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The Future of Work in the Mountain West

Ember Smith
University of Nevada, Las Vegas, ember.smith@unlv.edu

Caitlin Saladino
caitlin.saladino@unlv.edu

William E. Brown
The Lincy Institute and Brookings Mountain West, william.brown@unlv.edu

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THE FUTURE OF WORK IN THE MOUNTAIN WEST

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Prepared by: Ember Smith, Caitlin J. Saladino, and William E. Brown, Jr.

PURPOSE:

This Fact Sheet highlights the potential net job growth in the Mountain West states (Nevada, Utah, Arizona, New Mexico, and Colorado) and automation employment implications in each county in the region as detailed in *The future of work in America: People and places, today and tomorrow,* a report by the McKinsey Global Institute.[1]

KEY FINDINGS:

1. Around 60% of U.S. job growth by 2030 may be shared between only 25 cities and their surrounding areas which account for 44% of employment today.
2. Clark County (Las Vegas and Southern Nevada), Maricopa County (Phoenix and its surrounding area), and Denver County are among the counties projected to reach over 15% net job growth from 2017-2030. Several other counties, including Salt Lake County, will experience 10-15% job growth in the same period. The majority of counties in the Mountain West will see net job loss or gains of less than 5%.
3. Mountain West states are forecast to have higher net job growth from 2017-2030 than the majority of U.S. states.
4. Workers with a high school diploma or less are four times more likely to hold positions at a high risk of displacement. Because of educational disparities, 12 million Hispanic and African American workers may be displaced. Gender and age also play a role in job displacement.

SUMMARY:

Since the Great Recession, twenty-five megacities, high-growth hubs, and their peripheries have spurred the majority of job growth in the United States. At the same time, a substantial number of rural counties (home to 25% of the U.S. population) suffer from older and smaller workforces, increasing unemployment, and a less educated citizenry. Increased automation technology in the workforce may deepen the divide between lower income and higher income earners as workforce mobility stagnates. Even though attention is focused on job displacement in office support, food service, customer service, and transportation, automation will also create new jobs in sectors like health care, STEM, and fields with personal interaction. The creation of new jobs may help offset displacement, but the McKinsey Institute finds that new jobs are not necessarily in the same locations as the jobs replaced by automation. As a result, the 25 cities (and their peripheries) at the forefront of recovery after the Great Recession may gain 60% of U.S. job growth through 2030, leading to a number of opportunities and hardships for those displaced.

Job displacement and reinstatement effects (the creation of occupations)[2] differ by education, race, and age. People with a high school degree or less are four times more likely to be displaced by automation as those with a bachelor's degree. Nearly 12 million Hispanic and African American workers are expected to be displaced because of educational disparities. Similarly, 15 million jobs held by young people and 11.5 million jobs held by workers over 50 are at high risk. Because men disproportionately hold jobs that involve routine tasks (factory workers) and women disproportionately occupy positions that require emotional intelligence which may not easily be automated (teachers), women may capture more of

[1] The McKinsey Global Institute, "The future of work in America: People and places, today and tomorrow," July 2019 (www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-in-america-people-and-places-today-and-tomorrow).

[2] Daron Acemoglu and Pascual Restrepo, "Automation and New Tasks: How Technology Displaces and Reinstates Labor," Journal of Economic Perspectives Volume 33, Number 2, Spring 2019.

