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An Overview of the Household Location Decision Process, With a Focus on Arizona

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W. P. CAREY
SCHOOL of BUSINESS

ASU ARIZONA STATE
UNIVERSITY



Timothy Hogan, Ph.D.
Professor Emeritus, Dept. of
Economics, and Research Associate,
Center for Competitiveness and
Prosperity Research

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Timothy Hogan, Ph.D.

Professor Emeritus, Department of Economics,
and Research Associate, Center for Competitiveness and Prosperity Research

Center for Competitiveness and Prosperity Research
L. William Seidman Research Institute
W. P. Carey School of Business
Arizona State University
Box 874011
Tempe, Arizona 85287-4011

(480) 965-5362

FAX: (480) 965-5458

EMAIL: Tim.Hogan@asu.edu or Dennis.Hoffman@asu.edu
www.wpcarey.asu.edu/seid



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SUMMARY

One-in-eight Americans change residences each year. Most of these moves are local, but about six million people on average relocate to a different state or move from abroad. This report examines the characteristics of these longer-distance movers, their reasons for moving, and how they choose the destination for their move. This discussion focuses on the decision process of working-age adults. Based on the results of the analysis, the report evaluates how Arizona and the Phoenix and Tucson metropolitan areas rate as potential destinations.

National Migration Patterns

The migration statistics collected by the U. S. Census Bureau show that the U.S. population has historically been very mobile. Historically, approximately 45 percent of the population changed residences over a five-year period, but the proportion declined to 35 percent for the 2005-to-2010 period. The decrease has been even steeper for interstate moves, from about 9 percent of the population historically to less than 6 percent between 2005 and 2010.

The propensity to move and the pattern of those moves vary significantly among different subgroups of the U.S. population. Age is one of the most important characteristics associated with the propensity to move long distances. Rates of long-distance moves peak among young adults and decline sharply among middle-aged and older adults. Looking at socioeconomic characteristics, level of education is the strongest predictor of migration behavior apart from age, with a positive relationship between educational attainment and the likelihood of long-distance moves.

Migration data for the 2005-to-2010 period show a continuation of the historic pattern of population redistribution from the Northeast and Midwest to the South and West regions. The overall magnitude of redistribution has declined, especially for the West.

Arizona

Population growth has been a defining factor in Arizona's history. Over the century since statehood in 1912, Arizona was the second-fastest growing state in the nation behind only its neighbor Nevada, and migration has been responsible for approximately two-thirds of population growth over that time period.

Net migration estimates for the 2000-to-2010 period show a decline in Arizona's net migration consistent with the national trend of fewer people moving. Net in-migration was about 762,000 over the decade compared to nearly 1.1 million during the 1990-to-2000 decade.

Matching the national pattern of propensity to migrate by age, young adults (especially those from 18-to-34 years old), have accounted for a disproportionate share of migrants to and from Arizona. Unlike the nation, in-migrants to Arizona (and net migration) have had a secondary peak in the retirement age groups (ages 55 to 69). Between 2000 and 2010, net migration to Arizona was about equal in the 15-to-19, 20-to-24, 25-to-29, 60-to-64, and 65-to-69 age groups.

The regional pattern of in-migration to Arizona has shifted dramatically over the years. Data from the 1935-to-1940 period show that almost half of those moving to the state came from the South, about one-third came from other western states, one-fifth from Midwestern states, and

relatively few from the Northeast or from outside the United States. Recent data show that one-half of domestic migrants came from other western states and about one-fifth came from the South.

California continues to dominate as the major origin and destination of Arizona migrants. Texas, Michigan, and Illinois, plus three states bordering Arizona — Colorado, Nevada, and New Mexico —also are origins of substantial numbers of in-migrants. Besides California, other popular destinations for those leaving the state are Colorado, Texas, and Washington, and to a lesser extent the other three neighboring states of Nevada, New Mexico, and Utah.

Estimates of net migration over the 2000-to-2010 period show that the Phoenix metropolitan area accounted for nearly three-quarters of the state's total net migration, with the Tucson area receiving slightly more than 10 percent, and the balance of the state 16 percent.

Conceptual Models of the Location Decision Process

Analyses of the movements of people and where they move have often looked at migration as an aggregate phenomenon, examining and attempting to explain the magnitude and pattern of migration flows. A growing body of research, however, focuses on the questions of why people move and where they move from the perspective of individual choice. Based on this research, social scientists generally agree that individual and household migration decisions are influenced by a combination of economic and noneconomic factors that vary depending on the time period, and age and other personal characteristics. A general choice-theory model of migration behavior conceptualizes decision-making in terms of reasoned action based upon the effect on individual or family well-being. In this model, the decision process is based on perceived expectations of the consequences of the decision and could conceivably take into account a wide menu of factors that could vary in importance at different times and for different individuals.

Review of Past Research

Models of migration behavior for the most part can be classified into three approaches. Human capital models view the migration decision as an economic decision motivated by perceived interregional differences in factors that influence economic opportunity. A large body of research based on this approach emphasizes the importance of real income or wage differentials and employment prospects as important determinants of migration behavior. The other two approaches have a common focus on “nontraded goods and services” rather than income maximization. One emphasizes the importance of differences in local taxes and government services on the location decisions of households. The other nontraded goods approach focuses on the importance of quality-of-life factors on migration decisions. In this model, individuals migrate in order to attain a better quality of life by choosing a location with more and/or better location-specific amenities.

Empirical research has examined the influence of these economic, fiscal, and quality-of-life factors on migration behavior. The preponderance of the findings point to the primacy of employment-related factors but also often have identified significant impacts of noneconomic factors, supporting the multidimensional nature of location decisions.

Most of the research on internal migration in the United States has not focused on the location decision of individuals and households. But looking at research findings from both statistical and

survey-based empirical studies that do address the specific topic of the factors that influence the selection of migration destination, the studies have typically found economic variables to have the strongest weight but have also found evidence that noneconomic factors have at least secondary influences on the location decision.

Rating Arizona and the Phoenix and Tucson Metropolitan Areas as Migration Destinations

Based on an analysis of 47 indicators chosen as measures of economic, fiscal, and quality-of-life factors potentially important in the location decision process, Arizona ranks below average, and often near the bottom, relative to other states. Only in the cases of climate, low state and local government taxes and expenditures, and the proportion of the adult population born in another state did the state rank near the top.

A similar exercise for the Phoenix and Tucson metropolitan areas based on 37 indicators finds that both the Phoenix and Tucson areas rank below average, and sometimes near the bottom, relative to other U. S. metropolitan areas. Only in the cases of climate (excepting summer temperatures) and recent home price appreciation did the Phoenix area rank near the top among the decision factors. The results for the Tucson area were similarly negative, with the exception of particulate air pollution, on which it had one of the best records among all metropolitan areas.

Three representative traditional “best places/quality of life” studies — that use an “amenity accounting” approach by comparing areas on a number of factors — did not give Arizona high ratings. Only in one case did Arizona even rank in the top half of the 50 states. Results were similar for Arizona’s two large metropolitan areas, which were not ranked among the “best places to live” in the three studies reviewed. The Phoenix area did rank among the top 25 percent of U.S. metropolitan areas in one study, but was ranked near the bottom in the other two studies. The Tucson area received poor ratings in the two studies in which it was rated.

Economists have developed an alternative approach to measure the quality of life of an area, in which the value of place-specific attributes is based on what individuals are “willing to give up” in terms of lower wages and/or higher housing costs to live in a higher quality-of-life area. In three studies using this statistical approach, Arizona had much better ratings than the numbers produced by the traditional “amenity accounting” method. Similarly, two studies based on this alternative approach produced much higher quality-of-life ratings for the Phoenix area and particularly for the Tucson area.

The wide divergence in ratings produced by the two alternative methodologies points out the disconnect that has existed historically between Arizona being ranked as one of the top states in terms of net-migration rates versus its mediocre at best rankings in published quality-of-life/best-places-to-live studies. One explanation for this apparent contradiction may be that for the subset of movers who chose Arizona, the state’s employment opportunities, low taxes, the draw of family and friends who already live in the state, and the sunny climate were the most important factors, trumping its poorer showing on other issues.

INTRODUCTION

Based on the latest available data, one-in-eight Americans, or more than 36 million individuals, change residences each year. Most of these moves are local — within the same county — but about 6 million of these people relocate to a different state or move from abroad. This report first examines the characteristics of these longer-distance movers, their reasons for moving, and how they choose the destination for their move. The factors that are important to individuals' migration decisions vary significantly by age. The discussion focuses on the decision process of adults of working age. Based on the results of that analysis, the report then evaluates how Arizona and the Phoenix and Tucson metropolitan areas rate as potential destinations.

MIGRATION TRENDS

National Trends

U. S. data relating to the movements of individuals or households are formally known as “population mobility.” Conventionally, population mobility is defined in terms of the physical relocation of the place of residence of an individual or household across jurisdictional boundaries. In practice, most of data relating to population mobility produced by the Census Bureau or other U. S. statistical agencies are derived by determining whether people changed residences during either the past 12 months or during the previous five years and compiling the data based on county and state boundaries. These data therefore are limited by the fact that they do not capture repeat migration (people who leave a residence and return within the reference period) and only captures one move during the study period.

Moves are commonly classified in terms of the following categories: within the same county, from a different county in the same state, from a different state, or from abroad. For example, the geographic mobility data from the Census Bureau's *Current Population Survey* (CPS) indicate that more than one-third of the U. S. population moved at least once during the 2005-to-2010 period (Ihrke and Faber 2012). A majority of moves were within the same county, but almost one-in-five people relocated to another county in the same state, nearly one in six moved to another state, and 4 percent moved from a foreign county (see Table 1).

Beginning in 1940, the decennial censuses asked individuals where they lived five years ago (with the exception of the 1950 Census, which asked for residence one year ago). Starting in 1975, the CPS asked a similar question for the first five years of the decade, a period not covered by the census. This allowed for an expansion of this time series and provided five-year mobility estimates for the period between decennial censuses. With the discontinuation of the decennial census long form after the 2000 Census, no mobility data were collected in the 2010 Census. However, the CPS collected one-year and five-year geographic mobility data in 2010, providing users with an uninterrupted set of five-year data covering a 40-year period.

