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Missouri: Generation Transformation

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MISSOURI: GENERATION TRANSFORMATION

By Mark Tranel

EXECUTIVE SUMMARY

While Missouri's population has grown slowly over the past 50 years its characteristics have evolved in important ways. This paper first describes the contemporary demographic profile of who Missourian are, where and how they live. It then examines the trends over the period 1960 to 2010. The data for Missouri are compared to national characteristics and trends to provide points of similarity and contrast. The factors that have changed, and some that have not, have implications for actions that need to be taken in response to challenges Missouri faces because of these demographic dynamics.

The Center for Economics and the Environment is an economics research center in the John W. Hammond Institute for Free Enterprise. Its focus includes policy-oriented research on the business and economic environment, particularly of state and local economies.

1. INTRODUCTION

Missouri is a study in demographic contrasts. Land use in the state is largely rural but the population is largely urban—70.4 percent of Missouri residents live in an urban area, but only 3 percent of the land use is urban. Despite its central location on the continent, Missouri was the 7th most populous of the 46 states in 1910 but by 2010 it was the 18th most populous of the 50 states. While 22 percent of Missouri households have an income greater than \$100,000, a matching 22 percent have incomes less than \$25,000. There are almost as many households in Missouri that are a person living alone as there are households with children. The number of children in the state is declining and the fastest growing age group in Missouri is residents 75 and over. These contrasts are one characteristic of the demographics of Missouri. Another is the substantial demographic transformation that occurred over the past half century.

This report presents first a snapshot of the current demographic characteristics of the state and then examines the differences between Missouri at the time of the 1960 census and at the time of the 2010 census. There are significant differences in the demographic, social, and geographic character of Missouri's residents in 2010 compared to those in 1960. The change in the characteristics of the population over these generations has important implications for supply (workforce) and demand (consumers) in the Missouri economy. The changes also have important implications for private and public policy decision making.

2. CONTEMPORARY MISSOURI CHARACTERISTICS

The most recent estimated population for Missouri is just over 6.1 million residents.¹ Population growth in Missouri is attributable largely to natural increase and not migration. As shown in Table 1 growth in Missouri's population from 2010 to 2017 resulted only from the number of births exceeding the number of deaths whereas nationally natural increase accounted for less than 60 percent of population growth. Missouri has been losing slightly more population from domestic migration than it gains through international migration whereas international migration accounts for over 40 percent of U.S. population growth. An impact of the low level of in-migration is most Missouri residents are U.S. born (nearly 96 percent) and the majority (almost 70 percent) were born in Missouri. Due to population growth derived from natural increase and that increase being relatively small, Missouri ranks 41st among the states in population growth.²

Table 1
Components of Population Change: 2010-2017

<u>Components of Change</u>	<u>Missouri</u>	<u>Percent</u>	<u>United States</u>	<u>Percent</u>
Births	545,020		28,703,158	
Deaths	416,536		18,814,845	
(net natural increase)	128,484	103%	9,727,447	57.4%
Domestic migration	- 57,375		NA	
International migration	55,209		7,233,626	
(net migration increase)	- 2,166	- 1.7%	7,233,626	42.6%
Net change	124,607		16,961,073	

Source: U.S. Census American Community Survey 2010, 2017

2.1 Population distribution by age and race

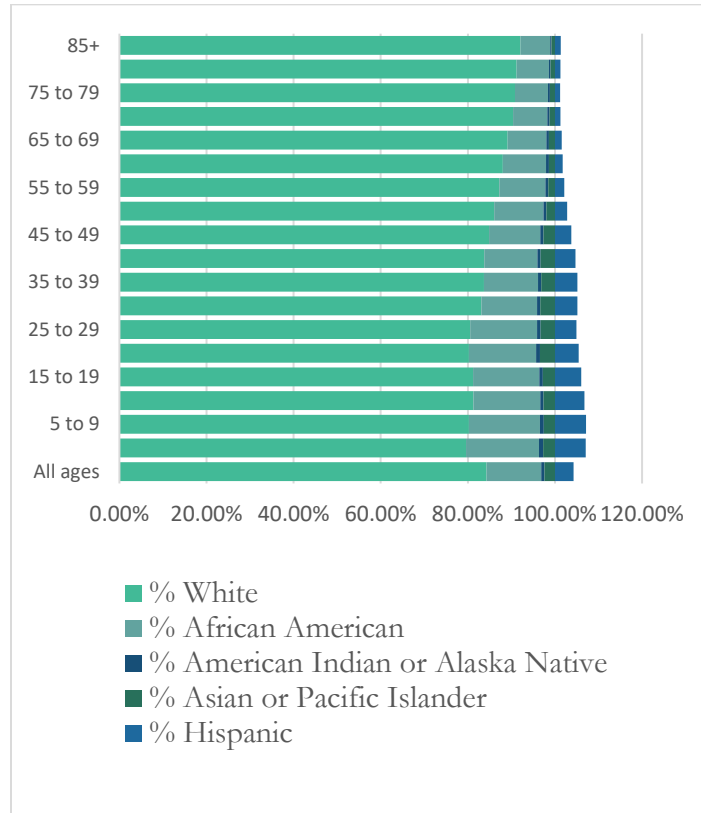
Missouri children and youths age 19 years old and younger are about 25 percent of its residents while approximately 16 percent are senior adults age 65 and older, about the same as the national age distribution. The recent Missouri trend, however, has been a declining younger population even though there is an increasing older population. From 2000 to 2017 the number of children and youths in Missouri *decreased* by over 45,000 (about a 3 percent decline in that age group) but the number age 65 and older *increased* by 250,000 (an expansion of that age group by nearly 20 percent). For the first time in Missouri’s history there are over one million residents age 65 and older. Nationally, the population of children and youth increased by nearly 3 percent while the number age 65 and older expanded by 45 percent.

