study: the rate of in-migration (INMIG); the rate of return migration (RETURN); the rate of primary migration (PRIMARY); and the rate of secondary migration (SECONDARY). The analysis involves a separate regression equation for each of the dependent variables for a total of four equations for each decade. The investigation covers both the 1970 and 1980 censuses.

In addition, this study is concerned about the potential role of return migration in the changing pattern

of the determinants of migration over the last decade. As a result, it divides states into two groups based on the level of return migration. States with rates of return migration less than the mean rate of return were classified as "low" return states; states with rates higher than the mean were classified as "high" return states. A dummy code was assigned based on this classification with the "low" states assigned the zero code. With this coding scheme, it is possible to discern whether the relative rate of return migration has any affect on the economic and noneconomic determinants of migration. Two additional equations, one for each decade, will be analyzed for interaction effects with this dummy-coded return migration variable.

Determinants of Migration

The central focus of this study is the role of return migration in the changing economic and noneconomic determinants of in-migration. Past migration research has shown that traditional economic and ecological determinants of migration are weakening in their predictive power (Lichter and Fuquitt, 1982), while noneconomic correlates of migration are gaining in their predictive ability (Sommers, 1981). At the same time that this change is occurring, traditional flows of migration have reversed (Beale, 1972). This reversal has occurred

on three fronts: (1) movement from North to South; (2) movement from metropolitan to nonmetropolitan areas; and (3) movement from urban to rural places within nonmetropolitan areas (Lichter, Fuquitt, and Heaton, 1985). A major theoretical explanation for the nonmetropolitan reversal in particular is that it is an episode of collective behavior (Campbell and Garkovich, 1984). Contrary to this stance, the contention of this study is that the reversal is simply traditional migratory patterns with an unusually large proportion of a given type of migrant, specifically return migrants, in the stream of migration. It is this change that has effected the change in the determinants of migration and in the reversal in traditional flows of migration.

In order to arrive at a sufficient explanation for return migration's potential role in the changing economic and noneconomic determinants of in-migration, a number of conditions need to be established. The first condition is that return migration has increased as a proportion of all in-migration. It is on this initial step that problems arise. Table 1 presents the distribution of the three types of migrants and two types of nonmigrants for 1960, 1970, and 1980. The table shows that return migration has actually increased from 1960 to 1980. In 1960, 1.4 percent of the population were return migrants; in 1970 this figure rose to 1.7 percent; and in 1980 it again rose

to 2.0 percent. So at first glance return migration has appeared to have grown.

But what is also apparent is that the amount of in-migration itself has risen. Total in-migration is equal to the sum of return, primary and secondary migration. When these figures are added, we see that in 1960, 9.0 percent of the population were in-migrants; in 1970, 11.5 percent were in-migrants; and in 1980, in-migration had risen to 20.0 percent. Thus, while return migration grew by 21.4 percent from 1960 to 1970 and 17.6 percent from 1970 to 1980, total in-migration grew by 27.7 percent from 1960 to 1970 and a tremendous 73.9 percent from 1970 to 1980. This rise in total in-migration was due to a rise in secondary migration of approximately 141 percent from 1970 to 1980. As a result of the larger rise in total in-migration, return migration has actually decreased as a proportion of all in-migration from 15.5 percent of in-migration in 1960 to 14.7 percent of in-migration in 1970 to a low of 10.0 percent of in-migration in 1980. Thus, the first condition as stated in hypothesis 3A is rejected. The proportion of return migration relative to total in-migration has not increased from 1960 to 1980.

The second condition that needs to be met in this process is to establish the increasing importance of noneconomic determinants as compared to economic determinants of in-migration from 1970 to 1980.

Regression analysis for 1960 was fruitless to continue due to the lack of data on many of the noneconomic determinants of migration. Because no adequate comparison of economic and noneconomic factors could be drawn, regression analysis on 1960 data were dropped from the study.

Four economic and six noneconomic variables were used to explain rate of in-migration, primary migration, secondary migration and return migration. There has been much discussion concerning what constitutes noneconomic and economic determinants of migration. Much of past migration research has been inadequate in their operationalization of noneconomic (Williams, 1981; Lichter and Fuquitt, 1982), while at the same time noneconomic indicators research includes so many variables that their inclusion would be pointless for analysis. This study has, therefore, dropped the concept quality of life in lieu of the concept of noneconomic determinants of migration. Six of the most important noneconomic variables have been chosen for this research. They have been drawn from a variety of sources including Heaton, et al. (1981) and Pierce (1984).

Factor-Matrix

In an effort to discover any underlying commonalities of the economic or noneconomic independent variables, a

factor analysis was run for both 1970 and 1980. Results of this analysis are presented in Tables 6 and 7. In both decades, four unique factors were uncovered; however, the variables that load on these factors differ between 1970 and 1980.

In 1970, CRIME, FAMINCOM, and PROF load on factor one; HOSPBEDS, EDUC and UNEMPLOY load on factor two; AMENITY and MANUF load on factor three; and HOUSING and CLIMATE load on factor four. There does not appear to be any clearly economic or noneconomic factor except factor four. In 1980, CRIME, HOUSING, FAMINCOM, and PROF load on factor one; HOSPBEDS, CLIMATE, and EDUC load on factor two; UNEMPLOY and MANUF load on factor three; and only AMENITY loads on factor four. Clearly, conditions have changed between the two decades. In 1980, there is one clearly economic factor (factor 3) and two noneconomic factors (factors two and four). Thus, differences between economic and noneconomic determinants of migration are increasingly distinctive.

Zero-Order Correlation Matrix--1970-

Table 8 presents the zero-order or Pearson product-moment (r) correlation matrix for all variables in 1970. The zero-order correlation coefficient measures the strength of the linear relationship between two variables without statistical controls from a third variable.

Table 6: Factor Matrix of Independent Variables: 1970

Variable	Correlations				Communal
	Factor1	Factor2	Factor3	Factor4	
HOSPBEDS	-.00	-.86	.17	-.16	.80
CRIME	.72	.24	.12	.33	.69
HOUSING	-.57	.22	.15	-.64	.81
CLIMATE	.02	.34	.03	.88	.89
AMENITY	-.05	.17	-.85	.01	.76
EDUC	-.24	.80	.01	.34	.81
UNEMPLOY	.29	.69	-.26	-.21	.66
FAMINCOM	.92	-.11	.13	-.02	.87
MANUF	-.06	-.10	.93	-.01	.88
PROP	.84	.01	-.22	-.03	.76

Table 7: Factor Matrix of Independent Variables: 1980

Variable	Correlations				Communal
	Factor1	Factor2	Factor3	Factor4	
HOSPBEDS	-.17	-.89	-.05	-.16	.85
CRIME	.67	.54	-.17	-.01	.76
HOUSING	-.77	-.12	.28	.27	.75
CLIMATE	.12	.69	-.21	-.57	.86
AMENITY	.03	.09	-.25	.86	.82
EDUC	-.32	.78	.21	.00	.76
UNEMPLOY	.00	.29	.82	.04	.76
FAMINCOM	.85	.04	.06	.22	.78
MANUF	-.06	-.19	.76	-.32	.72
PROF	.73	-.28	.13	-.02	.63

Interpretation of the zero-order correlation coefficient is straightforward. Correlation coefficients range from -1.0 to +1.0. The closer the coefficient is to 1 or -1 the stronger the relationship. A negative coefficient indicates that low scores on one variable tend to be associated with high scores on the second variable.

