



ABILENE WORKFORCE ANALYSIS

FINAL REPORT

December 2021

TABLE OF CONTENTS

- Executive Summary
- Background & Methodology
- Demographics
- Occupational Supply & Demand
- Training & Education
- Quality of Place
- Strategic Recommendations

- *Appendix*
 - *Occupational Definitions*
 - *Completions Definitions*
 - *Target Industry Analysis*



AN EXIS PARTNER

8235 Douglas Avenue
Suite 500
Dallas, Tx 75225

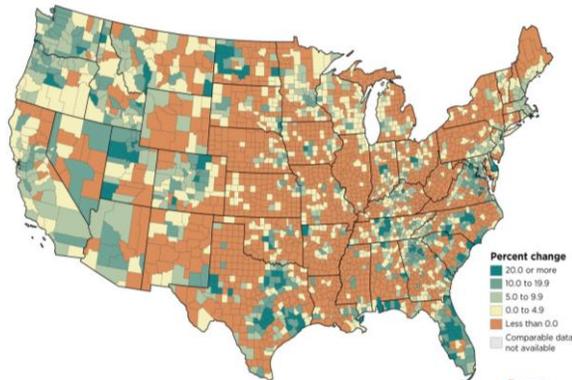
siterelectiongroup.com

The background features a white field with a light gray dot pattern. On the left, there are overlapping geometric shapes: a dark blue triangle at the top, a medium blue triangle below it, and a white triangle at the bottom. Two orange diagonal lines cross the page from the bottom left towards the top right.

EXECUTIVE SUMMARY

SSG'S APPROACH TO WORKFORCE ANALYTICS

1. DEMOGRAPHICS



- Population, Growth, Labor Force
- Age, Education, Income
- Commuting & Realistic Labor Shed

2. OCCUPATIONAL DYNAMICS



- Supply of Key Skill Sets
- Demand for Key Skill Sets
- Wages & Salaries

The graphic at left shows the broad categories under which SSG performs workforce analyses on behalf of its corporate clients. While every project requirement is different and each is driven by different objectives, almost all clients want to be in a location that has 1) aligned demographics, 2) target mix of occupational supply and demand, and 3) robust workforce training and educational opportunities. We also add “quality of place”. While there is some data to support a community's quality of place value proposition and we use some of that herein, SSG believes a qualitative perspective is a more appropriate lens to view this aspect through.

3. TRAINING & EDUCATION



- K-12
- Technical Training
- Colleges & Universities
- Workforce Development

4. QUALITY OF PLACE

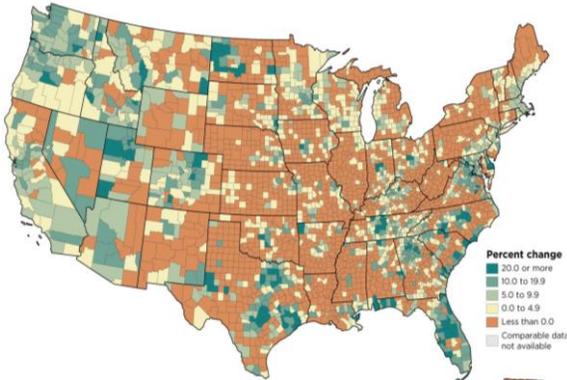


- Some data (housing, crime, rankings)
- But much more qualitative-focused

As a result, SSG applies the same perspective to its workforce analyses on behalf of economic development organizations, Abilene included. It is critical to use this framework to identify where a community's workforce value proposition truly lies. For some markets, that value proposition could be based on favorable population and demographic trends. For others, it could be lower levels of competition. Regardless, SSG believes any community needs to have a strong training & education pitch and an attractive community to show off.

1. DEMOGRAPHICS SUMMARY

1. DEMOGRAPHICS



- Population, Growth, Labor Force
- Age, Education, Income
- Commuting & Realistic Labor Shed

Overview & Approach

The first section of the analysis focuses on core demographic fundamentals in the community. A quality workforce is obviously based on people so understanding the baseline demographics characteristics of a community is a critical starting point.

This section starts with a commuting summary to establish a realistic labor shed from which employers in Abilene can attract workers from. In SSG’s corporate experience, it is critically important to draw a defensible and realistic labor shed. SSG has seen too many communities who claim exceptionally large labor draws, only to have actual employer testimony discount how far workers will actually travel. In this report, we use both best-in-class, publicly available commuting data (via LODES) along with employer provided primary data.

Based on that analysis, we examine specific demographic variables of interest like population, workforce, labor force participation, unemployment, age, income, and educational attainment. We close with data related to migration – that is, where people in Abilene have moved from or are moving to, and historical views on how Abilene and the region have changed.

Key Strengths

- ✓ Story Telling on Labor Shed: The vast majority of the workforce comes from the immediate area around Abilene (~20 minutes). While some communities pitch very broad drivetime labor sheds, SSG finds the pitch far more convincing on a tight, focused labor shed. However, there’s certainly potential to draw from further away. Regional population trends further support focusing on Abilene.
- ✓ Lower Median Age: While this is certainly impacted by university presence, the data show a favorable median age. However, most Texas markets show favorably in this space.
- ✓ Middle Income/Middle Education: Demographics align well with needs of mid-skill white collar jobs and advanced manufacturing operations.
- ✓ Diversity in Manufacturing: QWI data shows favorable racial and ethnic diversity in manufacturing. Further, it shows a diversity of firm sizes, rather than being dominated by one large operation.
- ✓ Outmigration Improving: While this data is impacted by the ebb and flow of energy, recent years’ data show slowing outmigration to major Texas markets, especially Dallas.

Key Challenges

- ? Demographics at Broader Drive Times: SSG likes pitching the 20- minute data but uses broader 40-minute data throughout to capture the full, potential workforce draw. However, Abilene will compare much better to larger markets on a 20-minute basis vs a 40-minute one. For example, a 40-minute drivetime around Abilene only pulls in more rural areas, vs. a comparison 40-minute drivetime around a site in Dallas, Longview, or Temple pulls in a much larger workforce.
- ? Lower Labor Force Participation + Low Unemployment: Both of these in unison point to a very tight labor market overall. That comes as no surprise based on conversations with community stakeholders.
- ? Lower Population Growth: While the data is still positive, and we can see (in person and in the mapping), that there is strong growth in parts of the community, it pales in comparison to growth seen across most of the region. Abilene could pitch this as “sustainable growth”.

2. OCCUPATIONAL DYNAMICS SUMMARY

2. OCCUPATIONAL DYNAMICS



- Supply of Key Skill Sets
- Demand for Key Skill Sets
- Wages & Salaries

Overview & Approach

This section focuses on the specific occupational clusters critical to Abilene’s target industries and other primary, export-oriented sectors. The beginning of this section shares summary and high-level occupational data and then dives into 23 individual clusters of interest. In each section, we measure:

- **Occupational Supply**: the overall count of workers in that cluster, the concentration of workers relative to the national average, and historic/projected growth data.
- **Occupational Demand**: job postings data that shows demand for these positions. We use two different measure of demand data that show different views of competition.
- **Wage & Salary**: two sources of data that show current wage levels along with historical wage growth trends. We use two sources of data here as wage/salary data can oftentimes be misleading compared to actual market rates.

Throughout, we add additional anecdotal data as collected during our conversations with employers and other stakeholders in the region. Unless otherwise stated, this data represents a 40-minute drivetime around Abilene and each comparison market.

Key Strengths

- ✓ **Supply and Demand for Skilled Manufacturing**: There is a strong concentration and relatively lower demand for maintenance and engineering techs – two critical occupational clusters for advanced manufacturing. There’s also a potential niche for aerospace given the maintenance base.
- ✓ **Supply of Healthcare**: There is a strong concentration of healthcare workers, although data and testimony point to high demand. We see some potential to parlay that presence into primary industry.
- ✓ **Demand/Competition Value Proposition for Professional Services**: Although the presence and concentration of key clusters like finance, accounting, HR, IT, and marketing aren’t that strong, there is much lower demand compared to a market like DFW. There’s a particularly strong presence and growth trajectory for marketing workers.
- ✓ **Supply of Supplemental Retail & Hospitality Workers**: There is a high concentration of these workers who tend to be underemployed. With training, these folks can transition into higher skill careers.

Key Challenges

- ? **Sheer Availability of Production Workforce & High Demand**: The data point to lower numbers and concentration of most production-related clusters. With Great Lakes on the horizon, that supply will get squeezed further. A large supply of construction/extraction workers connected to the oil field can help address that concern, but that workforce will (likely) remain transient.
- ? **Supply of Engineering**: The presence and concentration of engineers is low, which may be the biggest challenge for growing and attracting advanced operations.
- ? **Supply of IT and STEM**: While improving, the supply of these types of workers in absolute and concentration terms is not as favorable compared to larger markets.
- ? **Supply of Professional Services**: Similarly, there’s a lower presence and concentration of these workers. The value proposition is much stronger on the demand side.

3. TRAINING & EDUCATION SUMMARY

3. TRAINING & EDUCATION



- K-12
- Technical Training
- Colleges & Universities
- Workforce Development

Overview & Approach

In SSG's view, a robust training and educational offering is critical to any site selection project regardless of the industry or end user. Further, there is no silver bullet or singular offering that makes for a "good" educational market – it requires a mix of providers and stakeholders from every level of education, training, and workforce development to tell a compelling story.

The challenge with training and educational analyses is that it requires a mix of data-driven analysis, but also very strong "storytelling" As a result, we leverage both quantitative and qualitative data to evaluate the training and education value proposition. Specifically:

- **Quantitative Data**: Completions analysis from local colleges and training institutions, job profile analytics to show where workers tend to get training from, and further profile analytics to show potential "leakage" of local graduates to other markets.
- **Qualitative Data**: Interviews with workforce development, training, and educational partners, coupled with SSG's experience in other markets.

Key Strengths

- ✓ **Significant University Presence**: Communities of this size are fortunate to have one college, let alone three with relevant programs.
- ✓ **Strong Technical Training Presence**: Both TSTC and Cisco offer highly relevant programs and are strongly embedded with employers. TSTC has an especially attractive facility and multi-tool/disciplinary industrial program.
- ✓ **Large Number of Relevant Completions**: Colleges and training facilities put out a large number of completions in highly relevant fields like business, health, and sciences. Engineering and IT completions are more limited, but programs exist.
- ✓ **Extremely Proactive Workforce Development**: The Workforce Solutions team is one of the most engaged teams we've ever met. Its focus on K-12 and long-term workforce planning is exceptional.
- ✓ **Very Engaged K-12**: The investment in the LIFT is just one way K-12 is demonstrating its commitment to career exploration and training.
- ✓ **Industry Engagement**: Multiple employers and stakeholders highlighted the strength of industry engagement via Big Country Manufacturers Alliance.

Key Challenges

- ? **Completion Data from TSTC**: Because of centralization of its completion data, IPEDS does not show completions in Abilene (and inflates Waco's). As a result, target completions are underestimated.
- ? **Engineering & ACU Data**: While we are glad to see engineering programming at ACU, graduates are classified under a general category meaning companies looking for specific engineering requirements (e.g. EE) may miss them. Many engineering profiles in the community are from Texas Tech and Texas A&M.
- ? **Leakage to Dallas & Large Markets**: Not surprisingly, the data show large number of local graduates in Dallas and other Texas markets.
- ? **Two Technical Training Options**: While more is always better, the storytelling on TSTC & Cisco interaction can be challenging.
- ? **Engagement with 4-Years & Employers**: While employers were complimentary of relevant programming at 4-years, some noted that engagement between academics and business could be enhanced.

4. QUALITY OF PLACE SUMMARY

4. QUALITY OF PLACE



- Some data (housing, crime, rankings)
- But much more qualitative-focused

Overview & Approach

The final section of the report focuses on Abilene’s overall quality of place. While this has always played a role in economic and workforce development along with corporate site selection, in recent years it has become increasingly relevant as talent attraction and retention (especially for skilled workers) has risen in its importance. While we can use some data to show key distinctions between it and other markets, quality of life (or lack thereof) can’t really be shown through charts and data. As a result, we use the following:

- **Heavily Qualitative Approach**: Relying on stakeholder commentary along with SSG’s experience visiting markets across the country to give a subjective view of the community’s quality of life and its marketing pitch thereto.
- **Leveraging Some Data**: Quality of life is a pitch better shown in person than told through data and graphs. That being said, we leverage some key data points to highlight key quality of life advantages and challenges in the community overall. Namely, we look at housing, crime, and some ancillary employment data.

Key Strengths

- ✓ **Downtown Redevelopment**: SSG was impressed by the amount and quality of downtown and nearby re-development. Most stakeholders commented on the positive momentum, too. SSG found it to be a really attractive downtown that shows well compared to communities its size.
- ✓ **“Great Place to Raise a Family”**: We also see the clear community focused housing, school district, retail, and restaurant options important to families. This is a common pitch that SSG hears in similar situated communities.
- ✓ **Housing Costs**: Data shows housing price increases, but nothing like the increases in places like Dallas and other large markets.
- ✓ **Air Access**: For a market this size, having two outbound options via American and United is a differentiator.
- ✓ **Faith-Based Culture + Diversity**: Abilene has a really unique and strong story of how it combines a strong religious ethos with diversity. SSG sees a lot of similarities here with how fast-growing Utah pitches itself.

Key Challenges

- ? **“Great Place to Raise a Family”**: We (somewhat) jokingly also put this heading on the challenge side, but ensuring that the community continues to develop to be attractive to younger people and families will be a critical challenge. In SSG’s experience, sometimes a “great place to raise a family” is code for “not a great place to be a young person”.)
- ? **Access to Childcare**: Multiple stakeholders noted challenges with adequate childcare in the community. Employment data for that specific sector supports that there’s fewer opportunities here.
- ? **Continued Infill and Development of Downtown and Surrounding Neighborhoods**: Again, SSG is very excited by the development of the area and knows there are additional opportunities to keep development the area, infill vacant properties, and the like.