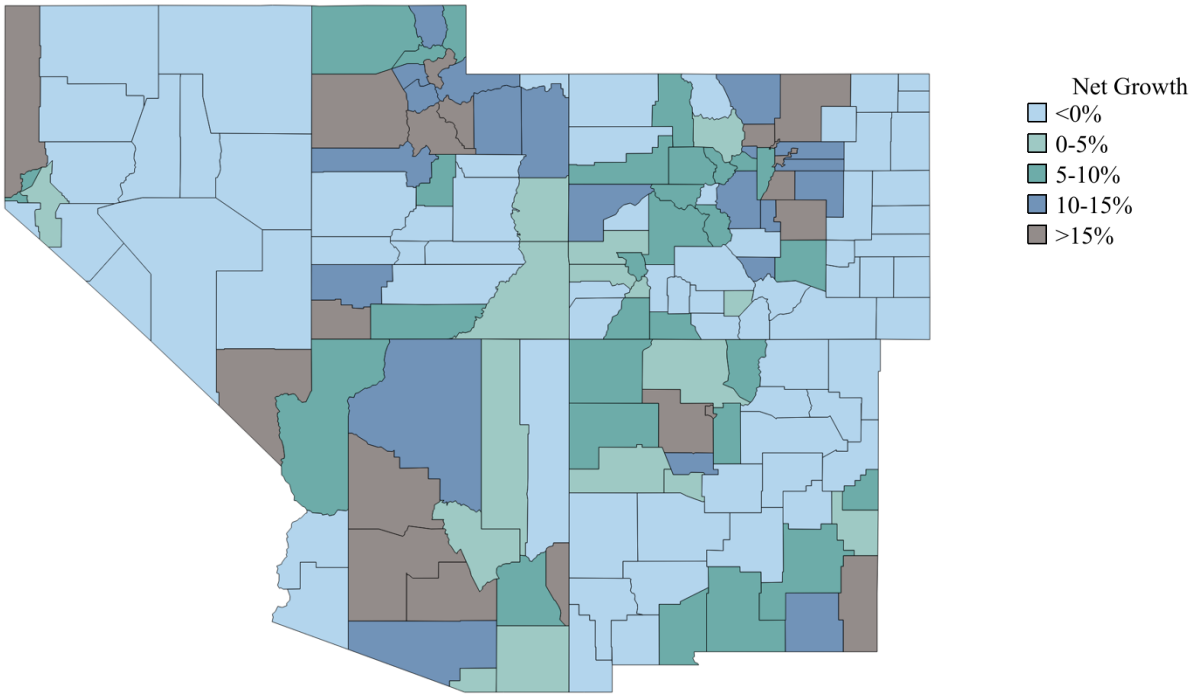
the occupational growth than men, although those positions are typically lower paying than the new technology sector jobs that are more likely to be held by men.

Despite ample opportunity and the growth of job potential in many counties, the "hollowing out" of middle-wage jobs may persist. As automation expands, high skill technology design positions and lower-income positions that are less easily replaced by machines (service jobs) will grow. The growth of high-wage jobs will only benefit displaced middle-wage earners if they are able to attain the necessary skills and education.

Although these trends spell trouble for some regions in the U.S., they are not set in stone. With public and private initiatives, the coming automation era may be a great opportunity for the country writ large, albeit one that may cause extreme disruption in the short term.

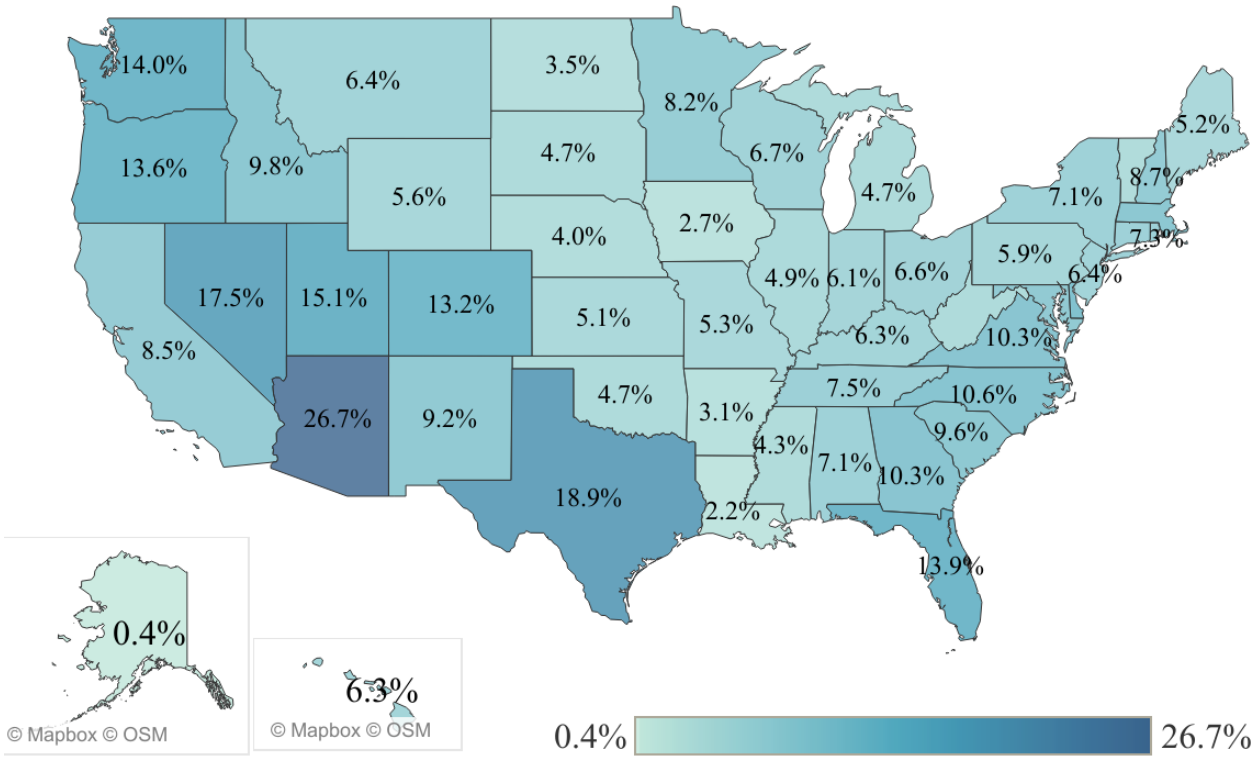
Figure 1 displays the McKinsey Global Institute's estimated net job growth in each county from 2017-2030 in the Mountain West region in a midpoint adoption scenario. The midpoint adoption scenario is the middle of the three levels of automation aggressiveness estimates evaluated. Workforces will evolve differently in communities across the United States. Although some counties are forecast to experience high net job growth, high amounts of job displacement or occupation loss to automation may still occur. Other counties may experience high automation rates of middle- and low-skill jobs, but still create a larger number of high-skill jobs. While net growth may be high, dependable jobs may not be accessible to lower-skilled workers absent intervention.