Much of what has been argued in previous chapters centers around the uniqueness of the return migrant. Previous research has indicated that return migrants generally do not move for the same reasons that other migrants do. According to Lansing and Mueller (1967), the return migrant is in possession of more location-specific capital in the area of destination than either the primary or secondary migrant possesses. The first four rows of Table 8 report the zero-order correlation coefficients associated with the relationships of the ten independent variables and the four dependent variables. It is immediately apparent when comparing the four dependent variables on each of the independent variables that the return migrant is indeed unique. On nearly every single independent variable, return migrants differ from the other three types.

The relationship of return migration with the independent variables differs radically from that of in-migrants, primary migrants, and secondary migrants. In six cases, the sign of the relationship (whether it is

Table 8: Zero-Order Correlation Matrix for Dependent
and Independent Variables: 1970

	HOSPBEDS	CRIME	HOUSING	CLIMATE	AMENITY	EDUC	UNEMPLOY	FAMINCOM	MANUF	FROF
INMIG	-.432	.200	-.313	.230	.612	.197	.438	.268	-.556	.442
RETURN	-.030	-.651	.494	-.134	-.039	.231	.023	-.740	-.007	-.508
PRIMARY	-.394	.249	-.309	.212	.590	.136	.379	.334	-.488	.475
SECONDARY	-.428	.269	-.390	.256	.595	.192	.454	.334	-.577	.478
HOSPBEDS		-.198	-.056	-.412	-.277	-.667	-.483	.067	.258	-.043
CRIME			-.427	.338	.036	.136	.155	.610	.046	.479
HOUSING				-.441	.012	.109	-.069	-.494	.156	-.435
CLIMATE					.021	.489	.112	-.043	-.020	.022
AMENITY						.147	.238	-.109	-.676	.062
EDUC							.311	-.302	-.078	-.138
UNEMPLOY								.097	-.303	.230
FAMINCOM									.097	.669
MANUF										-.291

positive or negative) is actually different from the other three dependent variables. This is the case with return migration's correlation with crime rate (-), median family income (-), the mildness of the climate (-), percent of the labor force employed in professional and technical occupations (-), and the amenity index (-). In each of the above six cases, in-migration, primary migration, and secondary migration retain similar correlation coefficients that are different from return migration; that is, they are all positive and are of roughly the same magnitude. In addition to these six cases, on three occasions, namely number of hospital beds per 100,000 persons (-), unemployment rate (+), and percent employed in manufacturing (-), the signs are the same for all four types of migration but the strength of the relationship differs greatly. In these cases, also, the strength of the relationships for the three remaining migrant types are all similar. In each case, it is only the return migrant group which differs. Only in one of the ten relationships do the coefficients for return migrants appear similar to those of the other three migrant types, namely the student/teacher ratio.

The coefficients for return migrants indicate that prior to additional analysis there is very little relationship between return migration and the economic reasons associated with migration. Specifically, there is

little association between return migration and the unemployment rate, $r = .023$, and the percent employed in the manufacturing industry, $r = -.007$. In addition, there appears to be little association between return migration and several noneconomic variables, namely, the number of hospital beds per 100,000 persons, $r = -.030$, the mildness of the climate, $r = -.134$, and the amenity index, $r = -.039$. On the other hand, there is a strong negative correlation between return migration and median family income, $r = -.740$, percent of the labor force employed in professional and technical occupations, $r = -.508$, and the crime rate, $r = -.651$.

For immigrants, primary migrants, and secondary migrants the findings are nearly opposite those of the return migrants. A high rate of in-migration, primary or secondary migration is associated with higher levels of professional and technical employment, lower levels of manufacturing employment, higher levels of median family income, high rates of unemployment, and low rates of hospital beds per 100,000 persons. In addition, all three are strongly associated with high ratings on the amenity index. This appears to be a contradiction from the predicted lack of association with noneconomic variables. Without taking into account the influence of other variables, it seems safe to assume that the composite picture of the relationships of in-migration, primary

migration, and secondary migration with the independent variables is quite similar. Conversely, return migration has little in common with the other three migrant types.

The second use for a zero-order correlation matrix is to evaluate the correlation coefficients of the independent variables in order to begin to assess the extent of high multicollinearity. The correlation coefficients for the independent variables are found in rows 5 through 13 of Table 8. Large correlation coefficients between independent variables are an indicator of high multicollinearity. Parameter estimates are unreliable in the face of high multicollinearity due to the large variances in the slope estimates and, consequently, large standard errors (Lewis-Beck, 1980). Four symptoms of multicollinearity include: (1) a substantial R-square for the equation but statistically insignificant coefficients; (2) regression coefficients which change when independent variables are added to or dropped from the equation; (3) suspicion regarding the magnitude of the coefficients; and (4) a coefficient with the "wrong" sign (Lewis-Beck, 1980: 59-60). The preferred method for assessing multicollinearity is to regress each independent variable on all other independent variables. A quick perusal of the correlation coefficients for the independent variables indicates that there is certainly cause for concern over

multicollinearity. There are four coefficients in the matrix of independent variables with correlations above $r = .60$. Ten regression equations, each with a different independent variable used as dependent variable, were generated. The coefficient of determination ranged from a low of .31 for unemployment to a high of .74 for median family income. The remainder range between .52 and .66. If multicollinearity is discovered, Lewis-Beck (1980) offers four possible solutions to the problem. They are: (1) enlarge the sample; (2) combine those independent variables that are highly interrelated into a single indicator; (3) not to interpret the independent effect on Y of a change in the value of a single X; or (4) discard the offending variable (Lewis-Beck, 1980: 61). Because each of the ten independent variables are theoretically justified for being in the equation, it is essential that they remain in the equation. In addition, it is impossible to enlarge the sample since the population is being studied. An attempt has been made to combine the variables into a single indicator, but there is no methodological basis on which to do so. Because all four of the options have been exhausted with little remedy, the original model will be retained with the understanding that an interpretation of the standardized regression coefficients is accompanied by a caution concerning the efficiency of the coefficients.