STRATEGIC RECOMMENDATIONS & OPPORTUNITIES



1. Further Enhance and Invest in Education & Training

- Further coordination and leveraging 4-year institutions – strong feedback from some employers that this can be improved.
- Strategy with two technical training institutions – how do you show that two institutions is an advantage, and not just competition with one another?
- All-in on work-based Learning – it works and it “sells” to prospects in SSG’s view.
- Tell a complete and comprehensive story – one of the few communities we see that has all the ingredients to tell a compelling K-PhD story.



2. Keep Investing on Community & Quality of Life

- Childcare is a challenge everywhere, but given presence of stakeholders, are there creative opportunities? Examples of solutions we see are support for off-hour day care, locating childcare in training facilities, creative school bus stop locations, formally engaging church and university partners, supporting direct day care options in industrial parks, etc.
- Keep investing in Downtown redevelopment and quality of life value proposition for younger folks.

STRATEGIC RECOMMENDATIONS & OPPORTUNITIES



3. Identify More Ways to Formalize & Operationalize that Transition for Exiting Airmen

- Increase accessibility and understanding of SkillBridge
- Improve data collection and understanding of existing skill sets AND interests.
- Improve early intervention on existing airmen – common denominator on military communities is getting that process started very early.



4. Target Industry – Recruitment and Promoting Existing Growth

- Manufacturing: Given current market dynamics and project activity, this is ripe for even more recruitment opportunities. Great Lakes proves it's a viable pitch for a major project. Very strong pipeline story and contrast with hyper growth (and logistics competition in I-35 corridor). Biggest challenge is non-workforce namely overall logistics and geographic positioning. Unless a prospect needs to be west of the I-35 corridor for a specific reason (e.g. for dairy access, energy access) it's a much tougher sell as its so rural and sparsely populated to the west.
- Professional Services: Much harder “pure recruitment” environment right now. In addition, the value proposition is much stronger on the demand side than the supply side. The big positives here are that you have a big and growing 4-year partners AND existing case studies on these types of operations (it's not a “start from scratch” strategy).

The background features a white field with a light gray dot pattern. On the left, there are two overlapping triangular shapes: a dark blue one on top and a medium blue one below it. Two parallel orange lines run diagonally across the bottom right of the page.

BACKGROUND & METHODOLOGY

WORKFORCE ANALYSIS OVERVIEW

The Abilene Industrial Foundation (“Abilene”) engaged Site Selection Group (“SSG”), a Dallas-based location advisory firm, to help it conduct a comprehensive workforce analysis to better position the community for attracting, retaining, and growing primary industry.

While SSG’s core business is focused on helping corporate clients identify the optimal location for a new facility, from time to time we are engaged by economic development or similar organizations to help them become more competitive. Oftentimes, these analyses focus on workforce, as that tends to be the biggest driver of corporate location decisions.

Because of SSG’s background, we view these analyses through a specific lens of how we would evaluate a community if we had a “real” client looking at the market. We believe this perspective can be especially valuable rather than conducting an academic exercise.

While we do not explicitly segment the analysis in this manner, SSG and Abilene see two fundamental objectives of this report:

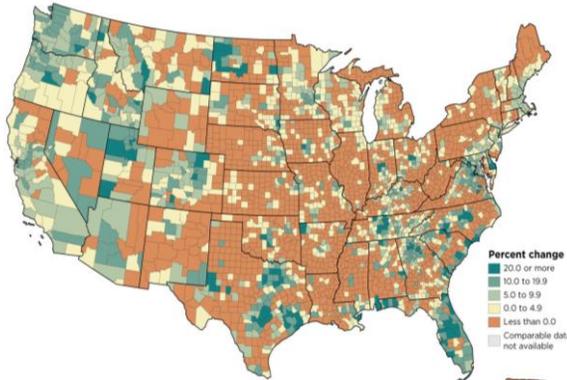
- **Marketing Perspective:** This report can be leveraged to highlight the community’s key workforce strengths in order to better market itself to prospective and growing employers. We might think of this as the more favorable, or the “value proposition” perspective of the report. This perspective is important for all, but especially for those charged with marketing the region and its assets.
- **Strategic Perspective:** The alternative is to read this in a way to identify weaknesses and to chart ways to confront those challenges. We see this as an important way to improve the community and its value proposition. While important for everyone, this perspective is especially critical for key workforce development stakeholders.

The remainder of this section lays out the overall approach, data, and methodology used for this analysis.



SSG'S APPROACH TO WORKFORCE ANALYTICS

1. DEMOGRAPHICS



- Population, Growth, Labor Force
- Age, Education, Income
- Commuting & Realistic Labor Shed

2. OCCUPATIONAL DYNAMICS



- Supply of Key Skill Sets
- Demand for Key Skill Sets
- Wages & Salaries

The graphic at left shows the broad categories under which SSG performs workforce analyses on behalf of its corporate clients. While every project requirement is different and each is driven by different objectives, almost all clients want to be in a location that has 1) aligned demographics, 2) target mix of occupational supply and demand, and 3) robust workforce training and educational opportunities. We also add “quality of place”. While there is data to support a community's quality of place value proposition and we use some of that herein, SSG believes a qualitative perspective is a more appropriate lens to view this aspect through.

3. TRAINING & EDUCATION



- K-12
- Technical Training
- Colleges & Universities
- Workforce Development

4. QUALITY OF PLACE



- Some data (housing, crime, rankings)
- But much more qualitative-focused

As a result, SSG applies the same perspective to its workforce analyses on behalf of economic development organizations, Abilene included. It is critical to use this framework to identify where a community's workforce value proposition truly lies. For some markets, that value proposition could be based on favorable population and demographic trends. For others, it could be lower levels of competition. Regardless, SSG believes any community needs to have a strong training & education pitch and an attractive community to show off.

WORKFORCE & THE SITE SELECTION PROCESS

Because site selection is its primary business, it is critical to understand how SSG applies that corporate experience to economic development engagements like this one with Abilene. In summary, SSG strives to use many of the same approaches and analyses in its engagements with economic development as it would with a corporate client. The graphic below highlights the overarching process that SSG and its clients use when approaching a site location exercise.

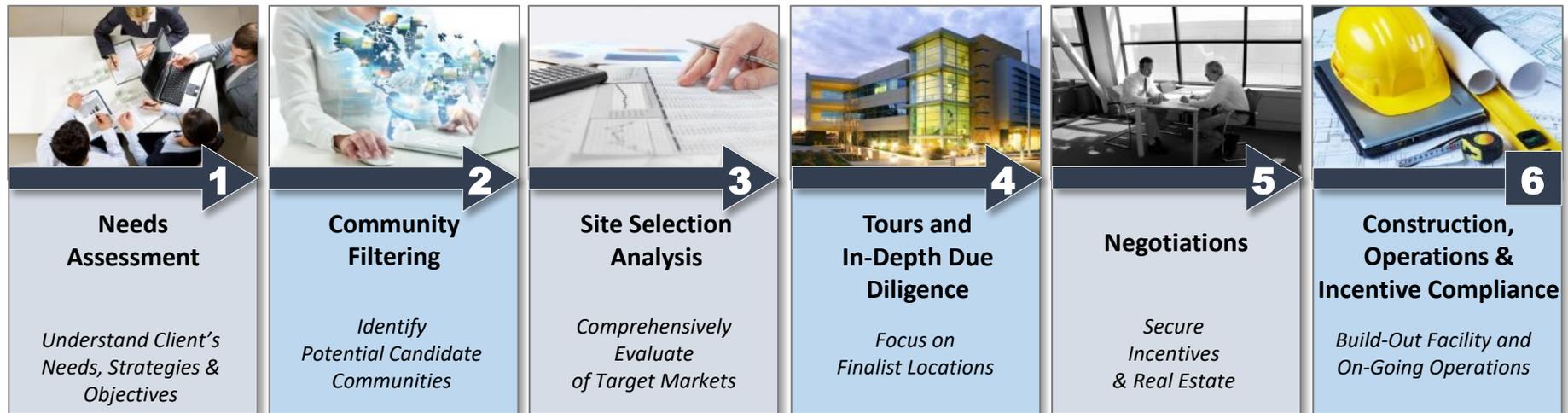
Evaluating a community's labor force remains one of the most important parts of the site selection process. However, the methods and data used vary considerably based on the stage of the project. In S

- **Secondary Research:** Early in a project, SSG utilizes secondary data in order to filter down to a smaller number of markets that broadly fit a project's requirements. This can include data from sources like the U.S. Census, Bureau of Labor Statistics, and a myriad of subscription data sources. This helps identify markets

that may align with a client's requirements, but oftentimes lacks in specificity and timeliness.

- **Primary Research:** Later on in a project, primary data (i.e. data collected in real time from sources in communities via interview, survey, etc.) becomes increasingly important because secondary data can be too broad, lag, or sometimes mislead. Primary data, on the other hand, can tell the "true" story through the eyes of existing community stakeholders.

In our view, there is no substitute for using both types of data to fully understand a community's workforce value proposition. It helps communities understand why they may be falling out of consideration earlier in the site selection process, and where its workforce "story" later on in the process may be missing out or hitting the mark.



Secondary Research



Primary Research

DATA COLLECTION OVERVIEW

Quantitative & Secondary Data Sources



- Multiple best-in-class sources.
- Comparable to other markets.
- Main driver of Demographics, and Occupational Dynamics sections.
- Support for Education & Training section.

Site Selection Group leverages best-in-class data resources for its desktop analyses as shown by the sources in the graphic at left. We believe very strongly that using a variety of sources and putting them in a comparative framework is the best way to show a community's data-driven workforce strengths and weaknesses. Building off the previous page, this can help identify where a community may fall short during a site selection project.

But when time and budgets allow, SSG recommends conducting workforce analyses using primary, real-time data to understand actual labor conditions. Even high-quality secondary data does not always tell the whole labor story in a community. Furthermore, as it relates to corporate site selection, locationally active companies tend to put more weight on employer and stakeholder testimony over classic workforce data. Again, this is critically important as it helps reveal a community's "story" which is more important later in the process.

Qualitative & Primary Data Sources



- Collected via two community visits and follow up conversations.
- 25 Interviews Total
 - 12 Employer Interviews
 - 13 Stakeholder Interviews (training, education, military)
- Supplements data noted above.
- Provides significant insight into workforce and community dynamics that are lost in the data.

SSG was very pleased to see that with Abilene's exceptional support, we were able to include a significant amount of qualitative/primary data gathered through stakeholder interviews. Frankly, one of SSG's key findings in this report is that we were very impressed by the connections and relationships that Abilene was able to put us in front of throughout this engagement. In our view, this is clearly a community that has a significant advantage because of those strong relationships between economic development and key workforce stakeholders.

TARGET INDUSTRIES & TARGET OCCUPATIONAL CLUSTERS

Target Industries	Target Occupational Clusters (SOC Based)	SSG Notes
Advanced Manufacturing <i>Includes “Energy” and “Advanced Technology”</i>	<ul style="list-style-type: none"> • Production – All • Engineering • Engineering Techs • Maintenance • Logistics – Direct • Logistics – Support • Production – Food Specific (SSG rec.) • Production – Metal Specific (SSG rec.) 	<p>Based on SSG’s analysis and previous experience, the clusters at left represent the most important occupational skill requirements for manufacturing projects. Based on our target industry analysis, SSG added two more specific clusters for Food and Metals. And after further review with Abilene, we believe their target clusters of “Energy” and “Advanced Technology” are captured here.</p>
Aerospace	<ul style="list-style-type: none"> • Production – Aero. Specific • Engineering – Aero. Specific 	<p>This cluster has significant overlap with Manufacturing above, but we highlight specific occupational clusters for Aerospace.</p>
Bio-Tech	<ul style="list-style-type: none"> • Production – Bio/Life Science • Hard Science (e.g. chemists, biologists) • Science Techs (e.g. chem techs) • Health Care & Related 	<p>Again, production in the Bio-Tech space has significant overlap with other production categories. However, we highlight unique occupational clusters for that space here.</p>
Information Technology	<ul style="list-style-type: none"> • Higher Skill IT (bachelor’s+ talent) • Moderate Skill IT (no degree) 	<p>These IT clusters are increasingly important not just for IT or Professional Service Projects, but for nearly all operations.</p>
Business & Professional Services <i>SSG recommended addition to the analysis</i>	<ul style="list-style-type: none"> • Finance • Accounting • HR • Marketing • Administrative Support 	<p>Based on SSG’s target industry analysis, we added this and its typical component skill sets to the analysis. Not only could these be target operations in and of themselves, but these skill sets are important to all other target clusters.</p>

As one of our first steps, SSG worked with Abilene to identify its target industries so we can further identify the critical occupational skill sets to be analyzed throughout this report.

