

The Role of Postsecondary Education in the Future of the Verde Valley Region

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Introduction

The Verde Valley occupies a unique place on the map of Arizona. The bustling traffic along the commercial corridor between Cottonwood and Camp Verde contrasts with the nearby wilderness areas where tranquility is the norm. Ties to the mining and ranching history of the area are seen everywhere, even as the economy has transitioned to one based on modern services for new residents and visitors who are attracted by the stunning scenery and ideal climate.

Although the Verde Valley lies very close to the center of the state, in some ways it operates in relative geographic isolation. The Yavapai County seat in Prescott is over an hour away by car. Residents can head north on Interstate 17 to Flagstaff and be there in about an hour, or head south for an hour to find themselves on the fringes of the Phoenix metropolitan area. The Verde Valley economy benefits in part from its proximity to Prescott, Flagstaff and Phoenix, even as it occupies its own unique geography.

With a population of 67,000 residents, the collected communities of the Verde Valley have a population comparable to that of Flagstaff.¹ It is a region of some size by Arizona standards, but the valley represents less than a third of the Yavapai County's total population of 213,000, much of which is centered in the larger metropolitan Prescott area. Equitable division of scarce resources across the county can be difficult across such a large and complex landscape.

The following pages examine the Verde Valley to gauge the economic and educational resources currently available and to present some estimates of what the future may hold.

Analyzing the Verde Valley Region

The physical makeup of Yavapai County makes for a challenging economic and governance environment. With an area of over 8,000 square miles, the county is nearly as large as the state of New Jersey. New Jersey itself is divided into 21 counties, which makes it possible to deliver services directed specifically to a geographically concentrated population. Yavapai County, however, must deliver services to a diverse population spread over a wide area without the benefit of such subdivisions. Providing equitable service delivery of countywide services in such an environment is problematic.

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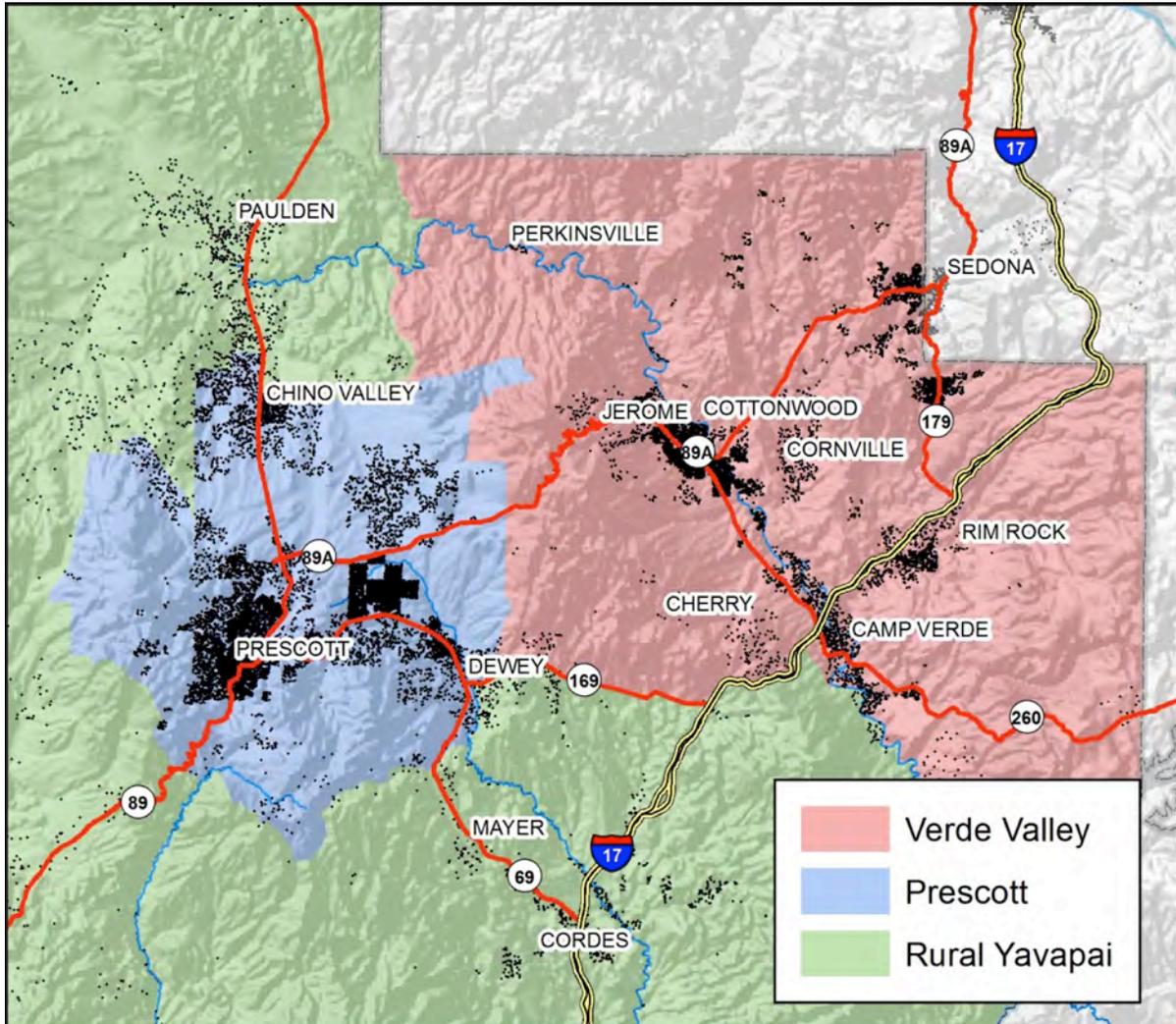


Figure 1: Population Distribution of Yavapai County – each dot represents 10 people.

Population divide in Yavapai County

As seen in Figure 1, Yavapai County has two primary population centers: the greater Prescott area and the Verde Valley. The rest of the county is sparsely populated. With Mingus Mountain providing a natural divide between Prescott and the Verde Valley, travel between the two areas requires either navigating a difficult mountain road or making a longer trip via Interstate 17 and state routes 169 and 69.