These data show that the U.S. population has historically been very mobile, with five-year mover rates of approximately 45 percent during the 1965-to-2000 period. A significant decline in the geographic mobility of the U. S. population occurred during the 2000s, with the overall proportion of people who had moved in the previous five years decreasing to about 35 percent over the 2005-to-2010 period. The downward trend has been even steeper for interstate moves,

TABLE 1
UNITED STATES FIVE-YEAR MOVER RATES BY TYPE OF MOVE, 1970 TO 2010

	NUMBER IN THOUSANDS		PERCENTAGE OF POPULATION WHO MOVED					PERCENTAGE OF MOVERS			
	Population 5 or Older	Movers	Total	Same County	Same State	Different State	From Abroad	Same County	Same State	Different State	From Abroad
1965-70	176,354	77,790	44.1%	24.6%	8.9%	9.1%	1.5%	55.8%	20.2%	20.6%	3.4%
1970-75	183,093	83,442	45.6	25.6	8.9	9.1	2.0	56.2	19.5	20.0	4.4
1975-80	210,323	97,629	46.4	25.1	9.8	9.7	1.9	54.1	21.1	20.9	4.1
1980-85	216,108	90,126	41.7	22.1	9.1	8.7	1.8	53.0	21.8	20.9	4.3
1985-90	230,446	107,649	46.7	25.5	9.7	9.4	2.2	54.6	20.8	20.1	4.7
1990-95	241,805	106,616	44.1	25.0	8.8	8.1	2.2	56.7	20.0	18.4	5.0
1995-2000	262,375	120,348	45.9	24.9	9.7	8.4	2.9	54.3	21.1	18.3	6.3
2000-05	270,904	107,012	39.5	20.4	9.1	7.8	2.3	51.6	23.0	19.7	5.8
2005-10	282,846	100,152	35.1	21.6	6.7	5.6	1.5	61.0	18.9	15.8	4.2

Note: The 1970 and 1975 estimates do not include respondents who did not specify a mobility status.

Source: U.S. Department of Commerce, Census Bureau, Current Population Survey (P20-567), *Geographic Mobility 2005-2010*, December 2012.

dropping from approximately 9 percent of the population in 1970s and 1980s to less than 6 percent by 2005-2010.

Evidence from other sources confirms the observations drawn by the 2012 CPS report: historically our nation was characterized by high rates of internal migration but geographic mobility has been declining in recent decades. Focusing on interstate moves, a longer migration series based on decennial census data shows that national rate of interstate migration rose substantially over the 20th century — particularly between 1935-1940 and 1945-1950 — and has been in a declining trend since 1980 (Rosenbloom and Sundstrom 2006).

The Internal Revenue Service (IRS) has estimated the number of people who make interstate moves each year since 1980. These data indicate that roughly 1.5 percent of the population move between the Census regions (Northeast, Midwest, South, and West) annually, and roughly 1.3 percent of the population relocate to a different state within the same region, implying an overall annual interstate migration of 2.8 percent (Molloy et al. 2011). The IRS series also shows a decline in national migration rates over time but not to the degree indicated by the CPS series.

A methodological analysis of the CPS migration data (Kaplan and Schulhofer-Wohl 2011) indicates that the Census Bureau's imputation procedures used prior to 2006 resulted in overestimates of interstate migration during the 1999-to-2005 period, so that interstate migration rates continued a pattern of long-term decline over the 2000-to-2010 period rather than being above-trend in the first half of the decade and falling sharply after 2005.

Thus, although the magnitude and timing of the decline in mobility varies somewhat across datasets and measures of migration, by almost any measure, migration in the 2000s was lower than in the preceding decades. Migration rates are at the lowest levels since World War II. Given the pro-cyclicality of migration, the decrease in moves in the 2005-to-2010 period likely was further exaggerated by the longest and deepest economic recession since the Great Depression of the 1930s.

Researchers have examined why fewer people are moving and have offered a wide variety of hypotheses concerning what has caused the decline. A recent study that systematically examined many of the proposed explanations (Kaplan and Schulhofer-Wohl 2013) found that for the 1991-to-2011 period most of the hypotheses do not match the facts. The analysis concluded that changes in the distribution of age, education, marital status, labor force participation, real household incomes, occupation/industry, and changes in the relative desirability across regions could not account for the declines. While not an explanation for the longer-run downtrend, there has been much speculation that the housing market bust had a negative impact on migration in the late 2000s, but research has not found a substantial impact of the bust on homeowner mobility over and above the broader effects of the severe 2007-to-2009 recession (Molloy et. al. 2011). Based on their analysis of the 1991-to-2011 period, however, Kaplan and Schulhofer-Wohl did identify two changes in the U. S. economy that they assert can explain much of the downward trend in interstate migration over the past 20 years — a decline in the geographic specificity of returns to occupations (an increase in the geographic similarity of job opportunities and earnings by occupation has reduced the need to move) and improvements in workers' ability

to learn about other locations before moving, through information technology and inexpensive travel.

Mover Characteristics

The propensity to move and the pattern of those moves vary significantly among different subgroups of the U.S. population. Table 2 compares national five-year mover rates for 2005 to 2010 calculated from the Current Population Survey for several different demographic and socioeconomic subgroups. The following discussion of migration differentials concentrates on “longer” domestic moves — primarily across state borders and secondarily cross-county — rather than “local” moves, those from one location to another within the same county.

Demographic Characteristics

Age. Migration research has consistently identified age as one of the most important characteristics associated with the propensity to move long distances. Rates of long-distance moves peak among young adults and decline sharply among middle-aged and older adults. This pattern is clearly evident in the rates reported in Table 2. The peak rate of interstate moves occurred among ages 25 to 29 — double the overall rate — with the rates for both the 18-to-24 and 30-to-34 age groups lower but still substantially above the overall rate. The rate of interstate moves for those 45 and older is only about one-quarter of the rate for those 25 to 29. Rates for moves between counties within the same state show a very similar pattern.

Gender. The interstate and intercounty migration rates do not differ substantially by sex with rates for males slightly higher than those for females.

Race and Hispanic Origin. Asians have the highest interstate migration rate and also the highest rate of movement from abroad. Blacks have lower-than-average migration rates, and Hispanics have the lowest propensity for long-distance moves. Conversely, Hispanics and blacks have the highest propensity for local moves.

Marital Status. Never married, separated, and divorced individuals are more likely to migrate than married or widowed persons, but the differentials for interstate moves are much smaller than the differences by age.

Socioeconomic Characteristics

Housing Tenure. Of the socioeconomic characteristics listed in Table 2, home ownership is a key factor in the likelihood of moving. For interstate moves, renters were almost three times as likely to move as those living in their own home. In fact, this 3-to-1 ratio was relatively consistent for all types of domestic moves, but the data show that a somewhat higher share of moves by renters was within the same county.

Education. Interstate migration rates by educational attainment shown in Table 2 demonstrate a positive relationship between education and the likelihood of long-distance moves, but with the magnitude of the differences less than for age. This pattern is consistent with most migration

TABLE 2
UNITED STATES FIVE-YEAR MOVER RATES BY SELECTED CHARACTERISTICS,
2005 TO 2010

	All Movers	Same County	Different County, Same State	Different State	From Abroad
Total, Age 5 or Older	35.4%	21.6%	6.7%	5.6%	1.5%
Gender					
Male	35.7	21.7	6.8	5.7	1.6
Female	35.1	21.5	6.7	5.5	1.4
Age					
5-9	44.7	28.9	8.0	6.1	1.7
10-17	34.6	23.1	5.6	4.5	1.5
18-24	48.0	27.9	10.5	7.4	2.2
25-29	65.5	37.5	13.2	11.6	3.2
30-44	45.5	27.6	8.3	7.3	2.3
45-64	23.5	14.6	4.5	3.7	0.8
65-74	15.2	8.5	3.2	3.2	0.3
75 or Older	11.9	7.1	2.6	2.0	0.3
Marital Status, Age 15 or Older					
Married	28.8	16.5	5.6	5.1	1.6
Widowed	18.1	11.3	3.4	2.9	0.5
Divorced	40.1	26.1	7.7	5.8	0.5
Separated	51.6	33.9	9.5	6.8	1.4
Never Married	44.2	27.0	8.5	6.7	1.9
Race and Hispanic Origin					
White	33.7	20.4	6.7	5.6	1.0
Black	42.9	28.7	7.2	5.3	1.7
Asian	40.7	19.6	5.6	6.0	9.5
Hispanic	43.1	31.0	5.2	3.9	3.0
Housing Tenure					
Owner Occupied	22.2	13.2	4.7	3.7	0.6
Rental	65.6	40.7	11.3	9.9	3.7
Educational Attainment, Age 25 or Older					
Not a High School Graduate	33.3	23.6	4.4	3.1	2.2
High School Graduate	30.0	19.6	5.6	3.9	0.9
Some College	33.5	20.2	6.9	5.5	0.9
Bachelor's Degree	35.6	18.4	7.5	7.7	1.8
Graduate Degree	32.9	16.0	6.3	8.4	2.2
Household Income, Age 15 or Older in 2009					
No Income	36.9	22.7	5.8	5.0	3.5
Less Than \$10,000	35.5	21.2	6.9	5.7	1.7
\$10,000-29,999	35.4	22.0	6.8	5.3	1.3
\$30,000-49,999	35.1	21.2	7.4	5.5	0.9
\$50,000-74,999	31.5	17.8	6.8	6.0	1.0
\$75,000-99,999	30.6	17.4	6.0	6.4	0.8
\$100,000 or More	28.7	15.4	5.6	6.7	0.9
Employment Status, Age 16 or Older					
Employed Civilian	37.2	22.6	7.3	5.8	1.4
Unemployed	47.7	29.3	9.4	7.3	1.7
Armed Forces	72.7	21.2	8.2	36.4	6.8
Not in Labor Force	27.3	16.0	5.2	4.6	1.5

Source: U.S. Department of Commerce, Census Bureau, Current Population Survey (P20-567), *Geographic Mobility 2005-2010*, December 2012.

research, which has generally found that apart from age, level of education is the strongest predictor of migration behavior.

Income. Interstate migration rates for upper-income groups are somewhat higher than for lower-income individuals, but the differences are not large. In general, research has not found income by itself to be a good predictor for the likelihood to move, since income is closely linked with other characteristics, such as age, education, and occupation.

Employment Status. Individuals in the Armed Forces are by far the most mobile among the different employment categories. Unemployed persons had somewhat higher interstate and intercounty migration rates than employed individuals, with those not in the labor force having the lowest rates.

Geographic Patterns

Regional Patterns. The sample size of the Current Population Survey precludes publication of data on migration flows for the individual states but does provide information at the regional level. Table 3 presents data on the five-year migration flows in and out of the four major U. S. regions for the 2005-to-2010 period. Regional migration focuses on the overall redistribution of people as they move throughout the nation. According to the CPS estimates, the South had 4.1 million in-migrants, and the West had 2.3 million. The Midwest had the largest number of out-migrants with 2.9 million and the West had the lowest with 1.6 million.

The term “net domestic migration” refers to the overall change in an area when both in-migrants and out-migrants are taken into consideration. This number provides the clearest picture of population change in an area due to domestic migration, by limiting the outside influence of immigration (movement into the country from abroad). A positive figure means the region gained population from domestic migration, while a negative number means the region lost population. The net domestic migration estimates show the Northeast losing more than 800,000 people between 2005 and 2010. The South and West both gained population, although the South’s net gain of 1.1 million people dwarfed that of the West.