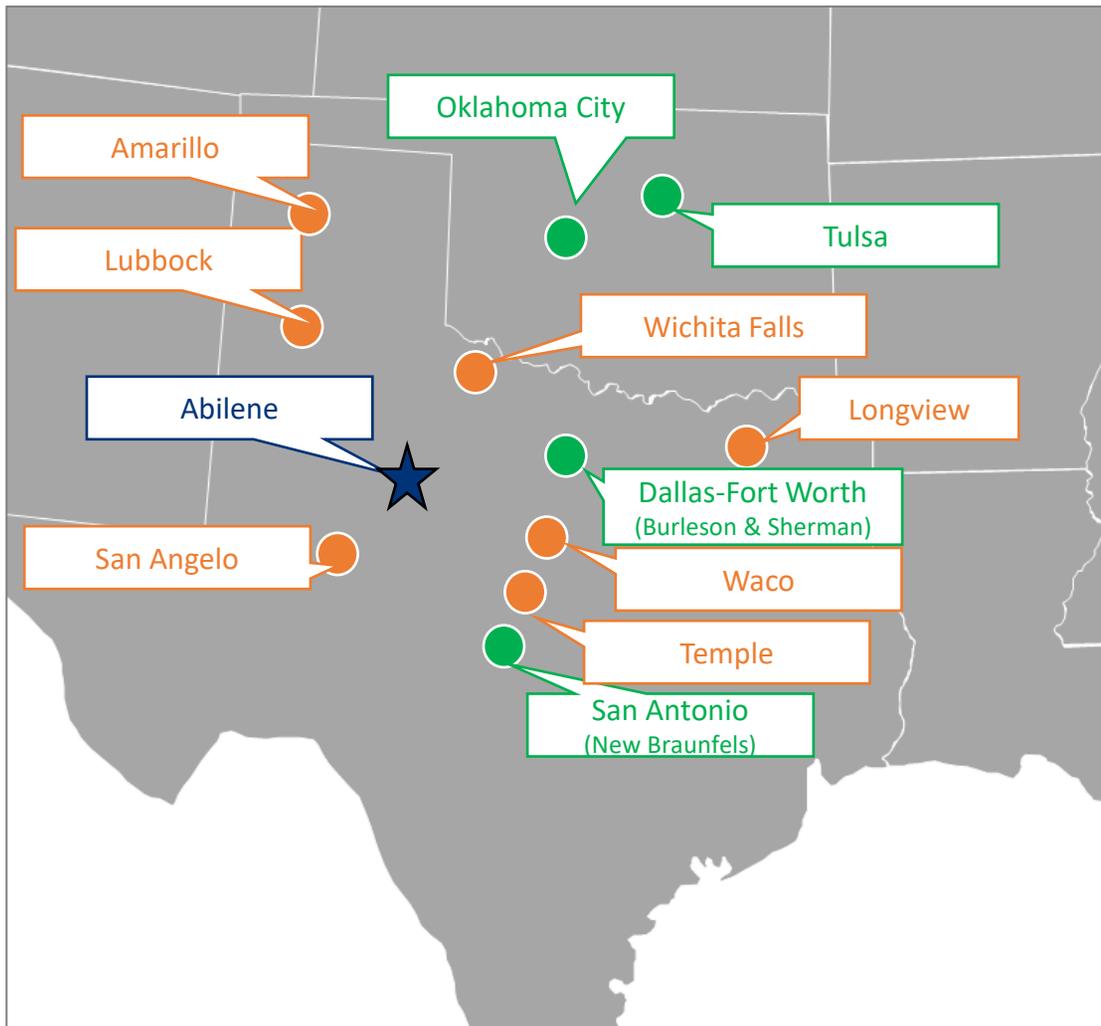
The table at left shows Abilene’s target industries and how SSG mapped those onto specific Standard Occupational Code (“SOC”) definitions.

Further, SSG conducted a baseline target industry analysis to identify any specific sectors and/or additional clusters that warranted inclusion in the report. From this analysis, SSG recommended including specific Food Production and Metal Production occupational clusters, along with a broad Business & Professional Services target.

SSG’s target industry analysis is included in the [Appendix](#) and the specific SOC-based cluster definitions are also included in the [Appendix](#).

COMPARISON MARKETS FOR ANALYSIS

Comparison Markets used in Analysis



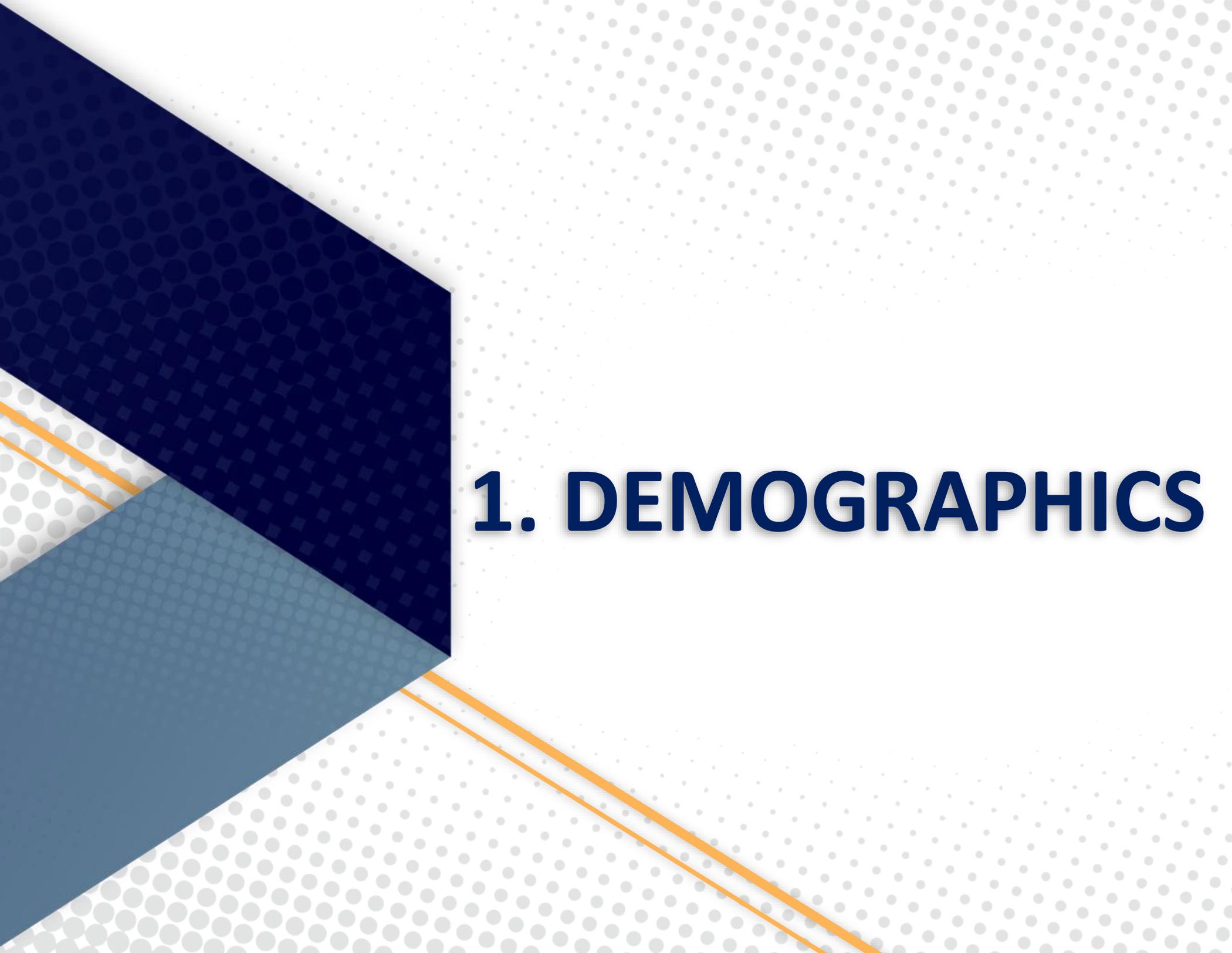
In SSG's view, there is no such thing as the simple concept of a "good" workforce. While some markets have more favorable workforce conditions, there are always tradeoffs. For a community that has favorable growth and occupational presence, there may be higher competition and wage pressure. For more rural areas, there may be less competition but concerns with long-term demographic trends.

As a result, like for corporate work, no workforce analysis is done in a vacuum. Abilene and SSG jointly identified comparison markets to be used in this analysis to benchmark Abilene against.

Further, based on its corporate experience, SSG selected an example point (i.e. a competitive business park) to use for point driven analysis, rather than simply comparing one metro area to another. In SSG's view this is more useful and fair analysis, and one that better replicates an actual site selection project.

The map at left and listed below shows the markets used. Please note that because it is such a large and important competitor, we use two separate points for Dallas-Fort Worth to represent the types of exurban communities Abilene is likely to be benchmarked against.

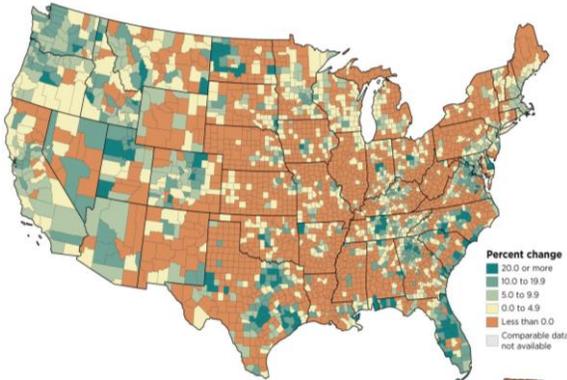
- **Large Markets: Dallas-Fort Worth (Burleson & Sherman), Oklahoma City, Tulsa, San Antonio (New Braunfels).** SSG feels strongly that benchmarking against these types of large-market competitors is absolutely critical as they represent the biggest "threat" to smaller and mid-size markets.
- **Mid-Size Market Peers: Amarillo, Lubbock, San Angelo, Wichita Falls, Waco, Temple, Longview.**

The background features a white field with a light gray dot pattern. On the left side, there are overlapping geometric shapes: a dark blue triangle at the top, a medium blue triangle below it, and a white triangle at the bottom. Two parallel orange lines run diagonally across the page, starting from the left edge and extending towards the bottom right.

1. DEMOGRAPHICS

1. DEMOGRAPHICS SUMMARY

1. DEMOGRAPHICS



- Population, Growth, Labor Force
- Age, Education, Income
- Commuting & Realistic Labor Shed

Overview & Approach

The first section of the analysis focuses on core demographic fundamentals in the community. A quality workforce is obviously based on people so understanding the baseline demographics characteristics of a community is a critical starting point.

This section starts with a commuting summary to establish a realistic labor shed from which employers in Abilene can attract workers from. In SSG’s corporate experience, it is critically important to draw a defensible and realistic labor shed. SSG has seen too many communities who claim exceptionally large labor draws, only to have actual employer testimony discount how far workers will actually travel. In this report, we use both best-in-class, publicly available commuting data (via LODES) along with employer provided primary data.

Based on that analysis, we examine specific demographic variables of interest like population, workforce, labor force participation, unemployment, age, income, and educational attainment. We close with data related to migration – that is, where people in Abilene have moved from or are moving to, and historical views on how Abilene and the region have changed.

Key Strengths

- ✓ Story Telling on Labor Shed: The vast majority of the workforce comes from the immediate area around Abilene (~20 minutes). While some communities pitch very broad drivetime labor sheds, SSG finds the pitch far more convincing on a tight, focused labor shed. However, there’s certainly potential to draw from further away. Regional population trends further support focusing on Abilene.
- ✓ Lower Median Age: While this is certainly impacted by university presence, the data show a favorable median age. However, most Texas markets show favorably in this space.
- ✓ Middle Income/Middle Education: Demographics align well with needs of mid-skill white collar jobs and advanced manufacturing operations.
- ✓ Diversity in Manufacturing: QWI data shows favorable racial and ethnic diversity in manufacturing. Further, it shows a diversity of firm sizes, rather than being dominated by one large operation.
- ✓ Outmigration Improving: While this data is impacted by the ebb and flow of energy, recent years’ data show slowing outmigration to major Texas markets, especially Dallas.

Key Challenges

- ? Demographics at Broader Drive Times: SSG likes pitching the 20- minute data but uses broader 40-minute data throughout to capture the full, potential workforce draw. However, Abilene will compare much better to larger markets on a 20-minute basis vs a 40-minute one. For example, a 40-minute drivetime around Abilene only pulls in more rural areas, vs. a comparison 40-minute drivetime around a site in Dallas, Longview, or Temple pulls in a much larger workforce.
- ? Lower Labor Force Participation + Low Unemployment: Both of these in unison point to a very tight labor market overall. That comes as no surprise based on conversations with community stakeholders.
- ? Lower Population Growth: While the data is still positive, and we can see (in person and in the mapping), that there is strong growth in parts of the community, it pales in comparison to growth seen across most of the region. Abilene could pitch this as “sustainable growth”.

COMMUTING SUMMARY: SECONDARY DATA

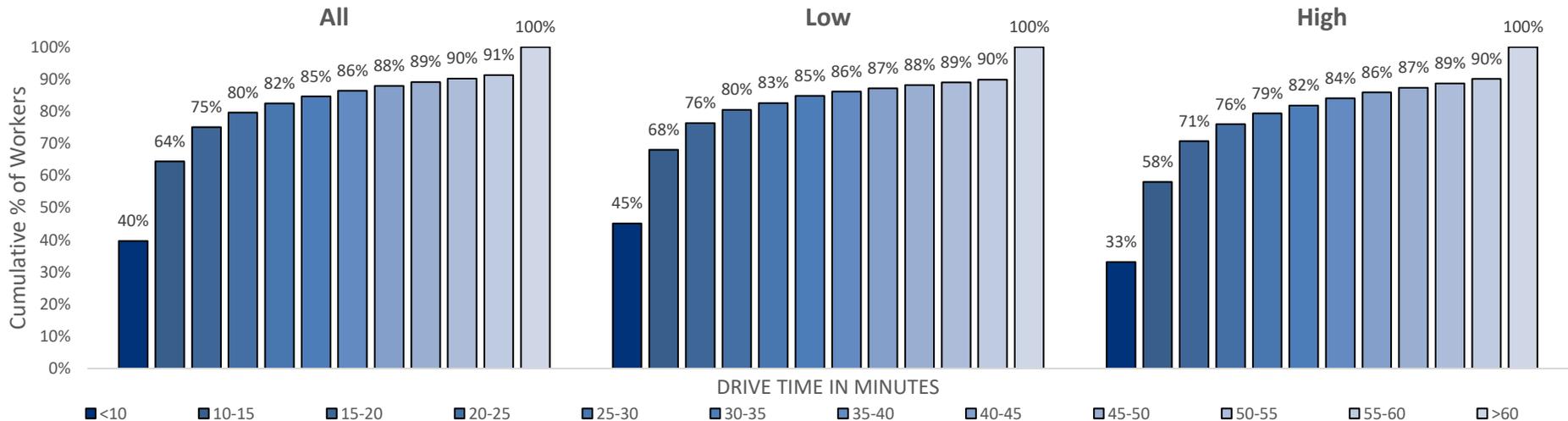
Key Commuting Drive Time Thresholds

	50 th Percentile "Guaranteed"	80 th Percentile "Likely"	95 th Percentile "Possible"
All Workers	13.4 mins.	18.1 mins.	42.3 mins.
Lower Wage Workers	12.9 mins.	17.2 mins.	48.2 mins.
Higher Wage Workers	13.7 mins.	19.8 mins.	38.5 mins.