Two racial groups account for most of Missouri’s population – 82 percent of Missourians are White and a little over 11 percent are African American. The U.S. population is more diversified – 72 percent White, almost 13 percent African American, approximately 6 percent Asian and about 10 percent other races or combination of races. Just over four percent of Missouri residents are Hispanic or Latino of any race compared to 18 percent of the U.S. population. The majority of Missouri Hispanics (69 percent) are of Mexican heritage, similar to the 62 percent of Hispanics/Latinos of Mexican origin in the U.S. population.

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As shown in Figure 1 the age distribution within racial groups in Missouri varies as the population gets older, particularly after about age 30. The mortality rate among African Americans and Hispanics steadily increases compared to Whites so the older population in Missouri is less diverse than the younger population.

Figure 1
Missouri Population Age by Race³



Source: U.S. Census American Community Survey, 2017

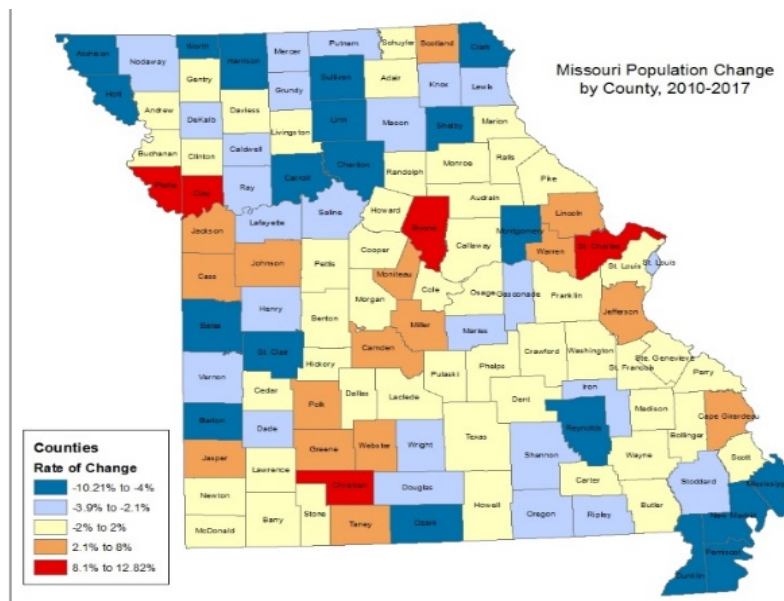
2.2 Geographic Distribution

One-half Missouri's population lives in seven of its 115 counties: the City of St. Louis, St. Louis, and St. Charles Counties (St. Louis metro area), Clay and Jackson Counties (Kansas City metro area), Boone County (Columbia), and Greene County (Springfield). The minority (African American) population of Missouri predominately resides in those seven urban counties (87 percent); four percent of Missouri's rural population is African American. Hispanics are more evenly distributed – three percent of Missouri's rural population is Hispanic and four percent of its urban population is Hispanic.⁴

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The population in Missouri's rural areas has been at best stable, but many rural counties in Missouri are losing residents. As shown in Map 1 most of the counties in northern Missouri (those counties north of Interstate 70) and in the Bootheel (the southeast corner of the state) lost population between 2010 and 2017. The counties gaining population reflects the trend of an increasing urban and decreasing rural population in Missouri. The highest rate of growth—highlighted in red—occurred in the corridors of suburban expansion in the metropolitan counties of the St. Louis, Kansas City, Columbia, and Springfield areas.⁵ Consistent with the generally slow rate of growth in Missouri, these high growth counties reflect a redistribution of metropolitan area population rather than net new residents.⁶

Map 1



Source: U.S. Census American Community Survey 2010, 2017

Small-town life is still a prominent lifestyle in Missouri. There are 809 rural towns with less than 5,000 residents, and the majority of those (61 percent) have between 200 and 500 residents. While most Missourians live in some type of developed area—a small town, a suburban subdivision, or a larger city—over one-fifth of the population (1.3 million Missourians) live in remote areas.⁷ Many of these Missouri residents live on the nearly 100,000 farms that cover two-thirds of the state's total land acreage.⁸ Missouri is ranked 2nd in the nation in number of farms.⁹

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Less than one-third (30.3 percent) of Missouri households have one or more household members who are under age 18, which is slightly less than the approximately 32 percent of households nationally. Missouri residents under age 18 are a scarce commodity outside of metropolitan areas. There are 34 counties in Missouri's eight metropolitan areas. Of the 1,386,863 Missourians under age 18, 1,038,087 (75 percent) live in the 33 metropolitan counties with the other 348,776 distributed over the 82 nonmetropolitan counties.

In 2017 there were almost as many Missouri households that are defined as "one person living alone" (29.2 percent) as there are households with children.¹⁰ The percentage of Missouri residents who live alone is almost the same as the percentage nationally (29.5 percent).

2.3 Housing

Two-thirds of Missouri households are homeowners and one-third are renters. Most Missouri households (70 percent) live in a single-family, detached housing unit. Table 2 records the recent trend in homeownership in the State of Missouri and nationwide. The homeownership rate in Missouri has been five to seven percent higher than the national rate with the trend over the course of the 2010's being a slight decline in homeownership both in Missouri and nationally.

