

The Education Dividend: A Decade for Growth

Closing Arizona's Talent Gap to Strengthen Economic Competitiveness

Update to the 2022 Report: Advancing Arizona's Economy

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Prepared by:

Rounds Consulting Group, Inc.

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We are grateful to work with the Arizona Board of Regents and provide this comprehensive workforce gap and attainment opportunity report. We value the board's vision to provide a comprehensive supply and demand workforce analysis across the educational credential landscape.

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Arizona Chamber of Commerce & Industry

Greater Phoenix Chamber

NALA Northern Arizona Leadership Alliance

SALC Southern Arizona Leadership Council

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INTRODUCTION

Advancing Arizona's Economy: Investment in Workforce Development, published in the spring of 2022 and commissioned by Arizona's leading business organizations and the Arizona Board of Regents (ABOR), established a strong case for targeted investment in postsecondary education.

The report concluded that Arizona faced a growing workforce challenge that could limit the state's long-term economic competitiveness if left unaddressed. The primary issue at that time: academic achievement levels below the national average.

Since then, Arizona's economy has continued to build significant momentum. The state has attracted major corporate investments, reestablished itself as a national hub for advanced manufacturing, expanded its healthcare sector, and sustained some of the strongest population growth in the country.

That success, however, has intensified demand for workers with postsecondary degrees and credentials. Maintaining Arizona's competitive advantage will require more than continued business investment and population growth. It will depend on whether the state can produce enough qualified workers to meet employer needs.

Workforce Definitions

In this report, "qualified workers" refers to workers who hold a recognized postsecondary qualification beyond a high school diploma. These qualifications span the full range of educational pathways, including industry certificates, associate degrees, bachelor's degrees, graduate degrees, and professional credentials. Throughout the report, references to postsecondary education and workforce preparation encompass this full range.

While the report addresses workforce shortage concerns at different levels of educational attainment in different categories of occupational status, the report also distinguishes between employees that achieve a specific license or other form of specific training versus those employees that achieved a university level degree.

Four years after the original report, ABOR requested an expanded review encompassing all levels of postsecondary education and both public and private institutions. Drawing on updated data and this broader scope, this report provides the most comprehensive assessment of Arizona's postsecondary workforce pipeline to date. It examines the supply of workers and projected employer demand at each educational level, from industry certificates and associate degrees through bachelor's, graduate and professional degrees.

The report findings reveal both an urgent challenge and a significant opportunity. Employer demand is outpacing the production of qualified workers, in-migration is no longer closing the talent gap as it once did, and educational attainment remains below national averages.

Although the analysis identifies workforce needs across educational levels, the greatest need is for workers with bachelor's and graduate degrees. Meeting Arizona's workforce needs will require targeted investment in high-demand programs and pathways across the postsecondary system.

What This Report Covers

The analysis follows a five-step framework that: (1) projects Arizona's demand for qualified workers, (2) estimates the state's production of qualified workers, (3) accounts for qualified workers supplied through in-migration, (4) calculates the resulting gap between supply and demand, and (5) estimates the associated economic and fiscal impacts. The analysis is presented in two parts:

- **Part I: The Consequences of an Imbalance Between Workforce Supply and Demand** projects Arizona's demand for qualified workers through 2034, estimates the number of qualified workers the state's postsecondary institutions are projected to produce, and quantifies the economic consequences of unaddressed gaps between worker supply and demand.

- **Part II: Improvements in Academic Achievement and the Impact on State Tax Collections** models the economic gains Arizona could capture by raising educational attainment to national benchmarks, demonstrating how improvements in graduation, enrollment, and completion rates translate into hundreds of millions of dollars in additional statewide tax revenues.

Data Sources

The analysis is based on workforce, education, demographic, and labor market data compiled from the Arizona Office of Economic Opportunity (OEO), the Integrated Postsecondary Education Data System (IPEDS), the U.S. Census Bureau, the U.S. Bureau of Labor Statistics (BLS), and the Arizona Board of Regents (ABOR). Other unique data was collected from individual sources that are considered highly reputable within their industries.

The resulting workforce projections are then used to estimate the associated economic and fiscal impacts using a highly modified, Arizona-specific IMPLAN input-output calculator.

EXECUTIVE SUMMARY

Over the past decade, Arizona's elected officials, business leaders, economic development organizations, and education partners have helped to transform the state's economy. Through strategic public policy and sustained public-private collaboration, Arizona has attracted major employers, expanded high-value industries, and emerged as a leading destination for business investment.

That success has created Arizona's next economic challenge. As the state's economy continues to grow, so does demand for skilled workers. While in-migration has long supplemented Arizona's workforce supply, it is no longer sufficient to meet employer demand. The question is no longer if Arizona can attract businesses and investment, but how the state will prioritize workforce development to sustain its established economic momentum.

Arizona has the institutions and expertise to meet this challenge. Its long-term competitiveness will depend on targeted investment and coordination across postsecondary education, workforce training, industry, and government – helping employers secure the workforce talent they need while expanding opportunity and economic mobility for Arizona residents.

This report quantifies Arizona's projected qualified workforce gap, examines the potential economic consequences of failing to close the gap, and identifies opportunities to strengthen the state's talent pipeline through investment in education and workforce development.

The Key Takeaways

The key takeaway is that Arizona has reached a new level of economic momentum. Sustaining that growth will require continued investment in the foundations of economic competitiveness, especially a qualified workforce.

Access to qualified workers is a leading consideration for businesses seeking to expand and relocate. Yet, Arizona's educational attainment levels remain below the national average, limiting the state's ability to meet employer needs and fully realize the economic benefits of its growth.

Simply becoming average in terms of academic achievement would allow the state to collect approximately $500 million in additional annual state and local tax revenue.

This review examined workforce supply and projected employer demand across the full range of postsecondary qualifications, including industry certificates, associate degrees, bachelor's degrees and graduate and professional degrees. Arizona's education and training providers appear better

positioned to meet overall demand at the certificate and associate degree levels, although shortages may persist in particular fields. The largest gaps are at the bachelor's and graduate degree levels, where targeted policy and investment are needed to support degree completion, graduate retention and the attraction of qualified workers from other states and countries.

If left unaddressed, the projected workforce shortfall could exceed 10,000 qualified workers annually, concentrated primarily in occupations requiring university degrees.

The resulting constraints on economic growth could reduce statewide tax collections by as much as $6 billion over the next decade.

The analysis indicates that the investment needed to improve educational attainment would represent a small fraction of the additional public revenue that could follow. Addressing these gaps should therefore be a leading economic priority for the Arizona Legislature and the Governor's Office.

A projected workforce shortage signals a constraint on future growth. If Arizona can supply enough workers with the qualifications employers need, it will be better positioned to sustain its economic momentum.

If it cannot, business expansion and investment will slow, bringing economic growth in line with the workforce available. The opportunity is to expand that workforce now so that a shortage of talent does not become a limit on Arizona's prosperity.

Other Key Findings at a Glance

The analysis reveals both the scale of Arizona's workforce challenge and the economic opportunity available through targeted investment across the education and talent-development continuum.

Progress and Opportunity

Arizona has made meaningful progress since the 2022 study. Annual bachelor's degree production has increased by nearly 3,000 graduates, bachelor's degree attainment among adults has risen from 18.4% to 20.0%, and college enrollment has increased from 46.2% to 48.3%.

Raising achievement and attainment across the full education continuum generates significant economic returns. If Arizona reaches national averages in high school graduation, college enrollment, and postsecondary completion and attainment, the state will generate an estimated $1.3 billion in additional annual labor income and approximately $500 million in annual state and local tax revenues – equivalent to as much as $5 billion in potential tax revenues over 10 years.

While these findings appear to be concerning on first review, they are actually positive because it identifies that Arizona as a whole has an opportunity to continue to improve its economic position compared to other states.

The fact that Arizona's level of academic achievement is relatively low, yet state efforts to successfully attract higher wage businesses and improve on the per capita personal income statistics over the past several years represent a significant achievement.

Figure 1: The Education Dividend: Economic Gains from Reaching National Achievement & Attainment Averages

+$1.3 Billion

Additional Annual Labor Income
(Wage Gains for Arizona Workers)

+$500 Million

Recurring Annual
State & Local Tax Revenues

Simply by reaching the U.S. average for educational attainment, Arizona could benefit by up to $5 Billion in additional state and local tax revenues over ten years.

Source: Rounds Consulting Group, Inc.

The Workforce Challenge

Arizona is not forecasted to produce enough qualified workers to meet employer demand. Employers are projected to demand nearly 130,000 qualified workers annually, while the state produces approximately 80,000 – about six workers for every ten needed.

This outlook represents an improvement from four years ago, demonstrating that Arizona's postsecondary institutions are producing more graduates despite constrained resources.

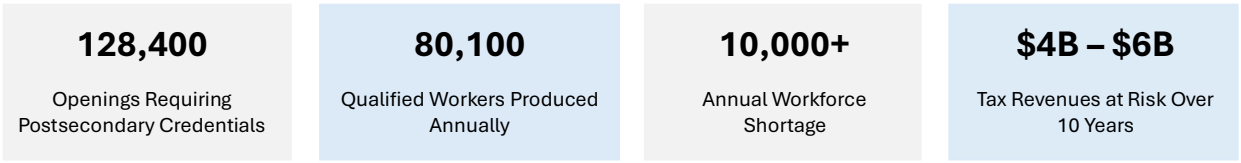
However, the remaining shortage underscores the need for additional investment in high-demand programs and pathways.

Even after accounting for in-migration, Arizona is projected to face an annual shortage of more than 10,000 qualified workers, including approximately 7,500 workers with bachelor's degrees and just under 4,000 with graduate level degrees. Without further talent development, these shortages could constrain higher impact business expansion, future investment, and Arizona's broader economic momentum.

Migration alone cannot solve Arizona's workforce needs. In-migration will remain an important source of qualified workers, but slowing migration between states and growing competition for talent make it a less reliable way to close Arizona's workforce gap.

The economic costs of inaction are substantial. If workforce shortages persist, Arizona could forgo $4 billion (lower end of estimate) to $6 billion (higher end of estimate) in cumulative state and local tax revenues over the next decade, with annual losses approaching $1 billion by Year 10.

Figure 2: Arizona's Workforce Outlook



Source: Rounds Consulting Group, Inc.

What Has Changed Since 2022

The 2022 report identified an annual shortage of more than 20,000 workers with at least a bachelor's degree, assuming migration would continue at historical levels and Arizona's economy would remain on its existing growth trajectory. That analysis focused primarily on the state's public universities, while the current report provides a broader assessment of Arizona's postsecondary talent pipeline.

For comparison with the 2022 findings, Arizona is projected to have more than 50,000 annual openings for workers with bachelor's degrees or higher. In-state postsecondary institutions are expected to supply approximately 25,000 workers annually after accounting for graduates who leave Arizona or do not enter the workforce.

In-migration is projected to supply another 17,000 workers, leaving an annual shortage of more than 10,000 workers with bachelor's degrees or higher.

This improvement reflects the progress Arizona's postsecondary institutions have made with limited resources. However, employer demand still exceeds supply, underscoring the need for additional investment in high-demand programs and pathways along with efforts to retain and attract talent.

Progress That Has Been Made

Arizona has made measurable gains in several areas, including:

- Bachelor's degree production at the state's three public universities grew from approximately 34,000 annually in 2020 to 37,000 in 2023, a trajectory of 4.4% per year that is projected to continue through 2030.
- The share of Arizona adults lacking a high school diploma improved, declining from 12.9% in 2019 to 10.6% in 2024 – narrowing the gap, but still trailing the national rate of 10.4%.
- The share of Arizonans age 25 and older holding a bachelor's degree increased from 18.4% to 20.3%, though this remains 1.3 percentage points below the national average of 21.6%.
- Arizona's median wages for workers without a four-year degree have become broadly competitive with national levels. For example, median earnings for workers with a high school diploma reached $41,000, slightly above the national median of $40,000, while workers with some college or an associate degree earned nearly $48,000, matching the national average.
- However, Arizona wages for all postsecondary degree holders remain about 5.8% below national medians.
- Arizona's economy continued to diversify and attract high-value corporate investment in advanced manufacturing, semiconductor production, healthcare, and other sectors that increase demand for qualified workers.

Persistent & Emerging Challenges

Despite measurable progress, several structural challenges continue to limit Arizona's ability to develop and retain the talent needed for long-term growth:

- Talent needs are increasingly concentrated at higher levels of academic achievement. Arizona's technical and middle-skill pipeline is generally keeping pace with overall demand, but shortages remain in specific occupations and are more pronounced among workers with bachelor's, graduate, and professional degrees.
- Arizona cannot rely on in-migration to close the gap. The estimated contribution of in-migration with bachelor's degrees has declined from approximately 19,000 in the 2022 report to 11,000 in this update. Slower population growth, competition for talent, and rising living costs add further uncertainty.