Determinants of In-migration--1970

Table 9 presents the results of the regression analysis of the four dependent migration variables on the ten economic and noneconomic determinants of migration for 1970. Each of the panels of the table will be discussed separately.

Taken together these ten independent variables explain nearly 69 percent of the variance in total in-migration. Most important in this regard are the amenity index, $\beta = .53$, and the crime rate, $\beta = -.29$. These are the only two variables significantly related to in-migration. The amenity index for 1970 incorporates a measure of number of hotels per capita and the proportion of the workforce employed in personal services, recreation, and entertainment. Percent of seasonal housing was not accessible for 1970. Data pertaining to the percent of seasonal housing was not available for 1970. The positive slope between the amenity index and in-migration indicates that in-migrants are significantly attracted to a state for its recreational development amenities. A large leisure related workforce and large number of hotels and motels per capita tends to attract immigrants to the state. In addition to the attraction to amenities, immigrants tend to respond to the crime rate. The lower the crime rate in a state, the higher the rate of in-migration.

Table 9: Standardized Regression Coefficients for
In-Migration, Return, Primary, and Secondary Migration
Regressed on Ten Independent Variables: 1970

Variable	Dependent Variables			
	INNIG	RETURN	PRIMARY	SECONDARY
	beta	beta	beta	beta
HOSPBEDS	-.19	.05	-.22	-.17
CRIME	-.29*	-.32	-.26	-.23
HOUSING	-.12	.07	-.08	-.16
CLIMATE	.15	-.09	.17	.14
AMENITY	.53***	-.12	.58***	.46***
EDUC	.05	.18	-.02	.08
UNEMPLOY	.13	.13	.08	.14
FAMINCOM	.30	-.51**	.31	.36*
MANUF	-.03	.01	.07	-.12
PROF	.25	.03	.30*	.18
R-squared	.69	.67	.67	.74
adj R-squared	.62	.58	.58	.67
stand error	3.34	.37	1.74	1.67
F-test df=10,39	8.88	7.77	7.88	10.92
signif F	.0000	.0000	.0000	.0000

* Significant at .05 level

** Significant at .01 level

*** Significant at .001 level

Table 10 presents the regression analysis for those variables that were significantly related to rate of migration for 1970 in the overall ten variable model. As can be seen from this Table, AMENITY has an extremely strong positive effect on rate of in-migration to states, $\beta = .61$. When in-migration is regressed on only the two significant variables, the amenity index increases in its effect on in-migration, from .53 to .61, and crime rate loses effect, from $-.29$ to .18. In fact, the effect of crime rate changes sign and becomes nonsignificant in the reduced model. In addition, these two variables alone explain 41 percent of the variance in in-migration. The remaining eight variables in the equation together explain 38 percent of the variance in in-migration. Using adjusted R-square instead, the remaining eight variables only explain an additional 24 percent of the variance. High rates of in-migration to states in 1970 are the result of high rates of leisure and recreational employment and a high number of hotels and motels per capita and only somewhat to high crime rates. This last part seems illogical in that high crime rates seem to attract migrants. It is felt that either migrants may be attracted to states which are developing certain amenities but also have higher crime rates or that this is a spurious relationship. Obviously, the amenities of a state are much more important than other variables in explaining higher rates of in-migration.

Table 10: Standardized Regression Coefficients for
In-Migration, Return, Primary, and Secondary Migration
Regressed on Significant Variables Only: 1970

Variable	Dependent Variables			
	INNIG	RETURN	PRIMARY	SECONDARY
	beta	beta	beta	beta
AMENITY	.61***	-	.56***	.64***
CRIME	.18	-.32**	-	-
FAMINCOM	-	-.55***	-	.40***
PROF	-	-	.44***	-
R-squared	.41	.61	.54	.52
adj R-squared	.38	.60	.52	.50
stand error	4.24	.37	1.87	2.07
F-test df=2,47	16.13	37.00	27.69	25.02
signif F	.0000	.0000	.0000	.0000

* Significant at .05 level
 ** Significant at .01 level
 *** Significant at .001 level

For the overall in-migration rate, there appears to be little relationship between in-migration and two of the more important economic determinants of migration, rate of unemployment, $\beta = .05$, and percent of the labor force employed in manufacturing, $\beta = .006$. The migration literature traditionally cites these two variables as extremely important in predicting migratory behavior. In fact, all of the economic determinants of migration for this model are nonsignificant.

Determinants of Return Migration--1970

Column 2 of Table 9 presents the results of regressing return migration on the ten economic and quality determinants of migration for 1970. The ten variables in the equation explain a total of 67 percent of the variance in return migration. The adjusted R-square for all ten variables is .58. Five of the ten relationships are very weak ($\beta < .10$). Only two variables are significantly related to return migration, median family income, which has a β of $-.51$ and crime rate, $\beta = -.32$. This means that the lower the median income and crime rate in a state, the higher the rate of return migration. The finding for median family income is opposite that for in-migration, primary migration, and secondary migration.

Table 10 shows that when these two significant variables are analyzed by themselves, they explain a total of 61 percent of the variance in return migration. The adjusted R-square is .60. Thus, only 6 percent of the variance in return migration is explained by the remaining eight variables in the equation. Using differences in adjusted R-square reveals that the remaining eight variables explain -2 percent of the variance. Thus, return migration depends nearly entirely on fluctuation in median family income and crime rate.

Determinants of Primary Migration--1970

Column 3 of Table 9 presents the regression equation predicting rate of primary migration from the ten independent variables for 1970. These variables combine to explain 67 percent of the variance of primary migration with an F-value of 7.88. The adjusted R-square is .58. It was noted in the discussion on the zero-order correlation matrix that the relationships of primary migration with the ten independent variables are similar to those of in-migration. For the most part, the same case exists for the regression equation involving primary migration. Of the two significant standardized regression coefficients, the amenity index has the strongest effect on primary migration, $\beta = .58$. The only other significant effect on primary migration is the percent

employed in professional and technical occupations, $\beta = .30$. The amenity index is also the most significant predictor of in-migration. Crime rate and percent employed in professional and technical occupations have similar sized coefficients for both in-migration and primary migration. The only difference is that crime rate has a significant effect on in-migration and percent employed in professional and technical occupations has a significant effect on primary migration.

When primary migration is regressed on only the two significant independent variables, 54 percent of the variance is explained. The adjusted R-square is .52. This compares to 67 percent of the variance using all ten independent variables (.58 percent adjusted). Thus, only 13 percent of the variance in primary migration is being explained by the remaining eight independent variables. If adjusted R-square is used only 6 percent of the variance is explained by the remaining eight variables.