Summary

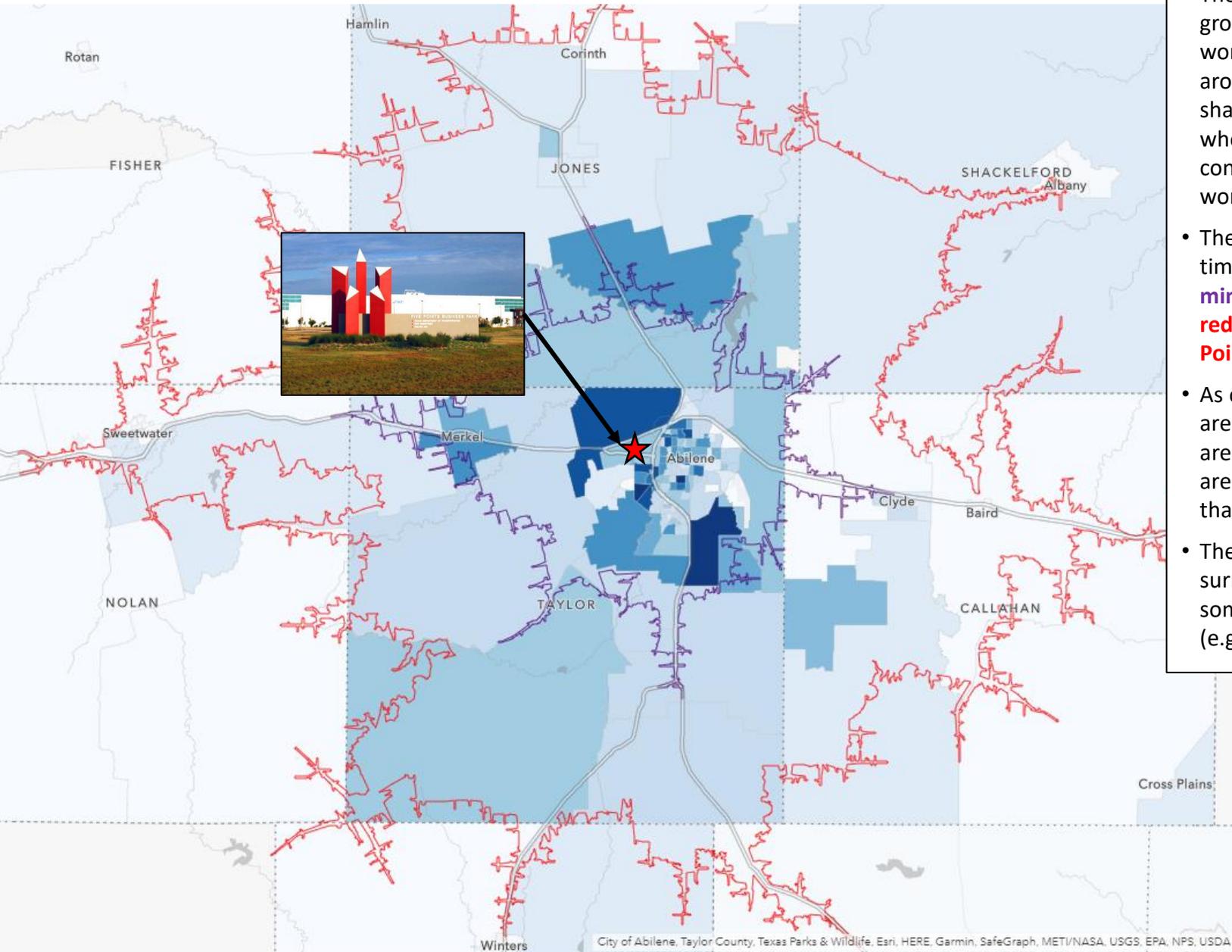
- Every workforce analysis begins with a commuting and labor shed analysis to determine where an operation will draw the majority of its workers from. But unlike watersheds, laborsheds are not absolute and can vary based on wage level.
- The table at left shows the travel times that workers employed in Abilene (specifically around the Five Points Business Park) travel from their homes. For example, 50% of all workers travel 13.4 minutes or less, while 80% of low wage workers travel 17.2 minutes or less.
- Because it's a city surrounded by rural areas, the vast majority of workers in Abilene also live there or in nearby communities. As a result, the critical labor shed is roughly 15-20 minutes. That is indicated by the 50th percentile and even the 80th percentile data in the chart. There is certainly some labor draw at higher levels (as shown by the 40+ minute drive times at the 95th percentile).

Detailed Commuting Drive Time Distribution around Abilene



COMMUTING PATTERNS: WHERE WORKERS LIVE

Where Workers Employed in Abilene Live: Total Count by Block Group

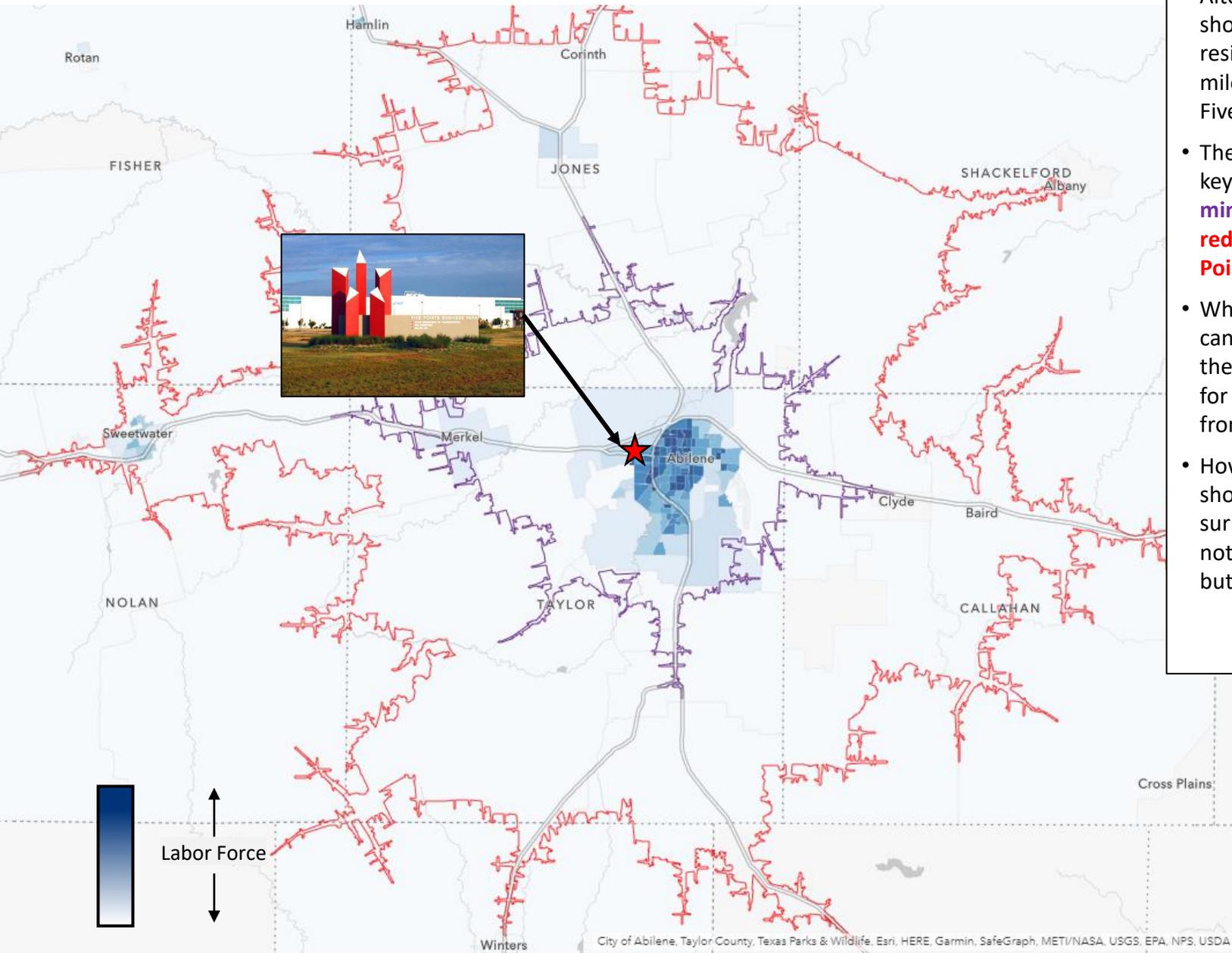


Summary

- The map here shows the block groups that individuals who work in Abilene (specifically around Five Points) live. Darker shaded areas show block groups where there's a higher concentration of resident workers.
- The map also overlays those key times shown in **purple (20 minutes from Five Points)** and **red (40 minutes from Five Points Business Park)**.
- As one can see, the darkest areas of the map where there are the most worker residences are nearly all contained within that 20-minute drive time.
- There are some rural areas and surrounding communities with some resident workers as well (e.g. Sweetwater)

COMMUTING PATTERNS: WORKFORCE DENSITY

Where Workers Employed in Abilene Live: Density by Block Group



- Summary**
- Alternatively, the map here shows the density of worker residences (i.e. worker/square mile) employed in and around Five Points.
 - The map again overlays those key times shown in **purple (20 minutes from Five Points)** and **red (40 minutes from Five Points Business Park)**.
 - When we adjust for density, we can even more clearly see that the vast majority of workforce for employers in Abilene come from Abilene proper.
 - However, this map does better show that potential draw into surrounding communities, notably Sweetwater to the west but also Anson to the north.

COMMUTING PATTERNS: COMPARING DIFFERENT POINTS

Five Points Business Park

	50 th Percentile "Guaranteed"	80 th Percentile "Likely"	95 th Percentile "Possible"
All Workers	13.4 mins.	18.1 mins.	42.3 mins.
Lower Wage Workers	12.9 mins.	17.2 mins.	48.2 mins.
Higher Wage Workers	13.7 mins.	19.8 mins.	38.5 mins.

Population Coverage

	Population at 20 mins.	Population at 40 mins.	Population at 60 mins.
Five Points	133,050	177,974	226,582
Access	130,379	166,201	220,636
Downtown	128,041	164,561	218,860

Access Business Park

	50 th Percentile "Guaranteed"	80 th Percentile "Likely"	95 th Percentile "Possible"
All Workers	10.7 mins.	16.3 mins.	49.3 mins.
Lower Wage Workers	10.8 mins.	16.7 mins.	48.4 mins.
Higher Wage Workers	11.4 mins.	17.2 mins.	52.1 mins.

Downtown Abilene

	50 th Percentile "Guaranteed"	80 th Percentile "Likely"	95 th Percentile "Possible"
All Workers	11.7 mins.	19.1 mins.	47.2 mins.
Lower Wage Workers	10.6 mins.	16.7 mins.	46.7 mins.
Higher Wage Workers	13.2 mins.	21.5 mins.	49.9 mins.

Key Takeaways

- As a consistency check, SSG ran the same commuting comparison analysis and population within key drivetimes across two additional locations in greater Abilene – Access Business Park and Downtown.
- As the charts at left and above show, there's very little difference across commuting draw both in terms of drivetime at different percentile cutoffs and total population draw. This does not surprise SSG as again, the vast majority of viable workforce and population in the region is in and around metro Abilene.

COMMUTING SUMMARY: COMPARATIVE

Comparison Commuting Drive Time Thresholds (in minutes)

	All Wages (50 th percentile)	All Wages (80 th percentile)
San Antonio (North)	29.2 mins.	46.4 mins.
Burleson	25.5 mins.	47.3 mins.
Sherman	19.0 mins.	41.1 mins.
Longview	19.8 mins.	40.9 mins.
Temple	18.5 mins.	35.6 mins.
Oklahoma City	24.0 mins.	32.9 mins.
Waco	18.9 mins.	32.6 mins.
Tulsa	22.1 mins.	32.3 mins.
Amarillo	15.6 mins.	21.7 mins.
Wichita Falls	12.7 mins.	21.0 mins.
Lubbock	14.5 mins.	19.3 mins.
Abilene	13.4 mins.	18.1 mins.
San Angelo	10.8 mins.	14.9 mins.

Summary

- The table at left shows the same commuting data for all the comparison markets to give relative sense for labor draw across the different locations. It is sorted by those with the widest labor draw at that critical, 50th percentile level where half of workers travel from.
- Abilene’s labor draw looks very similar to other similarly sized markets like Amarillo, Wichita Falls, Lubbock, and San Angelo. All draw the majority of their workforce from that 15–20-minute radius at both the 50th percentile and the broad 80th percentile levels.
- The larger markets tend to show slightly larger drive time labor draws, especially at the 80th percentile. That is a function of more diversity of communities in those larger markets (e.g. a worker in Burleson may live in a number of different communities in the metroplex). It is also a function of higher drive times due to traffic.