- Too few students enter postsecondary education. As of 2022, 48.3% of Arizona high school graduates enrolled in a postsecondary institution, up from 46.2% in 2020 but still well below the national rate of 62.0%.

- Arizona still trails the nation in college completion. Arizona's six-year university graduation rate increased from 53.5% to 54.1%, compared with an unchanged national rate of 62.2%.

- The fiscal stakes remain substantial. Raising attainment across the education continuum to national averages could generate approximately $500 million in additional annual state and local tax revenues.

Figure 3: Key Changes Since the 2022 Workforce Report

Metric	2022 Report	2026 Update	Trend
Total qualified worker shortfall, post-migration	Not estimated	10,000+ (1)	New finding
Arizona high school graduation rate	78.2%	78.4%	Marginal improvement, still below U.S. average (87.0%)
Arizona college enrollment rate	46.2%	48.3%	Improving, still below U.S. average (62.0%)
Arizona college completion rate, 6-year	53.5%	54.1%	Slight improvement, still below U.S. average (62.2%)
Arizona bachelor's attainment, adults 25+	18.4%	20.3%	Improving, still below U.S. average (21.6%)
Annual tax revenue gain from reaching national average	$497M	$478M (2)	Consistent, modest decline reflects adoption of flat income tax
Annual fiscal loss by Year 10 if gap persists	Not estimated	$800M – $1B+	New finding
In-migration as workforce buffer	Projected reliable	Increasingly uncertain	Risk elevated

Notes: (1) The 2026 bachelor's-level shortfall uses an occupation-aligned methodology that accounts for all credential levels, migration flows, and both public and private four-year institutions. The 2022 estimate used a narrow bachelor's degree only approach focused on Arizona's public universities. While the figures are not directly comparable, both point to the same structural workforce challenge. (2) The estimated annual tax revenue gain in the 2026 update is modestly lower than the 2022 estimate primarily because Arizona has since adopted lower individual income tax rates. The underlying economic benefits associated with improving educational attainment remain largely unchanged.



Figure 4: Arizona's Annual Workforce Gap

10,000+

Workers with Bachelor's Degrees or Higher
Needed Each Year After Accounting for In-Migration

Arizona's Annual Workforce Gap by Degree Level

7,500	**4,000**
Bachelor's Degrees	Graduate & Professional Degrees

Source: Arizona Office of Economic Opportunity; IPEDS; U.S. Census Bureau; Rounds Consulting Group, Inc.

The Fiscal Consequences of Inaction

Each year that Arizona's shortage of more than 10,000 qualified workers persists, a new gap is added to the shortage from prior years, causing the economic and fiscal effects to accumulate. Over the next decade, Arizona could forgo a cumulative $4 billion to $6 billion in state and local tax revenues.

The annual impacts begin relatively small but grow as workforce shortages compound. By year 10 alone, unrealized state and local tax revenues are projected to reach approximately $800 million to more than $1 billion for that year. These estimates therefore represent more than a one-time loss. An unaddressed workforce shortage would progressively reduce Arizona's economic output and tax base, with each year's losses adding to the cumulative 10-year impact.

Figure 5: The Risk of Inaction:

$4.0 – $6.0 Billion in Lost State & Local Tax Revenues

10 Years of Projected Cumulative Unrealized State and Local Tax Revenues if Arizona's Qualified Workforce Shortages Persist.

The Economic Value of Improving Educational Attainment

Arizona has made progress since the 2022 workforce report. High school graduation, college enrollment, and bachelor's degree attainment have all improved. Even so, Arizona continues to trail national benchmarks across nearly every stage of the education pipeline. Closing these gaps represents one of Arizona's greatest economic opportunities. Higher educational attainment strengthens the state's workforce, increases household incomes, improves business competitiveness, and generates recurring tax revenues.

Sustaining Arizona's Economic Momentum

Arizona's economic continued success will depend in large part on the strength of its workforce pipeline. Sustained, targeted investment in education and workforce development will be essential to aligning qualified workers with employer demand, supporting business expansion and job creation, and strengthening the state's long-term competitiveness.

Figure 6: Why Educational Attainment Matters

Educational Attainment Directly Influences Earnings, Workforce Productivity, and Long-Term Tax Revenues. In Arizona, Median Annual Earnings Increase Significantly with Each Additional Level of Educational Attainment:

$49,900	$67,400	$84,100
High School Diploma	Bachelor's Degree	Graduate Degree

Source: U.S. Census Bureau (2024).

Figure 7: Arizona Compared with National Benchmarks

Educational Outcome	Arizona	U.S.
High School Graduation Rate	78.4%	87.0%
College Enrollment Rate	48.3%	62.0%
College Completion Rate (6-year)	54.1%	62.2%

Note: Arizona's college enrollment and six-year completion rates reflect enrollment and completion at the state's three public universities only. Source: Arizona Department of Education; IPEDS; National Student Clearinghouse; Arizona Board of Regents.

Figure 8: The Annual Return on Investment

Improving Educational Attainment is One of Arizona's Highest-Return Investments

+$215 Million	+$478 Million	+$741 Million
Improving Halfway to National Average	Reaching National Average	Surpassing National Average

Source: Arizona Department of Education; U.S. Census Bureau; National Student Clearinghouse; Rounds Consulting Group, Inc.

The Policy Opportunity Ahead

Over the past decade, Arizona demonstrated that strategic public policy can reshape the state's economic future. Through coordinated action among elected officials, business leaders, educators, and economic development organizations, Arizona successfully attracted major employers and became one of the nation's leading destinations for business investment.

The next phase of Arizona's competitiveness will depend on applying that same collaborative approach to workforce development. The challenge is no longer simply attracting employers – it is ensuring Arizona can produce the talent needed to sustain continued economic growth.

Meeting that challenge will require stronger alignment among K–12 education, higher education, workforce development, and economic development initiatives. Potential strategies include expanding credential attainment, strengthening employer partnerships, improving statewide education and workforce data sharing, increasing dual enrollment and need-based financial aid opportunities, improving FAFSA completion, and developing a coordinated statewide attainment strategy.

Arizona's Next Economic Priority

Many factors will shape Arizona's economic future, but a skilled and qualified workforce will be among the most important. Developing and retaining that talent will be critical to sustaining the state's growth and competitiveness.

Arizona's colleges and universities have demonstrated their ability to increase workforce production despite more than a decade of constrained public investment. Building upon that foundation represents one of Arizona's greatest opportunities to sustain its economic momentum for the next decade.

Five Priorities for Strengthening the Talent Pipeline

Arizona's long-term economic success will increasingly depend on its ability to meet growing workforce demands. The following policy priorities can help strengthen the state's talent pipeline, support employer needs and position Arizona for continued growth.

- ***Increase postsecondary attainment across career and technical education programs, community colleges, and universities.***

- ***Strengthen alignment between education and workforce needs by expanding employer partnerships, improving labor market data sharing, and coordinating statewide workforce planning.***

- ***Expand access to education and workforce training through initiatives such as dual enrollment, need-based financial aid, improved FAFSA completion, and other strategies that reduce barriers to postsecondary success.***

- ***Retain and attract talent by increasing graduate retention, maintaining a competitive business climate, and addressing factors that influence workforce mobility, including housing affordability and quality of life.***

- ***Invest in Arizona's higher education and workforce institutions, which have demonstrated their ability to increase credential production despite more than a decade of constrained public funding.***

Workforce development is not simply an education issue – it is an economic development strategy. The policy decisions made today will shape Arizona's ability to attract investment, support business expansion, increase household incomes, and strengthen the state's long-term fiscal capacity for decades to come.

Opportunities for Further Policy Development

Beyond the aforementioned priorities, future workforce and economic development efforts should continue to evaluate opportunities to:

- ***Expand workforce pathways into education, training, and employment for Arizonans at different stages of their lives, including military veterans and foster youth.***

- ***Strengthen entrepreneurship, startup development, and small business growth as additional pathways for job creation and economic mobility.***

- ***Improve connections between education and employment, including work-based learning, internships, apprenticeships, and other career-connected opportunities.***

- ***Coordinate and provide additional support to workforce development in the rural parts of the state.***

- ***Support talent attraction and retention strategies that strengthen Arizona's ability to compete for skilled workers.***

- ***Develop regional and industry-specific strategies that respond to changing workforce and economic conditions.***

- ***Leverage public and private sector funding opportunities that can extend workforce capacity and improve outcomes.***

- ***Evaluate programs through a cost-benefit framework to identify the greatest return on investment for Arizona's economy and taxpayers.***

- ***Update Arizona's Achieve60AZ postsecondary attainment goal to incorporate measurable targets informed by projected occupational demand, regional workforce needs, and economic outcomes, enabling the state to track progress and evaluate results.***

Conclusion: Investing in Arizona's Next Competitive Advantage

Arizona's continued economic success will depend in large part on its ability to develop, attract, and retain a workforce that meets employers' evolving needs. If the supply of qualified workers falls short of demand, shortages will constrain business expansion, limit job creation, and weaken the state's long-term competitiveness. Addressing this challenge will require progress across the education continuum – from high school completion through industry-recognized credentials, trade and technical training, community college programs, and university degrees.

This report quantifies the economic benefits of closing attainment gaps across multiple education levels, with particular emphasis on workers with bachelor's degrees and higher, where the analysis identifies Arizona's largest workforce shortage. Further research should examine community college and trade-school pathways in greater detail to clarify how these programs can address occupational and regional workforce needs.

The Board, along with key stakeholders, may want to consider updating Arizona's Achieve60AZ goal, which calls for 60% of adults ages 25–64 to hold a postsecondary degree, certificate, or license by 2030.

Adding measurable occupational and regional targets tied to projected workforce demand would help guide investments, track progress, and evaluate how increased educational attainment contributes to economic opportunity for Arizonans and the state's long-term competitiveness.



METHODOLOGY & DATA SOURCES

The following section summarizes the methodology used to estimate projected workforce demand in Arizona, the expected supply of workers produced through the state's education and training systems, the role of in-migration in offsetting labor needs, and the associated economic and fiscal impacts of workforce gaps and improvements in educational attainment.

RCG employs a custom economic and fiscal impact modeling framework that leverages IMPLAN multipliers calibrated to Arizona's economic structure. The model captures direct, indirect, and induced effects in terms of employment, labor income, economic output, and tax revenues.

Projected Arizona Workforce Demand

Estimates of future workforce demand are based on the 10-year occupational job openings projected by the Arizona Office of Economic Opportunity (OEO) for the 2024–2034 period.

These projections follow methodologies developed by the U.S. Bureau of Labor Statistics (BLS) and are designed to capture the total number of workers employers will need over the projection period. For purposes of this analysis, projected job openings include:

- Openings due to economic growth, representing new jobs created as industries expand.

- Openings due to permanent workforce exits, including retirement, out-migration, mortality, or long-term separations.

Openings due solely to occupational transfers were excluded because they do not represent net workforce demand within the state. Because the projections include thousands of individual occupations, RCG aggregated them into the 22 major occupational groups defined under Standard Occupational Classification (SOC) structures. This allows for consistent comparison between workforce demand and workforce supply.

To align job openings with education levels, the distribution of educational attainment among workers within each occupation was applied to projected openings. This approach reflects the range of credential levels typically observed in the labor market rather than relying solely on minimum education requirements.

In-State Workforce Production

Workforce supply was estimated by measuring the number of individuals produced annually through Arizona's education and training systems.

Postsecondary completion data were collected using the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS), along with data from the Arizona Department of Education, ABOR, and institutional reporting. Completions include:

- ***Industry-recognized certificates and career/technical credentials.***
- ***Associate degrees.***
- ***Bachelor's degrees.***
- ***Graduate and professional degrees.***

These completions were classified by field of study using six-digit Classification of Instructional Program (CIP) codes. CIP codes were then aligned to occupations using crosswalks developed by the U.S. BLS and NCES.

Because a single program may prepare students for multiple occupations, completions were distributed across occupations using a probabilistic allocation approach informed by labor demand patterns. To approximate the number of completers entering Arizona's long-term workforce, adjustments were applied for:

- ***Graduate retention rates in Arizona.***
- ***Residency status of students.***
- ***Online-only completions unlikely to enter the in-state labor force.***

Retention assumptions were based primarily on workforce persistence patterns documented in ABOR's alumni outcomes reporting. The resulting estimates represent the annual number of workers produced within Arizona's education and training system.