Determinants of Secondary Migration--1970

Column 4 of Table 9 shows that primary, secondary and in-migrants are very similar, while return migrants seem to follow a separate path. The two significant effects on secondary migration are the amenity index, $\beta = .46$, and median family income, $\beta = .36$. Like both in-migration and primary migration, the most significant predictor of

secondary migration is the amenity index. The difference between these three dependent variables is that the second strongest predictor is unique to each.

When an equation is run using only these two significant independent variables, both get stronger in their independent effects (see Table 10). In addition, these two variables explain 52 percent of the variance in secondary migration (50 percent, adjusted). This means that the remaining eight variables together explain 22 percent of the variance in secondary migration (17 percent using adjusted R-square).

The results of the analysis on the economic and noneconomic determinants of migration for 1970 reveal no consistency between migrant types in their differences in the economic and noneconomic determinants of migration. The strongest predictor by far of in-migration, primary migration and secondary migration is the amenity index, a noneconomic measure. According to the hypothesized relationships, these three types of migration were supposed to be the ones most likely predicted by economic factors. Only primary and secondary migration are significantly effected by economic determinants of migration. In contrast to what was originally expected, the strongest predictor of return migration for 1970 is median family income, an economic determinant.

Zero-Order Correlation Matrix--1980-

Table 11 presents the zero-order correlation matrix for the dependent and independent variables for 1980. The presentation in this table is exactly the same as that in Table 8. The first four rows of Table 11 display the correlation coefficients between the four dependent variables and the ten independent variables. Comparing these rows shows that return migrants are, in fact, different types of migrants in their relationship to the ten independent variables. In five of the ten correlations, return migration reverses the sign of the relationship that exists with the other three dependent variables. There is a positive relationship between in-migration, primary migration and secondary migration and crime rate, whereas there is an equally strong negative relationship between return migration and crime rate. Similarly, there are positive relationships between the first three dependent variables and median family income, mildness of the climate and the percent of persons employed in professional and technical occupations. In each of these cases, there is an equally strong negative correlation with return migration. In the fifth case, there is a negative association between in, primary, and secondary migration and percent of owner-occupied housing but a strong positive correlation between return migration and this variable. In addition, in four instances the correlation coefficient for return migration differs

greatly in magnitude from the coefficients for the other three dependent variables. This occurs with number of hospital beds per 100,000 persons, percent of workforce employed in manufacturing, student/teacher ratio, and the amenity index. These findings corroborate the analysis from 1970.

The conclusion that one can draw is that return migrants are simply drawn to areas for different reasons than other types of migrants. Interestingly, there are a great number of negative relationships between return migration and the ten independent variables. In fact, there are only two moderately strong positive correlations. These are with percent of owner-occupied housing and student/teacher ratio. Both of these variables were included in the analysis as noneconomic factors. In addition, the strong negative relationships are with variables like crime rate and median family income. These coefficients imply that higher rates of return migration are associated with areas which have lower crime rates and lower median family income. Further, higher rates of return migration are associated with a higher percentage of owner-occupied housing and a high student/teacher ratio. The composite of the return migrant from these associations is one of someone returning home to his relatively crime free, lower income place of birth. In contrast to this picture, the other

Table 11: Zero-Order Correlation Matrix for Dependent
and Independent Variables: 1980

	HOSPBEDS	CRIME	HOUSING	CLIMATE	AMENITY	EDUC	UNEMPLOY	FAMINCOM	MANUF	PROF
INMIG	-.576	.536	-.186	.241	.511	.168	-.174	.366	-.586	.105
RETURN	-.136	-.362	.406	-.076	.100	.439	-.080	-.300	-.133	-.196
PRIMARY	-.500	.417	-.155	.143	.615	.106	-.207	.332	-.480	.090
SECONDARY	-.573	.591	-.224	.276	.442	.149	-.147	.389	-.593	.123
HOSPBEDS		-.510	.169	-.509	-.183	-.612	-.217	-.235	.126	.113
CRIME			-.571	.473	.130	.102	.019	.500	-.197	.249
HOUSING				-.338	.065	.218	.124	-.515	.159	-.374
CLIMATE					-.277	.390	.045	-.052	-.093	-.042
AMENITY						-.038	-.153	.063	-.341	-.012
EDUC							.293	-.197	-.005	-.269
UNEMPLOY								.043	.379	-.070
FAMINCOM									-.169	.506
MANUF										.089

three migrant types have positive correlations with crime rate, median family income, mildness of the climate, and the amenity index of recreational development. Strong negative correlations exist between these three dependent variables and number of hospital beds per 100,000 persons, percent of owner-occupied housing, rate of unemployment, and percent of labor force employed in manufacturing.

The zero-order correlation coefficients for only the independent variable relationships indicate that there should be few possibilities for multicollinearity. Most of the independent variable correlations are less than $r = .55$. There is only one association which could present some potential multicollinearity problems. It is the relationship between the student/teacher ratio and the number of hospital beds per 100,000 population, $r = -.612$. When each of the independent variables were regressed on all of the others, all but three of the regression equations had coefficients of determination of less than .60.

Determinants of In-Migration--1980

Table 12 presents the results of the four regression equations on in-migration, return migration, primary migration, and secondary migration. Each column of the table corresponds to one of the four equations. The first column of Table 12 investigates the relationship between

rate of in-migration and ten independent variables. The full model explains 76 percent of the variance of in-migration; the F-value is 12.20. The adjusted R-square is .70.

As far as individual relationships within the model are concerned, the most significant predictor of in-migration is the percent employed in manufacturing, $\beta = -.40$. This is followed by the number of hospital beds per 100,00 persons, $\beta = -.46$, the amenity index, $\beta = .25$, and percent of owner-occupied housing, $\beta = .23$. The first major point is that of the four significant effects on in-migration, only percent employed in manufacturing is an economic determinant but it has the strongest effect on in-migration. Interestingly, no economic determinants of in-migration were significant in 1970.

Table 13 shows that when in-migration is regressed on only the four significant independent variables from the full model, housing loses its effect. In addition, these four variables explain 67 percent of the variance in in-migration (adjusted R-square is .64). This means that the remaining six variables explain only 9 percent of the variance in in-migration. Using adjusted R-square, only 6 percent of the variance is explained by the remaining six variables.