Mingus Mountain effectively creates two distinct population centers and economic two economic centers in Yavapai County. Although the greater Prescott area and the Verde Valley share many commonalities, drive times of over an hour between the two centers mean that critical aspects of their economic and educational infrastructure function in relative isolation from one another.

Difficulties of analyzing Yavapai County data to get a picture of the Verde Valley

The standard data sets used to assess economic and demographic conditions – including tables from the Census Bureau, Bureau of Economic Analysis, and the Bureau of Labor Statistics – are not generally available at the sub-county level. Many indicators are even difficult to find at the county level. These difficulties call for alternate methods of analysis than those used in large urban areas. Use of county-level or even state-level data can provide very general insight into the situation in Verde Valley, but such statistics will provide little specific information about the area.

Aggregating Census Block Groups to form a demographic profile

To get a clearer picture of the dynamics of Verde Valley, block-group-level data on a wide variety of indicators was downloaded from the Census Bureau for all of Yavapai County. To provide a basis for comparisons, data also was downloaded on the national, statewide, and countywide level. Block groups were assigned to one of three regions within the county, capturing the major population centers, as shown in Figure 1. Block-group data and margins of error were then aggregated to these regions. This allowed for meaningful comparisons to be made between the regions and reduced the large statistical errors that are problematic when census data is analyzed at the tract or block-group level. Calculating standard errors for the three regions allowed for tests of statistical significance between the regions, Yavapai County, the state, and the nation as a whole.

Current demographics of the Verde Valley

Age breakdown

As with Prescott and the rest of Yavapai County, the Verde Valley is significantly older than the state as a whole, with over a quarter of its population over age 65 (Figure 2).² Additionally, the Verde Valley and Yavapai County have a lower proportion of youth under age 18 and of young adults age 19 to 34.

The Verde Valley stands out with a larger share of its

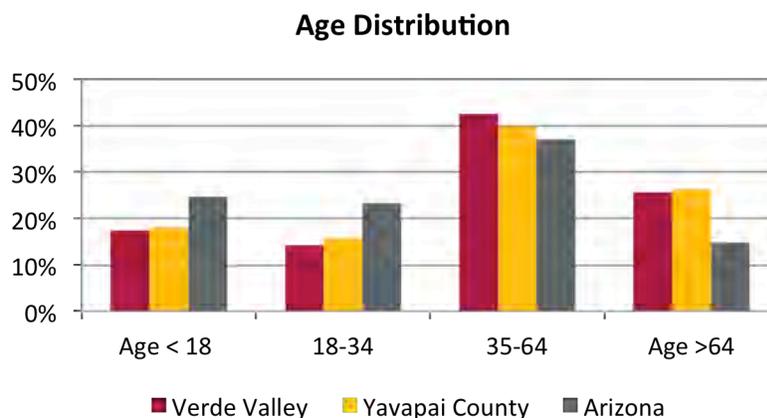


Figure 2: Population Age Brackets
Source: American Community Survey 2010-14 5-year estimates

population between the ages of 35 and 64. This age group represents the heart of an area's workforce – mid- and late-career workers who are at the peak of their skills and earning potential. However, as the workers of the baby-boom generation retire, they will create a need for other people to fill their places in the workforce. The Verde Valley's relatively small population in the 18-to-34 age bracket may indicate that there will be a need to bring new residents into the area to maintain workforce strength.

Dependency ratio

Dependency ratio is a common measure of the economic potential of a region. This measure is calculated by dividing the population under age 18, plus the population age 65 and over by the population age 18-64.³ Yavapai County (80 percent) and the Verde Valley (76 percent) each have dependency ratios considerably above that of the state as a whole (65 percent). The nationwide 18-64 dependency ratio is 59 percent.

In the short term, these high dependency ratios indicate that there will be a need to provide public services to the large portion of the nonworking population that pays minimal taxes into the system. Those on the younger end of the dependency scale will require public expenditures for education, while retirees will consume health care and other age-related services.

Emerging workforce

In the long term, a high youth-dependency ratio can be a benefit to a region. The large percentage of youth in today's demographic profile represent the workforce of tomorrow. If these youth are educated in the skills needed for the work environment of the future, they can be a boon to the region, expanding the economy.

Economic development in any region presents itself as a chicken-or-egg problem: Firms offering well-paying jobs will only locate in areas with a trained workforce, yet it is often a hard sell to taxpayers to fund expensive education and training programs for industries that haven't yet moved to the region. There is a fear that offering local residents training in specialized occupations will cause them to leave the region to seek employment where the jobs are located.

Many communities choose a strategy of identifying a small but promising local industry, and developing education programs to support it. The hope is that local investments in education and training will stimulate growth in the industry, leading to increased employment opportunities for local job seekers. These plans may or may not pay off and careful consideration must be taken before committing public resources to particular industries.

Current workforce

In most respects, the current industrial makeup of the Verde Valley resembles that of the rest of the state and the nation. Of the 14 industrial categories shown in Figure 3, the Verde Valley is not statistically different from either the state of Arizona or the nation as a whole. The three industries where Verde Valley stands out as different are as follows:⁴

- **Manufacturing** – With 3.4 percent of the workforce employed in manufacturing industries, Verde Valley has less than half the manufacturing employment of the state, which employs 7.3 percent of its workforce in these industries. The national rate is 10.4 percent.