FIGURE 1: NET JOB GROWTH PROJECTION BY COUNTY, 2017-2030



Although the future appears grim for a number of less populous counties and states across the U.S., the Mountain West could experience notable gains in net employment between 2017 and 2030. Figure 2 shows each state's net job growth in a midpoint adoption scenario.

FIGURE 2: STATE NET JOB GROWTH IN MIDPOINT ADOPTION SCENARIO, 2017-2030



In order to identify and describe trends at a regional level, the McKinsey Institute employs a mathematical clustering method to assign each U.S. County to one of 13 distinct segments based on economic health indicators, labor force demographics, industry mixes, and a variety of other characteristics. Counties within the same archetype have similar traits. For example, Clark County is classified as a "high-growth hub," suggesting that it is expected to have a high concentration of jobs in sectors like healthcare and finance. Tables 1-5 display the archetypes assigned to each county (color-coded) for each state in the Mountain West. For reference, the McKinsey Institute description of each archetype is included in Table 6.

The Future of Work in America: People and places, today and tomorrow finds that the 25 megacities and high-growth hubs (Las Vegas and Denver) with their peripheries will generate about 60% of net job growth by 2030 while they only account for about 44% of the population. Small powerhouses (like Washoe County, home to Reno) on average will benefit from 15% employment growth on average by 2030, fueled largely by technology businesses. Similarly, silver cities (cities with a high concentration of retirees) will push growth up to 15% as seniors drive demand for health care and similar services while continuing to work past retirement age. College-centric towns also may experience up to 11% employment growth in the same time frame as they build on their highly educated labor pools. While several sectors will experience net job growth through the automation period, rural America will not reap the benefits. Low-growth, rural areas account for about 20% of jobs today but will drive around 3% of job growth through 2030. Worse yet, Distressed Americana counties are expected to see a net job loss of nearly 3%. Some cities have predictable job growth outcomes, but a number of mixed middle cities including Stable Cities, Independent Economies, and America's Makers are a mixed bag.

Tables 1 – 5 display the archetypes of each county in the Mountain West based on McKinsey's analysis.[3]