Table 12: Standardized Regression Coefficients for
In-Migration, Return, Primary, and Secondary Migration
Regressed on Ten Independent Variables: 1980

Variable	Dependent Variables			
	INMIG	RETURN	PRIMARY	SECONDARY
	beta	beta	beta	beta
HOSPBEDS	-.46**	-.21	-.36*	-.46**
CRIME	.22	-.40*	.03	.31*
HOUSING	.23*	.12	.15	.24*
CLIMATE	.08	-.13	.17	.05
AMENITY	.25*	.01	.48***	.15
EDUC	-.13	.45*	-.10	-.17
UNEMPLOY	-.08	-.18	-.14	-.03
FAMINCOM	.10	-.10	.21	.06
MANUP	-.40***	-.17	-.19	-.45***
PROP	.14	.14	.07	.15
R-squared	.76	.47	.67	.76
adj R-squared	.70	.33	.59	.70
stand error	6.39	.60	2.14	4.71
F-test	12.20	3.44	8.09	12.36
df=10,39				
signif F	.0000	.003	.0000	.0000

* Significant at .05 level

** Significant at .01 level

*** Significant at .001 level

Table 13: Standardized Regression Coefficients for
In-Migration, Return, Primary, and Secondary Migration
Regressed on Significant Variables Only: 1980

Variable	Dependent Variables			
	INNIG	RETURN	PRIMARY	SECONDARY
	beta	beta	beta	beta
AMENITY	.29**	-	.54***	-
CRIME	-	-.41***	-	.41***
HOSPBEDS	-.46***	-	-.40***	-.33**
HOUSING	-.06	-	-	.14
EDUC	-	.48***	-	-
MANUF	-.42***	-	-	-
R-squared	.67	.36	.53	.69
adj R-squared	.64	.33	.51	.66
stand error	6.94	.58	2.33	4.98
F-test	22.81	13.21	26.91	24.97
df	4,45	2,47	2,47	4,45
signif F	.0000	.0000	.0000	.0000

* Significant at .05 level

** Significant at .01 level

*** Significant at .001 level

Determinants of Return Migration--1980

Column 2 of Table 12 displays the multiple regression equation performed on rate of return migration for 1980. The amount of variance in return migration explained in this equation is somewhat less than that in the return migration equation for 1970 and less than the equations on the remaining three independent variables for 1980. This explained variance amounts to only 47 percent of return migration (33 percent of the variance using adjusted R-square). This could be due to the potential multicollinearity or could simply be that return migration is increasingly elusive in its susceptibility to prediction. It could be that the variables used in the past to explain migration and specifically return migration are simply not appropriate to current trends in migration behavior.

Only two variables have a significant effect on return migration. These are the student/teacher ratio, $\beta = .45$, and crime rate, $\beta = -.40$. All other variables had standardized regression coefficients at .21 or less and were nonsignificant. Both of the strongest predictors of return migration are noneconomic determinants. Economic determinants of return migration were found to be nonsignificant in 1980.

When return migration is regressed on the two significant variables for 1980, 36 percent of its variance

is explained (33 percent using adjusted R-square). This compares with 47 percent (33 percent) when all ten variables are used in the analysis. Thus, the two significant independent variables explain only 11 percent less variance than the full model. Using adjusted R-square, these two variables explain all of the variance in the more elaborate model. Further, when return is regressed on the significant variables, each of the effects becomes stronger. Return migration in 1980 is dependent on two noneconomic determinants. This represents a major change from 1970 when median family income was the strongest predictor.

Determinants of Primary Migration--1980

Column 3 of Table 12 displays the multiple regression equation used in predicting the rate of primary migration in 1980. The ten independent variables taken together in this equation explain 67 percent of the variance in primary migration with an F-value of 8.09 (59 percent, adjusted). By far the most important individual variable used to predict primary migration in this equation is the amenity index, $\beta = .48$. Only one other variable significantly affects primary migration, number of hospital beds per 100,000 persons, $\beta = -.36$. All other effects are nonsignificant. Primary migration, more so than other forms of migration, is tied to the amenity

index. While in 1970, in-migration, primary, and secondary migration were all tied to the amenity index, 1980 shows a trend for in-migration and secondary migration to be moving away from these effects. Like in-migration and secondary migration, there is a negative effect of the number of hospital beds per 100,000 persons on primary migration.

When primary migration is regressed on HOSPBEDS and AMENITY, both effects gain in strength. In addition, the two independent variables explain 53 percent (51 percent, adjusted) of the variance in primary migration compared to 67 percent (59 percent, adjusted) by all ten independent variables. This means that the remaining eight variables explain only 14 percent (8 percent, adjusted) of the variance in primary migration in 1980. Like return migration, only noneconomic variables significantly affect primary migration. The higher the amenity development in a state and the lower the number of hospital beds per 100,000 persons, the lower is primary migration.

Determinants of Secondary Migration--1980-

The last column of Table 12 presents the findings of the regression analysis performed on the rate of secondary migration. The ten independent variables taken together explain 76 percent of the variance in secondary migration with an F-value of 12.36 (70 percent, adjusted). This

ability to explain about three quarters of the variance in the dependent variable has been consistent throughout the analysis of all four dependent variables for both decades. The only drop from this level is that for return migration in 1980.

The most important individual effects on secondary migration are percent of labor force employed in manufacturing, $\beta = -.45$; number of hospital beds per 100,000 persons, $\beta = -.46$; crime rate, $\beta = .31$; and percent of owner-occupied housing, $\beta = .24$. Each of these four effects is significant beyond the .05 level. MANUF and HOSPBEDS have by far the strongest effects on secondary migration. All other effects are nonsignificant.

Table 13 shows that when secondary migration is regressed on the four significant independent variables from the elaborated equation, a total of 69 percent of the variance is explained (66 percent, adjusted). This means that the remaining six independent variables explain only 7 percent of the variance in secondary migration (4 percent when using adjusted R-square). Individual effects in the reduced model reveal an interesting pattern. Both crime rate and percent employed in manufacturing increase in the strength of their effects, while both the number of hospital beds per 100,000 persons and percent in owner-occupied housing decrease in their strength. With fewer

controls, the last two variables have weaker effects and the effect of HOUSING becomes nonsignificant. This means that confounding influences due to correlation with other nonsignificant variables had inflated the standardized regression coefficients in the full model.

The results of the analysis on secondary migration for 1980 need to be evaluated from two perspectives. First, a comparison of the results of this table show that the factors which determine secondary migration are for the most part the same as those that also affect in-migration. Three of the four significant influences of secondary migration also affect in-migration. The only difference is that secondary migration is affected by crime rate, while in-migration is affected by the amenity index. Thus, a portrait of the determinants of total in-migration most closely reflects the effects of secondary migration. Those factors that affect both return and primary migration are for the most part not reflected in the determinants of total in-migration.

The second method of evaluating this table is to compare the results for 1980 with the results for 1970. For secondary migration, the individual effects of these ten variables have changed drastically. Those variables that are significantly related to secondary migration in 1980 are CRIME, MANUF, HOSPBEDS and HOUSING. In 1970, they are AMENITY and FAMINCOM. This represents a total

shift in the determinants of secondary migration. The other three dependent variables retain some level of consistency from 1970 to 1980.