- **Transportation, warehousing, and utilities** – Again, the region’s employment in this sector is less robust than the state and the nation, with 3.1 percent employed in these industries in Verde Valley, and 4.9 percent both statewide and nationally.
- **Arts, entertainment, recreation, accommodation, and food services** – This broad category is the most distinctive feature of Verde Valley’s industrial mix. With 20.1 percent of the workforce employed in these industries, the region has double the employment rate of the state and nation. Interestingly, this is also the one industrial area where the region is significantly different from Yavapai County.⁵

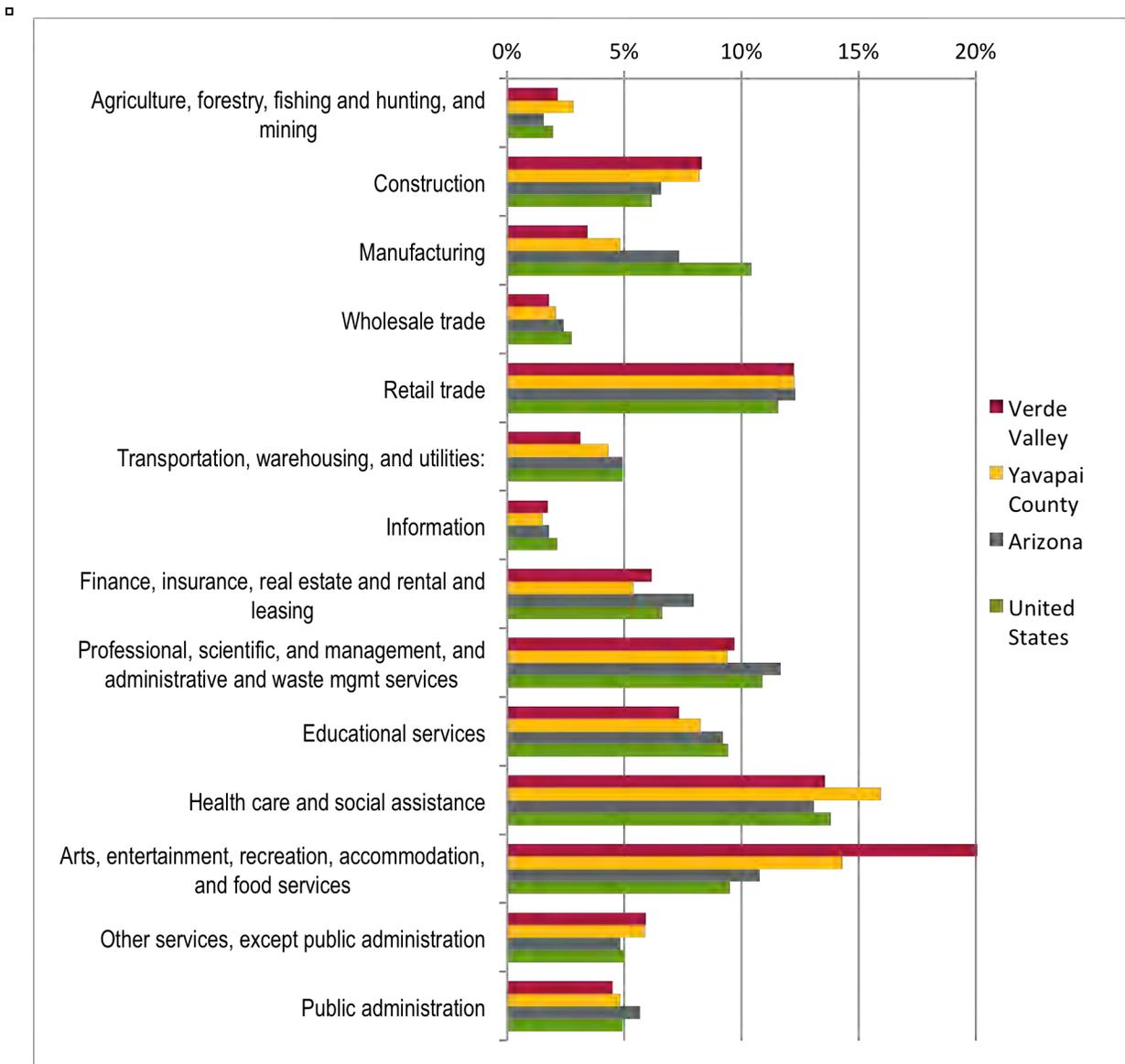


Figure 3: Employment percentage by Industry
 Source: American Community Survey 2010-14 5-year estimates

As with the rest of the nation and the state of Arizona, Verde Valley shows strong employment in the health care and social assistance sector, as well as retail trade, construction, and management. This

reflects long-term trends in the overall economy that are emphasized in the Verde Valley due to the large proportion of aging residents and a reliance on domestic in-migration for population growth.

Educational attainment

The educational attainment levels of the over-age-25 population in Verde Valley and Yavapai County generally match that of the rest of the state. The small differences seen in Figure 4 are not statistically significant. There are, however, significant differences in educational attainment between the national average and Arizona.

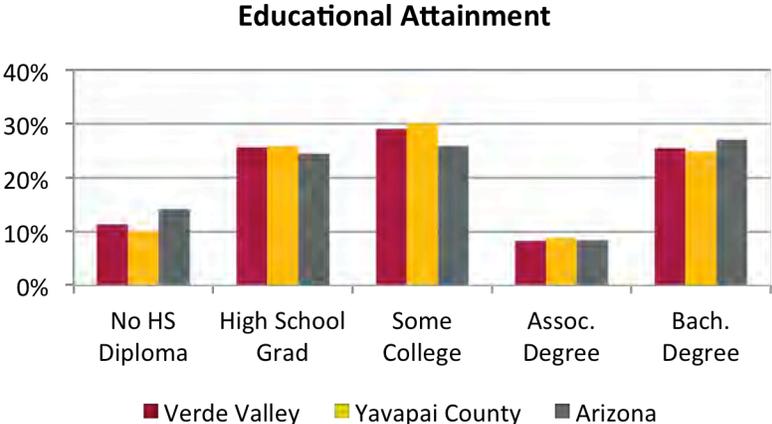


Figure 4: Educational Attainment, population over age 25
Source: American Community Survey 2010-14 5-year estimates

Arizona (27 percent), Yavapai (25 percent), and the Verde Valley (26 percent) all have bachelor’s degree rates slightly below the national average of 29 percent. These differences are statistically significant, but carry an even larger economic significance. The presence of an educated workforce is a key component of a thriving economy – not just for those with college degrees, but also for the entire population. Nationwide, workers with low-education levels have higher incomes in areas where there are higher proportions of highly educated workers.