The data for the 2005-to-2010 period show a continuation of the historic pattern of population redistribution from the Northeast and Midwest to the South and West regions. The overall magnitude of the redistribution has declined, especially for the West, where net domestic migration has been minimal — primarily due to declining in-migration — compared to the experience prior to 1990. On the other hand, the South continues to experience substantial net domestic migration, although the net inflow from other regions was only about half of the peak value during the 1990-to-1995 period. Net out-migration from the Northeast and Midwest has also declined since 2000, particularly for Midwest compared with its large net migration losses during the 1970s and 1980s.

Distance of Move. Information on the distance of intercounty and interstate moves was also calculated by the Census Bureau from the 2005-to-2010 CPS migration data. Distance moved was estimated by measuring the distance between the population center of the origin county and the equivalent geographic point in the destination county. The results of this tabulation show that

TABLE 3
IN-, OUT-, AND NET MIGRATION BY U.S. REGION, 2005 TO 2010

	Northeast	Midwest	South	West
Domestic In-Migrants	992,000	1,818,000	4,397,000	2,013,000
Domestic Out-Migrants	1,824,000	2,168,000	2,386,000	1,942,000
Net Domestic Migration	-832,000	-350,000	1,111,000	71,000

TABLE 4
**DISTANCE MOVED BY INTERCOUNTY AND INTERSTATE MOVERS,
UNITED STATES, 2005 TO 2010**

Distance in Miles	Percent
Less Than 50	37.4%
50 to 199	21.6
200 to 499	14.4
500	26.7

Source (Tables 3 and 4): U.S. Department of Commerce, Census Bureau, Current Population Survey (P20-567), *Geographic Mobility 2005-2010*, December 2012.

more than one quarter of all intercounty/interstate moves were of at least 500 miles, although the most common distance was less than 50 miles (see Table 4).

Arizona

Population growth has been a defining factor in Arizona's history. Over the century since statehood in 1912, Arizona was the second-fastest-growing state in the nation behind only its neighbor Nevada, and migration has been responsible for approximately two-thirds of the growth in population over that time period. Tabulations based on decennial census data for total population change and total net migration to Arizona for the six decades of the 1950-to-2010 period (see Table 5) certainly demonstrate the importance of migration to the state's growth.¹ These data also show considerable variability in migration rates and migration's share of total population growth over time. Of particular note are the figures for the 1990-to-2000 decade — when the total volume of net in migration was the highest on record and net migration contributed almost three-quarters of total population growth in Arizona over the decade.

While the importance of migration to the state is obvious, a key fact about this demographic phenomenon in Arizona may not be as familiar: The overall volumes of people moving into and out of the state are much larger than indicated by the net migration figures. For example, the 2000 decennial census indicated that the net migration of one-half million between 1995 and 2000 was the result of nearly one million people living in Arizona in 2000 who had lived somewhere else in 1995 and one-half million people who had lived in Arizona in 1995 moving away from the state during the five-year period.

¹ These estimates of net migration, sometimes labeled as "implied" net migration, do not distinguish between domestic and international migration. They are estimated figures based on the population change by age calculated from two consecutive decennial censuses plus the births and deaths by age that occurred during the decade.

**TABLE 5
POPULATION CHANGE AND NET MIGRATION BY DECADE, ARIZONA,
1950 TO 2010**

	Population Change*	Net Migration**	Net Migration Share	Net Migration Rate***
1950-60	552,574	354,512	64.2%	473
1960-70	468,739	238,406	50.9	183
1970-80	947,315	715,982	75.6	403
1980-90	947,013	611,297	64.6	225
1990-2000	1,465,404	1,081,715	73.8	295
2000-10	1,261,385	761,573	60.4	148

* As of April 1.

** Calculated as the difference in the population change plus the number of births less the number of deaths; births and deaths are by calendar year.

*** Per 1,000 Arizona residents at the beginning of the decade.

Sources: Calculated from U.S. Department of Commerce, Census Bureau (decennial censuses) and Arizona Department of Health Services (births and deaths).

Table 6 presents figures relating to domestic interstate migration flows to and from Arizona for the past 50 years. Through 2000, the figures come from migration data from the decennial censuses. The data labeled as “2010” come from the annual American Community Survey (ACS) and cover the five calendar years from 2005 through 2009 (the period most comparable to the April 1, 1995 to April 1, 2000 period reported in the 2000 decennial census). The ACS is a large national survey conducted by the Census Bureau, designed to provide the types of detailed data that used to be derived from information previously collected by the decennial census. The ACS migration data is based on moves over the previous 12-month period rather than a five-year period. This fundamental change in methodology means that current data are not directly comparable with the previous decennial census migration data.

The number of in-migrants and out-migrants both increased substantially between the late 1950s and late 1990s. Net migration rose considerably, though the high 1995-to-2000 figures may prove to be an aberration.

For the 1995-to-2000 period, Arizona’s nearly 800,000 domestic in-migrants ranked seventh among all states, but were still far below the 1.6 million for Florida and 1.4 million for California and Texas. The state ranked lower (17th) in terms of the number of out-migrants (480,272). Its net migration of 316,148 ranked fourth highest, behind only Florida, Georgia, and North Carolina. In terms of migration rates — which adjust for differences in population size — Arizona’s in-migration rate of 180 per 1,000 state residents in 1995 was more than double the national average and second only to Nevada. The state’s net migration rate of 71 was also second only to Nevada.

Unlike the upward trend in numbers of migrants, a declining trend is evident in the in-migration rates shown in Table 6, with a lesser decline in the out-migration rates. As the state’s population has grown rapidly, the increasing numbers of migrants are a smaller proportion of the total population when compared to earlier decades when Arizona was a much less populous state.

TABLE 6
DOMESTIC INTERSTATE MIGRATION, ARIZONA, 1955-60 TO 2010

	In-Migration	Out Migration	Net Migration
Migration Flows			
1955-60	312,597	150,287	162,310
1965-70	355,683	245,598	110,085
1975-80	598,368	352,680	245,688
1985-90	649,821	433,644	216,177
1995-2000	796,420	480,272	316,148
2010	265,281	187,916	77,365
Migration Rates			
1955-60	317	152	164
1965-70	225	155	70
1975-80	262	154	108
1985-90	204	136	68
1995-2000	180	108	71
2010	42	30	12

Source: U.S. Department of Commerce, Census Bureau (decennial censuses for 1960 through 2000 and American Community Survey for 2010).

Given the declines in geographic mobility nationally, decreases in the domestic migration numbers for Arizona for the 2005-to-2010 period would be expected, but since the ACS numbers are not comparable to the previous decennial census measures, it is difficult to interpret the latest figures. A naïve approach might be to simply divide the “five-year” census numbers by five but that would certainly not produce statistically valid estimates of annual average figures because of the people who move more than once in a five-year period. The results of such an exercise do not match expectations as the 2010 figures are much larger than one-fifth of the 1995-to-2000 numbers.² However, the decline in total net in-migration figures for the 2000-to-2010 period shown in Table 5 is consistent with the national trend mentioned previously.

Based on the ACS data, the absolute size of its migration flows ranked Arizona eighth in terms of the numbers of in-migrants, 13th for out-migration, and third highest, behind only Texas and North Carolina, in terms of net migration.

Characteristics of Arizona’s Migrants

To date, no state-to-state migration flows by characteristics have been released from the ACS. Thus, this analysis relies heavily on the migration data compiled from the 2000 census.

Migration rates by age group for interstate migrants to and from Arizona and for those moving to the state from abroad, based on the 2000 census data, are shown in Table 7. The highest rates of interstate in-migration and out-migration were among young adults (ages 20 to 39 in 2000).

² The migration statistics traditionally compiled from the decennial census have several limitations: they were estimates based on data collected by the long form of the census that was only completed by a small fraction of the population; the methodology was based on comparing location at only the beginning and end of a five-year period and so did not count some moves; and no data were collected about what happened in the first five years of the decade.

TABLE 7
MIGRATION RATES BY AGE, ARIZONA, 1995 TO 2000

	Rate Per 1,000 Arizona Residents in 1995			
	In-Migration	Out-Migration	Net Migration	From Abroad
Total	187.2	112.9	74.3	43.0
5-9	162.2	118.7	43.5	45.6
10-14	140.7	95.6	45.1	37.1
15-19	152.0	99.1	53.0	63.3
20-24	273.7	164.3	109.4	113.5
25-29	281.7	199.2	82.5	94.9
30-34	229.0	165.6	63.4	60.5
35-39	190.9	133.0	57.9	41.0
40-44	164.8	107.4	57.4	30.6
45-49	152.4	90.1	62.3	24.0
50-54	167.3	81.4	85.9	17.1
55-59	199.6	75.4	124.2	18.1
60-64	222.7	72.5	150.2	17.1
65-69	217.9	64.1	153.8	13.6
70-74	157.6	61.2	96.4	9.0
75-79	125.8	64.3	61.5	5.9
80-84	113.7	77.7	36.1	5.0
85 or Older	123.4	101.2	22.2	5.7

Source: U.S. Department of Commerce, Census Bureau (2000 decennial census).

Those moving from abroad were even younger, with the highest rates in the 15-to-34 age group. A secondary peak in interstate in-migration occurred among those 55-to-69 years old, reflecting retirement migration. Thus, net interstate migration was bimodal, with the highest rates in the 55-to-69 age group, followed by the 20-to-24 age group.³

Numerically, interstate in- and out-migration between 1995 and 2000 was dominated by young adults (ages 20 to 39 in 2000). On a net basis, the highest number was in the 20-to-24 age group, followed by somewhat lower figures in the 25-to-29, 55-to-59, 60-to-64, and 65-to-69 age groups. The number moving from abroad was highest in the 20-to-24 and 25-to-29 age groups.

Age-specific estimates of implied total net migration calculated for the 2000-to-2010 period indicate that additions to the state's population from net migration continued to be concentrated in the young-adult and retirement age groups. The numbers of net migrants were relatively equal in the 15-to-19, 20-to-24, 25-to-29, 60-to-64, and 65-to-69 age groups.

The interstate migration flows into and out of Arizona during the 1995-to-2000 period were fairly evenly split by gender with males accounting for about 52 percent of net migration. In the case of foreign immigration, there was there more of a gender gap with 56 percent being males. Non-Hispanic whites made up more than three-quarters of domestic migration flows to and from Arizona and Hispanics accounted for most of the rest. The state was a very popular destination

³ The census data are reported in terms of age in 2000. Since the moves could have occurred anytime during the 1995-to-2000 period, the migration by age data are not based on actual age at time of move. On average, the age at the time of the move is 2.5 years less than the age in 2000.

for domestic interstate migration among both those born in the United States (fourth highest number of net migrants) and those born outside the country but moving to Arizona from another U. S. state (fifth highest). The state did not rank as highly in immigration from abroad at tenth among all states.