AMENITY has a significant effect on in-migration in both 1970 and 1980; CRIME has a significant effect on return migration in both 1970 and 1980; and AMENITY has a significant effect on primary migration in both 1970 and 1980. There have been some changes in the significant effects of variables from one decade to the next but nothing quite so drastic as that for secondary migration. Further, the determinants of in-migration can be reflected in both the effects on primary and secondary migration in 1970. Not until 1980 are the effects on one component of migration so reflected in the effects on total in-migration. Contrary to the hypothesized relationships, however, it seems that the changes in the determinants of in-migration are tied to changes in the determinants of secondary migration and not return migration. The results of these equations tied with the fact that secondary migration is the component which has increased in its proportion in the in-migration stream lead to the conclusion that secondary migration plays an important role in the changing economic and noneconomic determinants of in-migration.

Interaction with Return Migration

The final step in the process of ascertaining the role of return migration in the changing economic and noneconomic determinants of in-migration is to directly test the effect of the proportion of return migration on the ten independent variables in the equation. This has been done by recoding the proportion of return migration into two categories--a low and high category. The line between low and high was arbitrarily drawn at the mean level of return migration for that decade. Percentages below the mean were coded as zero for the "low" group and those above the mean were coded as one for the "high" group. This dummy-coded return migration variable was then added to the multiple regression equation and interaction terms for each of the ten independent variables were constructed and a regression was run on this full model. The differences between the R-squared in the full model and the R-squared in the reduced model are then tested to ascertain whether the addition of the interaction with return migration helps to better explain in-migration. Individual differences among the economic and noneconomic determinants and the interaction with return migration will also be observed.

Table 14 presents the regression equations used to predict rate of in-migration with all ten interaction terms created for 1970 and 1980. Coefficients for both the variables and interaction terms have been included.

Those coefficients that do not meet minimum tolerance standards established by SPSSX have been omitted in the table. An F-test for the difference in R-squared for the elaborated model with interaction terms and the reduced model with no interaction terms for 1970 shows that the increment in R-squared added with the interaction is not significant. The increment in R-square added with the elaborated model amounts to only 2 percent using adjusted R-square. There is only one individual relationship in 1970 where states with high return rates differ substantially from states with low return rates. For states with a high rate of return migration, unemployment has a relatively strong negative effect on in-migration, $\beta = -.39$; while in states with a low rate of return migration, unemployment has a moderately strong but positive effect on in-migration, $\beta = .23$.

The results for 1980 show a somewhat different picture. When the difference in R-squared increment is tested between the full model and the reduced model with no interaction, the F-value is 2.6 which is significant beyond .05. Thus, interaction with return migration helps to better explain in-migration. There are four variables in particular that differ based on the amount of return migration. They are the percent of labor force in professional and technical occupations, rate of unemployment, percent of labor force employed in

Table 14: Standardized Regression Coefficients for
In-Migration Regressed on Ten Independent Variables
and Interaction with Return Migration: 1970 and 1980

Variable	Year	
	1970	1980
	beta	beta
Independent Variables		
HOSPBEDS	-.12	-.42*
CRIME	-.32*	.42*
HOUSING	.02	.17
CLIMATE	.12	.06
AMENITY	.54**	.39**
EDUC	-.07	-.18
UNEMPLOY	.23	-.14
FAMINCOM	.41	-.04
MANUP	-.26	-.09
PROF	.27	-.01
Interaction Terms		
HOSPBEDS	-.13	.01
CRIME	.05	-.45
HOUSING	-	-
CLIMATE	.47	.45
AMENITY	-.07	-.20
EDUC	-	-
UNEMPLOY	-.62	.45
FAMINCOM	-	-
MANUP	.29	-.83**
PROF	-	.57
R-squared	.76	.85
adj R-squared	.64	.76
stand error	3.24	5.62
F-test	6.10	10.37
df=17,32		
signif F	.0000	.0000

* Significant at .05 level

** Significant at .01 level

*** Significant at .001 level

Those variables with no coefficient do not meet the
minimum tolerance limits.

manufacturing, and crime rate. Interestingly, the difference in the proportion of return migration changes the effects of three economic determinants of in-migration but affects only one noneconomic variable. In high return states, high unemployment but also high levels of professional and technical employment draw increased numbers of in-migrants; whereas high levels of manufacturing employment tends to assure very little in-migration in high return states.

Chapter VI

Discussion and Conclusions

The original focus of this study was to determine the role of return migration in the changing economic and noneconomic determinants of state in-migration. An analysis of the selectivities and determinants of migration has highlighted a number of major findings that are significant to the migration literature. Although many of the hypotheses concerning the contribution of return migration to changing determinants of in-migration have not been supported, a great deal has been learned about the characteristics of the different migrant types and the relative contribution of the components of migration to the changing determinants of migration. The present chapter will summarize these findings and attempt to relate them to their respective bodies of literature. Finally, a number of general conclusions can be drawn from the analysis in this study.

Selectivities

The first finding of any significance is that the proportion of migrants in the population has grown from 1960 to 1980. By 1980, roughly 20 percent of the population could be classified by the Census Bureau as migratory. This figure includes all return, primary, and

secondary migrants in the stream of in-migration. This means that these individuals have changed place of residence between 1975 and 1980 at least one time. It does not include all of the moves between 1975 and 1980 and does not include those individuals who moved prior to 1975 but remained settled after that date. As a result, much of what can be referred to as migration is in fact lost by definition of the Census Bureau. Thus, the figures given in this study are conservative estimates of the mobility of the population.

Not only has migration as a whole increased from 1960 to 1980, but the various components have also increased. This is especially the case with secondary migration. In 1960, secondary migrants were grouped together with primary migrants and combined for a total of 7.6 percent of the population. By 1980, primary migrants represented 4.0 percent of the population and secondary migrants represented 14.0 percent of the population. This amounts to a tremendously large growth rate in the proportion of secondary migrants to the total in-migration stream. As a result, however, a major contention of this study was not found to bear up under scrutiny, namely that the proportion of return migration had increased relative to the total in-migration stream.

Originally, looking at the role of return migration in the changing economic and noneconomic determinants of

migration was important because return migrants shared many of the same motivations for moving as migrants as a whole seemed to be expressing based on recent aggregate studies of migration. It was felt that if return migrants represented a larger proportion of the in-migration stream in 1980 than they did in 1960, then the weight of their characteristics was what was being tapped by research on changing determinants of migration. What has been found, however, is that the proportion of return migration in the total in-migration stream has actually decreased over time. It is thus impossible to imagine that return migration plays any role in the changing economic and noneconomic determinants of in-migration.

However, it has also been found that the proportion of secondary migrants has increased over time and this growth has been phenomenal. In 1980, secondary migrants make up 70 percent of all five-year migrants. In fact, as will be discussed in a later section, determinants of in-migration pattern themselves more closely after the determinants of secondary migration in 1980 than they did in 1970 and the important determinants appear to be the noneconomic factors in 1980. It appears by all indications that the patterns and relationships hypothesized for return migration are, in fact, true for secondary migration.