In terms of the economy, the difference in bachelor’s degree rates between Verde Valley and state and national rates, as reported by most sources, is somewhat misleading. The large number of retirees, many of whom are highly educated, masks the true nature of the workforce. When the age-65-and-over population is removed from the numbers shown in Figure 4, the percentage of the working

Bachelor's or Better Rate
Population Age 25-64

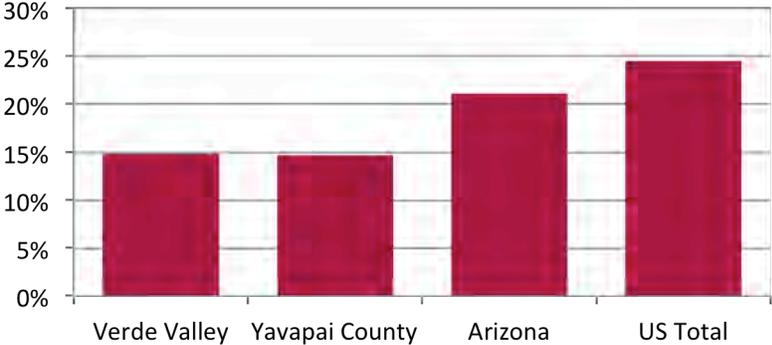


Figure 5: Population Age 25-64 with at least a bachelor's degree.
Source: American Community Survey 2010-14 5-year estimates

population with at least a bachelor’s degree drops from 26 percent to 15 percent. This is considerably below the national figure of 24 percent of the working population holding a bachelor’s degree or better and below the statewide figure of 21 percent (Figure 5).⁶ The bachelor’s degree rate for the age 65 and-over population in the Verde Valley is correspondingly higher at 11 percent, which is significantly higher

than the state figure of 6 percent and the national number of 5 percent.⁷ This is undoubtedly a reflection on the large number of retirees who live in the area.

Poverty

Poverty rates for Verde Valley and Yavapai County are similar to those of the state as a whole. Seventeen percent of individuals in the region reside in households where the income level is below the Federal Poverty Level (FPL).⁸ An additional 11 percent of Verde Valley residents are in near-poverty, making between 100 percent and 150 percent of the federal poverty level. There is no statistically significant difference between the poverty and near-poverty levels seen in the Verde Valley and Yavapai County, the State of Arizona, or the nation as a whole.

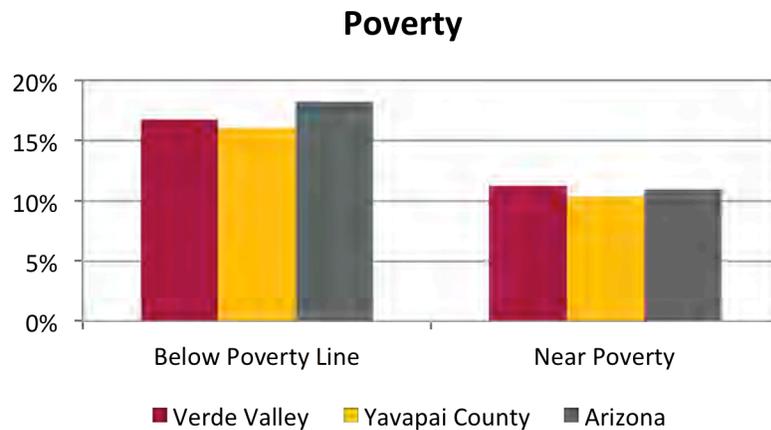


Figure 6: Persons in poverty and near poverty.
Source: American Community Survey 2010-14 5-year estimates

The U.S. Census Bureau also provides data on poverty in families with children present, which indicates that 7 percent of all families in Verde Valley are both in poverty and have children present in the household. This rate is not statistically different from the childhood poverty rate seen in at the county, state, or national level, however, the 6.9 percent rate in Yavapai County is significantly lower than the statewide rate of 10.2 percent.⁹

Race and ethnicity

	Verde Valley	Yavapai County	Arizona	United States
White	76%	81%	57%	63%
Latino	17%	14%	30%	17%
Black	1%	1%	4%	12%
Native American	3%	2%	4%	1%
Asian	1%	1%	3%	5%
Other	2%	2%	2%	2%

Figure 7: Racial and Ethnic Makeup
Source: American Community Survey 2010-14 5-year estimates

As indicated in Figure 7, both the Verde Valley and Yavapai County have a racial and ethnic makeup that is quite different from both the state and the nation. There is a statistically significant higher percentage of Whites in these areas than either the state or the nation.¹⁰ This is accompanied by a correspondingly small percentage of minority populations. Note that

the Latino percentage of Verde Valley and Yavapai County more closely matches that of the nation.

Population projections through 2026

The state's Office of Employment and Population Statistics publishes population projections for Arizona and its counties.¹¹ These figures have been used for the following analysis. Note that although population projections are available out to 2050, accuracy declines considerably for projections into the far future. Using 2026 as a horizon for estimates represents a compromise that allows a look into the future with a reasonable level of confidence.