Regional Pattern of Arizona Migrants

The regional pattern of in-migration has shifted dramatically over the years. Data from the 1935-to-1940 period show that almost half of those moving to Arizona came from the South, about one-third came from other western states, one-fifth from Midwestern states, and relatively few from the northeastern states or from outside the United States. In the post-World War II period the pattern shifted, and by the 1975-to-1980 period, the largest share of in-migrants came from other western states (34 percent), with smaller shares from the South (25 percent) and the Midwest (15 percent) and larger shares from northeastern states (17 percent) and from abroad (8 percent).

More recently, the patterns have shifted again as shown by the data in Table 8. During the 1995-to-2000 period, almost half of domestic in-migrants came from other western states, about one-quarter from the Midwest, and smaller shares from the South and from states in the Northeast. For those who left the state during the late 1990s, about half of domestic out-migrants went to other western states, 25 percent to the South, 18 percent to the Midwest, and only 7 percent moved to states in the Northeast. Data from the ACS for the 2005-to-2009 period show a further continuation of these shifts in the geographic patterns. One half of domestic migrants continued to come from other western states, a bigger share came from the South (19 percent), and the share of new residents coming from states in the Northeast continued to decline. The primary change in the regional pattern of out-migration during the 2005-to-2009 period was further growth in the share of those leaving Arizona moving to southern states and a lesser share moving to the Midwest.

**TABLE 8
GEOGRAPHIC DISTRIBUTION OF IN- AND OUT-MIGRATION FLOWS,
ARIZONA, 1995 TO 2000 AND 2005 TO 2009**

	In-Migration	Out Migration
1995-2000		
Northeast	10.6%	6.8%
Midwest	23.9	18.4
South	17.7	25.3
West	47.8	49.6
2005-09		
Northeast	8.3%	6.1%
Midwest	22.1	16.5
South	19.4	27.9
West	50.3	49.5

Source: U.S. Department of Commerce, Census Bureau (2000 decennial census and 2005-to-2009 American Community Survey).

Focusing on individual states, California dominated in the 2005-to-2009 period as the major origin and destination of Arizona migration, as it has for many years. Arizona has gained many more new residents than it has lost to its bigger neighbor. Texas, Michigan, and Illinois, plus three states bordering Arizona — Colorado, Nevada, and New Mexico — also were origins of substantial numbers of in-migrants during the 2005-to-2009 period. Besides California, other popular destinations of those leaving the state were Texas, Colorado, and Washington, and to a lesser extent the other three neighboring states of New Mexico, Utah, and Nevada. In terms of net migration, Arizona had substantial net outflows to the southwestern states of Texas and Oklahoma and to Colorado and Utah in the West, but generally the net flow to Arizona was positive.

Estimates of the annual state-to-state migration flows compiled from IRS records for the 2000-to-2010 period indicate that regional migration patterns changed significantly as the overall volume of in-migration to Arizona fell to historic low levels by the end of the decade. The IRS data show that the state had net inflows from all four census regions and from 47 of the other 49 states during the first half of the decade, with net in-migration from other western states making up more than one half of the total. But by 2010, net flows to Arizona had dropped precipitously and geographic patterns had shifted, with the state losing population to the South and the share of net in-migration from the other western states dropping to only 10 percent, while Midwestern states accounted for two-thirds of net migration.

Metropolitan Area Migration

In the second half of the last century, the Phoenix metropolitan area was the primary destination of most of the flow of interstate migration into Arizona. As it has grown, Arizona's largest metropolitan area has become a major destination for migrants from the rest of the nation. In the 1995-to-2000 period, the Phoenix metro area experienced the greatest net domestic migration of all metro areas, with domestic in-migration exceeding 582,000 and a net in-migration flow of more than 245,000 people. It did not rank as highly in international migration (11th). In terms of total flows (combining the domestic and foreign figures), the Phoenix metro area had the second-most migrants among U. S. metro areas, only behind the Atlanta area.

The migration flows for the Tucson metro area were much smaller than for the Phoenix area, with total domestic in-migration of a little more than 154,000 and net in-migration of approximately 32,000. Among the state's three smaller metro areas, only the Prescott area experienced substantial population growth from migration, with total in-migration of more than 51,000 and net in-migration of almost 23,000. Table 9 presents the figures for total domestic in-migration, out-migration, and net migration for the 1995-to-2000 period for the five metro areas in Arizona.

No information on post-2000 migration flows for metropolitan areas based on ACS migration data is available. Estimates of implied net migration over the 2000-to-2010 period based on data from the decennial censuses and birth and death statistics show that the Phoenix area accounted for about three-quarters of the state's total net migration during the last decade, with Metro Tucson receiving slightly more than 10 percent, and with 16 percent in the other areas of the state.

TABLE 9
MIGRATION FLOWS AND NET MIGRATION RATES,
ARIZONA METROPOLITAN AREAS, 1995 TO 2000

	In-Migration	Out-Migration	Net Migration	Net Migration Rate*
Phoenix-Mesa-Scottsdale	582,206	337,047	245,159	93.6
Tucson	154,174	122,190	31,984	43.7
Flagstaff	31,446	32,840	-1,394	13.0
Prescott	51,631	28,969	22,662	169.7
Yuma	31,477	27,708	3,769	27.7

* Per 1,000 Arizona residents in 1995.

Sources: U.S. Department of Commerce, Census Bureau (2000 decennial census).

CONCEPTUAL MODELS OF THE LOCATION DECISION PROCESS

Analyses of the movements of people and where they move has often looked at migration as an aggregate phenomenon, examining the magnitude and pattern of migration flows and trying to tie the size and/or pattern of these flows to aggregate measures related to the geographic areas. A large and growing body of research, however, focuses on the questions of why people move and where they move from the perspective of individual choice. Based on this research, social scientists generally agree that individual and household migration decisions are influenced by a combination of economic and noneconomic factors that vary depending on the time period and age and other personal characteristics.

A simple but popular conceptual model of the migration decision categorizes the factors that influence the decision into two sets: those forces that encourage an individual to leave his/her current location, termed “push” factors; and those that attract him/her to another place, termed “pull” factors. A representative listing of factors grouped according to this approach was developed by Bogue (1985):

Push Factors:

1. Decline in a resource or in the price paid for it; decreased demand for a particular product or service.
2. Loss of employment.
3. Oppressive/repressive discriminatory treatment because of political, religious, or ethnic origins.
4. Alienation from the community because one no longer subscribes to prevailing belief, actions, or modes of behavior.
5. Retreat from the community because of lack of opportunities for personal development, employment, or marriage.
6. Retreat from the community due to catastrophe: floods, drought, earthquake, etc.

Pull Factors:

1. Superior opportunities for employment.
2. Opportunities to earn a larger income.

3. Opportunities to obtain desired specialized education and training.
4. Preferable environment and living conditions.
5. Dependency: movement associated with the move of other persons to whom one is related or otherwise linked.
6. Opportunities for new and different activities, environment, or people, such as the cultural, intellectual, or recreation activities available in an urban setting versus a rural or small town setting.

While it remains useful as a way to frame discussion of the factors that affect people's decisions to move, this causal model of the migration decision has been criticized as oversimplifying what is a complex process. As an alternative, most recent analyses of migration decisions have been conceptualized in the context of what social scientists term "choice theory." The fundamental concept of choice theory is the hypothesis that individuals make decisions based on rational evaluation of the positive and negative factors associated with each alternative and choose the option that maximizes personal welfare.

The best-known application of this approach is the neoclassical microeconomic model of individual choice. As applied to the migration decision, individuals rationally choose whether to move and where to move on the basis of cost-benefit calculations of the expected net financial (or more generally, welfare) return. In its strictest one-period formulation, individuals choose to move where they can be most productive subject to the cost of relocating. More realistically, the theory posits that the decision is based on "expected" net returns estimated over some time horizon for current and alternative locations.

Use of microeconomic choice theory to model migration behavior has been criticized on several fronts. The general criticism of this economic model that individuals do not have all the necessary information or are unable to perform such cost-benefit calculations certainly applies to its application to migration theory, but over time economists have developed more realistic versions of the general model in which decisions are based on less-than-full information. More telling is the criticism from other social scientists that the microeconomic choice model concentrates on economic variables but takes important noneconomic factors as givens.

A more general and realistic choice-theory model of migration behavior incorporates aspects from versions of the theory from sociology, psychology, and demography and conceptualizes decision-making in terms of reasoned action based upon the effect on individual or family well-being. This decision process is based on perceived expectations of the consequences of the decision and could conceivably take into account a wide menu of factors that could vary in importance at different times and for different individuals.

Such a model has the following features:

1. In this more general conception of the migration decision process, an individual chooses to stay or move to one of the possible other locations being considered based on which place is perceived to provide the highest level of well-being in the future for the individual and/or his/her family.

2. Rather than focusing solely on economic well-being, the evaluation of future well-being is made in terms of multiple dimensions, such as standard of living, economic stability, comfortable home and community environment, various dimensions of quality of life, proximity to family and friends, social and political climate, etc.
3. The decision process is influenced by a variety of personal factors, such as age, sex, household characteristics, health, previous migration experience, human capital attributes, and financial resources.
4. Contextual factors can also influence the decision-making process. For example, changes in regional or national economic conditions can affect an individual's evaluation of the relative desirability of potential moves. Changes to the political or social climate can have similar impacts.
5. The important role of social networks also needs to be incorporated into the model. They can play a key role in making individuals aware of alternatives, providing information and assistance in the migration process. In particular, the presence of existing ties often makes potential destinations more attractive.

In summary, this generalized model of migration behavior conceptualizes the decision process as one of an evaluation of subjectively perceived expectations of the level of future well-being — based on multiple criteria — associated with the current location versus alternative destination locations.

REVIEW OF PAST EMPIRICAL RESEARCH

Data Analyses

The literature on migration has grown exponentially in recent years as demographers, economists, geographers, and regional scientists have focused their research efforts on many different aspects of the phenomenon. Empirical work in this area has been facilitated by the availability of extensive cross-section and longitudinal datasets for individuals and households and by advances in both computer technology and analytical techniques.

Much of the research has centered on the factors that influence the migration decision. Models of migration behavior for the most part can be classified into three approaches. Human capital models trace their origins back to Sjaastad (1962) and take the view of the migration decision as an economic decision motivated by perceived interregional differences in factors that influence economic opportunity. A large body of research based on this approach emphasizes the importance of real income or wage differentials and employment prospects as important determinants of migration behavior.

Using economic jargon, the other two approaches have a common focus on “nontraded goods and services” rather than income maximization. One of these is based on the seminal work of Tiebout (1956) and recognizes the importance of differences in local taxes and government services on the location decisions of households. The other nontraded goods approach focuses on the importance of quality-of-life factors on migration decisions. In this model, individuals migrate in order to attain a better quality of life by choosing a location with more and/or better location-specific amenities.