In-State Workforce Gap Estimation

Workforce gaps were estimated by comparing projected annual job openings to estimated annual in-state workforce production across education levels and occupational groups. Two measures of workforce imbalance were calculated:

- ***Qualified workforce gap, including positions requiring mid-skill credentials, bachelor's degrees, or graduate education.***

- ***Total workforce gap, including positions across all education levels.***

These estimates reflect structural differences between projected demand and Arizona's internal workforce production capacity. They are not forecasts of unemployment or job vacancies.

In-Migration Workforce Gap Adjustment

Because Arizona historically supplements its workforce through population inflows, a secondary analysis was conducted to estimate how migration may offset workforce gaps.

Migration estimates were derived from U.S. Census Bureau population movement data. The total number of individuals moving to Arizona from other states was adjusted to isolate the working-age population (25–54).

To estimate potential job coverage associated with this inflow, Arizona's observed ratio of employment to population was applied. This ratio approximates how many jobs are supported per resident in the state economy.

This calculation produces an estimate of the number of jobs migration could potentially fill each year. Because detailed occupational data for incoming workers is limited, the analysis assumes that a meaningful share of migrants possess postsecondary credentials. This assumption provides an approximate upper-bound estimate of migration's contribution to workforce supply.

Migration adjustments were applied separately from the in-state pipeline analysis so that readers can distinguish between workforce production capacity and external labor inflows.

Educational Attainment Benchmark Analysis

In addition to workforce gap modeling, the report includes an updated benchmarking analysis examining the economic gains associated with improving educational attainment outcomes in Arizona.

Current Arizona high school graduation, college enrollment, and college completion rates were compared to national averages using data from ADE, ABOR, and NCES. Three scenarios were modeled:

- ***Closing half of the current attainment gap,***
- ***Reaching national averages,***
- ***Surpassing national averages by half of the current gap.***

For each scenario, incremental increases in graduates were estimated and translated into economic and fiscal impacts using the same modeling framework applied in the workforce gap analysis.

Economic & Fiscal Impact Methodology

The approach to quantifying the economic and financial impacts is grounded in established industry standards and leverages proprietary economic modeling techniques that enhance the analysis. It goes beyond conventional approaches by incorporating tailored adjustments specific to Arizona's economic landscape, including the use of IMPLAN multipliers, to assess direct, indirect, and induced impacts.

An economic and fiscal impact model provides a quantifiable method to estimate the economic impact of a particular activity in a given area. Impacts can be used to measure existing activity and to measure potential expansions/contractions of an area's economy resulting from changes in economic activity. Typically, the level of economic effects resulting from the activity is estimated in terms of economic output, jobs, labor income, and tax revenues. These are defined as:

- **Economic output** captures the broader level of economic activity, or the total value of goods and services produced in the region, similar to how statistics like gross domestic product (GDP) capture economic volume in individual states and across the country.

- **A job** is simply one person working a full-time equivalent (FTE) job over a one-year period.

- **Labor income** represents the income earned by employees. The earnings component measures the total change in income throughout the economy due to economic or business activity.

- **Tax revenues** refer to the estimated annual government tax revenues that are generated by a particular project, policy, business, development, or activity in a given area. For example, the types of taxes analyzed include sales taxes, state income taxes, and property taxes, among others. The types of activities subject to these taxes include payroll, retail sales, and real/personal property, to name a few.

The economic and fiscal impacts that occur as a direct consequence of the initial activity create additional activity in the regional economy. This relationship is known as the multiplier or ripple effect. The basis for multiplier effects is the interdependence between industries, how one industry impacts other sectors, and the cycle of spending and re-spending within the regional economy.

An input-output model generates these multipliers. These multipliers quantify relationships among industries and estimate the extent to which the area being analyzed can capture sales, economic activity, and job impact within the region.

Input-output models measure impacts based on their source. Direct effects are the result of the initial activity being analyzed. The multiplier effects, or secondary effects, are measured as either indirect or induced. These are defined as:

- **Direct effects, or impacts**, measure the economic activity at an individual site, or the initial economic change attributed to the event under consideration.

- **Indirect impacts** capture additional economic output, labor income, employment, and tax revenue changes generated as a result of increased or decreased demand in the industries that supply services or products.

- **Induced impacts** capture additional output, labor income, employment, and tax revenue changes generated as a result of increased spending in the local economy made by the households of both direct and indirect employees.

A commonly used input-output model framework for generating economic multipliers is IMPLAN (short for “impact analysis for planning”). Originally developed by the U.S. Forest Service in the 1970s, the responsibility for developing IMPLAN data sets shifted to the University of Minnesota as demand for regional models grew.

Now, IMPLAN runs as a private organization and is the leading provider of nationwide economic impact data and analytical software. The RCG custom economic impact model employs this input-output methodology.

Limitations & Assumptions

The analyses provided in this report rely on several key assumptions and limitations that should be considered when interpreting the results. While the findings in this report represent realistic expectations under a variety of parameters for future performance, these parameters may change as the economy evolves, causing inherent uncertainty in analysis results.

As such, the following represents the key assumptions and limitations that the study results are most sensitive to.

- Arizona OEO occupational employment projections reasonably approximate future labor market conditions and are held constant over the 2024–2034 period.

- Annual wages for each occupational group reflect Arizona averages as reported by the BLS, and they will increase by 5.2% annually and keep up with inflation, using historical wage inflation data.

- Observed educational attainment distributions within an occupation reflect that employers' current demand for workers with varying levels of educational attainment remains constant over the 2024–2034 period.

- Historical undergraduate and graduate workforce persistence rates published by ABOR are sustained over the 2024–2034 period. Online, in-state postsecondary students follow similar out-migration patterns that are observed in traditional postsecondary students.

Primary Limitations

- Using educational attainment observed in the workforce as a proxy for educational attainment demand may understate future actual demand as employers continue to increase minimum educational requirements driven by upskilling, technological changes, and broader shifts from manufacturing to a service economy.

- Not every CIP code was able to be matched with a corresponding SOC code, impacting the ability to reasonably estimate the gap in workforce supply for select occupations. However, 96% of the 196,422 program completions were matched to an SOC code.

- Survey-based data, including ACS and IPEDS, are subject to sampling error, reporting variability, and definitional constraints. In addition, occupations are aggregated to major groups to improve statistical stability, which may mask variation within detailed occupations and fields of study.

- The estimates presented in this study are based on historical data and established forecasting methodologies, and actual outcomes may differ if future economic conditions vary from those assumed.

However, RCG has taken every measure to ensure the analysis relies on grounded, accurate data, industry-standard forecasting techniques, and market-tested methodologies to produce the most reliable results possible.

Data Sources

Four primary sources of data were used in this report. Historical and current distributions of educational attainment by occupation were calculated using data from the U.S. Census Bureau's American Community Survey (ACS).

Postsecondary degree and credential supply was measured using the Completion Survey from the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS), which reports annual degree certificate completions by institution and field of study.

To estimate the share of completions likely to enter Arizona's labor market, pooled data from 2020–2024 IPEDS Fall Enrollment Surveys, which report first-time undergraduate residency status and instructional modality, was used to approximate the proportion of students who are Arizona residents, nonresidents, and students enrolled exclusively online.

Additionally, 2024–2034 occupational employment projection data from the Arizona OEO provided estimates of future job openings by occupation due to both employment growth and worker exits.



Part I: The Consequences of an Imbalance Between Workforce Supply & Demand



PROJECTED WORKFORCE DEMAND

According to Arizona OEO's official 10-year forecast, the state is projected to have approximately 219,600 job openings annually.[1] This estimate includes openings due to economic growth and permanent exits and excludes occupational transfers, which do not result in net job opening growth.

Projected demand is not evenly distributed across occupations. Instead, openings are concentrated in a mix of service-sector, administrative, logistics, and professional occupations that reflect both Arizona's population growth and its evolving economic structure.

Workforce demand is concentrated in four broad areas: healthcare, logistics and transportation, construction and infrastructure, and customer-facing occupations. Together, these sectors account for a substantial share of projected openings and reflect Arizona's dual challenge of supporting continued population growth while expanding higher-value industries.

[1] Based on the 2024-2034 estimates prepared by the Arizona Office of Economic Opportunity, November 2025, https://oeo.az.gov/labor-market/employment-projections.

Figure 9: Projected Annual Job Openings by Major Occupational Group (2024–2034) All Credential Levels	
Major Occupational Group	Annual Openings
Food Preparation & Serving Related	30,800
Office & Administrative Support	24,100
Sales & Related	22,400
Transportation & Material Moving	20,400
Healthcare Support	16,000
Management	13,800
Construction & Extraction	11,300
Healthcare Practitioners & Technical	10,800
Business & Financial Operations	10,600
Installation, Maintenance, & Repair	8,300
Building / Grounds Cleaning & Maintenance	8,300
Educational Instruction & Library	8,000
Personal Care & Service	7,800
Production	7,800
Computer & Mathematical	4,100
Protective Service	3,600
Community & Social Service	3,300
Arts, Design, Entertainment, Sports, & Media	3,000
Architecture & Engineering	2,400
Farming, Fishing, & Forestry	1,300
Life, Physical, & Social Science	800
Legal	800
Total	219,600

Source: Arizona Office of Economic Opportunity.

Overview of Occupational Groups

To provide additional context, the major occupational groups included in this analysis are summarized below.

- **Healthcare Support** – Occupations that assist medical professionals in delivering care, including nursing assistants, medical assistants, home health aides, and other patient support roles.

- **Construction & Extraction** – Jobs related to building and infrastructure development, including construction laborers, electricians, plumbers, equipment operators, and related trades.

- **Healthcare Practitioners & Technical** – Licensed and highly skilled medical professionals such as physicians, nurses, therapists, pharmacists, and diagnostic specialists.

- **Community & Social Service** – Occupations focused on public health, counseling, social work, and community outreach programs.

- **Architecture & Engineering** – Technical and professional roles involved in designing buildings, infrastructure, and industrial systems, including engineers, architects, and surveyors.

- **Transportation & Material Moving** – Occupations supporting logistics and goods movement, including truck drivers, delivery workers, warehouse operators, and equipment movers.

- **Computer & Mathematical** – Technology-oriented occupations such as software developers, data analysts, cybersecurity specialists, and IT professionals.

- **Management** – Leadership and supervisory roles responsible for directing organizations, departments, and business operations.

- **Installation, Maintenance, & Repair** – Skilled trades responsible for maintaining and repairing equipment, machinery, and infrastructure systems.

- **Food Preparation & Serving Related** – Service-sector occupations in restaurants, hospitality, and tourism, including cooks, servers, and food service workers.

- **Life, Physical, & Social Science** – Scientific and research-oriented occupations including laboratory technicians, environmental scientists, and social science researchers.

- **Personal Care & Service** – Occupations providing direct services to individuals, such as childcare workers, hairstylists, and fitness trainers.

- **Arts, Design, Entertainment, Sports, & Media** – Creative and performance-based occupations including designers, performers, writers, and media professionals.

- **Business & Financial Operations** – Occupations related to accounting, finance, human resources, logistics coordination, and business analysis.

- **Production** – Manufacturing-related jobs involved in assembling goods, operating machinery, and processing materials.
- **Legal** – Occupations supporting the legal system, including lawyers, paralegals, and court support staff.
- **Building & Grounds Cleaning & Maintenance** – Jobs focused on facility upkeep, landscaping, janitorial services, and building maintenance.
- **Sales & Related** – Occupations involved in the sale of goods and services across retail, wholesale, and business-to-business markets.
- **Educational Instruction & Library** – Teachers, instructors, librarians, and other education-related occupations supporting schools and training institutions.
- **Office & Administrative Support** – Clerical and administrative roles such as office assistants, customer service representatives, schedulers, and records clerks.
- **Protective Service** – Public safety occupations including police officers, firefighters, corrections officers, and security personnel.
- **Farming, Fishing, & Forestry** – Occupations tied to agriculture, resource management, and food production.

Projected Job Openings by Skill Level

Projected job openings span the full spectrum of occupations across Arizona's economy, from entry-level roles to highly specialized professional positions. As a result, estimating total workforce demand alone is not sufficient to understand how many positions can realistically be filled. Each occupation requires workers with specific levels of education, training, or credentials, making it necessary to examine demand by skill level.