Just under 24 percent of Missouri owner-occupants pay 30 percent or more of their income for housing costs; nationally 29 percent of owner-occupants pay 30 percent or more for housing. Among Missouri renters, over 42 percent pay 30 percent or more of their income for monthly housing costs, about four percent less than the national rate of 46.8 percent of renters. While 11 percent of Missouri owner-occupied units are valued at less than \$50,000, four percent are valued at more than \$500,000. Statewide the average home value is \$181,050 and the median value \$145,400, the difference indicating a range of housing values in Missouri.¹¹

Table 2
Homeownership Rate

<u>Year</u>	<u>Missouri rate</u>	<u>U.S. rate</u>
2010	69.0	65.4
2011	68.0	64.6
2012	67.5	63.9
2013	67.0	63.5
2014	66.9	63.1
2015	66.1	63.0
2016	66.1	63.1
2017	67.0	63.9

Source: American Community Survey, 1-year estimates

Table 3 shows how these values vary in a sample of Missouri metropolitan areas and rural counties. Values in the Columbia metro area and Scott County vary less from the median than in the Kansas City, St. Louis, and Springfield metro areas. The values in Linn County skew considerably from the median.

Table 3
Home Values in Missouri

	<u>Average</u>	<u>Median</u>
Columbia metro	\$206,801	\$177,800
Kansas City metro	\$204,318	\$166,800
St. Louis metro	\$202,741	\$162,600
Springfield metro	\$167,400	\$137,000
Linn County	\$130,623	\$80,400
Scott County	\$121,041	\$103,300

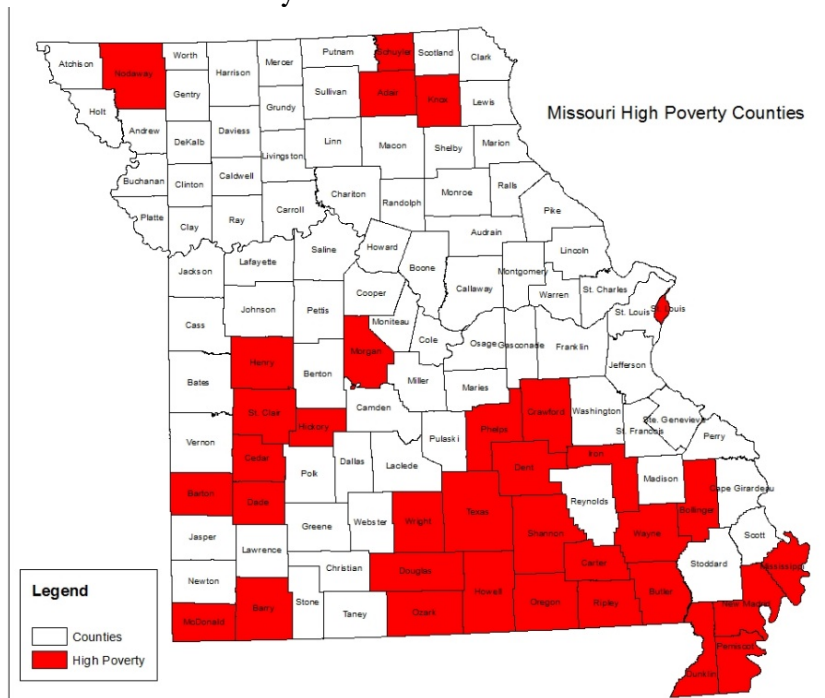
Source: American Community Survey, 2013-2017
5-year estimate

2.4 Educational Attainment and Income Level

The proportion of Missourians with a household income less than \$25,000 is essentially identical to those with household income over \$100,000, 22 percent in both cases. In terms of average income, Missouri’s household median income of \$53,578 ranks in the bottom one-third of states.¹² One reason for the low ranking is the nearly 800,000 Missourians (13 percent) whose income is below the poverty level, an income of \$25,100 for a family of four.¹³

Income varies by geography, especially poverty-level income. Map 2 shows the high poverty counties in Missouri. The U.S. Department of Agriculture classifies a county “high poverty” if 20 percent or more of its residents had income below poverty level in the American Community Survey five-year estimates for 2012-16. Among rural areas, high poverty is most prevalent in the southern half of the state. Among urban areas in the state, only the City of St. Louis is included in this group. This suggests that, perhaps against conventional wisdom, high poverty is more often a rural issue than an urban one.

Map 2
Poverty in Missouri Counties



Source: USDA Atlas of Rural and Small Town America

Economist Anthony Carnevale and economic education specialist Scott Wolla are among the many who have documented a correlation between educational attainment and income level - that a

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more advanced level of educational attainment correlates to a higher level of income.¹⁴ Missouri ranks in the lower half (27th, to be exact) of the 50 states in terms of educational attainment measured as the percentage of residents age 25 and over with at least a high school diploma. It also ranks 32nd in the number of residents with at least a bachelor's degree, and at the midpoint (25th) in the percentage with an advanced degree.¹⁵ As shown in Table 4 less than 20 percent of Missouri residents have a Bachelor's Degree and approximately 11 percent have a graduate or professional degree.

Table 4
Education Attainment

<u>Education Attainment</u>	<u>Missouri</u>	<u>U.S.</u>
Less than 9th grade	3.4%	5.4%
9th to 12th grade, no diploma	7.4%	7.2%
High school graduate (includes equivalency)	30.9%	27.3%
Some college, no degree	22.4%	20.8%
Associates degree	7.7%	8.3%
Bachelors degree	17.5%	19.1%
Graduate or professional degree	10.7%	11.8%

Source: American Community Survey, 2013-2017

While Missouri's level of educational attainment fairly closely tracks the national distribution, there is a notable difference compared to other states. The percent of the population with a bachelor's degree or higher in Missouri is 28.2 percent, but in Colorado it is 39.4 percent, in Maryland 39.0 percent, and in New Jersey 38.1 percent.

Educational attainment varies by Missouri's rural and urban population distribution. The data in Table 5 show that over half (56 percent) of rural adults did not complete or completed only high school whereas the percentage of urban adults completing college is nearly twice the percentage of rural adults with a college degree.