Empirical research has examined the influence of these fiscal and quality-of-life factors on migration behavior. In many cases, such studies have focused on testing the impact of a single type of fiscal or quality-of-life factor, but still usually employ multivariable models that include economic and/or other location-specific variables. For example, in an often-cited article, Graves (1979) found both economic opportunities and climatic aspects of quality of life important determinants of migration. With respect to fiscal factors, multiple studies have found evidence that location differences in taxes and public services affect migration behavior (see Cebula and Nair-Reichert 2012 for example).

Other researchers have taken the approach of specifying more comprehensive formulations that include economic, fiscal, and quality-of-life variables within the same model. A representative example of this comprehensive approach can be found in the Schachter and Althaus (1989) analysis of state migration flows that incorporated economic (income, unemployment rates, manufacturing growth, degree of unionization), fiscal (tax level, per capita expenditures on government service, and per capita welfare expenditures), and climate (cooling- and heating-degree-days) variables in its models. Clark and Hunter (1992) undertook a particularly comprehensive examination of age-specific migration rates using a model that included a large number of both fiscal and quality-of-life measures. Their results support the view that amenities as well as economic opportunity are important determinants of migration behavior along with the added insight that the economic variables were relatively more important to younger adults and amenities were more important to older adults. The findings for the fiscal variables were also age-dependent, but in general higher tax levels appeared to have negative effects on migration behavior. Unfortunately, the study used county-level data, and thus was not focused solely on longer-distance moves between states or labor market areas.

Lacking direct information relating to networks of friends and family, some studies have used proxy measures based on available data relating to numbers of previous migrants and generally found significant positive impacts for the variable.

At the risk of overgeneralization, the preponderance of the findings point to the primacy of employment-related factors but also often have identified significant impacts of noneconomic factors, supporting the multidimensional nature of location decisions. The review articles of Greenwood (1975 and 1997), Michalos (1996), and Cushing and Poot (2004) present extensive reviews of this literature from the points of view of three different academic disciplines.

Most of the research on internal migration in the United States has dealt with aspects of the topic not specifically related to the subject of this study — the location decision of individuals and households. Even the preponderance of research related to location decisions has concentrated on residential mobility — local moves within a single labor market or metro area — rather than longer-distance moves. The following discussion is limited to research findings from empirical studies that address the specific topic of the factors that influence individuals' or households' selection of migration destination.

Davies et. al. (2001) used IRS annual state-to-state migration flows for the 1986-to-1997 period to examine factors affecting interstate moves and specifically the destination decision. The analysis focused on migration responses to relative economic opportunities (as measured by

unemployment rates and per capita income) and the costs of moving (as proxied by the distance between origin and destination). The results indicate strong and consistent impacts of all the explanatory variables included in the model: a negative impact of higher unemployment at the destination, a strong positive impact of higher per capita incomes, a negative but diminishing impact of distance, and a positive effect of population — that is, movers were more likely to move from a smaller population state to a larger state. Their models also found significant effects from noneconomic variables, but unfortunately, the impacts of place-specific noneconomic variables were tested only indirectly by including them as a set of “fixed effect” variables for each state. This methodology provides a test of whether such noneconomic factors have a significant impact on the destination decision but does not provide evidence concerning the relative importance of specific noneconomic variables.

A study focusing on the influence of differences in the returns to education on interstate migration using micro data for white males aged 25 to 34 from the 1990 census (Dahl 2002) produced similar results: both the economic variable and three different sets of noneconomic variables (quality of life, climate, and fiscal measures) had significant effects on migration destination. But again, no results for the individual noneconomic variables were reported.

A recent study that specifically analyzed the college-to-work moves by college graduates in technology fields has particular relevance as it included a large set of location-specific characteristics of the destination metro areas (Gottlieb and Joseph 2006). The results identified employment growth and variables related to the importance of the knowledge economy (educational attainment of the area population, research and development expenditures at area colleges, industry share of knowledge industries) as the most important factors in location decisions, with distance a negative influence and population size a positive factor. Among the measures that the authors classified as quality-of-life variables, the findings indicated a positive impact for climatic amenities (measured by the *Places Rated* climate index) and negative effects for the poverty rate and for high cost of living, but they concluded that the impacts of the amenity variables were of secondary importance in the location decisions of the young tech workers in the study.

Survey Research

Another approach to learning more about the migration decision involves asking migrants why they moved. Most of the survey data relating to reasons for moving have been collected as part of more general surveys, such as the Current Population Survey. As part of its data collection efforts related to geographic mobility, the Census Bureau has included a question on reasons for moving as part of the March CPS since 1998. Unfortunately, results pertaining specifically to interstate moves are not reported: only tables distinguishing between intracounty versus intercounty moves are published.

Table 10 presents the percentage distribution of reasons given for intercounty moves between 2011 and 2012 by movers aged 16 or older (U.S. Census Bureau, Geographical Mobility/Migration Main website). Given that interstate moves accounted for only about 40 percent of all moves that crossed county borders, the information reported in the table must be interpreted with caution. For example, the figures show that housing-related reasons account for about one-third of the moves, most of which are likely associated with moves from one county to

another within the same metro area rather than with long-distance moves. If only the nonhousing-related answers are considered, employment-related reasons dominate, with more than half of the reasons given for moving employment related. Moves associated with a new job or job transfer was the single most important reason, while unemployment (“looking for a job or lost a job”) was a much less prevalent reason with respect to intercounty moves. Among the nonemployment-related reasons, those categorized as “family-related” reasons are much more important than any of the “other” category. Reasons such as moves to attend school or for “quality of life” reasons were given by very few intercounty movers.

Although dated, special tabulations of the reason for moving from the Annual Housing Surveys (AHS) conducted from 1979 through 1981 provide information obtained from U. S. households that had made interstate moves during the previous 12 months. A summary of the main reasons listed by these households is found in Table 11 (Long 1988). More than one-half of the respondents cited employment-related reasons as the main reason for their move, with job transfers and new jobs as the most common employment-related reasons. Among family-related reasons, “to be closer to relatives” was the most-cited motive, emphasizing the importance of the role of family and friends in the migration decision process. In contrast to the CPS survey data, more interstate migrants indicated that quality-of-life reasons were the primary motive for their move, as indicated directly by the listing of “change in climate” by 6 percent of responding households. Unfortunately, some quality-of-life reasons may have been masked due to the way the data were collected/reported.⁴ Ten percent of respondents gave reasons not fitting any of categories on the survey. Given the structure of the questionnaire, it seems likely that lifestyle or other reasons not related to economic or family considerations made up most of these responses.

The AHS survey allowed multiple responses to the question on reasons for moving. More than half of the secondary reasons listed fell into the “all other” category. This indicates that the secondary motives for the interstate moves were more heterogeneous and fell outside the “more mainstream” set of reasons that were listed on the survey — consistent with the view of the migration decision process being complex and influenced by a variety of factors.

Of the secondary reasons listed, the most often given was to be closer to relatives — again emphasizing the importance of networks of family and friends in making the migration decision. Change in climate was also cited more frequently as a secondary reason. The popularity of both these factors as secondary reasons supports the notion that even though economic-related motives may be the most important factor in the decision, other noneconomic factors are also important considerations.

The AHS data were also tabulated to provide separate information on reasons for moving for those who made moves in and out of each of the four major census geographic regions. It should be noted when looking at these data that the Northeast and Midwest had substantial net out-migration during this period, while the West and particularly the South had net in-migration. Table 12 provides separate listings of the percent distribution of responses by households who moved into and out of each region during the 1979-to-1981 period.

⁴ As part of a housing survey, the questionnaire was not focused on interstate migration. In addition, only reasons receiving at least a 2 percent response were listed separately.

TABLE 10
REASONS FOR MOVING BY MOVERS 16 OR OLDER, UNITED STATES, 2012

Family-related reasons	26.8%	
Change in marital status		6.1%
To establish own household		6.4
Other family reason		14.4
Employment-related reasons	37.2	
New job or job transfer		21.6
To look for work or lost job		3.3
To be closer to work/easier commute		7.0
Retired		1.2
Other job related reason		4.0
Housing-related reasons	32.9	
Wanted own home, not rent		2.5
Wanted new or better home/ apartment		6.5
Wanted better neighborhood /less crime		2.6
Wanted cheaper housing		4.9
Foreclosure/eviction		1.6
Other housing reason		14.8
Other Reasons	3.0	
Change of climate		1.0
Health reasons		0.0
Natural disaster		0.5
All other reasons		1.5

Source: U.S. Department of Commerce, Census Bureau, Current Population Survey, Geographical Mobility: 2011 to 2012, <http://www.census.gov/hhes/migration/>.

TABLE 11
REASONS FOR MOVING BETWEEN STATES, UNITED STATES, 1979 TO 1981

Family-related reasons	14.2%	
Divorced or separated		2.6%
To be closer to relatives		8.6
Other family reasons		3.0
Employment-related reasons	56.2	
Job transfer		22.2
To look for work		6.3
Take a new job		18.7
Entered or left the armed forces		3.4
Retired		2.4
Other employment-related reasons		3.2
Other	23.7	
To attend school		5.6
Change in climate		6.0
Other reasons		10.1
Not specified		2.0
Other specified but not reported reasons*	5.7	

* Only reasons accounting for at least 2 percent of moves were reported.

Source: Long, L., *Migration and Residential Mobility in the United States*, 1988, based on combined data from the 1979 through 1981 American Housing Survey.

TABLE 12
REASONS FOR MOVING BETWEEN REGIONS, UNITED STATES, 1979 TO 1981

Main Reason	Northeast		Midwest		South		West	
	In	Out	In	Out	In	Out	In	Out
Job transfer	26.1%	27.4%	26.5%	22.9%	22.3%	27.5%	24.8%	18.6%
Look for work	7.3	3.8	5.8	9.4	7.3	6.7	5.7	4.5
New job	21.0	16.6	20.8	21.7	19.6	17.2	15.5	18.9
Armed forces	4.0	2.9	5.8	3.1	3.5	5.8	4.3	5.0
Retirement	0.3	3.3	1.4	3.0	3.9	1.1	1.3	1.9
Attend school	4.7	4.2	4.1	3.4	3.1	3.4	4.6	5.1
Be closer to relatives	9.6	4.9	11.6	6.8	7.9	9.2	6.9	14.0
Change climate	1.2	15.5	2.3	11.0	10.0	4.2	13.5	3.3
All other	25.8	21.5	21.7	18.7	22.5	24.9	23.3	28.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Reasons								
Job transfer	26.3%	28.0%	27.7%	23.5%	22.9%	28.4%	26.0%	19.7%
Look for work	9.1	5.7	6.7	12.3	9.2	8.4	8.8	5.6
New job	22.7	19.5	23.9	24.4	22.2	19.7	18.5	21.5
Armed forces	4.6	3.5	6.4	3.6	4.1	6.8	5.3	5.6
Retirement	1.1	5.2	2.2	3.7	5.3	2.8	2.9	2.6
Attend school	4.7	4.9	4.6	4.5	3.6	4.3	6.3	5.1
Be closer to relatives	15.2	10.1	15.1	10.4	12.6	12.4	10.9	20.9
Change climate	4.4	21.2	3.2	17.6	15.5	6.0	18.5	5.6
All other	40.2	35.1	34.4	34.2	36.5	38.6	41.1	29.2
TOTAL	128.3	133.2	124.2	134.2	131.9	127.4	138.3	115.8

Source: Long, L., *Migration and Residential Mobility in the United States*, 1988, based on combined data from the 1979 through 1981 American Housing Survey.