POPULATION COMPARISONS: 20, 40, 60 MINUTES

Populations at Key Drive Times

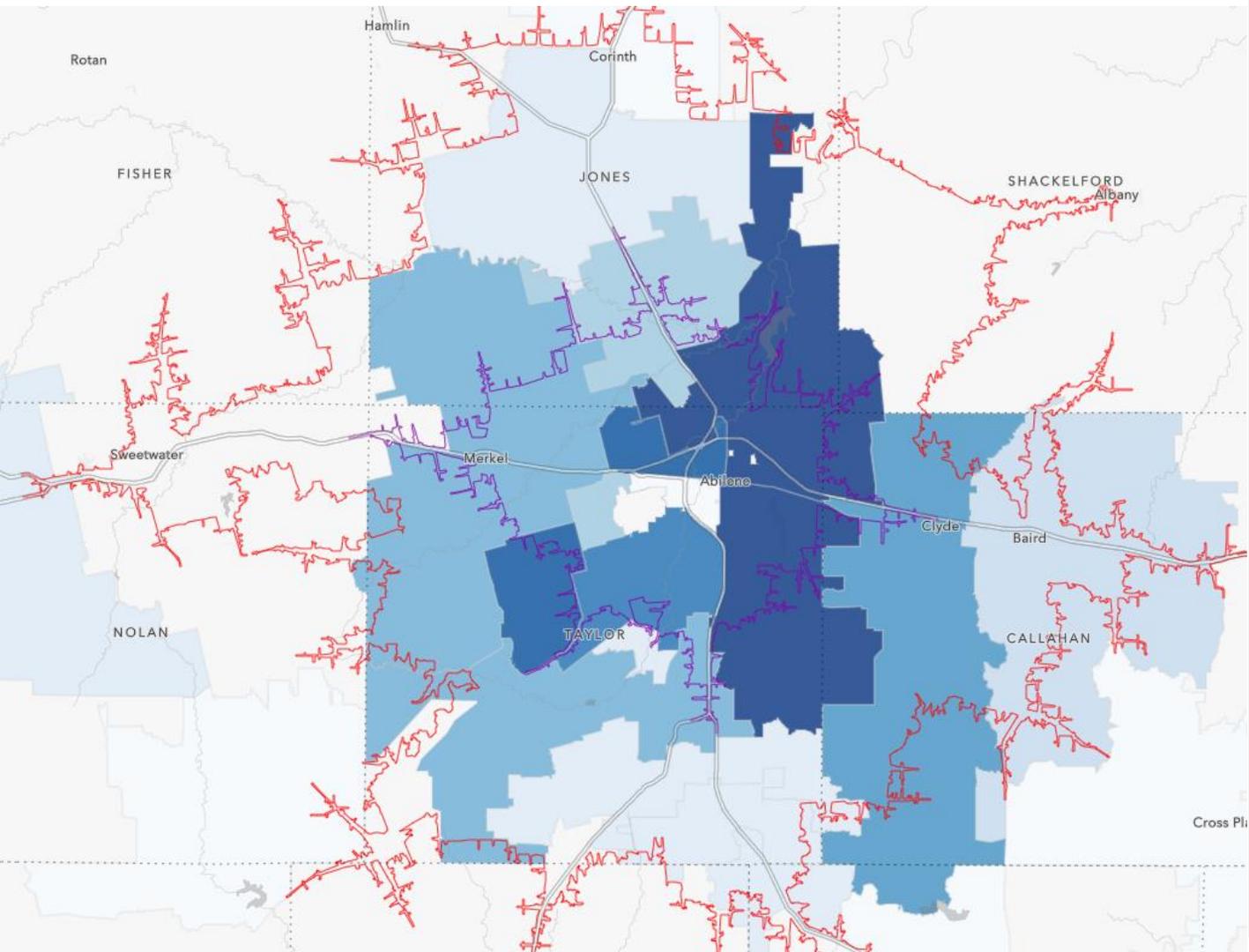
	Population at 20 mins.	Population at 40 mins.	Population at 60 mins.
Sherman	91,356	631,424	3,296,880
San Angelo	105,753	128,536	142,018
Wichita Falls	107,986	153,229	223,751
Longview	118,794	258,540	572,341
Temple	129,391	602,609	1,566,798
Abilene	133,050	177,974	226,582
Amarillo	159,017	261,547	334,367
San Antonio - North	164,122	1,234,440	3,761,398
Waco	200,466	377,808	713,183
Burleson	247,972	2,446,581	5,465,632
Lubbock	287,290	353,876	422,401
Oklahoma City	580,985	1,288,878	1,495,057
Tulsa	589,261	888,461	1,128,745

Summary

- The data at left shows population at critical drivetimes around Abilene and the comparison markets.
- At that most conservative, 20-minute drivetime, Abilene looks relatively favorable compared to many of the other markets. It has a much smaller labor draw than markets like Oklahoma City and Tulsa, where the points SSG picked are more centralized. But overall, Abilene looks in line with them at that conservative drive time.
- As drivetimes expand, the population around Abilene certainly grows, but it pales in comparison to what a 40-minute or 60-minute drive time around large markets like the DFW sites, San Antonio, Oklahoma City, or Tulsa look like. Abilene even looks much less favorable compared to similarly sized markets like Waco or Longview as those locations simply have higher regional population density.
- As a result and for this report, SSG recommends striking a balance, and we recommend using a 40-minute drivetime as the realistic labor shed. Yes, we recognize that Abilene employers can draw some workforce from a broader distance (e.g. from communities like Sweetwater), but from a comparative view, broader labor sheds will make Abilene look less favorable compared to its most likely competitor options
- SSG also sees opportunity for Abilene to pitch that the vast majority of its workforce comes from the immediate community. And further, that those workers enjoy very short commutes compared to other more populated regions.

COMMUTING SUMMARY: PRIMARY DATA

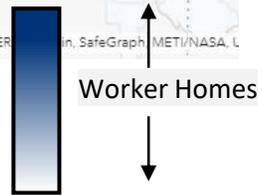
Where Workers Employed in Abilene Live: Total Count by ZIP Code



Summary

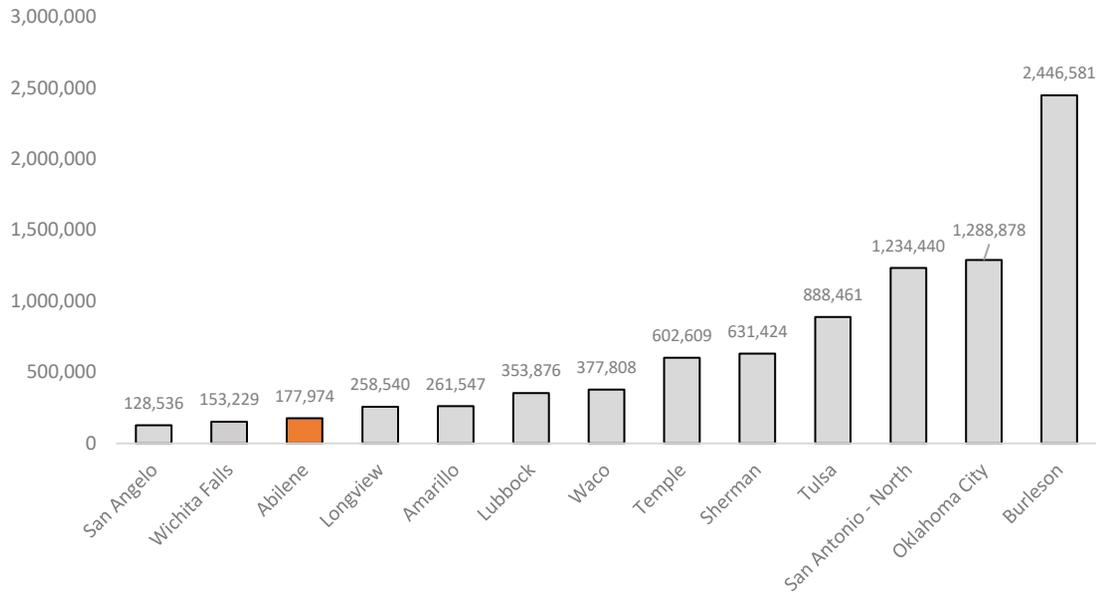
- In addition to utilizing publicly available home/workplace data, SSG also collected de-identified home ZIP code or address information from employers we spoke with during this engagement. This allows us to further analyze commuting patterns and the realistic labor draw in the community.
- The table at left shows results of this analysis using the same percentile breakdown as shown previously. Overall, the results from this analysis very closely resemble what we saw in the secondary data. Most people will commute from ~20 minutes with some potential to draw from a 40 minute+ radius, although the number of people commuting that far is relatively limited.
- In summary, this data collected from employers further supports that employers get the vast majority of their workforces from that ~20-minute drivetime in and around Abilene, with some potential to draw workers from farther away.

	50 th Percentile "Guaranteed"	80 th Percentile "Likely"	95 th Percentile "Possible"
Company-Provided Data	17.3 mins.	22.9 mins.	34.7 mins.

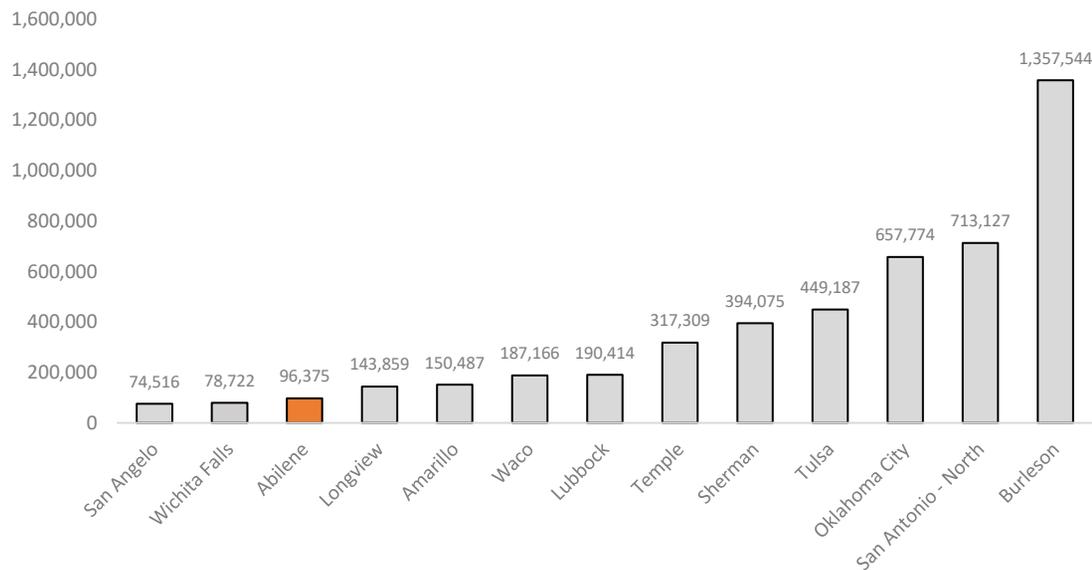


POPULATION & WORKFORCE INDICATORS (40 MINS)

Population (40-Minute Drive Time)



Labor Force (40-Minute Drive Time)

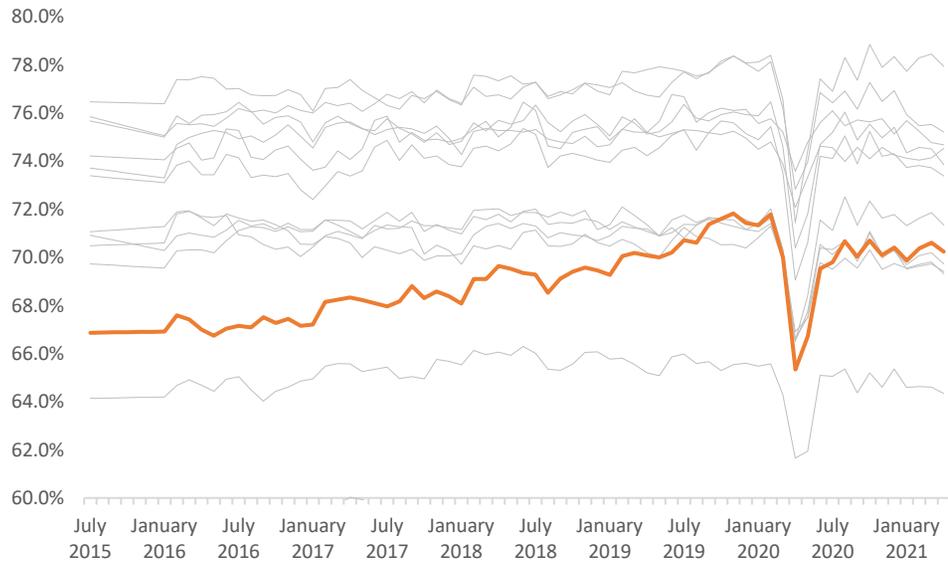


Population & Workforce Summary

- We now move into the comparative demographic data. The charts at left show simply the absolute number of people and the labor force within a 40- minute drive time of each comparison point.
- Abilene has approximately 178,000 people within that 40-minute drive time, and about 96,000 people in the labor force within that same drive time.
- It comes as no surprise that that figure is significantly smaller than numbers in much larger metro areas like Dallas-Fort Worth, San Antonio, Oklahoma City, and Tulsa, as demonstrated on the previous pages.
- For recruitment projects, this is clearly one of the potential hurdles for Abilene to overcome – to prove that it’s fundamentally large enough to support the workforce needs of certain operations types. In SSG’s experience, this size market is certainly capable of supporting smaller and mid-size requirements (for example 20-200 employee operations). However, based on sheer worker availability, it may struggle to compete to attract and retain much larger operations.