Moderate population growth

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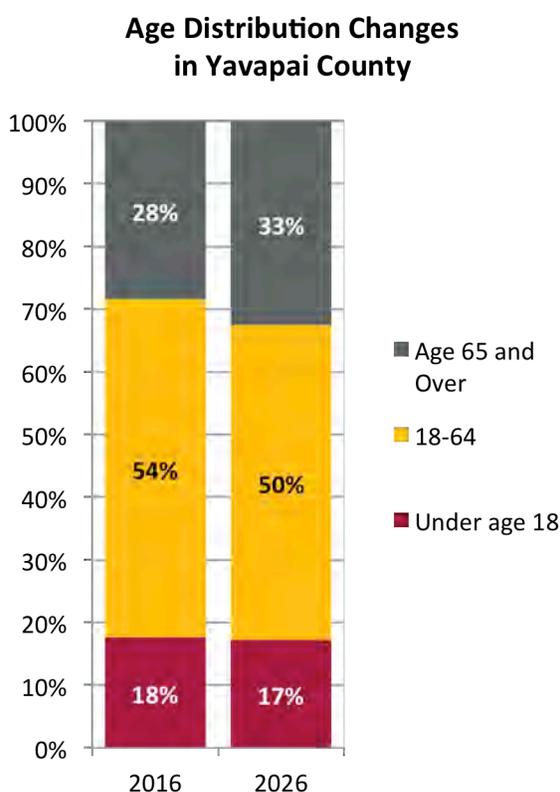


Figure 8: Changing age population 2016-2026
Source: Office of Employment and Population Statistics.

Yavapai County's population is expected to grow by an average of 2.1 percent annually over the next 10 years, from 226,210 in 2016 to 273,750 in 2026.¹² This represents a net increase of 47,541 residents over 10 years.

The Verde Valley is expected to see similar growth, with its population rising from 64,214 residents in 2016 to 76,174 in 2026, at an average annual rate of 1.9 percent. Growth is projected to be somewhat higher in the early years of the time period, beginning with a 2.4 percent annual increase in 2016 and gradually tapering to 1.3 percent in 2016.

Countywide, there will significant shifts in age distribution as current residents age and the region continues to attract retirees from outside the county. The over-age-65 percentage is projected to increase from 28 percent in 2016 to 33 percent in 2026, with a corresponding decrease in the working-age population, from 54 percent to 50 percent. The under-age-18 percentage will drop slightly, from 18 percent to

17 percent.

Negative natural population change

For the foreseeable future, natural population change in Yavapai County will be negative: The number of deaths in the county will exceed the number of births. Between 2016 and 2026, the Office of Employment and Population Statistics projects there will be 22,483 births in Yavapai County and 31,927 deaths, for a net natural loss of 9,444.¹³

Migration will be the source of population growth

The negative natural growth rate, however, is easily counterbalanced by large numbers of people projected to migrate into Yavapai County. Over the 10-year span, it is projected that 43,595 people will move into the county from elsewhere. Foreign migrants will make up 1,716 of this number, with domestic migrants from other states and elsewhere in Arizona projected at 41,879.

Current educational institutions

Valley Academy for Career and Technology Education

The Valley Academy for Career and Technology Education (V'ACTE) is a Joint Technical Education District (JTED) headquartered in Cottonwood. It offers courses at three local high schools and other sites in the Verde Valley. JTEDs enable a group of school districts to pool their resources to provide Career and Technical Education (CTE) training that would be impractical for individual districts to otherwise provide (Figure 9).

Member High Schools of VACTE
Camp Verde High School
Mingus Union High School
Sedona Red Rock High School

Figure 9: Member Districts of VACTE

V'ACTE Program Offerings 2015-16	
Camp Verde	Mingus
Agriculture	Agriculture
Automotive	Automotive
Cabinet Making	Business Operations
Culinary	Drafting
Graphic Web Design	Engineering
Music / Audio Production	Film and TV
Sports Medicine	Sports Medicine
Sedona Red Rock	Technical Theatre
Business Operations	Welding
Digital Photography	V'ACTE
Film and TV	Fire Service
Journalism	Nursing
Technical Theatre	

Figure 10: VACTE Programs

Career and Technical Education at JTEDs provides training that culminates in an industry-specific certification (Figure 10). Students earn these credentials while also working toward their traditional high school diploma. CTE training is seen as a key component of an educated and capable workforce. Workers with industry-recognized credentials in high-demand fields such as precision machining and nursing can have well-paying careers without committing to a four-year bachelor's degree.

Popular programs at V'ACTE include agriculture, graphic web design, and sports medicine. V'ACTE offers many of its classes through a dual enrollment program with Yavapai College, which enables students to acquire college-level credits as they work toward their high school diploma.

Popular programs at V'ACTE include agriculture, graphic web design, and

In contrast to some JTEDs in Arizona which have extensive campuses of their own, V'ACTE offers most of its courses at its three member high schools. Centralized programs include the firefighting academy in Cottonwood and the nursing program, which operates out of the Verde Valley Medical Clinic in Cottonwood. A new partnership with Yavapai College for the 2016-17 school year will have V'ACTE students in the film and TV program taking dual enrollment classes at the Yavapai College Verde Valley Campus in Clarkdale.

Yavapai College

Yavapai College is the community college serving Yavapai County. It offers a wide variety of two-year degrees, CTE certifications, and pathways to transfer to a four-year university. Total full-time student equivalent enrollment throughout the college was 3,849 for the 2015 fiscal year. Since 2007, the student

body has grown by 6.4 percent. This is more than double the growth of the Yavapai County population over the period.

The college offers 30 associate and transfer degrees in numerous specializations for particular professions such as nursing, gunsmithing, and automotive mechanics, and 54 certificates programs in areas as diverse as viticulture and animation. Programs are offered at six campuses around the county and through online delivery.

Prescott area facilities

Prescott campus

The main campus of Yavapai College, located in Prescott, hosts the majority of degree programs. This campus is home to the college's athletic teams and includes residence halls for students. The Prescott campus enrolls 35 percent of the total full-time student equivalent (FTSE) enrollment for the college.

Satellite facilities

In addition, there are several smaller campuses located in the greater Prescott area:

- The Career and Technical Education campus in Prescott located near the airport has specialized equipment and facilities needed for machining, aviation, and automotive training.
- The Prescott Valley campus specializes in police, fire, and emergency medical training, but also offers some general education classes.
- Agribusiness and Science Technology Center, located 28 miles north of the Prescott campus in Chino Valley, offers classes in agriculture, animal care, plus a small number of general education and other classes.