Looking first at the main reasons for moving, employment-related reasons dominated just as they did in the interstate tabulations. Focusing on the other reasons, the “all other” category was the most important, again consistent with the complex and multidimensional nature of the migration decision. Change in climate ranked highly among out-migrants from the Northeast and Midwest and among in-migrants to the South and West. Being closer to relatives was also cited by a substantial number of respondents, and interestingly this factor was more important to in-migrants to the Northeast and Midwest regions and to out-migrants from the South and West. In the tabulations of all reasons given for moving, the “all other” category and the noneconomic factors, such as being closer to relatives and climate, take on added importance as secondary reasons.

Other studies have also collected information on factors influencing the location decision of households. For example, a study based on data from a 1997 survey of households who moved to a set of high in-migration counties in the Midwest found that the responses from heads of households aged 18 to 59 indicated about one-third of their moves were for employment-related reasons but that only a small number were related to environmental-pull factors (15 percent) or ties to the area (6 percent) (Williams and Sofranko 1979).

Although narrowly focused on people who moved to a single state, a University of Montana study is of particular interest as it collected data from people as to why they had moved to Montana during the 1993-to-1997 period. About 60 percent of the responding households had at least one member who had lived in the state before. For these “return” migrants, 30 percent said “family ties” was the primary reason for moving back to Montana, 22 percent cited “employment,” 19 percent said “environmental quality,” and the remaining 28 percent indicated something else as their primary reason for their move. Among those households in which no member had previously lived in Montana, 36 percent said “family ties” was their primary reason for moving to the state, while 24 percent cited “employment,” 19 percent reported “environmental quality,” and 21 percent gave other reasons. Across the entire sample, leading examples of “other reasons” included retirement, to attend school, and military-related moves (Von Reichert and Sylvester 1998).

While the validity of information relating to reasons for moving gathered by household surveys has been questioned by some researchers, they do provide direct responses from movers relating to factors that influenced their decision to move and, in some cases, provide insight that may not be available from other sources. The CPS and AHS data certainly document that economic-related reasons are the most important factor, but the responses to the surveys — particularly those relating to secondary reasons from the AHS survey — show that family and friends also are a strong influence on many individuals’/households’ migration decisions. More generally, the data support the view that the migration decision is influenced by multiple factors and that noneconomic factors are often important influences.

THE LOCATION DECISION PROCESS IN PRACTICE

In the conceptual model of the location decision process described earlier, individuals (or alternatively households) compare potential destinations with respect to a set of factors that are important to them and make their choice based on their subjective evaluation of which of their alternatives produce the highest expected level of welfare for them or their household. In some

cases, this general model may be subject to severe constraints. At the limit, the choice may be constrained to the single choice, as in the case of a job transfer or family ties. At other times, the process may be limited by very specific factors that dominate the choice process, as for example very specific job requirements, or to participate in activities that only occur at a limited number of locations, such as specific university programs or ski jumping. But abstracting from such constrained cases, research has identified a more generalized set of factors that appear to be important decision variables. A representative list might include:

Economic factors:

- Employment opportunities – measured by the unemployment rate and job growth.
- Expected income – measured by employment opportunities and wage levels and by income levels and income growth.

Fiscal factors:

- State and local tax structure and levels.
- Availability and quality of government services.

Quality-of-life factors:

- Quantity, quality, and cost of housing.
- Quality of education system.
- Quality and availability of health care.
- Quality of the transportation system.
- Availability, quality, and cost of desired cultural and recreational activities.
- Environmental factors – air and water quality.
- Crime and safety.
- Other location-specific amenities – such as a coastal or other scenic location.

With the Internet, it is now much easier for individuals to gather information about many of these factors. In addition to many governmental and other free information sources available for access over the Internet, providing information to individuals for use in these kind of location decisions has become a big business. Any number of books and websites are available with data and other types of information about U.S. states, metropolitan areas, and individual cities and towns. Probably the best known of such publications is the *Places Rated Almanac*, but there are a wide variety of other books aimed at the same market, with all sorts of nuances — focusing on retirement, families, outdoor enthusiasts, etc. Similarly, there are numerous websites, such as the *Places Rated* or *Sperling's Best Places* websites offering to provide such information and/or providing ready-made comparisons among alternative locations and other value-added services.

However, more traditional methods to obtain information are also very important for the decision process of many individuals. These include knowledge gained from past visits and especially from friends and family and other social networks.

Looking at the Data for Arizona and the Phoenix and Tucson Metropolitan Areas

How does Arizona rank compared to the other states in terms of variables identified as potentially important factors in the location decision process of individuals and households?

State-Level Metrics

Table 13 presents the rankings for the state of Arizona among the 50 states for 47 economic, fiscal, and quality-of-life factors. Admittedly, the particular set of variables included in the table is arbitrary, with the data being publicly available at no cost as one of the primary criteria. In no way do the indicators cover all of the potentially important factors that can go into people's location decision, but they do offer some insight on how the state compares relative to other states for some of the relevant issues.

Economic Factors. Both empirical and survey research indicate that economic factors generally have the strongest influence on the decision to move and the choice of destination. While Arizona is historically one of the top states in terms of job growth, it has not ranked highly with regard to other economic measures such as income or wage levels. With the severe impacts of the 2008-09 recession on the Arizona economy, the state ranks near the bottom in the recent past (looking at a five-year period) for many economic measures. Data for the last year or two show improvement, especially in terms of the real estate sector, but still leave the Arizona economy well back in the pack, rather than one of the leaders.

Fiscal Factors. Arizona's tax burden and government spending levels are low compared to most other states, which should appeal to potential migrants who are proponents of small government. On the other hand, low government spending levels also imply the level and quality of public services provided are less than those available in many other states.

Arts, Culture, Recreation. Arizona's combination of desert and mountain scenery rate highly in terms of natural beauty and its wide-open spaces offer abundant outdoor recreational opportunities. Its natural resources and favorable climate attract large numbers of visitors, which help support tourism-related activities, and the combination of tourists' and local residents' demand results in the state's two major metropolitan areas ranking well above average for arts, culture, and recreation facilities (the metro areas are evaluated in Table 14). The state as a whole does not rank highly for entertainment/recreation-related facilities, such as golf courses or restaurants, however, and the state's financial commitment to both the arts and public recreation facilities ranks very near the bottom.

Climate. Climate is difficult to evaluate for at least two reasons: First, climate tends to be a local phenomenon — as is the case in Arizona, where there are several different climate zones within the state — so that climate measures at the state level may not be very useful. Second, personal preferences concerning what constitutes a desirable climate can be very different among individuals, so that trying to develop an overall climate ranking may not be that useful either. With those two caveats, the four climate factors in Table 13 show that on average, Arizona has relatively high summer and winter temperatures, very low amounts of rain and snow, and the sunniest climate among all 50 states. In general, it would seem that this combination would be evaluated favorably by most people.

Crime. The state's property and violent crime rates are worse than average. Despite relatively high spending on public safety, Arizona ranks 32nd in terms of violent crimes and its property crime rate is among the highest in the nation.

TABLE 13
RANKS ON SELECTED FACTORS ASSOCIATED WITH THE LOCATION DECISION PROCESS, ARIZONA
(A rank of 1 is highest unless otherwise noted)

	Rank	Data Source
ARTS, CULTURE, RECREATION		
National historic landmarks (2012)	18	National Park Service
State funding for the arts per capita (2010)	47	National Assembly of State Art Agencies
Per capita operation expenditures for state parks (1999)	48	Census Bureau
Golf courses per capita (2010)	31	National Golf Foundation
Restaurants per capita (2010)	45	National Restaurant Association
CLIMATE		
Average summer temperature	10	Currentresults.com
Average winter temperature	10	Currentresults.com
Average total precipitation	47	Currentresults.com
Number of clear days	1	Currentresults.com
CRIME		
Violent crime rate (2011) [lowest=1]	32	Federal Bureau of Investigation
Property crime rate (2011) [lowest=1]	43	Federal Bureau of Investigation
DEMOGRAPHIC FACTORS		
Population (2012)	15	Bureau of Economic Analysis
Population growth (2002-2012)	3	Bureau of Economic Analysis
Percent of current population 18+ born in another state	2	Pew Research Center from ACS Data
ECONOMIC FACTORS		
Employment growth (2010-2011)	20	Bureau of Economic Analysis
Employment growth (2006-2011)	48	Bureau of Economic Analysis
Unemployment rate (2012) [lowest=1]	35	Bureau of Labor Statistics
Average wage (2011)	20	Bureau of Economic Analysis
Wage growth (percent change 2010-2011)	23	Bureau of Economic Analysis
Wage growth (percent change 2006-2011)	46	Bureau of Economic Analysis
Per capita personal income (2012)	41	Bureau of Economic Analysis
Income growth (percent change 2011-2012)	26	Bureau of Economic Analysis
Income growth (percent change 2007-2012)	49	Bureau of Economic Analysis
Cost of living (2012) [lowest=1]	35	Missouri Economic Research and Information Center
Income-adjusted home price (2012) [lowest=1]	30	Federal Home Loan Mortgage Corporation
Percent change, income-adjusted home price (2007-2012)	50	Federal Home Loan Mortgage Corporation
Percent change, income-adjusted home price (2011-2012)	3	Federal Home Loan Mortgage Corporation

(continued)

TABLE 13 (continued)
RANKS ON SELECTED FACTORS ASSOCIATED WITH THE LOCATION DECISION PROCESS, ARIZONA
(A rank of 1 is highest unless otherwise noted)

	Rank	Data Source
EDUCATION		
Educational attainment (2009)		
High school	37	Census Bureau
Undergraduate degree	29	Census Bureau
Advanced degree	25	Census Bureau
Per pupil education expenditures adjusted for regional cost differences (2010)	47	Kids Count
K-12 achievement rating (2013)	32	Education Week
State support for higher education per capita (FY2013)	48	Illinois State University
Percent change in per capita state support for higher education (FY2008-FY2013)	50	Illinois State University
ENVIRONMENTAL FACTORS		
Toxic chemical releases into the environment	48	Goodguide.com
Health risk from air pollution	31	Goodguide.com
FISCAL FACTORS		
State and local tax burden (2010) [lowest=1]	11	Tax Foundation
Per capita state & local direct general expenditures (2010) [lowest=1]	6	Urban Institute/Brookings Tax Policy Center
Percent change in per capita state & local direct general expenditures (2005-2010) [lowest=1]	26	Urban Institute/Brookings Tax Policy Center
Best/worst run states	48	24/7 WallSt.com
HEALTH CARE		
Nonfederal physicians per capita (2006)	43	Census Bureau
Health care quality index (2007)	22	Commonwealth Fund
Cost of hospital care (FY2011) [lowest=1]	41	Center for Medicare and Medicaid Data
Percent of the population without health insurance (2009)	44	Census Bureau
TRANSPORTATION		
CNBC "infrastructure and transportation" ranking (2012)	8	CNBC
State highway expenditures per capita (2010)	37	Federal Highway Administration
Traffic fatality rate (2009)	33	National Highway Traffic Safety Administration

Demographic Factors. Arizona ranks second among all 50 states in terms of the percentage of the adult population born in another state, a variable often used in empirical studies as a proxy variable for the “friends and family” factor found to be one of the important factors in the location decision. Similarly, the state ranks third in terms of recent population growth, again indirectly indicating that it has been a popular state for previous interstate migrants.