TABLE 1: COUNTY ARCHETYPES - NEVADA

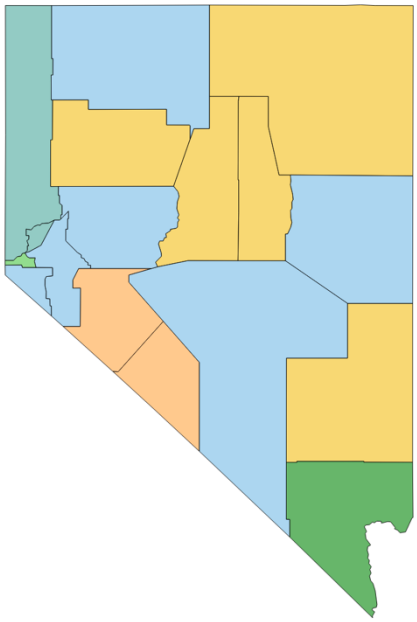
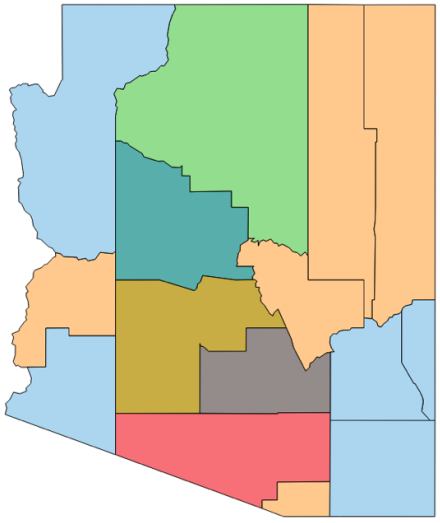
Nevada	Category	Archetype	County
	Urban Core	High-Growth Hubs	• Clark
	Niche Cities	Small Powerhouses	• Storey • Washoe
	Mixed Middle	Independent Economy	• Carson City
	Low Growth & Rural Areas	Americana	• Churchill • Douglas • Humboldt • Lyon • Nye • White Pine
		Distressed Americana	• Esmerelda • Mineral
		Rural Outliers	• Elko • Eureka • Lander • Lincoln • Pershing

TABLE 2: COUNTY ARCHETYPES - ARIZONA

Arizona	Category	Archetype	County
	Urban Core	Megacities	• Maricopa
	Urban Periphery	Urban Periphery	• Pinal
	Niche Cities	Silver Cities	• Yavapai
	Mixed Middle	Independent Economy	• Coconino
		Stable Cities	• Pima
	Low Growth & Rural Areas	Americana	• Conchise • Graham • Greenlee • Mohave • Poinsett • Yuma
		Distressed Americana	• Apache • Gila • La Paz • Navajo • Santa Cruz

[3] The McKinsey Institute, "The future of work in America- Appendix; Full list of US cities and counties by segment," July 2019 (www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-in-america-people-and-places-today-and-tomorrow)

TABLE 3: COUNTY ARCHETYPES - UTAH

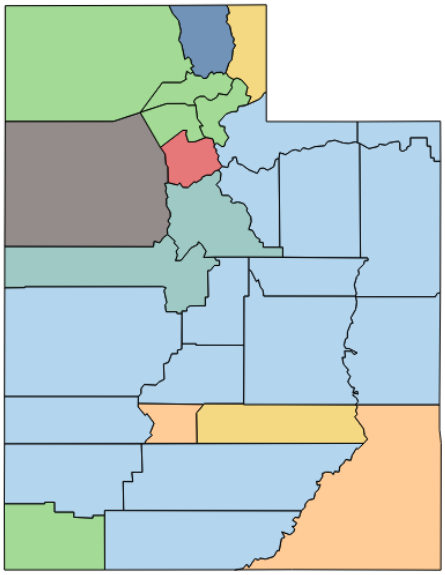
Utah	Category	Archetype	County
	**Urban Periphery**	**Urban Periphery**	• Tooele
	Niche Cities	**Small Powerhouses**	• Juab • Utah
	Mixed Middle	**Stable Cities**	• Salt Lake
		Independent Economies	• Box Elder • Davis • Morgan • Washington • Weber
		America's Makers	• Cache
	Low Growth & Rural Areas	**Americana**	• Beaver • Carbon • Daggett • Duchesne • Emery • Garfield • Grand • Iron • Kane • Millard • Sanpete • Sevier • Summit • Uintah • Wasatch
		Distressed Americana	• Piute • San Juan
		Rural Outliers	• Rich • Wayne