Table 5
Rural and Urban Education Levels

<u>Education Level</u>	<u>Rural Missouri</u>	<u>Urban Missouri</u>
Not completing high school	15.8%	9.6%
Completing high school only	39.6%	28.2%
Completing some college	28.5%	30.6%
Completing college	16.1%	31.6%

Source: U.S. Census Bureau Missouri 2010

The state’s level of education overall and especially the rural/urban education gap are important when considering the correlation between education and income as documented for Missouri in Table 6. The average salary for a Missouri resident with a bachelor’s degree is 60 percent higher than that of the average salary for a resident with a high school diploma. The table substantiates for Missouri the correlation between a higher level of education and higher income from those without a high school diploma through those with a graduate degree. Economist Eric Hanushek stated in an earlier paper in this policy series that Missouri’s sluggish growth in per capita income is a function of its educational system and detailed how Missouri can become more competitive with other states through improving teacher incentives and accountability systems and providing school choice and early childhood programs.¹⁶

Table 6
Education and Income

<u>Education Level</u>	<u>Average</u>	<u>Male</u>	<u>Female</u>
Less Than High School	\$21,136	\$25,596	\$16,438
High School Grad	\$28,926	\$34,374	\$22,471
Some College	\$32,727	\$40,789	\$27,566
Bachelors Degree	\$46,434	\$57,742	\$39,521
Graduate Degree	\$58,765	\$73,429	\$51,216
Overall	\$35,641	\$41,690	\$30,354

Source: Missouri Community Action Network

2.5 Snapshot Summary

Table 6 also documents while females experience the benefit of more income from more education, the same level of education does not have the same level of economic benefit compared to males. A female in Missouri with a Bachelor's degree makes only 68 percent of the annual income of a male with a Bachelor's degree. The wage gap is generally consistent across the education spectrum as a female with a high school diploma makes 65 percent of the annual income of a male in Missouri.

The dominant characteristics of Missouri's population then are that it is urban, white, with less than a college degree education, homeowners born, raised and continuing to live in Missouri. At the same time there is a substantial number of Missourians who live in small towns and rural areas and a substantial African American population. The nonurban population tends to be older with few children and youths. Missouri is a slow-growth state attracting few new residents either domestically or internationally, indeed there are more Missouri residents leaving for other states than there are residents of other states moving into Missouri. In many ways the Missouri population demographically reflects the U.S. population other than its rate of growth and the comparative lack of diversity of its population.

This snapshot indicates a rather demographically static population but a look back over the past fifty years shows a number of key areas where Missouri's population has evolved.

3. CHANGING POPULATION CHARACTERISTICS 1960 – 2010

3.1 Demographic

Missouri has been a slow growth state not just in recent years but for the past five decades. Table 7 shows that the population increased by approximately 39 percent over five decades at a rate averaging about 7 percent between each decennial census. Population growth in Missouri has persistently lagged behind the national growth rate. Missouri growth was particularly slow in the 1970s and 1980s. Over the past half-century Missouri has dropped from the 13th to the 18th most populous state causing a loss of two seats in Congress, increasing to a total of eight Congressional districts eliminated, a 50 percent reduction over the past century.

Table 7
Missouri Compared to U.S. population change, 1960 – 2010

<u>Year</u>	<u>Missouri Population</u>	<u>Percent MO growth</u>	<u>Percent U.S. growth</u>	<u>Population Rank</u>
2010	5,995,681	7.0	9.7	18
2000	5,595,211	9.3	13.2	17
1990	5,117,073	4.1	9.8	15
1980	4,916,686	5.1	11.5	15
1970	4,676,501	8.3	13.3	13
1960	4,319,813	9.2	18.5	13

Source: University of Minnesota's Humphrey School of Public Affairs

While growth has been slow, the composition of the population has evolved in important ways. For example, the age distribution of Missouri residents evolved considerably from 1960 to 2010 with the most significant changes among the youngest and the oldest age groups. As shown in Table 8 the number of children age birth to 9 years old decreased by 12 percent while the number of residents age 75 and older increased by more than 111 percent. While the number of young residents age 10 – 19 increased by almost 20 percent this was less than half the increase in the number of residents age 65 – 74. This means that the age distributions discussed in the snapshot above are not a new phenomenon but the outcome of decades' long changes.

While the population of Missouri grew by 39 percent from 1960 to 2010, the population of the United States grew by 71 percent. Not only was the rate of population growth nationally nearly double the rate of Missouri's growth, there are notable differences in the age dynamics, particularly in the younger age groups. Whereas the number of children (birth to age 9) declined by 12 percent in Missouri over the 50 year period, nationally there was growth, although modest (3.5 percent), in the number of children. The number of youths (ages 10 to 19) in Missouri increased by almost 20 percent during the period but nationally the number of youths increased by twice that rate at just over 41 percent. Nationally the age category with the most growth was the oldest residents, age 75 and over, but again the national rate of increase was twice that of the State of Missouri.