Education. All of the metrics related to the quality and performance of Arizona’s education system rank it well below average and in the case of the two spending-related measures at the very bottom among U.S. states. Only in the case of the proportion of college graduates and holders of advanced degrees among the state’s population does Arizona rank near average. College-educated individuals who have moved to Arizona as adults, particularly at retirement age, boost the state’s ranking.

Environmental Factors. Arizona ranks worse than average in terms of air pollution and hazardous waste issues. In fact, it ranks 48th in terms of the overall volume of toxic releases into the environment.

Health Care. On the positive side, an index produced by the Commonwealth Fund ranks the overall quality of health care in Arizona above average. More specific measures are less sanguine, ranking the state near the bottom in terms of the supply of physicians, the cost of hospital care, and the proportion of the population without health insurance.

Transportation. An overall index produced by CNBC as part of a broader business climate study ranked Arizona’s ‘infrastructure and transportation system’ eighth in the country, but more specific metrics focusing on the state’s highway system rate below average in terms of highway spending and accident rates.

Summary. For most of the measures presented in Table 13, Arizona ranks below average, and often near the bottom, relative to other states. Only in the cases of the climate factors, low state and local taxes and expenditures, and in the proportion of the adult population born in another state did the state rank near the top.

Metrics for the Phoenix-Mesa-Scottsdale and Tucson Metropolitan Areas

Table 14 presents comparative rankings for the Phoenix and Tucson metropolitan areas for 37 economic, fiscal, and quality-of-life factors. Again, the particular metrics included in the table are arbitrary, with no-cost public availability one of the primary criteria. While some of the same measures included in the state table are repeated here, the specific variables are somewhat different since sources for comparative data across metro areas are not as plentiful as state-level data. Because of this, Table 14 relies in part on ready-made composite variables for insight on how the Phoenix and Tucson areas rate vis-à-vis other U.S. metropolitan areas.

Economic Factors. Since economic factors generally have the strongest influence on the decision to move and the destination, comparisons are provided for 13 economic factors. The Phoenix area economy has historically been one of the fastest growing in terms of job growth, and the Tucson area economy usually posts above average growth. The severity of the 2008-09 recession and its continuing effects have wiped out this comparative advantage; over the recent

TABLE 14
RANKS ON SELECTED FACTORS ASSOCIATED WITH THE LOCATION DECISION PROCESS,
PHOENIX AND TUCSON METROPOLITAN AREAS

(A rank of 1 is highest unless otherwise noted)

	Rank		Number of Metros	Data Source
	Phoenix	Tucson		
ARTS, CULTURE, RECREATION				
Places Rated "Ambience" rating (2007)	62	64	379	Places Rated Almanac
Places Rated "Recreation" rating (2007)	103	113	379	Places Rated Almanac
CLIMATE				
Places Rated "Climate" rating (2007)	45	56	379	Places Rated Almanac
Average summer temperature [lowest=1]	100	98	100[a]	National Oceanic & Atmospheric Admin.
Average winter temperature	8	12	100[a]	National Oceanic & Atmospheric Admin.
Average total precipitation [lowest=1]	3	10	100[a]	National Oceanic & Atmospheric Admin.
Percent of possible annual sunshine	4	5	137	National Oceanic & Atmospheric Admin.
CRIME				
Violent crime rate (2011) [lowest=1]	188	224	330	Federal Bureau of Investigation
Property crime rate (2011) [lowest=1]	247	NA	337	Federal Bureau of Investigation
DEMOGRAPHIC FACTORS				
Population (2010)	14	53	381	Census Bureau
Population growth (2002-2012)	24	101	381	Census Bureau
Population density (2010)	196	304	349	Census Bureau
ECONOMIC FACTORS				
Employment growth (2011-2012)	94	214	380	Area Development Online
Employment growth (2007-2012)	325	285	380	Area Development Online
Unemployment rate (2012) [lowest=1]	153	153	372	Bureau of Labor Statistics
Average wage (2011)	44	133	366	Bureau of Economic Analysis
Wage growth (percent change 2010-2011)	122	241	366	Bureau of Economic Analysis
Wage growth (percent change 2006-2011)	277	215	366	Bureau of Economic Analysis
Per capita personal income (2011)	180	227	366	Bureau of Economic Analysis
Income growth (percent change 2010-2011)	218	317	366	Bureau of Economic Analysis
Income growth (percent change 2006-2011)	359	318	366	Bureau of Economic Analysis
Cost of living (2010) [lowest=1]	240	191	325	ACCRA Cost of Living Index
Median existing home sales price [lowest=1]	77	81	156	National Association of Realtors
Percent change, income-adjusted home price (2011-2012)	1	34	366	Federal Home Loan Mortgage Corporation
Percent change, income-adjusted home price (2007-2012)	319	327	366	Federal Home Loan Mortgage Corporation

(continued)

TABLE 14 (continued)
RANKS ON SELECTED FACTORS ASSOCIATED WITH THE LOCATION DECISION PROCESS,
PHOENIX AND TUCSON METROPOLITAN AREAS
(A rank of 1 is highest unless otherwise noted)

	Rank		Number of Metros	Data Source
	Phoenix	Tucson		
EDUCATION				
Educational attainment - college graduates (2010)	66	41	100[b]	Brookings Institution Metropolitan Policy Program
Places Rated "Education" rating (2007)	78	56	379	Places Rated Almanac
ENVIRONMENTAL FACTORS				
Water quality rating (2005)	34	NA	50[c]	Readers Digest
Toxic pollutant rating (2005)	50	NA	50[c]	Readers Digest
Hazardous waste rating (2005)	29	NA	50[c]	Readers Digest
Air pollution - ozone (2009-2011)	255	123	277	American Lung Association
Air pollution - particulates (2009-2011)	260	8	277	American Lung Association
HEALTH CARE				
Non-federal physicians per capita (2006)	220	58	361	Census Bureau
Health care quality index (2005)	199	115	307	Center for Medicare and Medicaid Data
Cost of health care (2010)	271	182	325	ACCRA Cost of Living Index
TRANSPORTATION				
Places Rated "Transportation" rating (2007)	46	355	379	Places Rated Almanac
Traffic congestion index (2011)	64	61	79[d]	Texas Transportation Institute

Notes: [a] 100 selected metropolitan areas
[b] 100 largest metropolitan areas
[c] 50 largest metropolitan areas
[d] Urban areas with 500,000+ populations

past (2007 to 2012), job growth in both metropolitan areas has ranked near the bottom among all metro areas, but it has improved somewhat in the last year or two in the Phoenix area. As is evident after a glance at the other economic metrics included in the table, Phoenix and especially Tucson are not highly ranked in terms of wage or income measures, and this is not offset by the areas having particularly low living costs. Median home prices are about average, and the two areas receive their highest rankings for home price appreciation over the 2011-to-2012 period, but that followed an earlier period of price declines, and this shows in the bottom rankings for home price changes over the 2007-to-2012 period.

Arts, Culture, Recreation. For both the Phoenix and Tucson areas, their natural environments and favorable winter climate attract large numbers of visitors, which help support tourism-related activities. The combination of tourists' and local residents' demand results in the state's two major metropolitan areas ranking above average for arts, culture, and recreation facilities.

Climate. Personal preferences concerning what constitutes a desirable climate can be very different among individuals. With this caveat, the *Places Rated Almanac* has developed a composite ranking system, and both the Phoenix and Tucson areas are ranked well above average on the basis of this metric. The four climate variables in Table 14 show that these rankings are based on very high summer temperatures, high winter temperatures, low precipitation, and lots of sunny days.

Crime. Crime rates in both metropolitan areas are worse than average. The Phoenix area gets an even worse ranking for its rate of property crime. Unfortunately, the latest data were not available for the Tucson area.

Demographic Factors. The Phoenix area ranks among the largest in the nation, and the Tucson area has a larger population than most other U. S. metropolitan areas, but both areas have below average population density. Both rank as fast-growing areas compared with most other metropolitan areas across the nation.

Education. Education is another area where it is difficult to gather comparable metro area data. The *Places Rated Almanac's* composite education rating ranks both the Tucson and Phoenix areas well above average but not among the top metropolitan areas. Statistics on the proportion of the adult population that are college graduates indicate that neither the Phoenix nor Tucson areas rank highly among the 100 largest metro areas.

Environmental Factors. The Phoenix area has consistently poor rankings for all five pollution measures in Table 14, and ranks at or near the bottom in terms of toxic pollutants and both measures of air pollution. Rankings are available for the Tucson area only for the air pollution variables and indicate much better air quality than in the Phoenix area, particularly in terms of particulate pollution.

Fiscal Factors. It is difficult to find comparative fiscal figures at the metro level, but state-level information provides useful insight. As stated above, Arizona's tax burden and government spending levels are low compared to most other states. This should appeal to potential movers who are proponents of small government. On the other hand, low government spending levels

also imply the level and quality of public services provided are below that available in many other states.

Health Care. The Phoenix area ranks below average on all three health care metrics in Table 14, with the worst showing on the “cost of health care” measure. The Tucson area fares somewhat better with above average rankings for the physician availability and quality of health care metrics but worse than average for the cost measure.

Transportation. The state’s two large metro areas have very different rankings for the *Places Rated Almanac*’s rating of the areas’ transportation situations. While not getting a top score, the Phoenix area was ranked 46th out of 379 metro areas. In contrast Tucson was ranked near the bottom. Both areas were ranked worse than average for traffic congestion.