This study is the first to classify and use a separate category of nonmigrant called the five-year nonmigrant. This category consists of individuals who moved prior to 1975 but settled after that date. They have been classified in this study as five-year nonmigrants and represent a fairly substantial proportion of the population (between 14 and 40 percent, depending on the year of analysis). It was felt that since these individuals had not moved at least in the past five years that their characteristics should be more similar to nonmigrants than to migrants. This was simply not the case. In several instances, five-year nonmigrants differ from all other categories, whether migrant or nonmigrant. This was the case with mean age of these groups. In other instances, five-year nonmigrants have characteristics similar to lifetime nonmigrants. This occurred with both the education and income selectivities. As a result, five-year nonmigrants have been kept as a separate category in the selectivities portion of this study.

The analysis of the selectivities of migration in this study has both supported and rejected existing literature on the socio-demographic characteristics of migrants. First, the literature that characterizes differences between migrants and nonmigrants is well grounded. Migrants tend to be younger, better educated persons from white collar occupations with higher incomes

and smaller households than nonmigrants. Individual variations in these findings do exist across decades.

For the most part, migrants are younger than nonmigrants. However, important differences do occur. Five-year nonmigrants are by far the oldest of any of the migrant or nonmigrant categories for all three decades. It was suspected that five-year nonmigrants would share many characteristics with lifetime nonmigrants, but the findings for age show that this hypothesis is by no means correct. Lifetime nonmigrants tend to be much younger than five-year nonmigrants and much more similar to the age of migrants. At times, lifetime nonmigrants are younger than certain migrant categories. For instance, lifetime nonmigrants are younger than secondary migrants in 1980 and younger than all three migrant groups in 1970. This contradicts the migration selectivities literature but can be the result of breaking five-year nonmigrants away from lifetime nonmigrants.

Occupation is another selective characteristic that shows inconsistencies across decades. For the most part, the proportion of both migrants and nonmigrants in white collar occupations is very similar. In 1960, a smaller percentage of five-year nonmigrants is found in white collar occupations, while lifetime nonmigrants are more similar to the migrant groups in the proportion in white collar occupations. The largest percentage of any group

in white collar occupations in 1970 belongs to lifetime nonmigrants, while the smallest percentage belongs to five-year nonmigrants. Migrants fall between these two groups. By 1980, there is little difference between migrants and nonmigrants in the percentage in white collar occupations. Lifetime nonmigrants do have the smallest percentage in these occupations which represents a reversal in past findings. Again five-year nonmigrants differ from lifetime nonmigrants.

Marital status is a confusing characteristic by which to differentiate between migrant and nonmigrant or the different migrant types. One consistent finding is that the five-year nonmigrants have the highest percentage in the married category than any other group for all three decades. Lifetime nonmigrants have a higher percentage among the single, divorced and separated categories in 1960 and 1970 but not 1980. In 1980, a larger percentage of primary migrants falls into that category. Prior research has indicated that there may, in fact, be no relationship between marital status and propensity to migrate. This study offers little consolation for those expecting to find a strong, consistent relationship between the two.

Comparisons on income for the migrants versus nonmigrants also reveal some inconsistencies. Five-year nonmigrants have the highest mean income in 1960 and 1980

but not in 1970. Lifetime nonmigrants have the lowest income in 1960 and 1970 but the second highest in 1980. Migrants fall between the two types of nonmigrants in 1960, have higher incomes than nonmigrants in 1970, and have lower incomes than nonmigrants in 1980. No clear pattern in the relative income characteristics of migrants versus nonmigrants ever develops.

A comparison of only the migrant types on each of the socio-demographic characteristics associated with migration is a much more tenuous task. This is due to the relative lack of a body of literature that compares the selective characteristics of different types of migrants. One fact is established in these findings, however: different kinds of migrants exhibit different selective characteristics. These characteristics may or may not be consistent over time, however, depending on the characteristic.

The focus of this study is on the difference between return migrants and the other two types of migrants so return migrants will be highlighted in this discussion. As far as age is concerned, return migrants are different from both primary and secondary migrants. In 1960, they were a little older; in 1970 were younger; and in 1980 were between primary and secondary migrants in mean age. Return migrants are slightly more likely to be male than the other migrant types. This is the case for both 1960

and 1980 but not 1970. Mean education of return migrants tends also to be between that of primary and secondary migrants. This is consistent for both 1970 and 1980. Return migrants share their occupational characteristics with secondary migrants. There tends to be a smaller percentage in white collar occupations than other types of migrants. For marital status, return migrants appear to be closer to secondary migrants than primary migrants also. They consistently have a smaller percentage in the single, divorced and separated category than primary migrants and a larger percentage in this category than secondary migrants, even though their percentages are closer to secondary migrants. Return migrants have the largest household size of any migrant type for all three decades. Return migrants have the lowest incomes of the three groups for 1960 and 1970 but fall between primary and secondary migrants in 1980. Finally, there is no difference between the three types of migrants on the race selectivity characteristic.

The picture of the return migrant from the above brief summary corroborates many of the conclusions of Lansing and Mueller (1967). Individuals who can be classified as return migrants tend not to be as well off as other migrants as far as socioeconomic status is concerned. They tend to have lower education, come from blue collar occupations, have larger households, be a

little older, and have less income than other migrants. Persons that differ on this many socio-demographic characteristics comprise a separate and unique cluster of migrants. These migrants have different motivations for moving to an area, whether they be for family reasons or simply a prior knowledge of a particular locale. For these reasons, location-specific capital in the area of destination is different for persons who choose to return to an area than for persons who choose to move on to a new area.

It is in this way that differences in the selective characteristics of migrant types can influence the kinds of determinants of in-migration at the aggregate level. A large proportion of a certain type of migrant that all chose to move for similar reasons will be drawn to similar kinds of areas. This creates a differential in the kinds of characteristics of an area associated with increased rates of in-migration. These characteristics that are found to be associated with in-migration can change depending on the proportion of the different types of migrants in the stream. As a result, changes can occur in the economic and noneconomic determinants of in-migration based on the level of the types of migrants who are primarily drawn by economic or noneconomic reasons.

Determinants-

In conceptualizing the determinants of migration, a difference has been drawn between what are known as economic determinants of migration and noneconomic determinants of migration. This distinction has been recognized in numerous studies of the determinants of migration (Sommers, 1981; Lichter and Fuquitt, 1982). The difference between what constitutes an economic determinant and what constitutes a noneconomic determinant of migration has been confused at best.