Table 8
Age Dynamics, 1960 – 2010

AGE GROUP	1960 Number of Residents and Percentage of Population	2010 Number of Residents and Percentage of Population	Difference in Number of Residents in Age Group	Percent Change in Number of Residents in Age Group Missouri	Percent Change in Number of Residents in Age Group U.S.
birth – 9	887,766 (20.5%)	780,700 (13.0%)	- 107,066	- 12.0%	3.5%
10 – 19	685,524 (15.8%)	820,711 (13.7%)	135,187	19.7%	41.1%
20 – 24	252,329 (5.8%)	413,289 (6.9%)	160,960	38.9%	94.6%
25 – 34	514,128 (11.9%)	775,467 (12.9%)	261,339	50.8%	78.8%
35 – 44	540,946 (12.5%)	748,616 (12.5%)	207,670	38.4%	70.0%
45 – 54	510,635 (11.8%)	888,572 (14.8%)	377,937	74.0%	118.3%
55 – 64	425,074 (9.8%)	723,278 (12.0%)	298,204	70.1%	135.3%
65 – 74	319,871 (7.4%)	450,490 (7.5%)	130,619	40.8%	97.7%
75+	183,540 (4.2%)	387,804 (6.4%)	204,264	111.3%	230.5%

Source: U.S. Census 1960, 2010

The difference in the age dynamics foreshadows a challenge for future population growth in Missouri and its relative position nationally. As a state dependent on natural increase for population growth with a smaller cohort of youth to contribute to births in the future and a larger percentage of the population eventually contributing to deaths, the rate of population increase in Missouri will at best be stagnant and could potentially even decline. An important factor in this dynamic is the declining number of births in Missouri. In 2017 there were 73,017 babies born in Missouri, the tenth consecutive year of a decline in the number of births, a decline of almost 11 percent over the decade.¹⁷ While the declining birth rate in Missouri parallels a national trend it is more significant in Missouri because the smaller cohort of children will ripple through Missouri demographics in coming decades, impacting household formation, the workforce and future birth rates.

The racial composition of Missouri’s population also evolved. Over time there has been an increase in the percentage of the population that is nonwhite. Table 9 shows that the rate of increase of the white Missouri residents is about 30 percent slower than the overall rate of population increase while the rate of increase in the nonwhite population has considerably exceeded the rate of growth in the

general population. Nationally, the population became more racially diversified as the growth rate of the percentage of the nonwhite population exceeded Missouri’s by about 40 percent.

Table 9
Changing Racial Composition

	1960		2010	
	<u>Missouri</u>	<u>U.S.</u>	<u>Missouri</u>	<u>U.S.</u>
White	90.8%	88.5%	82.7%	74.2%
Non White	9.2%	11.5%	17.3%	25.8%

Source: U.S. Census 1960, 2010

In 1960 there were 77,756 foreign-born residents in Missouri, 1.7 percent of the population. In 2010 there were 232,537 foreign-born Missouri residents 3.8 percent of the population. While statistically a 200 percent increase in a component of the population is a notable change, because the percentage of foreign-born residents was starting from such a comparatively small number, the fact that foreign-born residents in 2010 are less than four percent of total population indicates this has not been a significant factor in Missouri’s growth dynamics for the past 50 years. At 4.7 percent, foreign-born Missouri residents are represented in the labor force at a slightly higher rate than in the general population, but still a small percentage.¹⁸ As stated earlier, the level of immigration nationally far outpaces that in Missouri. By way of regional comparison, Missouri has the smallest percentage of foreign-born residents in the Midwest after the Dakotas; by 2010, the foreign-born population in Illinois had grown to 13.7 percent, in Minnesota to 7.1 percent, and in Kansas to 6.5 percent.¹⁹

A more important growth dynamic in the past half-century is the change in the number of households in Missouri. The number of households has increased at nearly twice the rate of the increase in population. Table 10 records that while the Missouri’s population increased by about 39 percent from 1960 to 2010, the number of households increased by nearly 75 percent. Several factors contribute to this phenomenon are discussed in the next section on social changes in recent decades.

Table 10
Household and Housing Unit Change 1960-2010

	Missouri			U.S.		
	<u>1960</u>	<u>2010</u>	<u>Change</u>	<u>1960</u>	<u>2010</u>	<u>Change</u>
Population	4,319,813	5,988,927	38.6%	180,671,158	309,349,689	71.2%
Households	1,359,826	2,375,611	74.7%	52,799,000	117,538,000	122.6%
Housing Units	1,491,397	2,712,729	81.9%	58,326,357	131,791,065	125.9%
Average Household Size (persons)	3.09	2.48	- 19.7%	3.33	2.59	-22%

Source: U.S. Census 1960, 2010

The number of households increased at nearly double the increase in population but the number of housing units increased at an even faster rate. During the period 1960 to 2010, a new housing unit was built in Missouri for nearly every additional resident (specifically every 1.36 new residents).

Table 10 provides two insights when comparing the changes in Missouri to the changes nationally. The table illustrates the dramatic difference in the rate of growth in the population between Missouri at 39 percent and nationally at 71 percent. But while the expansion in the number of households nationally also exceeded the expansion of the population, the relative rate in Missouri was actually much larger. Nationally the rate of household growth was 73 percent larger than the growth in population, but in Missouri the rate of household growth was 93 percent larger than the growth in population. The following section provides some insights into the increases in household formation but there has been little if any analysis of why the number of households in Missouri expanded at such a comparatively accelerated rate.

3.2 Social

One of the reasons for the increase in the number of households relative to the population is evolving family structure. As seen in Table 11, in 1960 nearly 9 out of 10 Missouri households were a “husband-wife” family. This characterization of a family changed dramatically over time: by 2010 only about 6 out of every 10 Missouri households fit in the “husband-wife” category. While female-headed families continued to be the largest percentage of non-husband-wife households, expanding to nearly one-quarter of all households by 2010, the largest percentage increase was in families headed by a single

male. In 1960 there were three female-headed families for every male headed family (300 percent more). By 2010 there were only 60 percent more female headed families than male headed families. While family types in Missouri in 1960 were quite similar to the national distribution, by 2010 the distribution looked very different. The percentage of husband-wife households in 2010 nationally was 18 percent greater than in Missouri, the percentage nationally of male-headed households was only half as large as Missouri and the percentage of female-headed households in Missouri was more than 20 percent larger than the national percentage.