To estimate workforce demand by education level, the observed educational attainment distribution within each occupation was applied to the state's projected job openings. This approach captures the variation in credential requirements across occupations and reflects the mix of education levels employers typically hire within each field. Across Arizona's projected job openings from 2024 to 2034, annual educational demand is expected to include approximately:

- ***28,600 positions requiring less than a high school diploma,***
- ***62,500 positions requiring a high school diploma,***
- ***74,000 positions requiring mid-skill credentials,***

- ***35,900 positions requiring a bachelor's degree, and***

- ***18,600 positions requiring post-bachelor's education.***

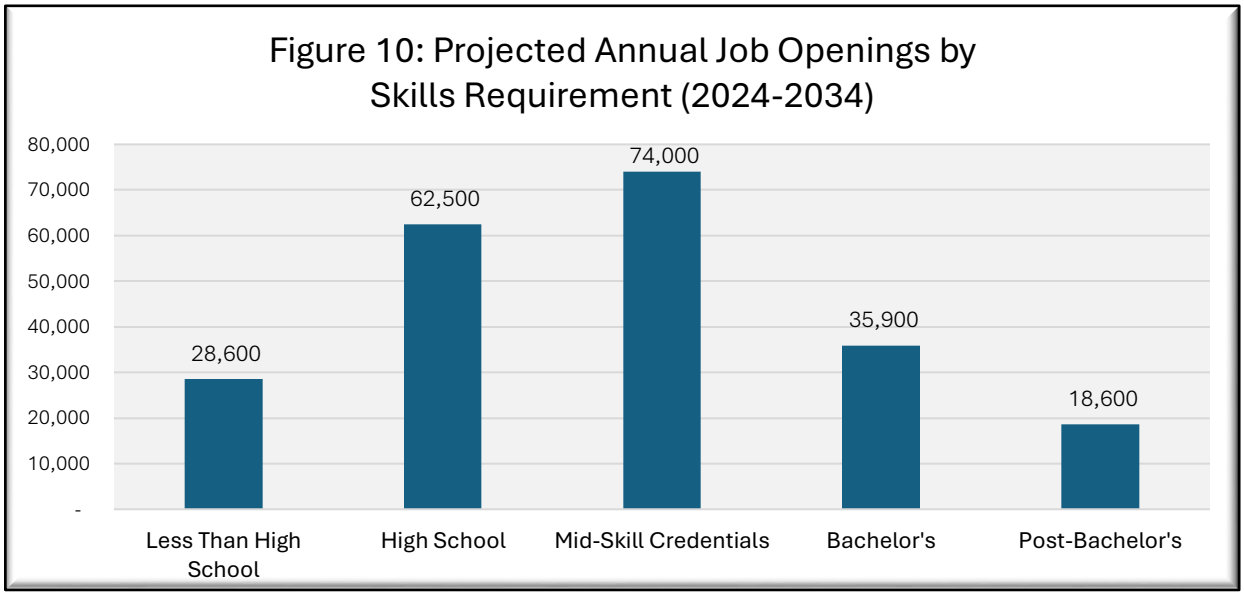
These figures reflect the distribution of educational attainment levels associated with projected job openings statewide, based on the educational profiles of workers currently employed in each occupation. Demand across skill levels should not be viewed as a choice between attracting high-wage jobs and supporting the rest of the workforce. Growth in advanced industries creates demand beyond the highly skilled positions those industries employ directly.

As businesses expand and higher-earning workers enter the economy, they generate additional demand for construction, transportation, retail, hospitality, personal services, and other locally serving industries. Consequently, Arizona's continued success in attracting high-wage employment is also expected to increase the need for workers in many mid-skill and high school level occupations.

This complementary demand helps explain why projected openings remain substantial across the educational spectrum. Some openings will result from economic and population growth, while others will arise as existing workers retire, change occupations, or leave the workforce.

Although Arizona's long-term strategy should remain focused on expanding access to higher-value career pathways, the state must also prepare enough workers to fill the essential supporting roles created alongside that growth.

Although demand extends across every skill level, Arizona is expected to require approximately 128,400 postsecondary credentials or degrees per year to meet projected job openings over the decade. At the same time, continued growth in higher-wage industries will reinforce demand for all workers throughout the broader economy, making workforce development across the full education and training pipeline essential.



Source: Arizona Office of Economic Opportunity



IN-STATE WORKFORCE SUPPLY PIPELINE

To evaluate whether Arizona's education and training system is producing enough workers to meet projected labor demand; annual in-state workforce production was estimated across each major education level. These figures reflect individuals completing schooling or training in Arizona and expected to remain in the state's labor force after completion.

With projected demand for postsecondary credentials established, the analysis next evaluates the anticipated supply of workers entering Arizona's labor market over the same 2024–2034 period. Annual degree production is based on current statewide completion levels and assumes no structural disruptions in observed trends over the forecast horizon.

Workforce Development within Arizona

Postsecondary credential production data were obtained from the Integrated Postsecondary Education Data System (IPEDS), administered by the National Center for Education Statistics. IPEDS provides comprehensive institution-level data on degrees and certificates conferred by both public and private postsecondary institutions in Arizona, allowing for consistent measurement of annual credential output across all fields of study.

However, degrees awarded do not automatically translate into permanent additions to Arizona's workforce, as some graduates leave the state following completion. To estimate long-term workforce retention, undergraduate and graduate persistence data were obtained from the Arizona Board of

Regents (ABOR). This data measures the share of graduates who remain employed and earning wages in Arizona after completing their education and vary by residency status and degree level.

Among undergraduate alumni, approximately 77% of resident students and 19% of non-residents remain employed in Arizona one year after graduation. [2] At ten years post-completion, persistence rates decline to about 66% for residents and 15% for non-residents.

Similar variation exists among graduate and professional degree recipients, with 74% of resident graduates and 16% of non-residents retained after one year, declining to roughly 64% and 13%, respectively, after ten years.

To reflect these patterns in a simplified way for long-term workforce modeling, the analysis applies a blended retention assumption for postsecondary completers. For associate degrees and mid-skill credentials, an average retention rate of approximately 85% was applied, reflecting the fact that these programs are often more locally oriented and closely tied to in-state employment.

Based on the most recent IPEDS data and after applying persistence adjustments, Arizona's education system produces approximately 80,100 post-secondary credentials each year, including:

- ***54,100 mid-skill credentials,***
- ***17,200 bachelor's degrees, and***
- ***8,900 post-bachelor's degrees.***

Mid-skill credentials represent the largest share of production partly because they are generally faster and less costly to obtain than four-year degrees. Many are also stackable, serving as intermediate milestones for students who later pursue higher-level credentials; consequently, credential totals may not always represent distinct workers immediately entering the labor force.

For individuals without postsecondary education, workforce participation assumptions were applied instead of retention rates. Estimates of the number of individuals entering the workforce at these education levels were based on the most recent high school graduation, continuation, and enrollment data reported by the Arizona Department of Education, which provide the basis for estimating how many students ultimately enter the labor force without completing additional postsecondary training.

For individuals without a high school diploma, a participation rate of 46.6% was used based on Arizona labor force participation patterns among working-age adults. [3] For individuals with a high school diploma but no college education, a participation rate of 58% was applied. [4]

After incorporating completion levels and retention/participation assumptions across all education levels, Arizona's in-state education and training pipeline is estimated to add approximately 113,100 individuals to the state's long-term workforce each year over the next decade, including:

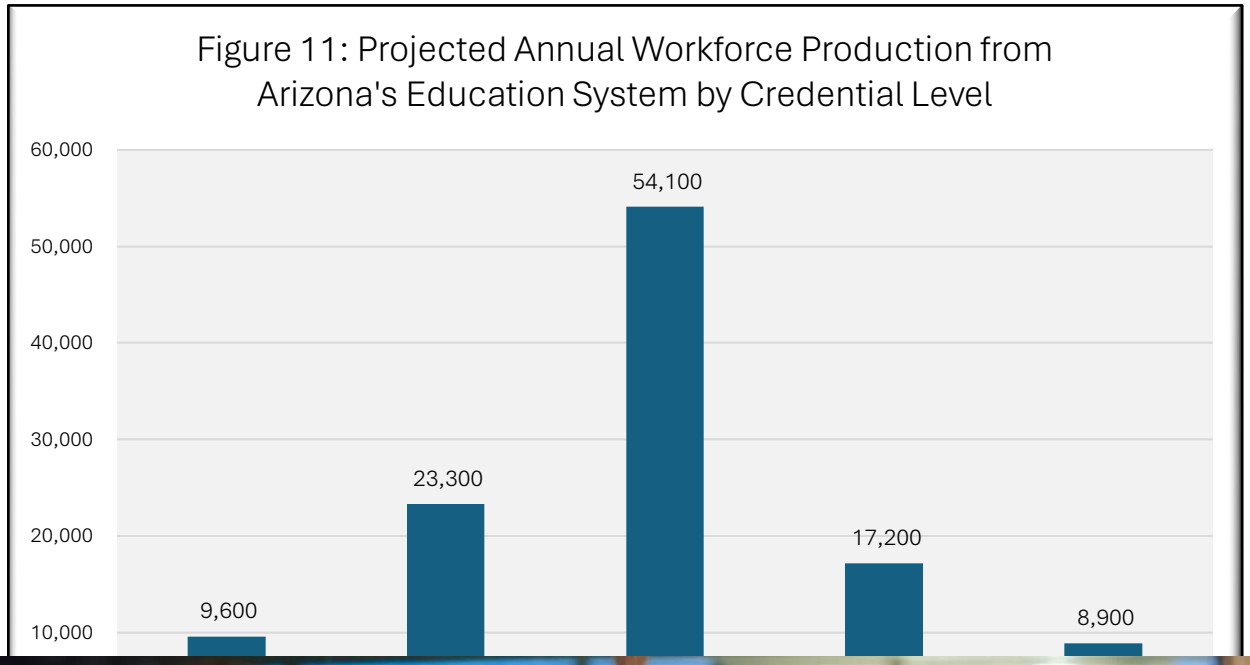
[2] Based on Arizona Board of Regent's Alumni Wages Report Fiscal Year 2023.
[3] U.S. Bureau of Labor Statistics, 2024.
[4] U.S. Bureau of Labor Statistics, 2024.

- ***9,600 individuals per year without a high school diploma,***
- ***23,300 individuals with a high school diploma only,***
- ***54,100 mid-skill credential completers,***
- ***17,200 bachelor's degree graduates, and***
- ***8,900 post-bachelor's graduates.***

Because postsecondary degrees are reported by field of study while projected job openings are reported by occupation, a standardized alignment between the two datasets was required before a meaningful comparison could be conducted.

Each program completion was matched to its corresponding occupational categories using established CIP-to-SOC crosswalks. These crosswalks identify the occupations most strongly associated with each field of study and allow educational output to be expressed in terms of the workforce roles those credentials are most likely to support.

Figure 11: Projected Annual Workforce Production from Arizona's Education System by Credential Level





PROJECTED IN-STATE WORKFORCE GAP

This section compares projected annual job openings to the number of workers Arizona is expected to produce through its in-state education and training pipeline. The purpose is to quantify the magnitude of the state's internal workforce production gap (i.e., the portion of projected demand that cannot be met through Arizona's current completion and retention patterns alone).

Between 2024 and 2034, Arizona is projected to experience approximately 219,600 job openings annually. These openings reflect both net employment growth driven by economic expansion and permanent workforce exits, such as retirements and other long-term separations from the labor force. As described previously, projected openings due solely to occupational transfers are excluded because they do not represent net new workforce demand within the state.

In-State Pipeline Shortfalls Across the Full Education Spectrum

When projected job openings are compared to Arizona's estimated annual in-state workforce production, the results indicate a significant structural mismatch between demand and the state's capacity to produce workers at every education level.

Across all education levels combined, Arizona is estimated to add approximately 113,100 workers per year to its long-term workforce through its in-state pipeline, while employers are projected to require approximately 219,600 workers per year to fill projected openings. This implies an overall in-state pipeline shortfall of roughly 106,500 workers annually over the coming decade. Estimated annual gaps by education level include:

- **Less than High School**: Approximately 19,000 fewer workers than projected openings.
- **High School Diploma** (no college): Approximately 39,200 fewer workers.
- **Mid-Skill Credentials**: Approximately 19,900 fewer credentialed workers.
- **Bachelor's Degree**: Approximately 18,800 fewer graduates.
- **Post-Bachelor's Degree**: Approximately 9,700 fewer advanced-degree workers.

It is important to emphasize that these figures represent the annual gap between projected openings and in-state workforce production. They are not forecasts of total labor shortages, job vacancies, or unemployment conditions. They also do not assume any offsetting in-migration, occupational switching, automation, or other labor market adjustments that may partially reduce or exacerbate observed gaps.

Post-Secondary In-State Workforce - The Largest Long-Term Constraint

While gaps exist at all education levels, the analysis that follows places particular focus on postsecondary credentials and degrees because these positions tend to be associated with higher wages, greater productivity, and stronger fiscal returns. They are also more likely to represent binding constraints on business expansion, and on Arizona's ability to attract or retain higher-value industries.

Of Arizona's projected 219,600 annual job openings, an estimated 128,400 positions (about 60%) are expected to require a postsecondary credential or degree. For the purposes of this report, postsecondary includes mid-skill credentials and associate degrees, bachelor's degrees, and post-bachelor's degrees (graduate and professional programs), as well as industry-recognized credentials requiring formal training beyond high school.