DEMOGRAPHIC & WORKFORCE INDICATORS

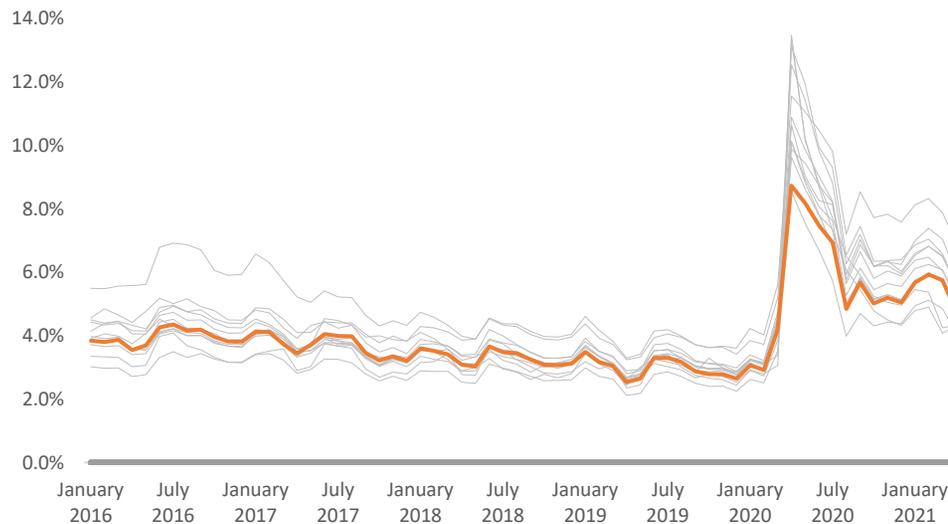
Labor Force Participation Rate:



Labor Force Participation Rate Summary

- Labor force participation can be a useful indicator of whether there is any potential “slack” remaining in a market and how much of the population is working. In SSG’s view, this is a critically important data point (more so than unemployment).
- The data show a significant disruption from COVID over the past few months with participation rates dropping dramatically.
- Historically, labor force participation has been lower in Abilene compared to the other markets. However, the data (pre-COVID) showed growth in the rate, which could be easily pitched as a positive shift in the community.

Unemployment Rate:

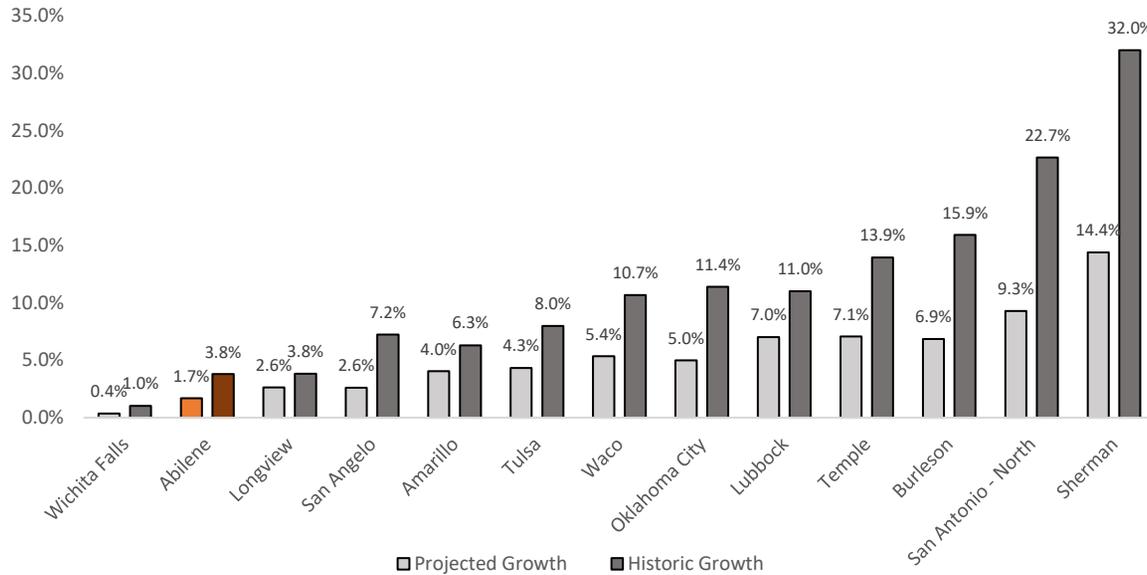


Unemployment Summary

- The chart at left shows historical unemployment rates for each comparison location over the past five years. The data obviously shows the dramatic uptick seen everywhere from the COVID-19 pandemic.
- Virtually all the markets’ unemployment rate changes track one another. Abilene tends to have a lower rate compared to the other markets, with both a lower “spike” from COVID, but also a lower unemployment rate today.
- This data, accompanied with lower labor force participation point to a very tight market. However, SSG sees opportunity in the historical data that shows increasing participation pre-COVID.

DEMOGRAPHIC & WORKFORCE INDICATORS (40 MINS)

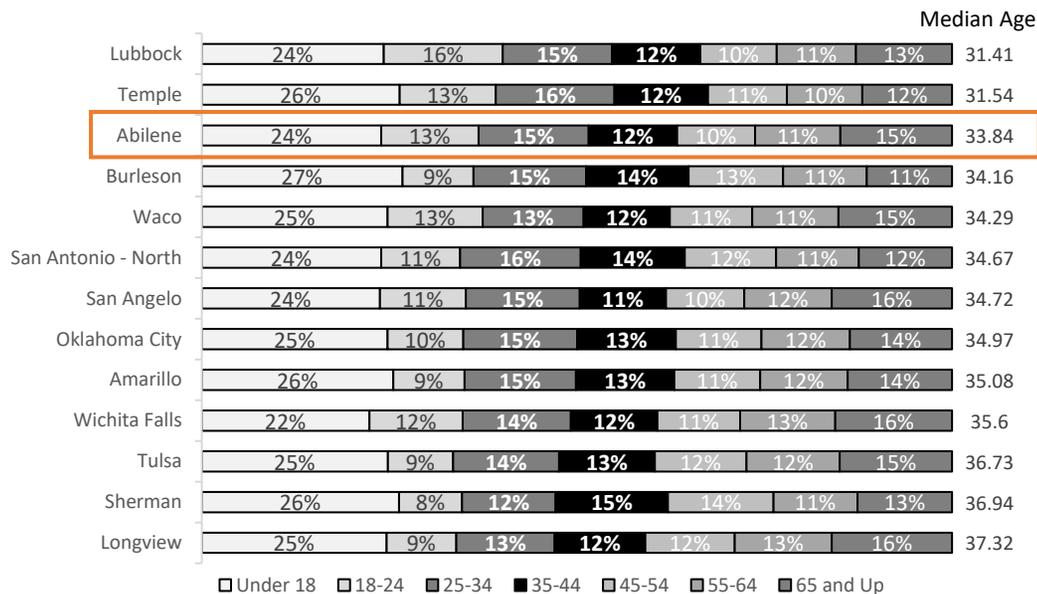
Population Growth: Historic (2010-2020) and Projected Growth (2020-2025)



Population Summary

- The figure at left shows historic population growth (since 2010) and projected population growth over the next five years (to 2025).
- Historic and projected population growth is one of the most important figures in any workforce analysis, as its one of the more “defendable” projection data points and helps speak to long term community viability.
- While the data show positive historic and projected growth for Abilene, it is significantly lower than in other markets. This also speaks to the tremendous growth in Texas overall.

Age Breakdown with Median Age

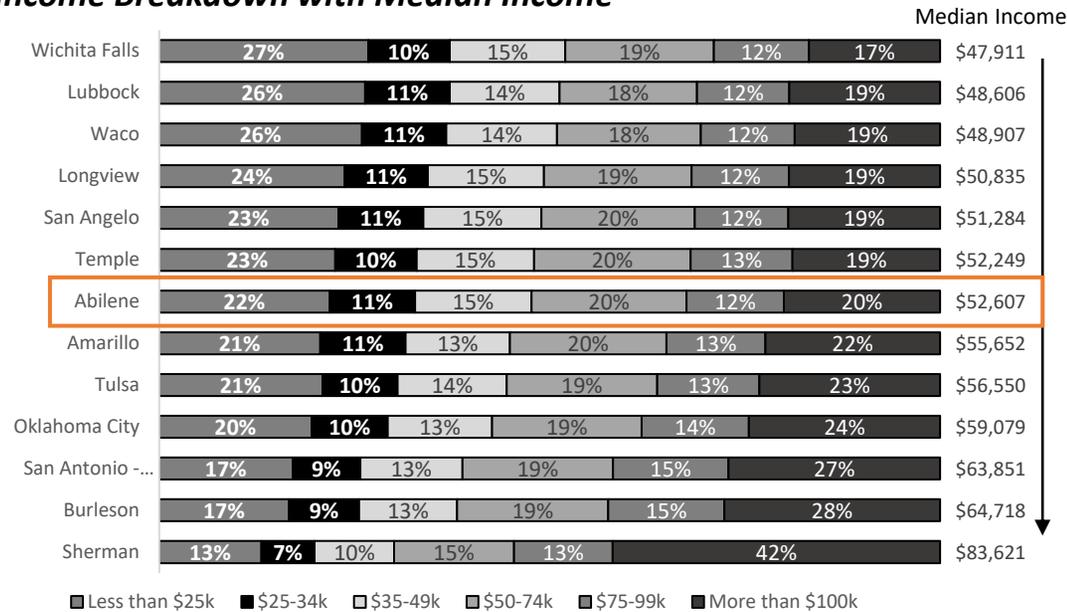


Age Summary

- Companies place an increasing emphasis on locating in markets with a young, sustainable workforce. Whether explicitly looking for attractive markets for “millennials” or just markets that have long term demographic advantages, the age profile of a market can make a significant difference. As a rule of thumb, SSG typically considers markets with a median age above 40 to be of some concern.
- Abilene is well below that. As a result, the overall age profile of the community shows favorably. This is impacted positively by the three universities located in Abilene as well as the significant presence of Dyess AFB.

DEMOGRAPHIC & WORKFORCE INDICATORS

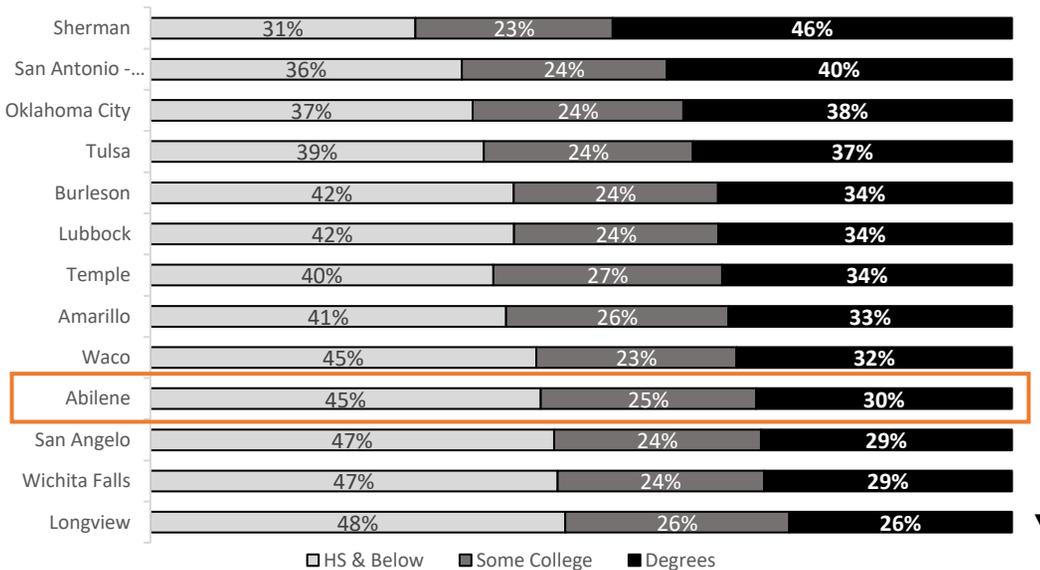
Income Breakdown with Median Income



Income Summary

- Target income profiles can swing greatly by the type of requirement, with some companies wanting a higher income profile while some put more emphasis on moderate income levels as a proxy for skill and wage profiles.
- Abilene's income profile falls right in the middle of the candidate communities. SSG does not see it as any cause for significant concern or advantage. Dallas-Fort Worth submarkets show particularly wealthy as the data includes some wealthy suburbs e.g. Frisco and Plano are within a 40-minute drivetime of Sherman.

Educational Attainment: Population 25+



Educational Summary

- The target educational profile of a community can vary considerably by the type of project. That being said, most communities (Abilene included) want to attract and retain higher impact jobs and operations, which tend to place an emphasis on having access to a highly skilled and educated workforce.
- Abilene trends a bit toward the bottom of comparison markets when looking at percentage of individuals aged 25+ with a bachelor's or associates degree. Like other markets towards the bottom, there is a large share of individuals with a high school or below education only. We break out the data further for the workers specifically in later pages.

HISTORICAL CHANGES: AGE & EDUCATION

Median Age: *Historic (2000, 2010) and Current (2020)*

Market	2000	2010	2020	% Change (2000-2020)
Sherman	34.10	35.41	36.94	+8.33%
Burleson	32.30	33.01	34.16	+5.76%
Tulsa	35.00	35.97	36.73	+4.94%
Temple	30.10	30.06	31.54	+4.78%
San Antonio - North	33.20	33.74	34.67	+4.43%
Wichita Falls	34.10	35.17	35.60	+4.40%
Amarillo	33.70	34.25	35.08	+4.09%
Longview	36.30	36.71	37.32	+2.81%
Waco	33.40	33.78	34.29	+2.66%
Oklahoma City	34.20	34.24	34.97	+2.25%
Abilene	33.60	34.50	33.84	+0.71%
Lubbock	31.20	30.88	31.41	+0.67%
San Angelo	34.60	35.05	34.72	+0.35%

Age Summary

- The table at left shows data from 2000, 2010, and 2020 for median age in the comparison markets. We review this to see any significant changes in age profile over time.
- The data shows that like the U.S. population overall, median age is increasing in each of these markets. However, Abilene's has been relatively stable, due in some part to the student population in the community.