Table 11
Changing Household Composition

Family Type	<u>Missouri</u>		<u>U.S.</u>	
	1960	2010	1960	2010
Husband-Wife	88.2%	62.85%	87.4%	74.1%
Single Household Head-Male	2.8%	14.0%	2.7%	7.1%
Single Household Head-Female	9.0%	23.15%	9.8%	18.8%

Source: U.S. Census 1960, 2010

The number of households and housing units in Missouri also increased as a result of the increased number of Missourians living alone. Whereas the Missouri general population grew by 39 percent from 1960 to 2010, Table 12 documents that the percentage of persons living alone increased by 180 percent and account for over 28 percent of all households. The percentage of single person households in Missouri has persistently been somewhat larger than the percentage nationally, although the margin narrowed over the past fifty years.

Table 12
Changing Single-Person Households

	<u>Missouri</u>		<u>U.S.</u>	
	<u>1960</u>	<u>2010</u>	<u>1960</u>	<u>2010</u>
Single person households	240,554	672,276	31.4 M	117.54 M
As percent of all households	17.6%	28.3%	13.1%	26.7%

Source: U.S. Census 1960, 2010

3.3 Education and Income

The difference in the level of educational attainment in Missouri over the past 50 years is noteworthy. Whereas in 1960 a little over 6 percent of adults completed a Bachelor’s or higher degree, in the current Missouri population 28 percent have a baccalaureate or more advanced degree.

Tracking the correlation between education and income presented earlier in Table 5 and with an increasing percentage of the population with a college degree while about 40 percent still are at the level of a high school, or less, education, income inequality in Missouri increased over the past 50 years as shown in Table 13. There we calculate what percentage of all income is received by the individuals with the most income as reported to the IRS on individual income tax forms.²⁰ In Missouri, the top 10 percent of individuals in 1960 with income accounted for nearly 35 percent of all income; by 2010 that had increased so that the top 10 percent accounted for 45 percent of all income.

Table 13
Top Income Shares 1960 and 2010

	<u>Top 10%</u>	<u>Top 5%</u>	<u>Top 1%</u>	<u>Top 0.5%</u>	<u>Top 0.1%</u>	<u>Top 0.01%</u>
1960						
Missouri	34.63	23.84	10.47	7.31	3.02	.90
U.S.	33.48	22.57	10.03	7.13	3.25	1.17
2010						
Missouri	44.48	31.39	16.49	12.54	7.60	3.63
U.S.	48.04	35.85	19.86	15.83	9.66	4.78

Source: Sam Houston University

While income inequality has been increasing nationally over the past 50 years, what is notable about Missouri is the more rapid increase in recent years. Analysis conducted by the Economic Policy Institute shows Missouri ranking second in the nation in the percentage of income captured by the top one percent during economic expansions since 1980. Prior to 1980 in Missouri the top one percent captured 8.4 percent of income growth and the bottom 99 percent captured 91.6 percent. Since 1980 the top one percent captured 115.7 percent and the bottom 99 percent a net loss of 15.7 percent. The evolving inequality is more extreme in Missouri than nationally where prior to 1980 the top one percent captured 9.5 percent of income growth and the bottom 99 percent captured 58.9 percent and since 1980 nationally the top one percent captured 90.5 percent and the bottom 99 percent

captured 41.1 percent of income growth. Missouri is one of 10 states where the bottom 99's percent of income has fallen during the economic expansions since 1980.

Table 14
Female Labor Force Participation

	1960		2010	
	<u>Missouri</u>	<u>U.S.</u>	<u>Missouri</u>	<u>U.S.</u>
Females age 16 and over	1,621,490	64,961,254	2,492,623	131,092,192
Females in the labor force	540,329	22,409,760	1,471,239	76,493,327
Percentage labor force participation	33.3%	34.5%	59.0%	58.3%

Source: U.S. Census 1960, 2010

Another income dynamic that relates to some of the evolving social dynamics of household composition and housing development over time is the increase participation of women in the Missouri labor force. As recorded in Table 14 in 1960 only one-third of women were engaged in the labor force, both in Missouri and nationally. Notice that by 2010 female participation had expanded to a level of nearly 60 percent, mirroring the expansion of female labor force participation nationally. This demographic dynamic allowed the Missouri labor force to expand at a greater rate than the rate of general population growth. Among other possible explanations, this change provides one explanation for the difference in household income between husband-wife families and single parent families over the past 50 years. Many more husband-wife families in 2010 both in Missouri and nationally have two incomes than was the case in 1960.

3.4 Geographic

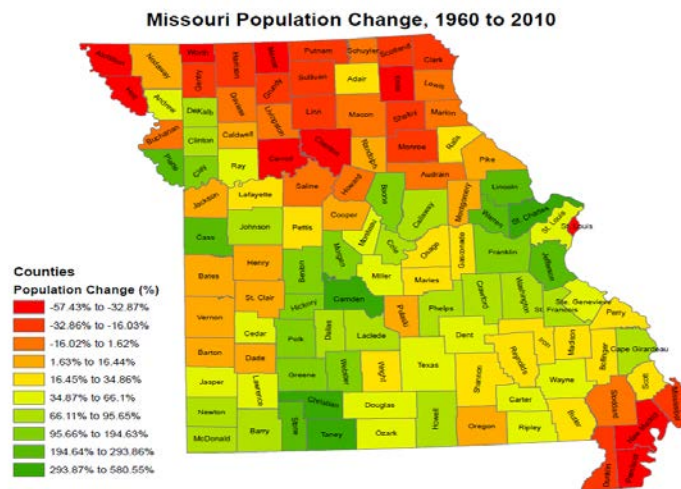
A last characteristic of the difference in life in Missouri in 2010 compared to 1960 is the ongoing trend of an increasing number of urban residents compared to rural residents. Table 15 shows that the residents in Missouri urban areas increased at over four times the number of rural residents. The trend of movement to urban areas was much more pronounced nationally. The data show that Missouri maintained its rural character to a greater degree even though most of the population movement was to urban areas.