Quality of life can include or exclude a variety of variables which can potentially fall under the category of economic determinant. It can very easily be argued that quality of life is at least in part dependent upon economic considerations. For instance, the individual who moves to an area and cites school systems and climate and cultural facilities as primary motivating reasons for moving to an area could not enjoy these accoutrements without a job that will provide the resources to pay for many of these quality of life kinds of motivations. Thus, quality of life is very closely tied to economic determinants of migration.

On the aggregate level, much of the research that has differentiated between economic and quality of life reasons for migrating has not expressed any kind of comprehensive evaluation of what exactly constitutes

quality of life. Rather, some proxy variable is chosen that is said to represent quality of life or developmental amenity or ecological or environmental quality associated with migration. At best these indicators are questionable representations of quality of life.

The present study has made a concerted effort to try to identify what exactly constitutes quality of life if anything and evaluate this concept methodologically. First, ten variables were chosen that had commonly been associated with either economic or quality of life determinants of migration or had simply been used as indicators of quality of life in the literature. These were obtained from a variety of sources and basically represent a variety of variables with no particular core conceptualization of one or two concepts. A factor analysis to test for some core association being tapped among the variables resulting in a theoretical conceptualization of economic or quality of life characteristics was done. No such underlying factors could be discovered.

The resulting solution has been to discard the concept of quality of life from the theoretical framework of this study. As stated earlier, it appears that quality of life is too volatile a concept to apply to migration studies such as this and that it is more appropriate to address the economic and noneconomic determinants of

migration. Each of the six variables initially delineated as quality of life factors have a noneconomic nature as a common denominator. The label of noneconomic does not require the value judgement called for by the concept quality of life and thus is a more neutral term to employ. Unfortunately there is no conceptual similarity between the variables labelled noneconomic, just a common characteristic. It seems to be in the best interest of both theoretical conceptualization and methodological parsimony that the concept quality of life be dropped from the analysis of the differing determinants of in-migration. This route has been initially taken by Heaton, et al. (1981) but not for the reasons outlined above. As a result, this study argues against the further use of quality of life as a factor in the migration literature in lieu of the concept of noneconomic determinants of migration.

Conclusion

Most of the hypotheses in this study have not been supported by the findings of the analysis. Initial formulations indicated that much of the change in the determinants of migration from economic towards noneconomic factors were the result of an increase in the proportion of return migrants in the in-migration stream. It has been discovered, however, that the level of return

migration has actually decreased over time. Return migration does appear to be significantly affected by noneconomic determinants of migration rather than economic determinants of migration, however.

The proportion of secondary migration has grown tremendously in the past three decades. In addition, the determinants of secondary migration most closely resemble the determinants of in-migration for 1980. This was not the case in 1970. These findings indicate that much of the change in the determinants of in-migration is actually related to changes in the components of the in-migration stream as was originally hypothesized. The difference lies in which component has grown in proportion over the last three decades. It was originally thought that return migration has increased. What has been discovered is that secondary migration has been the component that has increased in proportion over the past three decades.

If the basic theory is accurate, that is, that changing components of migration contribute to changing determinants of in-migration, then it is possible that the increase in the proportion of secondary migrants has contributed to the movement from economic to noneconomic determinants of in-migration. Thus, the basic theory remains intact. What must be reconceptualized is which component contributes to the change in the determinants of migration. An alternative route of endeavor would be to

investigate the hypothesis that changes in the determinants of migration are related to changes in the proportion of secondary migration in the total in-migration stream.

In addition, with changes in the determinants of migration being related to changes in the proportion of secondary migrants in the total in-migration stream, Campbell and Garkovich (1984) are more than likely correct. The characteristics of secondary migrants in the past have not been tied to noneconomic determinants of migration. By 1980, however, noneconomic determinants are strong predictors of secondary migration. This amounts to a radical change from previous decades. It appears that secondary migrants are moving for a different set of reasons in 1980 than in 1970 and these reasons are increasingly noneconomic in nature. In addition, secondary migrants make up a larger proportion of the in-migration stream. These findings point to an additional avenue of research, namely, the role of secondary migration on the changing determinants of in-migration.

Although the results of the analyses do not support the original theory in this study, this has not been an exercise in futility. A strong case can be made that differing determinants of total in-migration are related to the relative proportions of the components of the stream. Further, it has been found that there is a trend

toward noneconomic determinants of migration. In addition, it has been found that migrants differ from nonmigrants and that migrants differ from other migrants depending on the status of the migrant type. As a result, changes in the determinants of in-migration can be dependent upon the proportion of different migrant types in the stream.

This dissertation makes two contributions to the migration literature. First, this is the first time that the category of five-year nonmigrant has been separated from lifetime nonmigrant. It was originally hypothesized that these two groups would be very similar in their selective characteristics, but results of this study show that, in fact, they are very different. Future research will not be able to simply separate migrants from nonmigrants. Second, quality of life has been questioned as a viable concept in migration research. Based on the findings of this study, there does not appear to be a single, underlying quality of life concept among the determinants of migration. In addition, quality of life is a value laden concept which tends to employ both economic and noneconomic interpretations. It has been concluded that noneconomic determinants is a much more useful concept.

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RETURN MIGRATION: SOCIOECONOMIC DETERMINANTS
FOR STATE IN-MIGRATION

John Marvin Pippert

(ABSTRACT)

The central concern of this study is to determine the role of return migration in the changing economic and noneconomic determinants of state in-migration. It was hypothesized that the transition from primarily economic to noneconomic determinants of in-migration in the United States in the last decade was directly related to changes in the components of the migration stream itself; that is, that an increasing proportion of return migrants in the in-migration stream contributes to the movement toward noneconomic reasons for migrating.

This study compares the selective characteristics of lifetime and five-year nonmigrants, and primary, secondary and return migrants using Public Use Sample data for 1960, 1970, and 1980. In addition, it analyzes four economic and six noneconomic determinants of migration for 1970 and 1980 using a data set that includes published data on state migration and socioeconomic characteristics.

An analysis of the selectivities of migration has both supported and rejected existing literature. In a comparison of migrants and nonmigrants, migrants tend to be younger, better educated persons from white collar

occupations with higher incomes and smaller households than nonmigrants. When migrant types are compared, return migrants tend not to be as well off as other migrants socioeconomically. They tend to have lower education, come from blue collar occupations, have larger households, be a little older and have less income than other migrants. The most significant finding is the distinction of five-year from lifetime nonmigrants.

The regression analysis on the determinants of state in-migration reveals that there has been a shift from economic to noneconomic reasons for migrating from 1970 to 1980. In addition, the relative proportion of primary, secondary and return migration has changed over time. Contrary to the hypothesis, however, the trend from economic to noneconomic determinants of migration has not been related to changes in the proportion of return migration in the stream. Rather, this study points to further research that investigates the relationship between secondary migration and the changing determinants of state in-migration.