% of Population 25+ with Degrees: *Historic (2000, 2010) and Current (2020)*

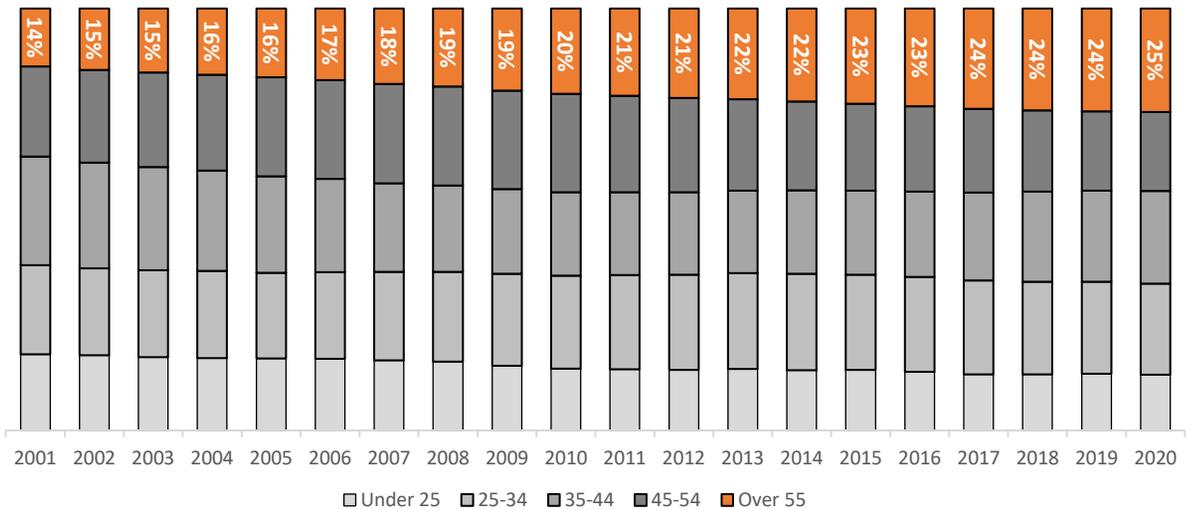
Market	2000	2010	2020	% Difference (2020-2000)
Sherman	33%	35%	46%	+13%
Temple	20%	28%	34%	+14%
Tulsa	25%	32%	37%	+12%
Wichita Falls	17%	25%	29%	+12%
Oklahoma City	26%	31%	38%	+12%
Waco	20%	26%	32%	+12%
San Antonio - North	29%	35%	40%	+11%
San Angelo	18%	24%	29%	+11%
Burleson	24%	30%	34%	+10%
Longview	16%	23%	26%	+10%
Abilene	20%	25%	30%	+10%
Amarillo	23%	28%	33%	+10%
Lubbock	25%	28%	34%	+9%

Degree Summary

- The table at left shows data from 2000, 2010, and 2020 for median age in the comparison markets. We review this to see any significant changes in educational attainment over time.
- Abilene's population has progressively become more educated over the past twenty years. The percentage of population with degrees has grown at a steady rate of 5% every ten years. However, most of the other markets have seen slightly higher increases in the proportion of their population with degrees over the past twenty years.

WORKFORCE DETAIL: AGE (ALL INDUSTRIES)

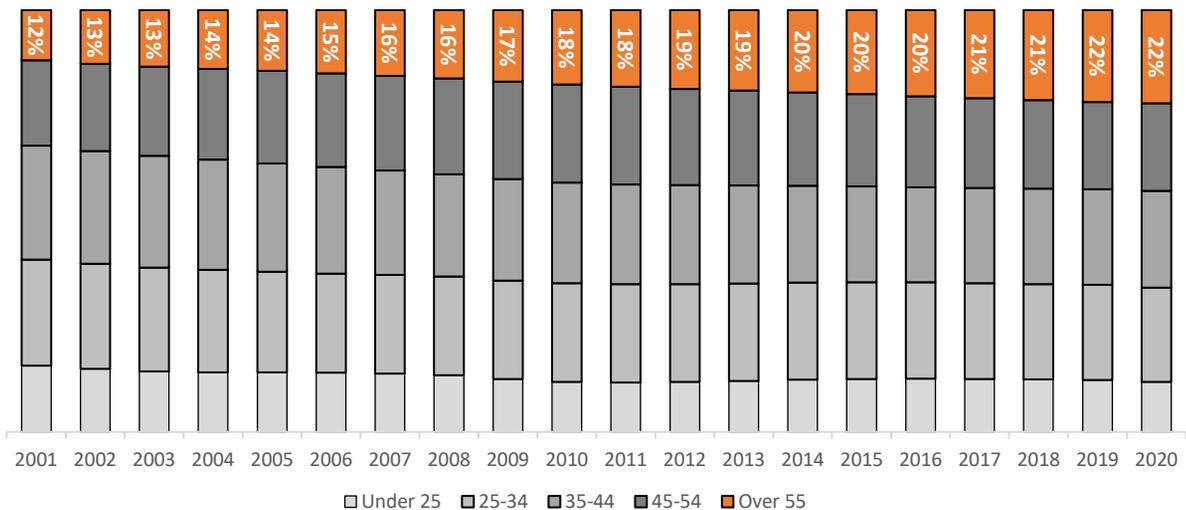
Abilene Workforce Age – All Industries: 2001-2020



Workforce Age Summary - Overall

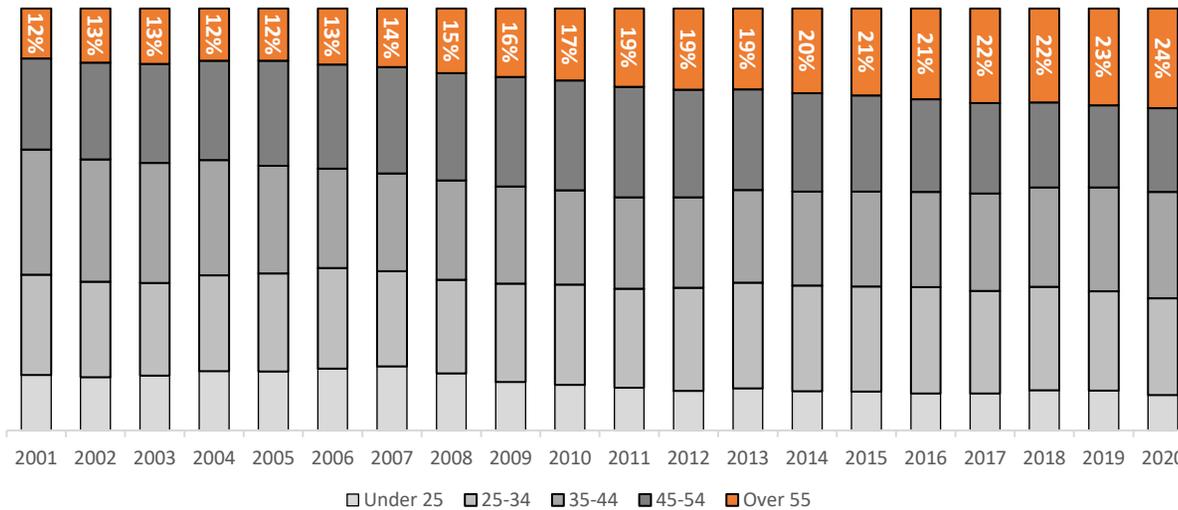
- We turn to more a more detailed breakdown of workforce demographics – that is, demographics characteristics of the workforce, not the population at large. This allows us to focus in more on specific items of interest.
- The charts at left show the percentage of Abilene’s workforce by age category over the past 20 years. This allows us to see not only current composition, but historical trends. We show the same data for its nearest large market competitor at bottom (Dallas-Fort Worth) to provide context. This includes data for all industries.
- Overall, the U.S. has an aging population, and that is clearly seen in the data here, as a larger share of all workers in both Abilene and Dallas-Fort Worth are in that over 55 category. In short, both markets look similar from a high level.

Dallas-Fort Worth Workforce Age – All Industries: 2001-2020



WORKFORCE DETAIL: AGE (MANUFACTURING ONLY)

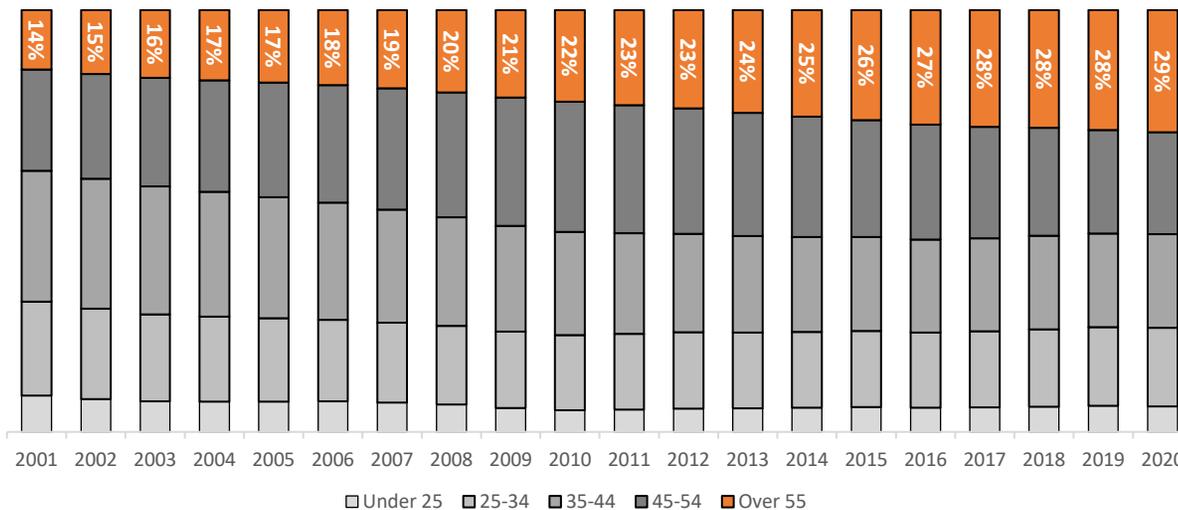
Abilene Workforce Age – Manufacturing: Distribution 2001-2020



Workforce Age Summary - Manufacturing

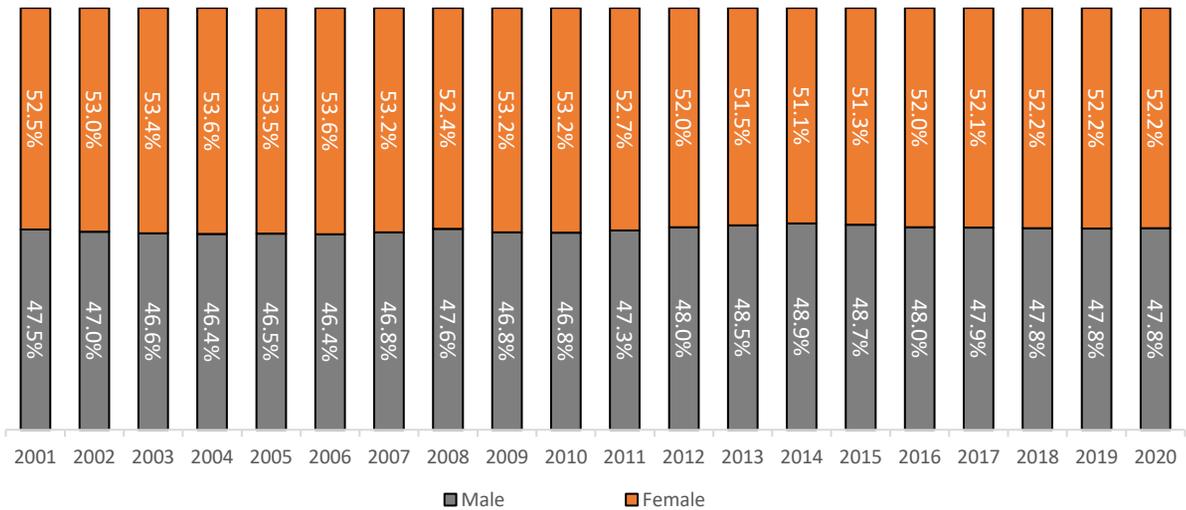
- The charts here example that same age data as on the previous page but isolate it to just the manufacturing industry. Again, we show Dallas-Fort Worth to provide more context.
- On the manufacturing side, the data show the aging of the workforce in Abilene, but its not quite as stark as what we see in Dallas. This data does show favorably.

Dallas-Fort Worth Workforce Age – Manufacturing: Distribution 2001-2020



WORKFORCE DETAIL: GENDER (ALL INDUSTRIES)

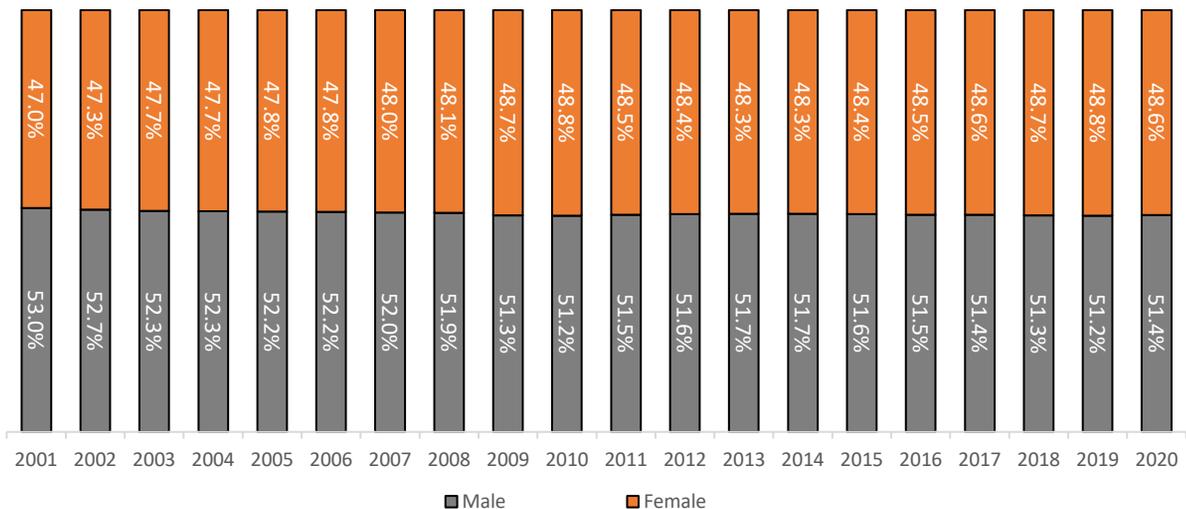
Abilene Workforce Gender – All Industries: *Distribution 2001-2020*