Verde Valley facilities

Verde Valley campus

The Verde Valley campus of Yavapai College is located in Clarkdale and offers Associate of Applied Science degrees in Early Childhood Education, Fire Science, Nursing, Social and Human Services, and Viticulture and Enology. The campus offers certificates in the Arizona General Education Curriculum (AGEC) that fulfill lower-division general education requirements for any of the state's three universities. The AGEC certificates allow students to complete a share of their bachelor's degree work at the community college that will transfer to the university. Completion certificates are available in 17 areas ranging from canine care to welding. The fall 2016 course guide shows 128 classes offered at the campus.

The Verde Valley campus also hosts lifelong learning classes for continuing education and is home to the Southwest Wine Center, which supports the region's growing wine industry. The Verde Valley campus accounts for eight percent of the total FTSE enrollment of Yavapai College.

Sedona Center

The Sedona Center is currently being renovated, with an expected opening date of Fall 2017. The renovations will feature spaces for arts classes, a culinary program, and some areas for general education.

The Osher Lifelong Learning Institute (OLLI), located at the Sedona Campus of Yavapai College, is the primary location for continuing education classes for retirees and leisure classes for the community-at-large .

Online presence

The college has a large online education program, that reaches 32 percent of the college’s FTSE enrollment . Nine associate’s degrees are available through entirely online classes (Figure 11). AGEC certificates are also available online to facilitate transfer to a state university. Finally, 15 professional certificates are offered online, covering a wide range of skills from accounting to criminal justice to video game development.

Degrees offered entirely online
Associate of Arts
Associate of Business
Associate of General Studies
AAS in Accounting
AAS in Administration of Justice
AAS in Administrative Professional
AAS in Management
AAS in Paralegal Studies
AAS in Video Game Development

Figure 11: Online degrees offered by Yavapai College

Yavapai College, the three state universities, and other institutions all have dramatically increased their delivery of online post-secondary education in recent years. These efforts have the potential to fundamentally change the delivery of post-secondary education, making degrees attainable for the first time to populations that are removed from the traditional urban centers of learning.

University of Arizona

The University of Arizona has a presence in the Verde Valley through its V-Bar-V Ranch research center in Rimrock. This center studies issues related to rangeland management, livestock, and wildlife in Arizona and the West.

The University has also recently acquired the DK Ranch in Cornville from the Steele Foundation.¹⁴ This property will be used by the College of Agriculture and Life Sciences and with an emphasis on the Veterinary Medical and Surgical program. Students in the program will have the opportunity for a six week stay on the ranch, with rotations in ranch management and economics, riparian ecosystems, wildlife medicine and management, and other programs.

Additionally, the University has Agricultural Extension offices in Camp Verde and Prescott. These offices apply university expertise to local agricultural issues

Arizona Technical College

Arizona Technical College is a private postsecondary school that has recently opened in Cottonwood.¹⁵ It is licensed by the Arizona State Board for Private Postsecondary Education but carries no formal academic accreditations at this time.¹⁶ The school offers certificate programs in Computer Numerical Controlled Machining, hospitality management, information technology, and several medical fields.

Workforce projections for Verde Valley

Current workforce

A workforce demand analysis of the Verde Valley was prepared by the Yavapai College Regional Economic Development Center in 2015, providing insight into workforce dynamics in the region.¹⁷ This report identifies the industrial sectors with the highest number of employees in the Verde Valley, and the wages they pay (Figure 12). The study largely confirms the numbers shown in Figure 3, with heavy reliance on relatively low-wage jobs in the accommodation and food service industries,¹⁸ as well as retail trade, and higher-wage jobs being clustered in government and health care.

Note that although the manufacturing sector employs relatively few people (just under a thousand), those jobs tend to pay more than other sectors. Also note the high wages of government workers; this is largely due to changes in government hiring in recent years. Increasingly, state and local governments have sought to privatize their workforces when possible, with formerly low-paying occupations in the government sector, such as janitors and groundskeepers, now being done by private contractors. The government jobs that remain are held by more highly trained and highly paid professionals such as engineers, planners, and accountants. Their wages, however, are no higher and are often less than their peers in private industry.

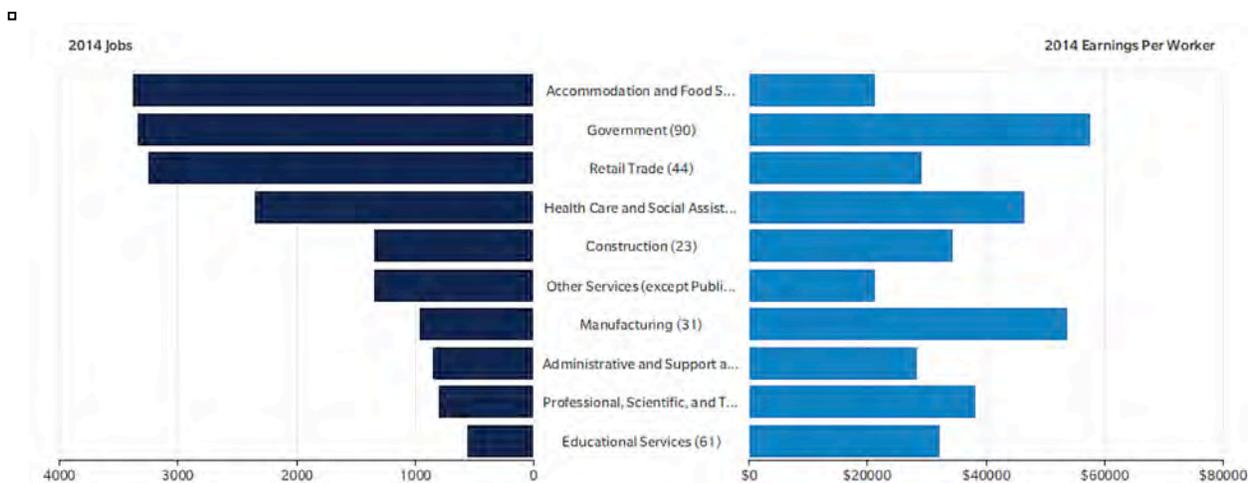


Figure 12: Verde Valley Industries and Earnings, 2014.