TABLE 4: COUNTY ARCHETYPES - COLORADO

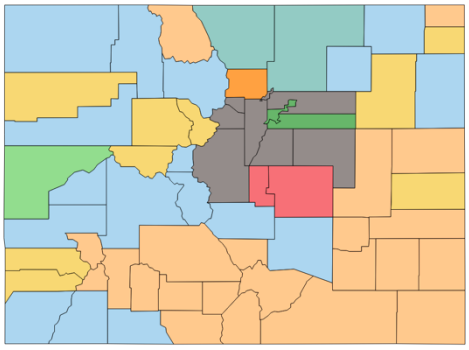
Colorado	Category	Archetype	County
	**Urban Core**	**High-Growth Hubs**	• Arapahoe • Denver
	Urban Periphery	**Urban Periphery**	• Adams • Broomfield • Clear Creek • Douglas • Gilpin • Jefferson • Park
	Niche Cities	**Small Powerhouses**	• Larimer • Weld
		College-Centric Towns	• Boulder
	Mixed Middle	**Stable Cities**	• El Paso • Teller
		Independent Economies	• Mesa
	Low Growth & Rural Areas	**Americana**	• Archuleta • Chaffee • Fremont • Garfield • Grand • Gunnison • La Plata • Lake • Logan • Moffat • Montezuma • Montrose • Morgan • Pueblo • Routt • Yuma
		Distressed Americana	• Alamosa • Baca • Bend • Conejos • Costilla • Crowley • Custer • Hinsdale • Huerfano • Jackson • Kiowa • Kit Carson • Las Animas • Lincoln • Mineral • Otero • Ouray • Prowers • Rio Grande • Saguache • San Juan • Sedgwick
		Rural Outliers	• Cheyenne • Dolores • Eagle • Phillips • Pitkin • Rio Blanco • San Miguel • Summit • Washington

TABLE 5: COUNTY ARCHETYPES - NEW MEXICO

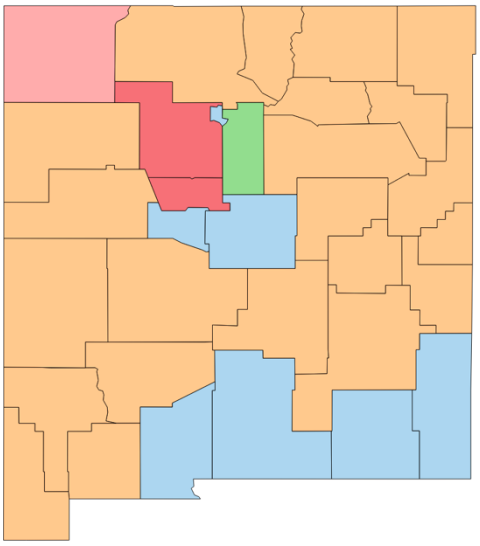
New Mexico	Category	Archetype	County
	Urban Periphery	Urban Periphery	• Pinal
	Mixed Middle	Stable Cities	• Bernalillo • Sandoval
		Independent Economies	• Santa Fe
	Low Growth & Rural Areas	Americana	• Dona • Eddy • Lea • Los Alamos • Otero • Torrance • Valencia
		Distressed Americana	• Catron • Chaves • Cibola • Colfax • Curry • De Baca • Grant • Guadalupe • Harding • Hidalgo • Lincoln • Luna • McKinley • Mora • Quay • Rio Arriba • Roosevelt • San Miguel • Sierra • Socorro • Taos • Union
		Trailing Cities	• San Juan

TABLE 6: ARCHETYPE DESCRIPTIONS ADAPTED FROM MCKINSEY'S DESCRIPTIONS[4]