Table 15
Urban/Rural Population Growth 1960 – 2010

	<u>1960</u>	<u>2010</u>	<u>Increase</u>	<u>% Increase</u>
Missouri				
Urban	2,876,557	4,218,371	1,341,814	+ 46.6%
Rural	1,443,256	1,770,556	327,300	+ 22.7%
U.S.				
Urban		249,253,271	123,984,521	+98.9%
Rural		59,492,267	5,446,842	+10.1%

Source: U.S. Census 1960, 2010

Map 3



These trends are shown at the county level for Missouri in Map 3. The largest population increases were in the suburban counties around Kansas City and St. Louis and in the resort areas at Lake of the Ozarks and Branson. Movement to rural areas focused on the southern areas of the state as northern Missouri experienced generally large percentage loss of population.

4. CONCLUSIONS AND IMPLICATIONS

It is a common saying among population prognosticators that “demography is destiny”.²¹ This assumes one can take current characteristics of the population and make straight-line projections into the future. For example, the population of Missouri is projected to grow to between 6.32 and 6.43 million by 2030.²² These projections are based on the same past trend of slow growth, primarily by natural increase. There are no economic or social changes incorporated into this forecast that would substantially impact Missouri’s steady, but measured, population growth trend. While the history of the past half-century would appear to validate these estimates, the demographic history recounted in this paper indicates there can be considerable changes within the population regardless of the exact size. While over the next several decades there are not likely to be changes in such characteristics as household formation and female participation in the workforce as there were over the past five decades, there are other demographic adaptations that may be of consequence.

One application of using Missouri’s historical slow growth to look to future is that one could use the current population as a baseline and make reasonable projections about the future available workforce. For example, there are approximately 1.6 million Missourians age 45 – 64 who will be aging out of the workforce over the next 20 years. There are approximately 1.2 million Missourians age 5 to 19 who will be aging into the workforce over the same period. A challenge for Missouri is that the cohort aging out of the workforce is over 25 percent larger than the cohort that will be aging into the workforce. This will be mollified somewhat by the trend that seniors are not leaving the workforce at the same rates as they did in earlier generations. Recent data show the percentage of Missourians age 65 and over in the workforce increased from about 10 percent in 2001 to a little over 12 percent in 2011.²³ But this modest shift in retirement behavior is not enough to close the worker gap.

The need for action to address the workforce gap is seen in documents such as the Missouri Chamber of Commerce and Industries’ *Workforce 2030: A Call to Action* report.²⁴ This private sector initiative calls for action in six different areas of focus, one of which is attracting and retaining more talent, especially skilled young professionals. The report highlights talent attraction campaigns and financial incentives for talent attraction as private-sector opportunities/responsibilities to address the workforce gap.

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The Chamber's strategic plan echoes the call for improvements to the public education system in order to not only improve the quality of the Missouri workforce but also impact worker's lives through reaping the benefits of higher income through higher levels of academic achievement.²⁵

Missouri demographic challenges are not limited to workforce issues and focused on the numbers of and education of its younger population. The growing population of older Missouri residents requires both private- and public-sector attention to issues of health care, housing, protective services and long-term care. The Missouri State Plan on Aging includes not only an inventory of areas for action but also the call for agencies to work together to address Missouri resident needs which cross typical forms of governmental structure.²⁶

Other social and location changes also are likely to impact who and where Missourians are in the future. Demographic data and history can be a useful resource if one not only looks at the current characteristics, but also looks for the dynamic aspects sure to be there.

Mark Tranel is the Director Emeritus, Public Policy Research Center, University of Missouri-St. Louis. He would like to thank the Hammond Institute for enabling the work to produce this paper, his mother for instilling intellectual curiosity to want to investigate issues such as those covered in this paper and his father for instilling the discipline and dedication necessary to complete such a task.

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NOTES

¹ The 2017 *American Community Survey* is the most current official source for population count, accessed online at <https://census.missouri.edu/acs/profiles/report.php?p=34&g=04000US29> on October 17, 2018.

² *World Population Review* accessed online at <http://worldpopulationreview.com/states/missouri-population> on October 17, 2018.

³ Totals exceed 100 percent because Hispanic population total includes white and nonwhite Hispanics

⁴ Missouri Department of Health and Senior Services, Office of Primary Care and Rural Health *Health in Rural Missouri* accessed online at <https://health.mo.gov/living/families/ruralhealth/pdf/biennial2015.pdf> on April 11, 2018.

⁵ Missouri Economic Information and Research Center (MERIC) “2007 Population Estimates,” 2007, accessed online at https://www.missourieconomy.org/indicators/population/pop_proj_2030.stm on January 23, 2019.

⁶ Frey, William H. 2018. US population disperses to suburbs, exurbs, rural areas, and “middle of the country” metros, Brookings, <https://www.brookings.edu/blog/the-avenue/2018/03/26/us-population-disperses-to-suburbs-exurbs-rural-areas-and-middle-of-the-country-metros>

⁷ Census towns (places) have a population between 200 and 4,999 residents, see <https://www2.census.gov/geo/pdfs/reference/GARM/Ch9GARM.pdf> accessed online August 14, 2018.

⁸ Missouri Department of Agriculture accessed on line at <https://agriculture.mo.gov/topcommodities.php> on April 17, 2018.

⁹ Missouri Economic Information and Research Center (MERIC) “Economic Contributions of Agribusiness,” April 2016, accessed online at https://www.missourieconomy.org/pdfs/agribusiness_economic_contribution.pdf on April 16, 2018.

¹⁰ Missouri Census Data Center, American Community Survey, <https://census.missouri.edu/acs/profiles/report.php?p=35&g=04000US29> accessed online April 12, 2108.