Summary. For most of the measures presented in Table 14, both the Phoenix and Tucson areas rank below average, and sometimes near the bottom, relative to other metropolitan areas across the nation. Only in the cases of the climate factors (excepting summer temperatures) and recent home price appreciation did the Phoenix area rank near the top among the decision factors. The results for the Tucson area were similarly negative, with the exception of particulate air pollution where it had one of the best records among all metropolitan areas.

Indexes and Ratings

Another innovation with the potential to help individuals in the location decision process is the development of composite indexes or ratings derived from multiple individual indicators. In the case of evaluating a set of alternative locations, these methodologies have been employed to produce two closely related types of composite indexes and ratings: “best places to live” ratings, which attempt to combine and summarize the impacts of all the factors that determine the relative desirability of living in each of the locations being evaluated, and “quality of life” indexes that attempt to provide a single composite measure of the quality of life (however defined) for each location.

These “best places” and quality-of-life indexes are produced by selecting a set of factors that supposedly determine alternatively the desirability of living in a particular location or the quality of life for residents in a particular location. A set of weights are then developed that represent the relative importance of each factor in determining desirability or quality of life. The value of the index for each location is then calculated as the sum of the value of each factor assigned for that location multiplied by its “relative importance” weight.

There are two alternative methods used to develop the weighting schemes used to calculate the indexes. Most of the popular indexes and ratings, such as the *Places Rated* and *Money Magazine* rankings, use surveys to gather information on relative importance that a sample of individuals assign to each of the factors (and in fact this survey approach is often also used to select the set of factors to be included in the index). The alternative approach more usually found in academic studies is based on what economists term “hedonic” methods. This technique relies on the assumption that individuals are willing to accept lower wages and/or pay higher housing costs to live in a desirable location. Based on this assumption, observed differences in wages and/or housing costs between areas with different location-specific characteristics are used to

statistically estimate the monetary value of those characteristics. These estimates of the imputed value of how much individuals are willing to pay for those characteristics are then utilized to develop the weighting scheme for the factors in the index.

Such indexes and ratings have been criticized as simplistic, inaccurate measures of quality of life. Critics argue that the quantitative variables used do not adequately measure the quality-of-life factors they are supposed to represent, subjective factors that cannot be easily quantified are ignored, and the formulas employed to combine the multiple variables into the single composite index are often arbitrary and/or not representative of public preferences. But while the pros and cons of such indexes have been widely debated (see OECD (2008) for a general summary of the issues associated with composite indexes in general and Blair (1998) for a critique focused on quality-of-life indexes), they are popular and are widely used in the analysis and evaluation of many different issues, including quality of life.

Published Rankings

Arizona. The top half of Table 15 lists the rankings of Arizona among the 50 states in the most recently published versions of three representative “best places/quality of life” studies whose information is publicly available. The Morgan Quitno “Livability Index” is included as an example of a general “best places to live” index. It is based on a set of 44 equally weighted factors covering economic, demographic, and quality-of-life characteristics (Morgan Quitno). The CNBC measure is the quality-of-life component from their more general *Top States for Business 2012* study (CNBC). Given the purpose of the study, the list of variables included and their weights were based upon inputs from business groups and included measures for health care, crime, environmental quality, and other place-specific amenities. Gallup-Healthways developed its index with a somewhat different approach — to measure the well-being of an area’s residents rather than the “livability” or “quality of life” of the area itself. It is based on responses to household surveys relating to 13 metrics measuring health status and access, economic factors, and environmental quality. All 13 factors are equally weighted in the calculation of the index (Gallup-Healthways).

Arizona does not come out as one of the top states by such quantitative “best places to live/quality of life” indexes. Only in the case of the Gallup-Healthways Well-Being Index does Arizona even rank in the top half of the 50 states.

Phoenix and Tucson Metropolitan Areas. Studies based on similar methodologies also compare the “livability/quality of life” among the nation’s metropolitan areas. The top half of Table 16 presents the rankings of both the Phoenix and the Tucson metropolitan areas in the most recently published versions of three such studies. The BloombergBusinessweek report compared 100 big cities (Tucson was not included) on the basis of 13 variables measuring each city’s crime, air quality, economic, educational, and leisure attributes (BloombergBusinessweek). The 2012 Parenting Magazine *Best Cities for Families* study rated 100 metro areas using 36 factors measuring educational, health and environmental, safety, economic, and cultural characteristics (Parenting Magazine). The Gallup-Healthways Well-Being Index used the methodology described previously to rate 189 metro areas (Gallup-Healthways).

TABLE 15
COMPARISON OF RANKINGS IN SELECTED BEST-PLACES/QUALITY-OF-LIFE
STUDIES, ARIZONA

Traditional Methodologies	
Best States to Live - Morgan Quitno 2005	36
Quality of Life - CNBC 2012	32
Well-Being Index - Gallup-Healthways 2012	23
Statistical Analyses	
Quality of Life - Granger and Price 2008	4
Quality of Life - Albouy 2008	13
Well-Being Index - Oswald and Wu 2010	5

Sources:

Morgan Quitno, "Best States to Live Index" obtained from www.statemaster.com.
 CNBC, "Quality of Life" category of "America's Top States for Business 2012" (www.cnbc.com/id/46414199).
 Gallup-Healthways, "Well-Being Overall" from "2012 State of Well-Being: Arizona" (http://www.well-beingindex.com/files/2013WBIRankings/AZ_2012StateReport.pdf).
 Granger, M.D. and Price, G.N. (2008) "Is Mississippi Really the Worst State to Live in? A Spatial Equilibrium Approach to Ranking Quality of Life," Social Science Research Network Working Paper (<http://ssrn.com/abstract=1154261>).
 Albouy, D. (2008) "Are Big Cities Bad Places to Live? Estimating Quality of Life Across Metropolitan Areas," NBER Working Paper 14472 (<http://www.nber.org/papers/w14472>).
 Oswald, A.J. and Wu, S. (2010) "Objective Confirmation of Subjective Measures of Human Well-Being: Evidence from the U.S.A.," *Science*, 327, No. 5965, pp. 576-579 (<http://www.sciencemag.org/content/327/5965.toc>).

Arizona's two large metropolitan areas were not ranked among the "best places to live" by any of the three studies. The Phoenix area did rank among the top 25 percent of U.S. metropolitan areas in the Well-Being Index but was ranked near the bottom in the Parenting Magazine study. The Tucson area received poor ratings in both the Parenting Magazine and Gallup-Healthways studies.

Statistical Analyses

Economists have developed an alternative approach to quantify quality of life in which the value of place-specific attributes are estimated statistically by calculating what individuals are "willing to give up" in terms of lower wages and/or higher housing costs to live in a higher quality-of-life area. The lower half of Table 15 presents the rankings for Arizona in three recent statistical analyses based on this "inferred valuation" methodology. In all three studies, the state is indicated to have a much better quality-of-life rating relative to other states than the numbers produced by the "amenity accounting" method discussed above. In fact, Arizona received a top-five ranking in two of the three analyses.

One of these analyses also produced similar rankings for U.S. metro areas (Albouy 2008), and an earlier study employed this approach to estimate quality-of-life measures for urban counties across the nation (Bloomquist et al. 1988). The rankings for the Phoenix (Maricopa County in Bloomquist et al.) and Tucson areas from these two analyses are presented in the bottom half of Table 16. As compared with the traditional "amenity accounting" approach, both of these studies

TABLE 16
COMPARISON OF RANKINGS IN SELECTED BEST-PLACES/QUALITY-OF-LIFE
STUDIES, PHOENIX AND TUCSON METROPOLITAN AREAS

	Phoenix	Tucson
Traditional Methodologies		
Best Places to Live - BloombergBusinessweek 2012 (among 100 big cities)	44	-
Best Places to Live - Parenting Magazine 2012 (among 100 metro areas)	92	83
Well-Being Index - Gallup-Healthways 2012 (among 189 metro areas)	44	140
Statistical Analyses		
Quality of Life Index - Bloomquist, et. al. 1988 (among 253 urban counties)	36	10
Quality of Life Index - Albouy 2008 (among 276 metro areas)	72	32

Sources:

- BloombergBusinessweek, "America's 50 Best Cities" (<http://images.businessweek.com/slideshows/2012-09-26/americas-50-best-cities>).
- Parenting Magazine, "Best Cities for Families List" (<http://www.parenting.com/gallery/best-cities-to-raise-a-family-2012>).
- Gallup-Healthways, "Well-Being Overall" from "2012 State of Well-Being: Arizona" (http://www.well-beingindex.com/files/2013WBIRankings/AZ_2012StateReport.pdf).
- Bloomquist, G. C., Berger, M. C., and Hoehn, J. P. (1988) "New Estimates of Quality of Life in Urban Areas," *American Economic Review*, 78, pp. 89-107 (<http://ideas.repec.org/a/aea/aecrev/v78y1988i1p89-107.html>).
- Albouy, D. (2008) Are Big Cities Bad Places to Live? Estimating Quality of Life Across Metropolitan Areas," NBER Working Paper 14472, National Bureau of Economic Research (<http://www.nber.org/papers/w14472>).

indicate a strikingly higher quality of life rating for the Tucson area, with the 1988 study ranking it 10th among 253 urban counties and the 2008 study ranking it just outside the top 10 percent among 276 metro areas. The statistical approach also produced much better results for the Phoenix area, putting it just outside the top 25 percent among metro areas in the recent study and an even better ranking for Maricopa County in the earlier study.

Commentary on the Rankings

Based on the results of direct comparisons at both the state and metropolitan area levels for a wide variety of metrics, Arizona ranks below average compared to other areas of the nation in terms of many of the factors identified as potentially important to individuals when choosing where to move. In contrast, the statistical analyses based on economic valuation methods produced much more favorable results, ranking Arizona among the top tier of "best places to live." The authors of one of the studies observe that these statistically based measures are more consistent with the observed location choices of individuals as measured by net migration (Granger and Price 2006).

This observation points out the disconnect that has existed historically between Arizona being ranked as one of the top destinations for interstate migrants and among the top states in terms of net-migration rates versus its mediocre at best rankings in published quality-of-life/best-places-to-live studies. One explanation for this apparent contradiction may be that for that subset of movers who chose Arizona, the state's employment opportunities, low taxes, the draw of family and friends who already live in the state, and the sunny climate were the most important factors, trumping its poorer showing on other issues.

Unfortunately, the severe effects of the recent recession on the Arizona economy have negated one of the state's most important attractions. The lingering effects of the 2008-to-2009 recession have begun to dissipate and the state's economy is currently experiencing solid economic growth, with job gains exceeding the U. S. rate, although still below the long-run average. Faster growth is expected during the next two years, with near-normal economic conditions by 2015. When the state is again perceived as being among the leaders in economic growth, one of the key variables in the location decision process will again be a positive factor for Arizona.

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