Arizona's in-state education and training institutions, technical schools, community colleges, universities, and other credential providers, are estimated to produce approximately 80,100 postsecondary completers per year after applying retention assumptions.

When compared to projected postsecondary job openings, this implies an estimated annual shortfall of approximately 48,300 qualified workers, indicating that employer demand for qualified workers will outpace Arizona's in-state pipeline under current trends.

Post-Secondary In-State Gaps by Attainment Level

Breaking the postsecondary gap into major education levels illustrates where pressures are expected to be greatest:

- **Mid-Skill Credentials** (industry-recognized credentials, CTE pathways, associate degrees): Arizona is projected to generate approximately 74,000 annual openings requiring these qualifications, compared to an estimated 54,100 annual in-state completers, resulting in a gap of approximately 19,900 workers per year.

- **Bachelor's Degrees**: About 35,900 annual openings are projected to require a bachelor's degree, while the estimated in-state pipeline produces approximately 17,200 graduates per year, yielding a gap of nearly 18,800 workers annually.

- **Post-Bachelor's Degrees** (graduate and professional degrees): Positions requiring advanced credentials are projected at approximately 18,600 annual openings, compared to about 8,900 in-state graduates, leaving a gap of roughly 9,700 workers per year.

These results indicate that the largest postsecondary constraints are concentrated in mid-skill and bachelor-level demand, which together account for nearly 39,000 of the estimated 48,300 annual qualified-worker shortfall.

This pattern reinforces a central challenge facing Arizona's workforce pipeline: meeting projected demand will require not only growth in total credential production, but also stronger performance in the credential levels most closely linked to Arizona's expanding industry base and occupational needs.

Figure 12: Projected Annual Postsecondary Job Openings vs. In-State Completions (2024–2034)

Educational Attainment Level	Job Openings	In-State Completions	In-State Workforce Gap
Mid-Skill Credentials	74,000	54,100	-19,900
Bachelor's Degrees	35,900	17,200	-18,800
Post-Bachelor's Degrees	18,600	8,900	-9,700
Total	128,400	80,100	-48,300

Source: Arizona Office of Economic Opportunity; IPEDS; Rounds Consulting Group, Inc.

Interpreting the In-State Gap

The in-state workforce gap should be interpreted as a measure of internal production capacity, not as a prediction that Arizona will be unable to fill these positions at all. In practice, some portion of these openings will be covered through in-migration, occupational mobility, delayed retirements, productivity changes, or employer adjustments. However, the size and persistence of the gap suggests that Arizona's ability to meet projected labor demand will remain heavily dependent on whether the state can:

- ***Expand credential attainment and completion,***
- ***Improve retention of graduates in Arizona's workforce, and***
- ***Build training capacity in fields aligned with the occupations generating the most demand.***

Without improvement in these areas, the in-state pipeline is unlikely to keep pace with projected demand, particularly for postsecondary credentials, creating a sustained constraint on Arizona's long-term economic growth and fiscal capacity.

Projected Annual Gaps by Major Occupational Group

To better understand where Arizona's workforce pipeline may face the greatest pressure, projected annual job openings were compared to the number of workers produced in-state across major occupational groups and postsecondary credential levels.

This comparison provides a structural view of the state's labor supply capacity. The estimates reflect the annual balance between projected employer demand and workers produced within Arizona's education and training system, rather than a forecast of unemployment, vacancies, or unfilled jobs.

As such, the estimates do not assume offsetting in-migration, occupational mobility, delayed hiring, automation, or wage adjustments. Instead, they isolate how much of projected workforce demand could be met internally if Arizona relied only on its current education and training output.

Across occupations requiring mid-skill credentials or higher education, Arizona is projected to face a combined shortfall of approximately 48,300 qualified workers per year. However, the magnitude and nature of these gaps vary substantially across occupational groups.

Occupational Groups with the Largest Projected Workforce Gaps

Several large occupational groups show particularly pronounced deficits, reflecting the combined effects of population growth, economic structure, and training pipeline limitations.

- **Logistics, Distribution, and Trade-Related Occupations** – Transportation and Material Moving occupations show one of the largest projected imbalances, with an estimated annual shortfall of approximately 7,800 workers.

  These occupations include truck drivers, warehouse personnel, delivery workers, and logistics operators. Demand in this sector is driven by Arizona's continued role as a regional distribution hub, the growth of e-commerce fulfillment, and increased interstate trade activity.

  Because many of these positions require mid-skill training rather than four-year degrees, the size of the deficit suggests that workforce shortages in logistics are tied less to academic attainment and more to training capacity, certification pipelines, and retention challenges in physically demanding occupations.

- **Administrative, Sales, and Customer-Facing Occupations** – Several broad occupational groups that cut across nearly every industry also show large projected deficits. Office and Administrative Support occupations show an estimated annual shortfall of approximately 14,200 workers. Sales and Related occupations are projected to face a deficit of roughly 12,100 workers annually.

  These occupations tend to generate large numbers of openings because they exist in virtually every sector of the economy and often experience high turnover. While many roles in these categories require only moderate formal education, they are essential to the functioning of businesses, government agencies, and service providers. Persistent shortages in these areas could therefore affect the operational capacity of firms even when higher-skill positions are filled.

- **Service-Sector Employment and Population-Driven Demand** – Service-sector employment continues to show some of the largest projected workforce gaps in Arizona's economy. Food Preparation and Serving occupations alone account for an estimated shortfall of nearly 12,500 workers annually.

  This reflects both the state's growing population and the scale of its tourism and hospitality sectors. Service jobs often experience high replacement demand due to turnover, seasonal variation, and wage sensitivity.

  While these positions may require less formal education, they remain critical to supporting tourism, retail activity, and the broader consumer economy. Sustained

shortages in these roles can influence business operating hours, service quality, and regional visitor capacity.

- **Healthcare Workforce Constraints** – Healthcare occupations continue to demonstrate structural constraints across multiple skill levels. Healthcare Support occupations show an estimated annual shortfall of about 5,100 workers. Healthcare Practitioners and Technical occupations show a net deficit of roughly 3,500 workers annually, despite some apparent surplus at the mid-skill level.

  This pattern suggests that while entry-level training programs may be producing sufficient numbers of aides and assistants, the pipeline for advanced credentials, clinical licenses, and specialized medical training is not keeping pace with demand.

  Given Arizona's aging population and ongoing expansion of medical facilities, shortages in higher-skill healthcare occupations may represent one of the most significant long-term constraints on both workforce health capacity and regional economic growth.

- **Construction and Infrastructure-Related Occupations** – Construction and Extraction occupations are projected to face an annual shortfall of approximately 2,500 workers. Although this gap appears smaller than in some other sectors, it carries outsized economic implications. Construction labor availability directly affects housing supply, infrastructure expansion, commercial development timelines, and public investment projects.

  Persistent workforce constraints in construction could therefore slow residential growth, increase development costs, and delay infrastructure projects across the state.

  Additional Occupational Groups with Notable Workforce Deficits – Several other occupational categories show moderate but still meaningful workforce gaps:

  - **Business and Financial Operations:** Roughly 4,900 workers short annually, reflecting growing demand for compliance, accounting, financial planning, and business analysis roles.

  - **Community and Social Service:** About 1,700 workers short, tied to population growth and expanded social support needs.

  - **Production Occupations:** Approximately 1,300 workers short, indicating continued pressure on manufacturing and industrial processing sectors.

  - **Building and Grounds Maintenance:** About 2,300 workers short, reflecting the scale of Arizona's commercial and residential property base.

  - **Personal Care and Service Occupations:** Roughly 1,500 workers short, tied to demographic growth and rising demand for household and care services.

The precise size of each occupational gap is less important than the broader pattern identified by the analysis. Actual outcomes will vary as workers change occupations, employers adjust wages and hiring practices, migration patterns shift, and training capacity expands. Nevertheless, the results consistently identify areas of workforce pressure and provide a practical basis for targeting education, training, retention, and employer-alignment efforts.

Interpreting Surpluses Across Some Occupational Groups

Although most occupational groups show projected deficits, apparent surpluses in certain occupations do not necessarily indicate oversupply. Many credentials lead to multiple career pathways and workers often move across occupations.

For example, in health-related occupations, some individuals obtain mid-skill credentials such as associate degrees or technical certifications in order to enter the workforce while continuing their education. In these cases, mid-skill completions may temporarily exceed demand even though they represent part of a longer pathway toward bachelor's or advanced credentials. As workers continue their training, shortages may emerge at higher credential levels within the same occupational field.

Figure 13: Projected Annual Gaps Between Job Openings & In-State Workforce Production

Major Occupational Group	Job Openings	In-State Completions	(Shortage) / Surplus
Office & Administrative Support	16,000	1,700	(14,300)
Food Preparation & Serving Related	12,900	400	(12,500)
Sales & Related	12,300	200	(12,100)
Transportation & Material Moving	8,400	700	(7,700)
Healthcare Support	9,300	4,200	(5,100)
Business & Financial Operations	9,100	4,200	(4,900)
Healthcare Practitioners & Technical	9,800	6,300	(3,500)
Construction & Extraction	3,800	1,300	(2,500)
Building / Grounds Cleaning & Maintenance	2,300	-	(2,300)
Community & Social Service	2,900	1,200	(1,700)
Personal Care & Service	4,800	3,300	(1,500)
Production	3,300	2,000	(1,300)
Farming, Fishing, & Forestry	500	-	(500)
Architecture & Engineering	2,200	1,800	(400)
Legal	700	600	(100)

Source: Arizona Office of Economic Opportunity; IPEDS; Arizona Board of Regents; U.S. Census Bureau; U.S. Bureau of Labor Statistics; Rounds Consulting Group, Inc.

A similar pattern appears in Educational Instruction and Library occupations, which show an apparent annual surplus of more than 16,000 workers. This result is influenced by how education-related degrees translate into employment outcomes.

Many graduates in education programs hold general studies or interdisciplinary degrees that do not necessarily lead to classroom teaching positions. Others obtain education credentials but ultimately transition into different industries where wages or working conditions may be more competitive. As a result, the measured surplus should not be interpreted as evidence that Arizona has an excess supply of teachers or instructional staff.

A few additional occupational groups show modest net surpluses, including management occupations, certain science-related fields, and some creative industries. However, these surpluses are relatively small compared to the scale of deficits observed in service, logistics, administrative, and health-related employment.

Furthermore, the surpluses are within the margin of error of the utilized forecasts for workforce demand. Therefore, in lieu of interpreting the data as too many workers are being trained in the surplus categories, it should be interpreted as the state is providing an adequate number of qualified workers in the same categories.

Figure 14: Projected Annual Gaps Between Job Openings & In-State Workforce Production

Major Occupational Group	Job Openings	In-State Completions	(Shortage) / Surplus
Educational Instruction & Library	6,800	23,200	16,400
Management	10,700	14,300	3,600
Arts, Design, Entertainment, Sports, & Media	2,300	3,200	900
Life, Physical, & Social Science	700	1,200	500
Protective Service	2,200	2,600	400
Installation, Maintenance, & Repair	4,000	4,200	200
Computer & Mathematical	3,700	3,700	-

Source: Arizona Office of Economic Opportunity; IPEDS; Arizona Board of Regents; U.S. Census Bureau; U.S. Bureau of Labor Statistics; Rounds Consulting Group, Inc.

Implications for Arizona's Workforce Pipeline

Overall, the results indicate that Arizona's in-state education and training system is not currently producing enough workers to meet projected demand across many of the occupations most critical to population growth, infrastructure expansion, and long-term economic competitiveness.

While labor market adjustments such as migration, occupational switching, wage changes, and productivity improvements may offset part of these gaps, the analysis suggests that in-state workforce production itself is likely to remain a central constraint on Arizona's future growth. The figures that follow compare projected annual job openings to Arizona's in-state workforce production by skill requirement. In this comparison:

- Mid-skill includes industry-recognized certificates, career and technical credentials, and associate degrees.

- Bachelor and post-bachelor categories represent occupations requiring four-year and graduate-level education.

Across mid-skill credentials and higher education levels combined, Arizona is projected to experience an overall shortfall of approximately 48,300 qualified workers per year. However, these gaps vary significantly across occupations.



Several large occupational groups show particularly pronounced deficits. Transportation and Material Moving occupations show one of the largest projected shortfalls, with an estimated annual gap of about 7,800 workers, driven primarily by shortages at the mid-skill level.

Similarly, Sales and Related occupations are projected to face a shortfall of roughly 12,100 workers annually, while Office and Administrative support occupations show a deficit of approximately 14,200 workers per year.