¹¹ Missouri Census Data Center, American Community Survey <https://census.missouri.edu/acs/profiles/report.php?p=35&g=04000US29> accessed online April 12, 2018.

¹² United Health Foundation, Americas Health Rankings accessed online at <https://www.americashealthrankings.org/explore/annual/measure/Medianincome/state/ALL> on August 14, 2018.

¹³ Missourian to End Poverty *2018 Missouri Poverty Report* accessed online at <http://www.caastlc.org/wpsite/wp-content/uploads/2018/03/MCAN-MEP-2018-MissouriPovertyReport-DigitalDownload.pdf> on October 22, 2018.

¹⁴ Carnevale, Anthony P. 2016. Credentials and Competencies (Demonstrating the Value of Postsecondary Education), Center on Education and the Workforce, Georgetown University <https://cew.georgetown.edu/wp-content/uploads/Parchment-Credentials-Competencies-Issue-Brief.pdf> on; Wolla, Scott A. and Sullivan, Jessica. 2017. “Education, Income and Wealth,” Federal Reserve Bank of St. Louis <https://research.stlouisfed.org/publications/page1-econ/2017/01/03/education-income-and-wealth/>

¹⁵ "List of U.S. states by educational attainment." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, accessed online at https://en.wikipedia.org/wiki/List_of_U.S._states_by_educational_attainment on February 1, 2019.

¹⁶ Hanushek, Eric A. 2018. “Missouri’s Economic Future Lies with School Reform.” The Hammond Institute Center for Economics and the Environment, Lindenwood University https://docs.wixstatic.com/ugd/b835d2_fd1c94364e8b417d92d7802566b45800.pdf

¹⁷ Bureau of Vital Statistics, Missouri Department of Health and Senior Services, “Focus,” July 2018 accessed online at https://health.mo.gov/data/focus/pdf/FOCUS_17.pdf on February 21, 2019.

¹⁸ American Immigration Council. “Immigrants in Missouri,” 2017 accessed online at <https://www.americanimmigrationcouncil.org/research/immigrants-in-missouri> on February 2, 2019.

¹⁹ Chicago Council of Global Affairs. “Missouri: State-by-State Immigration Trends,” 2012 accessed online at <http://logon.thechicagocouncil.org/UserFiles/File/Immigration/Fact-Sheets/Missouri.pdf> on February 12, 2019.

²⁰ Internal Revenue Service “Statistics of Income,” accessed online at <https://www.irs.gov/statistics/soi-tax-stats-historic-table-2> on February 1, 2019.

²¹ Weeks, John. “Who First Said Demography is Destiny.” Standard Blog, *Weeks Population*. October 30, 2013, accessed online at <http://weekspopulation.blogspot.com/2013/10/who-first-said-demography-is-destiny.html> on December 5, 2018.

²² Weldon Cooper Center for Public Service, University of Virginia, “Projections for the Fifty States and D.C.” accessed online at <https://demographics.coopercenter.org/national-population-projections>; Centers for Disease Control and Prevention, “State Population Projections 2004 – 2030, accessed online at <https://wonder.cdc.gov/population-projections.html> on November 18, 2018.

²³ Office of Social and Economic Data Analysis, University of Missouri Extension, “Missouri Senior Report 2013,” accessed online at <http://www.missouriseniorreport.org/report.php?c=29000&m=WorkforceOver65|PctWorkforceOver65|AvgMonthlyEarningsOver65&y=2001|2011> on November 18, 2018.

²⁴ Abernathy, Ted and Payne, Greg. *Workforce 2030*. Missouri Chamber of Commerce and Industry, accessed online at <http://mochamber.com/wp-content/uploads/2018/05/Workforce2030.pdf>

²⁵ Missouri Chamber of Commerce and Industry, “Missouri 2030: An Agenda to Lead,” (2017) accessed online at <https://mo2030.com/wp-content/uploads/2017/10/MO2030-report-2017.pdf> on February 15, 2019.

²⁶ Missouri Department of Health and Senior Services. “Missouri State Plan on Aging 2015-29,” 2015 accessed online at <https://health.mo.gov/seniors/seniorservices/pdf/state-plan-on-aging.pdf> on February 21, 2019.

DATA SOURCES

Data indicated as sourced from the 1960 U.S. Census for Missouri were accessed online at <https://www.census.gov/content/census/en/library/publications/1960/dec/population-pc-a1.html>; data indicated as sourced from the 1960 U.S. Census for the United States were accessed online at <https://www.census.gov/library/publications/1960/compendia/statab/81ed.html>

Data indicated as sourced from the 2010 U.S. Census for Missouri and for the United States were accessed from the Missouri Census Data Center at <http://mcdc.missouri.edu/>

Data indicated as sourced from the American Community Survey (ACS) for Missouri and for the United States were accessed from the Missouri Census Data Center at <http://mcdc.missouri.edu/>

Missouri Community Action Network. 2018 Missouri Poverty Report accessed online at <http://www.communityaction.org/2018-poverty-report/>

University of Minnesota's Humphrey School of Public Affairs. Smart Politics accessed online at <http://editions.lib.umn.edu/smartpolitics/2011/03/02/missouris-population-trends-ov/> on

U.S. Census Bureau, "America's Families and Living Arrangements: 2003," Current Population Reports P20-553 (September 2004): table HH-1, accessed online at www.census.gov, on July 19, 2005; and U.S. Census Bureau, "America's Families and Living Arrangements: 2003": table FM-1, accessed online at www.census.gov, on July 19, 2005.

U.S. Department of Agriculture, Atlas of Rural and Small-Town America accessed online at <https://www.ers.usda.gov/data-products/atlas-of-rural-and-small-town-america/> on