Source: Verde Valley Workforce Demand Analysis, 2015, Yavapai College Regional Economic Development Center

The workforce demand study also detailed the export dollars from various industries in the Verde Valley. Exports represent new money being brought into a region, as opposed to money that is circulated within the local economy from a business that only serves local needs.

Although manufacturing employs a relatively small percentage of the Verde Valley population as shown in Figure 3, in 2013 it generated \$235 million in exports, which is in excess of the \$225 million in exports from the arts, entertainment, recreation, accommodation, and food services sector. Manufacturing employs just one-sixth the workforce of the much larger accommodation and food services sector, so it

can be said that each worker in the manufacturing industry has a much larger impact on the overall economy of the region.

The study also listed competitive effects for various industries. Competitive effects measure an industry’s growth in a region and compare it to the growth of the industry nationwide. A positive competitive effect indicates that an industry is growing faster locally than in the nation as a whole, while a negative effect indicates relative shrinkage. In the Verde Valley, both manufacturing and retail trade showed large competitive effects, indicating that they are growing. Accommodation and food services had a positive, but small competitive effect.

Employment sectors projected to grow

The Office of Employment and Population Statistics at the Arizona Department of Administration publishes data on growing and declining industries across the state.¹⁹ These figures show industries that have gained and lost jobs over the past four years and give insight what the short-term trends may be. Note that the information shown in Figure 13 is for the entire county, so a gain or loss of a few dozen jobs in an industry over four years may not be significant for the Verde Valley. However, the gain of several hundred jobs in the traveler accommodation and outpatient care center industries may indicate a trend that will extend into the future.

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Yavapai County Job Growth 2011-2015			
GROWING INDUSTRIES	Job Growth 2011-15	DECLINING INDUSTRIES	Job Growth 2011-15
Traveler accommodation	480	Elementary and secondary schools	-104
Outpatient care centers	408	Aerospace product and parts manufacturing	-81
Residential building construction	232	Depository credit intermediation	-49
Services to buildings and dwellings	210	Professional and similar organizations	-46
Residential mental health facilities	180	Support activities for animal production	-43
Building equipment contractors	179	Wired telecommunications carriers	-30
Home health care services	145	Promoters of performing arts and sports	-30
Sporting goods and musical instrument stores	91	Grocery stores	-22
Office supplies, stationery, and gift stores	90		
Architectural and structural metals mfg.	89		
Technical and trade schools	77		
Beverage manufacturing	59		
Other residential care facilities	54		
Other financial investment activities	45		
Support activities for crop production	16		

Figure 13: Industries gaining and losing jobs in Yavapai County.
Source: Office of Employment and Population Statistics

Predicting long-term employment growth by narrow sector with any degree of accuracy is difficult, especially for economic regions as small as the Verde Valley. Smaller regions are necessarily affected by

changes that occur in much larger economies, over which they have no control. There are, however, some trends that point to likely areas of future employment growth.

Health care

The Verde Valley already has a large percentage of older residents, and that proportion is expected to increase in coming years (Figure 2 and Figure 8). Their need for health care will only increase as these residents age. In the Verde Valley, as in the rest of the nation, there will be increased demand for a broad variety of health-care workers – not only health-care practitioners such as doctors and nurses, but also health-care-support occupations such as home health aides and medical assistants.

Hospitality and Retail

The spectacular natural setting and ideal climate of the Verde Valley has drawn visitors from around the globe for many decades. In addition, close proximity to the Sun Corridor megapolitan area of Phoenix and Tucson, means that the region is just a short drive from the largest population center in the Intermountain West, one that offers an ideal weekend mini-vacation location to over 5 million people.

The region has capitalized on its location, first with resorts and restaurants in the Sedona area, and now in other valley locations, which offer more fine restaurants, accommodations, and retail stores. The hospitality and retail industry in the Verde Valley will continue to grow, and there will be demand for both management and service-sector occupations associated with these businesses.

Manufacturing

Although manufacturing currently comprises only a small fraction of the Verde Valley's employment, any increase in this employment is likely to have a relatively large effect on the economy of the region. The large competitive effects seen in the manufacturing industry indicate that it has the potential to grow. A cluster of small-scale manufacturers could be developed that gradually attracts more firms to the area.

The projected workforce

With the Verde Valley's future growth largely reliant on domestic in-migration, it can be said that the future workforce of the area will be imported, rather than raised locally. The area continues to be an attractive place for many to relocate, so economic forces will come into play to optimize the workforce. This dynamic can be seen as an asset to the economic development future of the valley: as the industrial mix of the area shifts in unpredictable ways in the future, the natural economic forces of the market will allow it to attract workers with the skills needed. For instance, if the region began to develop an industrial cluster built on additive manufacturing, it is likely that workers with the requisite specialized skills could be recruited to move to the region. The Verde Valley's spectacular natural setting and attractive lifestyle choices would help mitigate any wage premium that employers might have to pay to import skilled workers.

Even with population growth driven by in-migration, there is still the issue of finding well-paying jobs for both those currently in the workforce and local youth who will soon join the workforce. These are problems that rural areas everywhere must contend with: How to ensure continued employment for existing workers in the face of a changing and often cyclical economy; and how to provide job opportunities for younger workers that will keep them in the area.

Education and training requirements for the future workforce

Decisions about the education and training needs for the development of tomorrow's workforce involve a balancing act between three sometimes-conflicting factors:

1. **The needs of current employers in the region:** Determining what skills are required for their new hires and what skills do their existing employees need to advance their own careers while increasing the productivity.
2. **Community desires and aspirations:** Residents may try to nudge their region toward increased employment in an industrial sector they find attractive, perhaps one that offers higher wages or more stable employment than the current industrial mix.
3. **Available resources:** Plans for developing the workforce of tomorrow must consider several resource restraints. The most obvious of these is money. If neither employers nor the taxpayers are willing to fund the costs of new training programs, then the plans will not be realized. There are also labor restraints to consider. It is possible that there will not be enough workers available at virtually any price, or that potential workers will choose to move elsewhere to seek work.