Service sector employment also shows persistent imbalances. Food Preparation and Serving occupations alone account for an estimated shortfall of nearly 12,500 workers annually, reflecting continued population growth and demand for hospitality and tourism-related services.

Healthcare occupations continue to demonstrate structural constraints across multiple skill levels. Healthcare Support occupations show an annual shortfall of about 5,100 workers, while Healthcare Practitioner and Technical occupations show a net deficit of roughly 3,500 workers, despite some apparent surplus at the mid-skill level. These patterns suggest that while entry-level training may be occurring, the pipeline for advanced credentials is not keeping pace with demand.

Construction-related occupations also show ongoing workforce pressure. Construction and Extraction occupations are projected to face an annual shortfall of approximately 2,500 workers, indicating potential constraints on housing development, infrastructure expansion, and capital investment across the state.



Overall, Arizona's in-state education and training system is not currently producing enough workers to meet projected demand across many of the occupations most critical to population growth, infrastructure development, and long-term economic competitiveness.

While labor market adjustments such as in-migration, occupational switching, and productivity improvement may offset some of these gaps, the results indicate that in-state workforce production itself is likely to remain a key constraint on Arizona's future growth.

The following table and bar chart compare projected annual job openings to Arizona's in-state workforce production by skill requirement. Mid-skill includes industry-recognized certificates, career and technical credentials, and associate degrees, while bachelor and post-bachelor categories represent occupations requiring four-year and graduate level education.

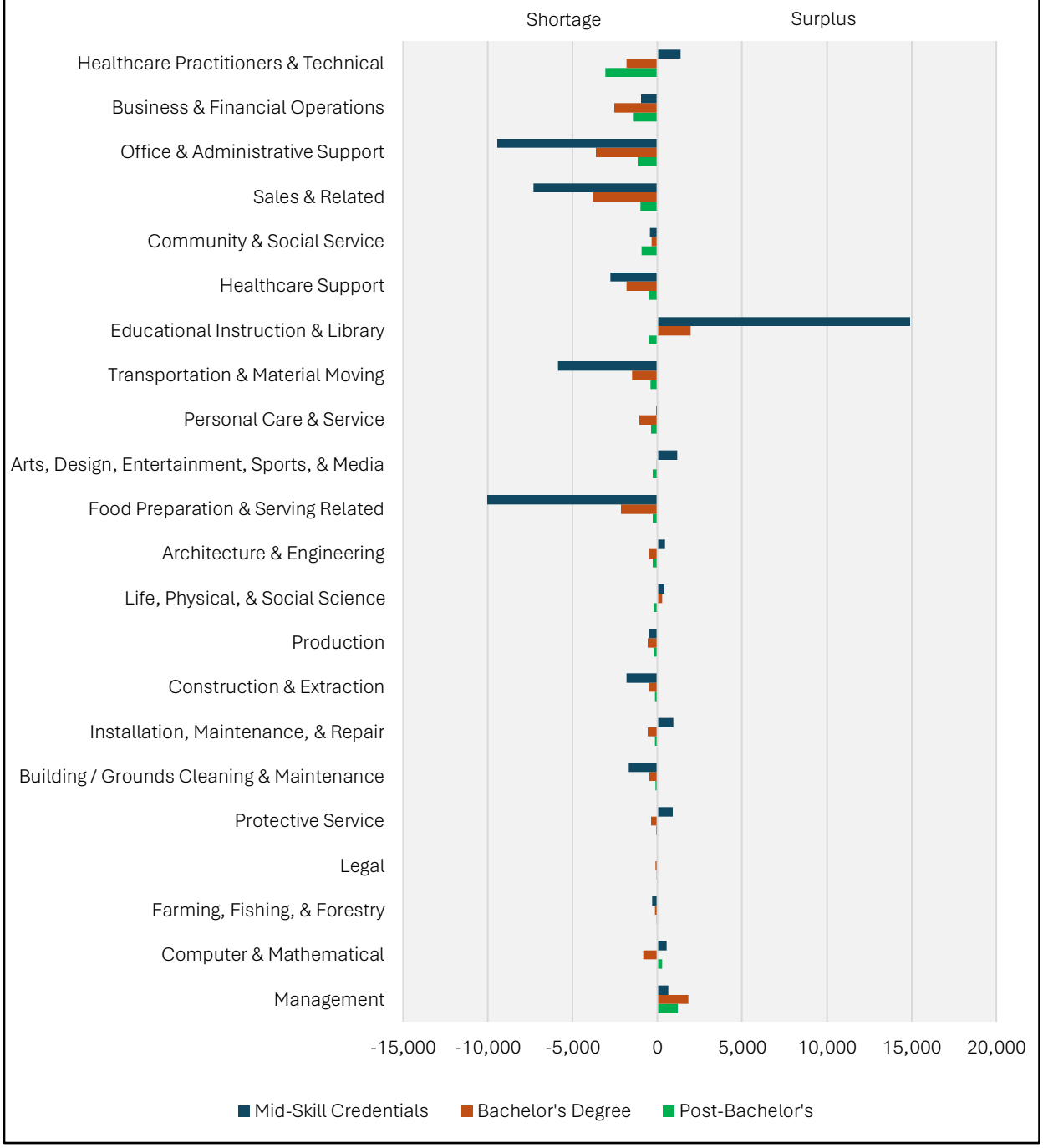


Figure 15: Projected Annual Gaps Between Job Openings & In-State Workforce Production – (Shortage) vs. Surplus

Major Occupational Category	Mid-Skill Credentials	Bachelor's Degree	Post-Bachelor's	Total
Office & Administrative Support	(9,500)	(3,600)	(1,200)	(14,200)
Food Preparation & Serving Related	(10,100)	(2,100)	(300)	(12,500)
Sales & Related	(7,300)	(3,800)	(1,000)	(12,100)
Transportation & Material Moving	(5,900)	(1,500)	(400)	(7,800)
Healthcare Support	(2,800)	(1,800)	(500)	(5,100)
Business & Financial Operations	(1,000)	(2,600)	(1,400)	(4,900)
Healthcare Practitioners & Technical	1,400	(1,800)	(3,100)	(3,500)
Construction & Extraction	(1,800)	(500)	(100)	(2,500)
Building / Grounds Cleaning & Maintenance	(1,700)	(500)	(100)	(2,300)
Community & Social Service	(400)	(300)	(900)	(1,700)
Personal Care & Service	(100)	(1,100)	(400)	(1,500)
Production	(500)	(600)	(200)	(1,300)
Farming, Fishing, & Forestry	(300)	(200)	-	(500)
Architecture & Engineering	400	(500)	(300)	(300)
Legal	-	(100)	(100)	(100)
Computer & Mathematical	500	(800)	300	-
Installation, Maintenance, & Repair	1,000	(600)	(100)	300
Protective Service	900	(400)	(100)	400
Life, Physical, & Social Science	400	300	(200)	500
Arts, Design, Entertainment, Sports, & Media	1,200	-	(300)	800
Management	600	1,800	1,200	3,700
Educational Instruction & Library	14,900	2,000	(500)	16,400
Total	(19,900)	(18,800)	(9,700)	(48,300)

Source: Arizona Office of Economic Opportunity; IPEDS, Arizona Board of Regents; U.S. Census Bureaa; U.S. Bureau of Labor Statistics; Rounds Consulting Group, Inc.

Figure 16: Projected Annual Job Openings vs. In-State Workforce Production



Note: Apparent surpluses should be interpreted cautiously. Some credentials are intermediate steps toward higher education, and not all completers enter or remain in the occupations associated with their credentials due to career changes, turnover, compensation, and working conditions.
Estimates reflect projected annual job openings from the 2024-2034 Arizona Office of Economic Opportunity and annual workforce additions based on 2024 completion data from the Arizona Department of Education, IPEDS, and related institutional sources. Completion figures are adjusted to reflect observed workforce retention patterns within Arizona.



ACCOUNTING FOR IN-MIGRATION

The previous sections compare projected job openings to the number of workers produced through Arizona's in-state education and training system. While this approach provides a clear view of the state's internal workforce pipeline, Arizona's labor market is also heavily shaped by migration from other states.

Incorporating migration into the analysis provides a broader understanding of how much of the projected workforce gap may realistically be offset through external labor supply.

Arizona has historically relied on population inflows to support economic expansion. As businesses grow and new employers locate in the state, workforce demand is often met not only through local graduates but also through workers relocating from elsewhere in the country.

Recent Migration Patterns & Workforce Implications

According to the most recent estimates from the U.S. Census Bureau, approximately 232,700 people moved to Arizona from other states in 2024. Of these new residents, an estimated 94,000 were of

prime working age (25–54 years old), representing a substantial potential addition to the state's labor force.

To translate this population inflow into potential job coverage, Arizona's observed ratio of employment to population can be applied. The state currently averages roughly one job for every 2.34 residents, reflecting labor force participation patterns, household composition, and demographic structure. Applying this ratio to the estimated number of working-age in-migrants suggests that recent population inflows could support approximately 40,200 additional jobs in the Arizona economy.

Because detailed occupational and credential data for incoming residents is limited, the migration adjustment assumes that a meaningful share of working-age in-migrants possess some level of postsecondary education or workforce training. While this assumption introduces uncertainty, it provides a reasonable approximation of how migration helps offset qualified workforce demand.

Migration-Adjusted Workforce Gap

When compared to the previously estimated 48,300 annual shortfall in postsecondary-qualified workers, the inclusion of migration narrows the gap but does not eliminate it. After accounting for in-migration, Arizona's annual shortfall in qualified workers declines to approximately 8,100 workers per year requiring post-secondary education or training.

When examined by credential level, the pattern becomes clear – Arizona's largest workforce constraint, after accounting for all offsets, is concentrated at the credential levels primarily produced by universities:

- **Mid-Skill Credentials:** Migration combined with Arizona's community college and technical training pipeline produces a modestly estimated surplus of approximately 3,300 workers annually. The mid-skill surplus should be interpreted cautiously. Mid-skill credentials are generally faster, less costly, and often stackable, resulting in higher completion levels.

- **Occupation Cross-Over:** Some completers continue to higher education or move into other occupations, so the estimated surplus may overstate the number of workers who remain available for mid-skill positions. It also depends on continued in-migration and masks shortages within specific occupations.

- **Bachelor's Degrees**: A shortage of approximately 7,500 workers per year remains even after combining in-state university production with in-migration – the single largest gap by credential level.

- **Post-Bachelor's Degrees**: An estimated shortage of approximately 3,900 workers per year persists after accounting for both in-site graduate production and migration, reflecting demand for advanced credentials that neither source of supply is projected to fully meet.

These results highlight the critical role migration plays in sustaining Arizona's labor market. Without in-migration, the state's qualified workforce gap would be several times larger. However, even with strong population inflows, projected employer demand for qualified workers still slightly exceeds the combined contribution of both new residents and in-state graduates.

If the analysis is expanded beyond postsecondary credentials to include the full workforce spectrum, including positions requiring only a high school diploma or less, the remaining gap is considerably larger. Even after incorporating migration, Arizona is projected to face an estimated overall workforce shortfall of approximately 66,500 workers per year across all skill levels.

This broader measure reflects the fact that migration does not perfectly align with occupational demand. Some incoming workers may not possess the specific skills employers need, while others may enter industries different from those experiencing the greatest shortages.

Key Implications of the Migration Adjustment

The migration analysis highlights two central findings regarding Arizona's long-term workforce outlook. First, migration plays a major role in sustaining the state's labor market and offsets a substantial portion of workforce demand that cannot be met through in-state production alone. Second, even with continued population inflows, Arizona's projected demand for qualified workers exceeds the combined contribution of both migration and local graduates.

The precise size of the projected gap is less important than the consistent direction of the findings. Estimates will vary with migration, economic conditions, workforce participation, and other labor market adjustments, but the analysis identifies a clear need to strengthen Arizona's workforce pipeline. In practice, long-term workforce balance will depend on:

- ***Expanding credential attainment.***
- ***Strengthening retention of graduates within the state.***
- ***Increasing training capacity in high-demand fields.***
- ***Improving alignment between education programs and employer needs.***



ECONOMIC AND FISCAL IMPACTS OF CLOSING THE WORKFORCE GAP

Even after accounting for migration, Arizona is still projected to face an annual shortfall of roughly 8,100 highly skilled workers and 58,200 mid-skill level workers, for a total of 66,300 qualified workers per year over the next decade. Although this gap may appear modest relative to total statewide employment, its economic implications are significant. When firms cannot access the skilled workers they need, projects may be delayed, scaled back, automated, or relocated to other states.