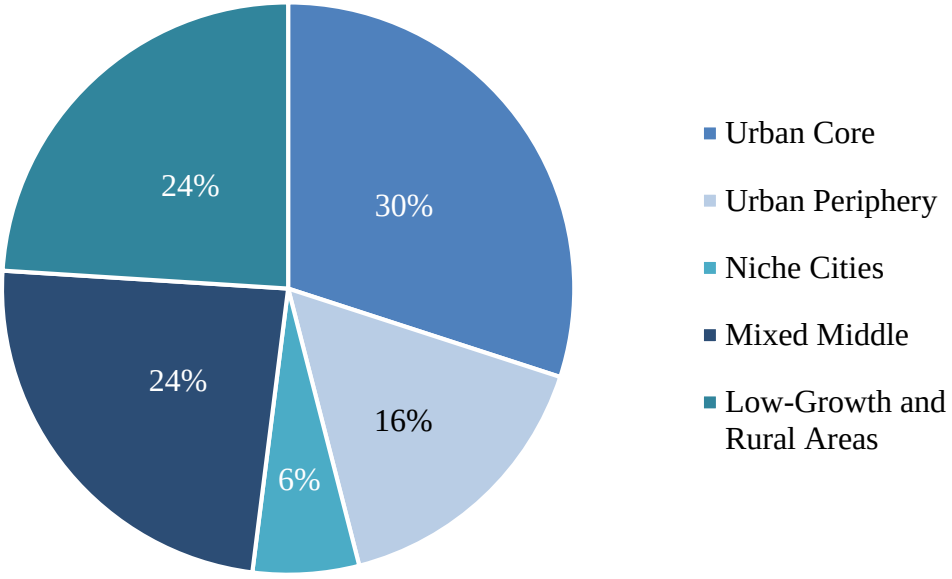
Category/Archetype	Description
Urban Core (Megacities, High-Growth Hubs)	Twenty-five megacities and high-growth hubs account for roughly 30 percent of the US population and are the nation's most dynamic places. The high growth industries of high tech, media, healthcare, real estate, and finance make up a large share of these local economies. These cities have higher incomes, faster employment growth since the Great Recession, high net migration, and younger and more educated workforces than the rest of the country—but also high levels of income inequality. Many are experiencing congestion and affordable housing shortages.
Urban Periphery	These 271 counties are the extended suburbs of US cities. Home to 16 percent of the US population, they also have seen strong net migration, attracting people moving out of cities in search of more space. In most of these counties, a large share of the population works in nearby urban areas. Healthcare, retail, logistics, and local services are large parts of these local economies.
Niche Cities (Small Powerhouses, Silver Cities, College-Centric Towns)	These 56 much smaller towns and cities, home to 6 percent of the US population, have found success by building on unique features. In college-centric towns, a major research university dominates the local economy. Silver cities, many of which are in Florida, are fast-growing retirement destinations. Small powerhouses, such as Bend, OR, and Provo, UT, have built economic clusters around technology and other industries; they have the fastest economic growth rates and second-highest rate of net migration across our archetypes. All niche cities are attracting both workers and companies with a low cost of living and a high quality of life.
Mixed Middle (Stable Cities, Independent Economies, America's Makers)	Almost one-quarter of the nation's population is found in these 180 stable cities (such as Cincinnati and St. Louis), smaller independent economies (such as Lancaster, PA, and Winston-Salem, NC), and the manufacturing hubs that we call "America's makers" (such as Rockford, IL, and Oshkosh, WI). Neither thriving nor in distress, these places have slower economic and job growth, higher unemployment, and workforces with slightly lower educational attainment than those in urban core cities. Some of America's makers are on an upward trajectory, while others are in decline.
Low-Growth & Rural Areas (Trailing Cities, Americana, Distressed Americana, Rural Outliers)	This group, which includes 54 trailing cities and more than 2,000 rural counties, is home to one-quarter of the US population. Many trailing cities, such as Flint, MI, and Bridgeport, CT, are former industrial towns with struggling economies. Rural counties encompass somewhat better-performing places (Americana) and struggling areas (distressed Americana). In these segments, populations are older, unemployment is higher, and educational attainment is lower than the national average. Things are somewhat brighter in the 192 rural outlier counties that have found some success with tourism or mining and energy.

[4] This passage is a reproduction of the description of each category found on pages 2-4 of *The future of work in America: People and places, today and tomorrow,* a report by the McKinsey Global Institute. County subcategories (i.e. "megacities," "stable cities," etc.) were added in parenthesis prior to the colon in each category for clarity.

Figure 3 displays the portion of the population in the United States living in each of the listed archetypes. Nearly half of the population lives in either an urban core or an urban periphery county, illustrating that the potential costs of automation are likely to be concentrated in areas with a lower population.

Because population growth affects economic expansion, it is worth noting that population growth and job growth are concentrating in the urban core and urban periphery areas. The lack of competitive jobs in rural areas combined with the expansion of firms in more densely populated, educated regions creates a feedback loop with skilled workers leaving rural areas for metropolitan areas, taking economic dynamism with them.[5] Burgeoning tech companies locate in clusters near their labor pool (usually cities), contributing to the stark contrast in net job growth projections between different county categories.

FIGURE 3: POPULATION DISTRIBUTION BY CATEGORY OF ARCHETYPE[6]



[5] Joint Economic Committee, "Losing Our Minds: Brain Drain across the United States," April 2019 (www.jec.senate.gov/public/index.cfm/republicans/2019/4/losing-our-minds-brain-drain-across-the-united-states)

[6] The McKinsey Global Institute, "The future of work in America: People and places, today and tomorrow," July 2019 (www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-in-america-people-and-places-today-and-tomorrow).