The Verde Valley workforce demand analysis provided some insight into the needs of current employers. The study involved a number of roundtables and interviews with key industries, discussing the knowledge and training requirements for employment. Manufacturers at these meetings stressed that their own internal training teaches many of the specific job skills that employees need. What these employers indicate they need from the community are students with generalizable skills, such as critical thinking, workplace safety, record keeping, and 'soft skills' such as the ability to show up on time and work as a team member.

The need for soft skills was echoed in a survey of food, accommodation, and retail employers done as part of the demand analysis. These same employers also expressed a need for workers with basic culinary skills. Soft skills are requisite for nearly all jobs, certainly including those in the health-care sector, so educational and experiential programs at both the high school and community college level that can develop these abilities are likely to pay off in the workforce.

Health Care

The Verde Valley campus of Yavapai College currently offers a small number of health-care classes, and more are available online. A needs analysis of the health-care sector in the valley would help to determine what programs are needed to meet expected demand, e.g., adjusting offerings to train students in medical billing, home health aides, or other specialties as needed. A reliance on online learning to the largest degree practicable may allow the flexibility required to scale programs up or down to meet current student and workforce demands.

Hospitality & Retail

There are many entry-level positions available in these sectors, but a pathway to promotion and higher pay should be available to Verde Valley employees. Solid education in soft skills could help ensure that employees are successful in entry-level positions. Further, a range of certificate programs in areas such as management, information technology, and culinary skills could position workers to advance and begin a career without the necessity of a college degree.

Manufacturing

Close collaboration with the emerging manufacturing industry can provide the feedback needed to design education programs to bolster this sector. Starting with an emphasis on soft skills and basic workplace safety practices, a set of stackable, industry-recognized credentials can be developed. Again, flexibility in program design and offering is paramount; institutions must be prepared to adjust rapidly to meet the changing needs of the manufacturing environment.

Conclusion

Trying to accurately predict what educational programs are needed to meet future needs is difficult for any region. Committing public resources to supporting a particular industry or occupation that is believed likely to be significant in the future presents the risk of placing a losing bet. An industry that seems attractive now could easily wither away. However, there are some general predictions that can be made with a reasonable level of certainty: The health care, food service, accommodation and retail sectors all will continue to grow in the Verde Valley, and manufacturing may play an important supporting role in the future economy of the region.

The hospitality and health-care sectors may not be the glamorous industrial gems sought by economic development gurus. Perhaps it is not as exciting to say you are investing in accommodation services as it is to invest in green energy or biotechnology. However, an area's future economy is built on the foundation of its current strengths, not on wishful thinking.

The trick with capitalizing on these industries will be ensuring that there are career pathways for young workers to progress from front-desk clerk to resort management, or from home-health aide to registered nurse. A savvy combination of locally based and online training will be required to make these pathways viable for residents of the Verde Valley Region.

Additionally, light manufacturing shows some promise in helping the area economy. Although manufacturing currently represents a small percentage of the Verde Valley's economy, there appear to be local competitive effects in the industry that indicate the potential for growth. This, coupled with the good wages offered for manufacturing jobs, may justify exploration of training programs and educational facilities to support the industry. A regional cluster, perhaps focused on a particular manufacturing specialty, might be the result. Such a cluster would help diversify the valley's economic portfolio.

The coming challenge will be to provide residents with not just jobs, but good jobs and careers with the potential for advancement in these fields. Close engagement with local employers will help ensure that workers are prepared to meet the demands of the future environment.

The economy of the future is likely to be even more dynamic and even chaotic than it is today. Keeping up with the many changes ahead will require that community leaders remain engaged with business and educational interests over the long haul.

End Notes

¹ Morrison Institute analysis of U.S. Census Bureau 2010-14 American Community Survey 5-year estimates. Unless otherwise noted, all population and demographic figures in this report come from this source.

² The differences in Verde Valley and Yavapai County population percentages in the four age brackets shown are statistically significant ($p < 0.10$) from the statewide percentages. They are also statistically different from the nation as a whole in the under 18, 18-34, and 65 and over age groups ($p < 0.01$).

³ Note that the dependency ratio is often calculated using the age 16-64 cohort as the working population. For this analysis, it was felt that an 18-64 working population is more realistic, under the assumption that the majority of 16- and 17-year-olds are still in high school.

⁴ Statistical significance, $p < 0.05$.

⁵ Statistical significance, $p < 0.10$.

⁶ Statistical significance, $p < 0.01$.

⁷ Statistical significance, $p < 0.01$.

⁸ In 2016 the Federal Poverty Level income was \$24,300 annually for a family of four.

<https://aspe.hhs.gov/poverty-guidelines>

⁹ Statistically significant at $p < 0.05$.

¹⁰ Statistically significant at $p < 0.01$.

¹¹ <https://laborstats.az.gov/>

¹² 2013-2050 Sub-County Population Projections, Office of Employment and Population Statistics, Arizona Department of Administration.

¹³ 2015-2050 Yavapai County Population Projections (Medium Series), Office of Employment and Population Statistics, Arizona Department of Administration.

¹⁴ <http://cals.arizona.edu/spotlight/cals-wins-3m-ranch-veterinary-school>

¹⁵ www.aztechcollege.com

¹⁶ <http://archiveppse.az.gov/Licensee/LicenseeDetails.aspx?id=JCdbNG%2bmzt0%3d&IsOutOfState=False>

¹⁷ Verde Valley Workforce Demand Analysis, 2015, Yavapai College Regional Economic Development Center

¹⁸ Accommodation and Food Services is classified under NAICS code 72 and defined as, “establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment. Excluded from this sector are civic and social organizations; amusement and recreation parks; theaters; and other recreation or entertainment facilities providing food and beverage services.”

¹⁹ <https://laborstats.az.gov/special-reports>



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