Over time, these effects accumulate into measurable reductions in economic output and public revenue capacity. To estimate fiscal impacts, the analysis applies average state and local tax contributions associated with postsecondary-educated workers in Arizona. These contributions include:

- ***State income taxes,***
- ***Sales taxes tied to household consumption,***

- ***Business activity supported by employment,***
- ***Property values.***

Estimated Impact of Qualified Worker Shortage

Based on these relationships, an annual shortage of approximately 8,100 qualified workers is estimated to reduce potential tax generation by more than $4.0 billion in combined state and local tax revenues over 10 years. This includes approximately $2.0 billion per year in forgone state tax revenues and $2.0 billion per year in forgone county and municipal revenues. These losses reflect the fiscal contribution that higher-earning workers typically make through both direct taxes and broader economic activity.

Beyond fiscal effects, workforce shortages also limit the level of economic activity the state can sustain. By the tenth year of the projection period, the qualified workforce shortfall is estimated to correspond to approximately 134,400 fewer total jobs supported statewide (including direct, indirect, and induced effects), $43.7 billion in lost labor income, and $110.5 billion in unrealized economic output. These figures represent economic activity that may not materialize if businesses are unable to access sufficient skilled labor to expand operations or invest in Arizona.

Figure 17: Total Economic & Fiscal Impact: Workforce Shortage of 8,100 Qualified Workers (Over 10-Years)

134,400	$43.7 Billion	$110.5 Billion	$4.0 Billion
Fewer Jobs	Lost Labor Income	Lost Economic Output	Forgone Tax Revenues

Source: Rounds Consulting Group, Inc.

Impacts When the Cumulative Workforce Gap is Considered

A broader perspective emerges when workforce gaps across all education levels are included rather than focusing only on qualified workers. After accounting for migration, Arizona's remaining workforce shortfall across the full education spectrum rises to approximately 66,300 workers per year.

Under this broader measure, the cumulative fiscal exposure over ten years increases to approximately $8.1 billion in combined state and local tax revenues, including: $4.0 billion in lost state revenue, and $4.1 billion in lost county and municipal revenue capacity.

When all education levels are considered, the economic implications expand substantially. By the tenth year of the projection period, the full workforce shortfall is estimated to correspond to 214,500 fewer total jobs supported in Arizona's economy, $82.3 billion in lost labor income, and $208.0 billion in unrealized economic output.

Importantly, these estimates do not imply that every missing worker permanently eliminates economic activity. Instead, they represent growth that may be delayed, reduced in scale, replaced through automation, shifted to other states, or never realized due to labor constraints.

Figure 18: Total Economic & Fiscal Impact Losses from a Workforce Shortage of 66,300 Workers (Over 10-Years)

214,500	$82.3 Billion	$208.0 Billion	$8.1 Billion
Fewer Jobs	Lost Labor Income	Lost Economic Output	Forgone Tax Revenues

Source: Rounds Consulting Group, Inc.

Furthermore, this information is provided for high level perspective. Economic imbalances of this scale would be corrected quickly by general economic forces. If labor shortages exist, then business development will decline and the supply and demand balance will be achieved through a reduction in economic activity within the state.

Alternatively, if the supply and demand imbalances were corrected through an increase in supply of a qualified workforce, then additional economic activity will be added to the state, household incomes will increase, more jobs will be created, and state tax collections will increase significantly.

Part II: Improvements in Academic Achievement & the Impact on Tax Collections



Educational Attainment Trends & Potential Economic Gains

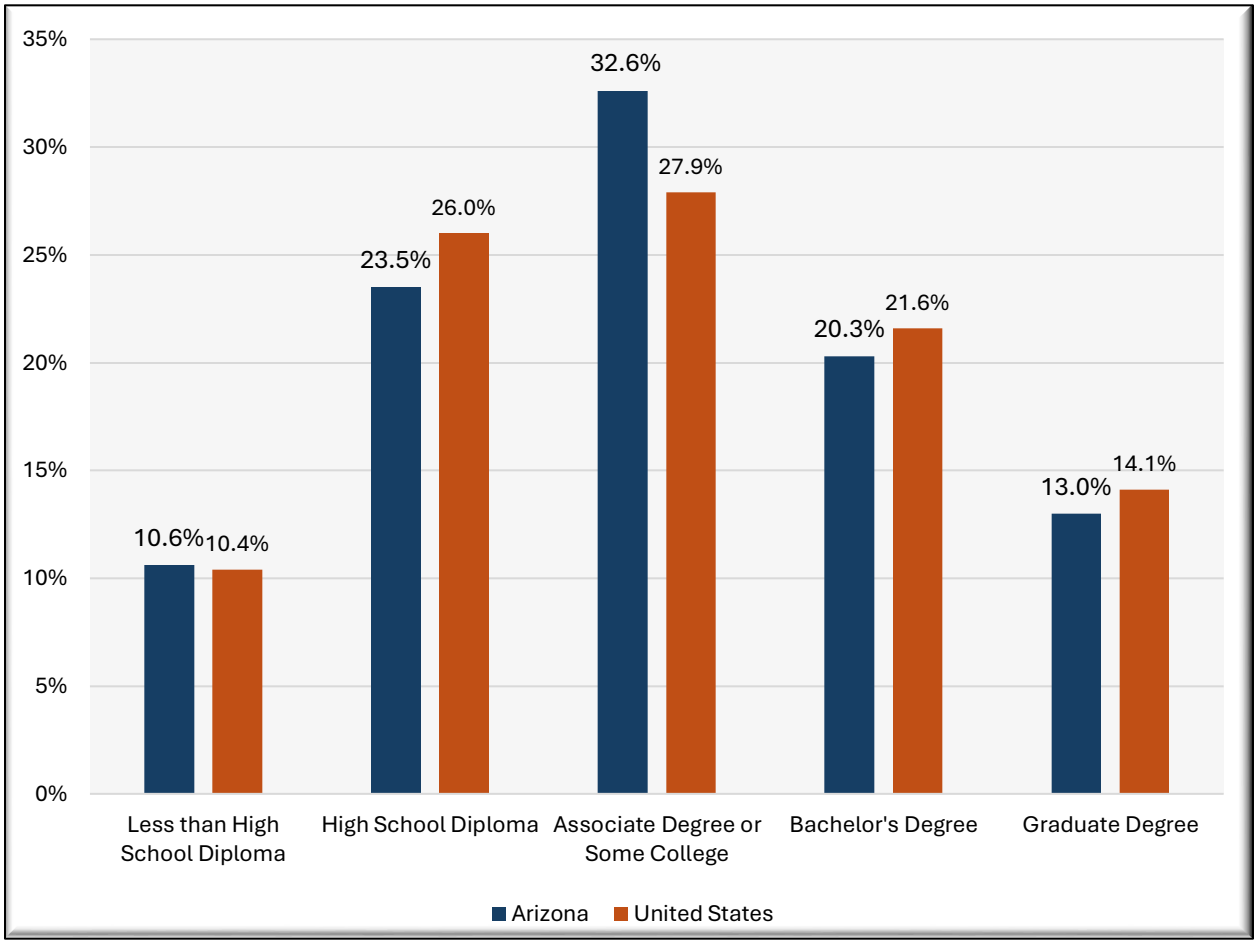
While Arizona has advanced in several key educational attainment and economic quality measures since the previous 2022 workforce development study, the state continues to trail the U.S. in terms of educational outcomes, particularly in high school graduation, college enrollment, and college completion rates.

In 2024, 10.6% of Arizona adults aged 25 and over lacked a high school diploma, down from 12.9% in 2019 but slightly above the current U.S. average of 10.4%.

The share of Arizona's population 25 and older with a bachelor's degree rose from 18.4% to 20.3% over the same period, 1.3 percentage points below the national average of 21.6%.[5]

[5] U.S. Census Bureau, U.S. Department of Commerce. "Educational Attainment." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1501, https://data.census.gov/table/ACSST5Y2023.S1501?q=arizona&t=Educational+Attainment.

Figure 19: Educational Attainment in Arizona and the U.S. (2024)



Source: U.S. Census Bureau.

Arizona's relatively low levels of educational attainment continue to have significant economic implications, especially given the differences in median annual income across educational levels. In 2024, the median income for Arizona residents aged 25 years and older with only a high school diploma was approximately $40,900, while those with a bachelor's degree earned a median income of $67,400, 64.8% higher. [6]

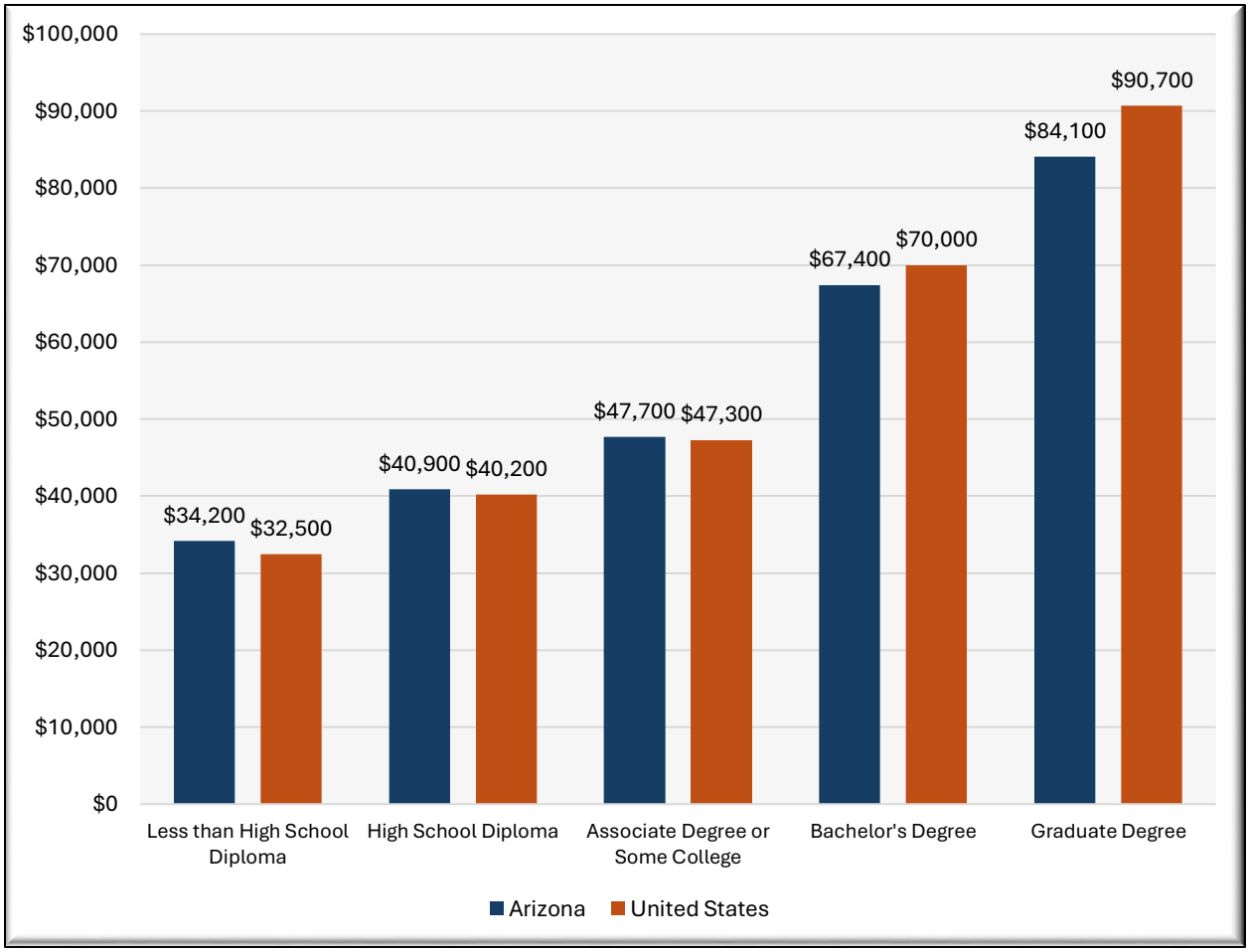
When compared to the U.S., Arizona has become much more competitive in terms of median annual wages for lower levels of educational attainment. As of 2024, U.S. Census data indicated that the state was either at par or slightly above the U.S. median wages among individuals with less than a high school diploma, a high school diploma, and an associate degree, or some college.

Arizona still trails the national medians for adults 25 and over with higher education. In 2023, bachelor's degree holders earned 3.8% less than the U.S. median, while graduate degree holders earned 7.3% less. [7]

[6] U.S. Census Bureau, U.S. Department of Commerce. "Educational Attainment." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1501, https://data.census.gov/table/ACSST5Y2023.S1501?q=arizona&t=Educational+Attainment.

[7] U.S. Census Bureau, U.S. Department of Commerce. "Educational Attainment." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1501, https://data.census.gov/table/ACSST5Y2023.S1501?q=arizona&t=Educational+Attainment.

Figure 20: Median Annual Wages by Educational Attainment (2024)



Source: U.S. Census Bureau.

In 2020, Arizona's three public universities awarded approximately 34,000 bachelor's degrees. That figure has increased to 36,900 degrees in 2023, with annual degree production still projected to grow by 4.4% per year through 2030. [8]

According to the most recent Alumni Wages Report published by ABOR, it remains consistent that an estimated 53% of resident and non-resident students earn wages in Arizona one year after graduation, which is consistent with out-migration patterns. [9]

While improvements have been made in high school graduation rates and degree production, Arizona continues to underperform in key areas such as post-secondary enrollment, credential completion, and the retention of skilled graduates in the state's labor force.

[8] Arizona Board of Regents, *2024 Annual Report*, https://www.azregents.edu/sites/default/files/reports/2024-abor-annual-report-r4.pdf.

[9] Arizona Board of Regents, *Alumni Wages Report: Fiscal Year 2023*, https://azregents.edu/sites/default/files/reports/2023_alumni-wages-report.pdf.

Without targeted investment in education access, affordability, and alignment with workforce needs, particularly in underserved communities, the state risks falling further behind as job demands increasingly require post-secondary credentials and advanced skills.

Addressing these challenges through data-driven, long-term education and workforce development policy will be critical to ensure Arizona's economic competitiveness and to maximize the potential of its growing population.

Increasing the State's Educational Attainment

Arizona's employment profile will demand an increasingly educated workforce to meet the forecasted supply of jobs requiring at least a bachelor's degree. Coupled with the state continually falling short of meeting national workforce productivity averages, it is important for the state to effectively act on raising educational outcomes through enhancing high school graduation, college enrollment, and college graduation rates.

Enhancing these outcomes would lead to a more skilled workforce in the state, which would drive significant economic gains by producing higher wages. Differences in educational attainment translate directly into earnings.

As of 2024, an individual with only a high school diploma earned a median wage $6,700 more than an individual with less than a high school diploma; and an individual with a bachelor's degree earned a median wage $26,500 more than someone with only a high school diploma.

By increasing a student's academic achievement, an incremental increase in their earnings potential occurs; individuals who otherwise would not have completed college would earn closer to the median annual wage of Arizona bachelor's degree holders rather than the median annual wage of workers with only a high school diploma.

Figure 21: Incremental Wage Gains

Educational Attainment	Median Annual Wages	Incremental Wage Increase
Less than High School Diploma	$34,200	-
High School Diploma	$40,900	+$6,700
Bachelor's Degree	$67,400	+$26,500

Source: U.S. Census Bureau (2024); Rounds Consulting Group, Inc.

Reaching the National Average

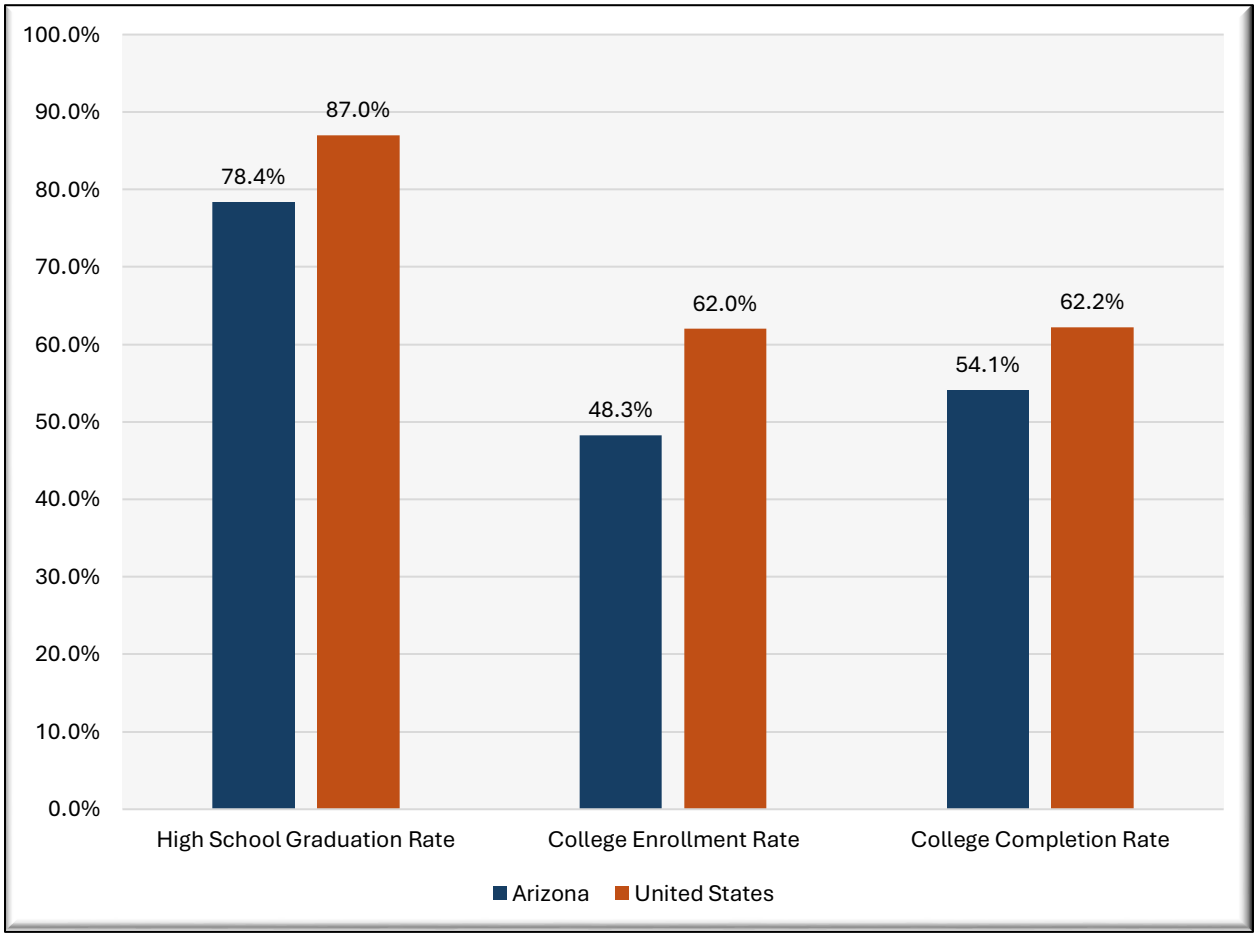
The impact of the state reaching the national averages for high school graduation, college enrollment, and college completion is significant. In 2024, 74,200 students graduated from high

school statewide, representing a 78.4% high school graduation rate in the state, compared to the national high school graduation rate of 87.0% in the same year. If the high school graduation rate in Arizona matched the U.S., there would have been more than 11,200 more high school graduates in 2024.

Of the state's total high school graduates, an estimated 48.3% enrolled in a postsecondary institution in 2022. In the U.S., the rate of college enrollment was 62.0%. Therefore, reaching the national average is estimated to have resulted in an additional 16,700 college enrollees. This increase would come from both the new high school graduates and the high schoolers who previously would not have graduated.

As more students enroll in a college or university after attaining their diplomas, more undergraduate and postsecondary degrees will be awarded. In Arizona in 2023, 54.1% of students who first enrolled in college in 2017 graduated within six years compared to the U.S. average of 62.2%.

Figure 22: Educational Achievement Rate Comparison (2024)



Source: RCG; U.S. Census Bureau; Arizona Department of Education; Arizona Board of Regents; U.S. Department of Education.

Increasing Arizona educational outcomes to national averages would have a significant impact on earnings when students enter the workforce. The workforce enhancements translate to direct economic and fiscal benefits.

The direct impacts from higher-income workers would also create additional indirect and induced impacts, as more money would circulate in the state economy, as higher-income workers have more discretionary money to spend on local businesses.

If Arizona reached national averages, the state would gain 11,200 high school graduates, 16,700 college enrollees, and 13,400 college graduates per year. This would translate to an estimated annual $1.3 billion in additional labor income and $478.2 million in revenues across state, county, and city taxes, or $4.8 billion over 10 years.

Figure 23: Economic Impact of Reaching the National Average			
Educational Outcome	Arizona	U.S. Average	Difference
High School Graduates	71,200	82,300	+11,200
College Enrollment	34,400	51,100	+16,700
College Completion	18,400	31,800	+13,400
Additional Income $1.3 billion		New Statewide Tax Revenues $478.2 million	

Source: U.S. Department of Education; U.S. Census Bureau American Community Survey; Arizona Department of Education; Arizona Board of Regents; National Student Clearinghouse Research Center; Rounds Consulting Group, Inc.; IMPLAN. Note: May not sum due to rounding.

Reaching the Midpoint of the National Averages

There would be significant benefits even if the state only made partial progress in reaching the national averages in high school graduation, college enrollment, and college completion. To illustrate this, the following quantifies the additional economic output and tax revenues that would be generated if the state progressed to 50% of what is needed to reach these national averages.

If Arizona reached the midpoint of where it stands now and the national average in educational attainment, the required additions to new high school graduates, college enrollees, and college graduates would be half of the numbers described above.

In reaching the midpoint, it is estimated that Arizona would add 7,100 high school graduates, 8,800 college enrollees, and 6,700 college graduates annually.

These individuals would go on to earn incrementally more in annual income. The impacts from these increases are estimated to be $562.8 million in income and $215.2 million in tax revenues from all levels annually. Over 10 years, statewide tax revenues are expected to increase by $2.2 billion.

Figure 24: Economic Impact of Reaching the Midpoint of the National Average			
Educational Outcome	Arizona	U.S. Average	Difference
High School Graduates	71,200	78,300	+7,100
College Enrollment	34,400	43,200	+8,800
College Completion	18,400	25,100	+6,700
Additional Income $562.8 million		New Statewide Tax Revenues $215.2 million	

Source: U.S. Department of Education; U.S. Census Bureau American Community Survey; Arizona Department of Education; Arizona Board of Regents; National Student Clearinghouse Research Center; Rounds Consulting Group, Inc.; IMPLAN. Note: May not sum due to rounding.

Surpassing the National Average

Finally, while Arizona would benefit from reaching or making partial progress to the national average in key educational attainment outcomes, the state should raise educational attainment rates by as much as it can. This is due to the economic compounding effect that increases the benefits from a higher-income workforce over time.

This scenario quantifies the effects of Arizona not only meeting but surpassing the U.S. averages in high school graduation, college enrollment, and college completion rates. In this scenario, the state is assumed to fully close the gap and then achieve an additional 50% of that gap.

In the scenario, the state would have seen 15,200 more high school graduates, 25,100 more college enrollees, and 20,800 college graduates. This would have added an estimated $1.9 billion in wages and $741.2 million in statewide tax revenues annually ($7.4 billion over 10 years).

Figure 25: Economic Impact of Surpassing National Averages			
Educational Outcome	Arizona	U.S. Average	Difference
High School Graduates	71,200	86,400	+15,200
College Enrollment	34,400	59,500	+25,100
College Completion	18,400	39,400	+20,800
Additional Income $1.9 billion		New Statewide Tax Revenues $741.2 million	

Source: U.S. Department of Education; U.S. Census Bureau American Community Survey; Arizona Department of Education; Arizona Board of Regents; National Student Clearinghouse Research Center; Rounds Consulting Group, Inc.; IMPLAN. Note: May not sum due to rounding.

CONCLUDING NOTES

Arizona leaders have long pursued economic growth through new programs, responsible regulation, competitive tax rates, and investments in services for residents and businesses. These efforts have helped strengthen the state's economy and position Arizona as a global hub for high-tech manufacturing.

This report examines a central factor in sustaining that progress: workforce availability. Its findings identify two challenges, below-average educational attainment and a projected shortage of highly skilled workers, that could limit Arizona's ability to meet the needs of its growing high-tech industries.

These challenges also present an opportunity. Since the Great Recession, Arizona has reversed a decades-long decline in per capita personal income relative to the nation. Strengthening the workforce can build on that progress, support business expansion, and extend economic opportunity across the state.

The report estimates that leaving the projected workforce gap unfilled would cost Arizona between $4 billion and $6 billion over the next decade. It also finds that the long-term economic gains from closing that gap would substantially exceed the cost of doing so, offering a positive return on investment.

Separately, the report estimates that raising Arizona's educational attainment to the national average would generate approximately $500 million annually in additional state and local tax revenue. This finding further demonstrates the potential economic and fiscal benefits of investing in education and workforce development.

Addressing these challenges before the next economic expansion could generate more than $1 billion in additional annual state and local revenues.

Those gains would give Arizona greater flexibility to maintain competitive tax rates while improving services for businesses and households and supporting economic activity in both urban and rural communities.