Workforce Gender Summary - Overall

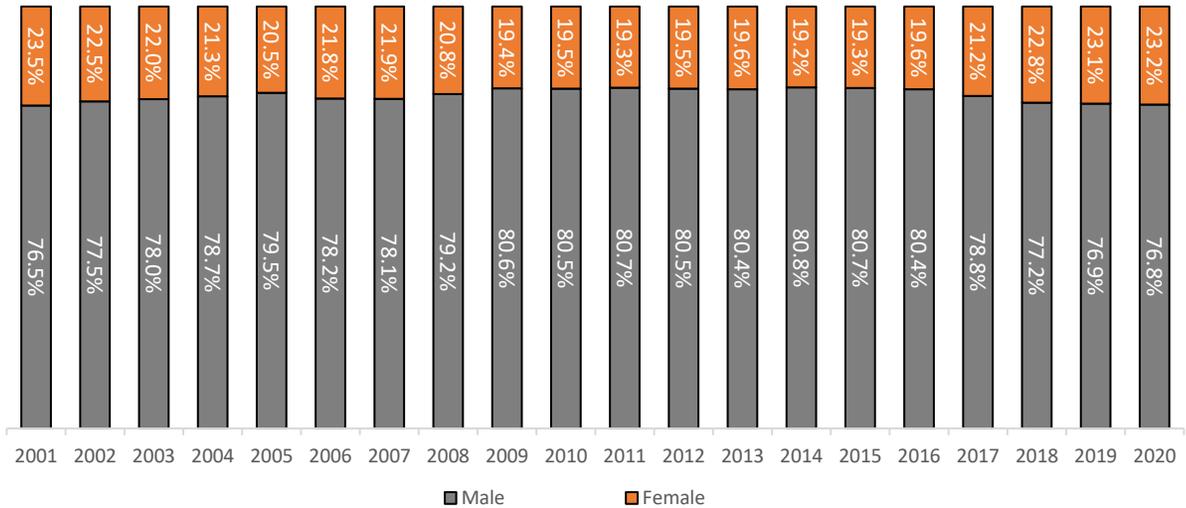
- The charts at left show the percentage of Abilene’s workforce by gender category over the past 20 years. This allows us to see not only current composition, but historical trends. We show the same data for its nearest large market competitor at bottom (Dallas-Fort Worth) to provide context. This includes data for all industries.
- While the difference is slight, the data here shows a higher percentage of the workforce in Abilene is female, which SSG sees as another asset to show the overall diversity of the workforce.

Dallas-Fort Worth Workforce Gender – All Industries: *Distribution 2001-2020*



WORKFORCE DETAIL: GENDER (MANUFACTURING ONLY)

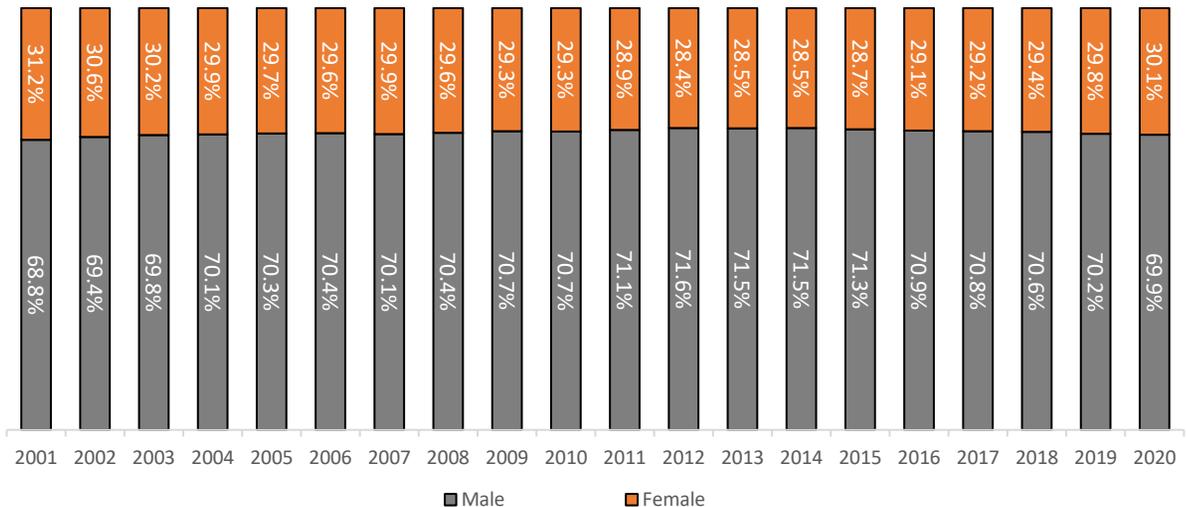
Abilene Workforce Gender – Manufacturing: 2001-2020



Workforce Gender Summary - Manufacturing

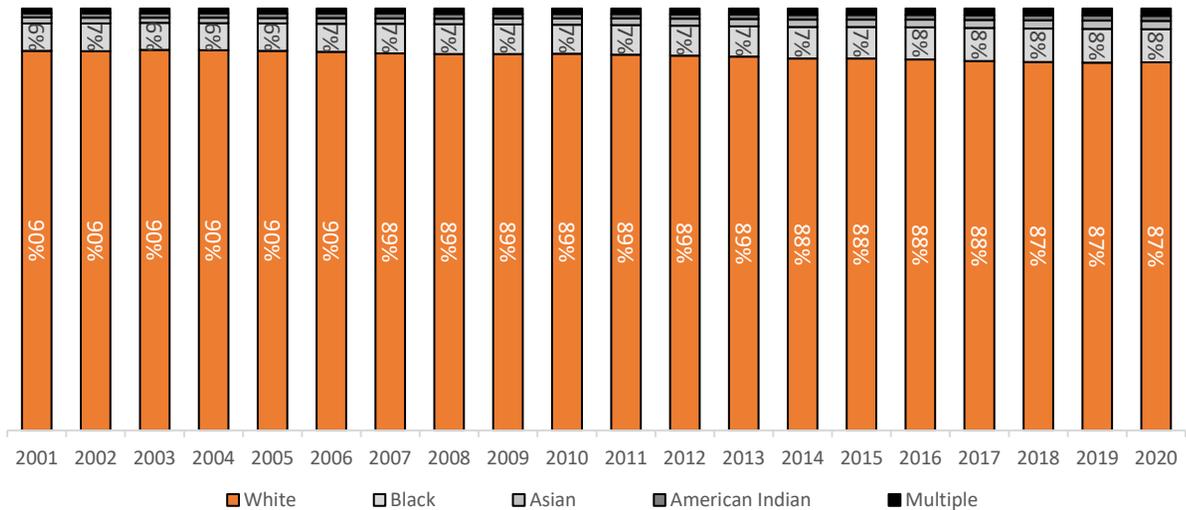
- The charts here example that same age data as on the previous page, but isolate it to just the manufacturing industry. Again, we show Dallas-Fort Worth to provide more context.
- Compared to the overall workforce, Abilene’s manufacturing sector has a smaller percentage of women. It’s also lower than in a large comparison market like Dallas. However, the data show an increase in the percentage of women in recent years.

Dallas-Fort Worth Workforce Gender – Manufacturing: 2001-2020



WORKFORCE DETAIL: RACE (ALL INDUSTRIES)

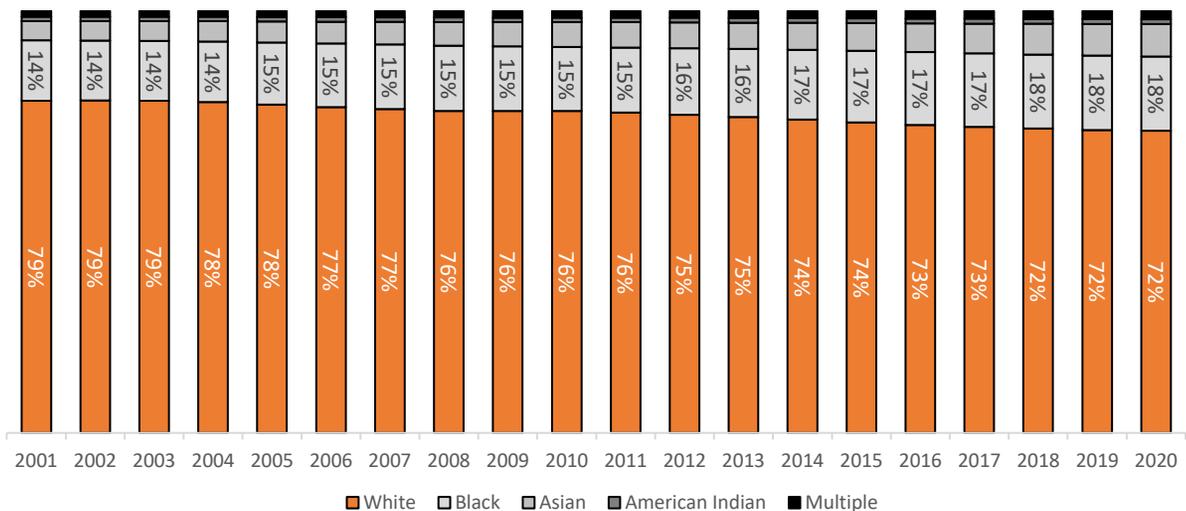
Abilene Workforce Race – All Industries: 2001-2020



Workforce Race Summary - Overall

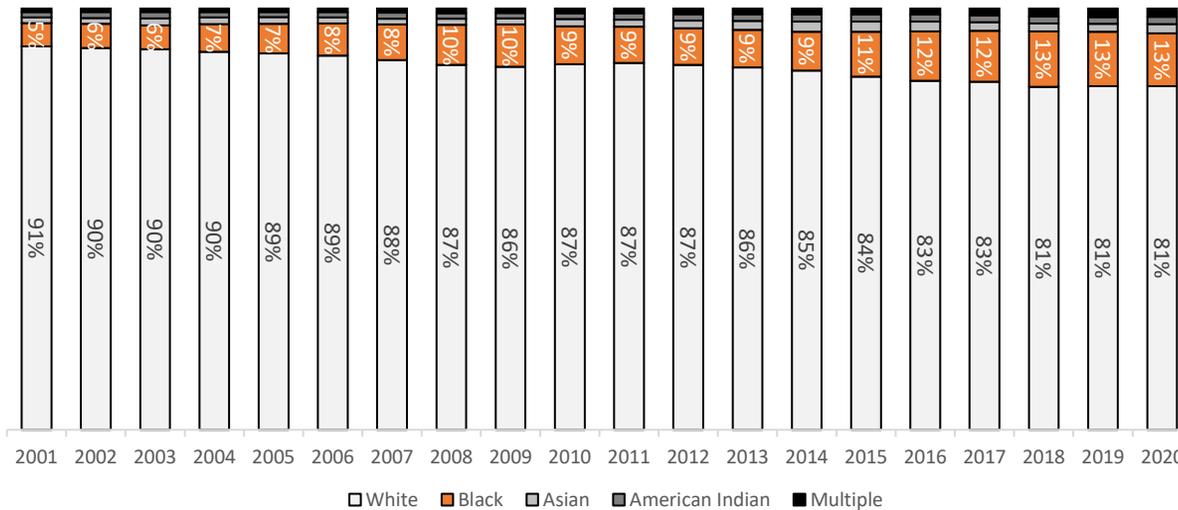
- The charts at left show the percentage of Abilene’s workforce by race over the past 20 years. This allows us to see not only current composition, but historical trends. We show the same data for its nearest large market competitor at bottom (Dallas-Fort Worth) to provide context. This includes data for all industries.
- The overall workforce in Abilene is not as diverse as in metro DFW.

Dallas-Fort Worth Workforce Age – All Industries: 2001-2020



WORKFORCE DETAIL: RACE (MANUFACTURING ONLY)

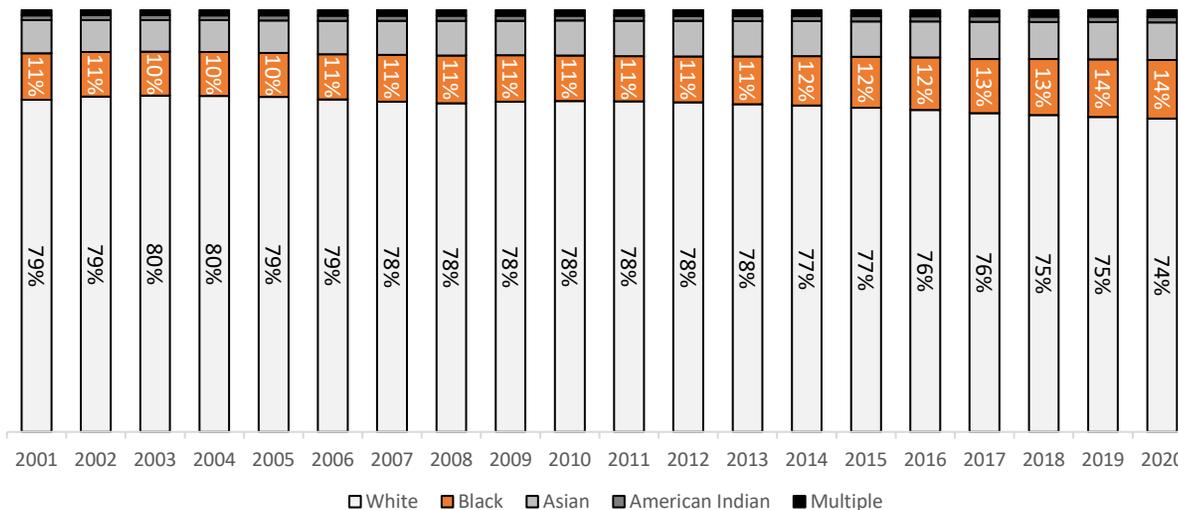
Abilene Workforce Race – Manufacturing: 2001-2020



Workforce Race Summary - Manufacturing

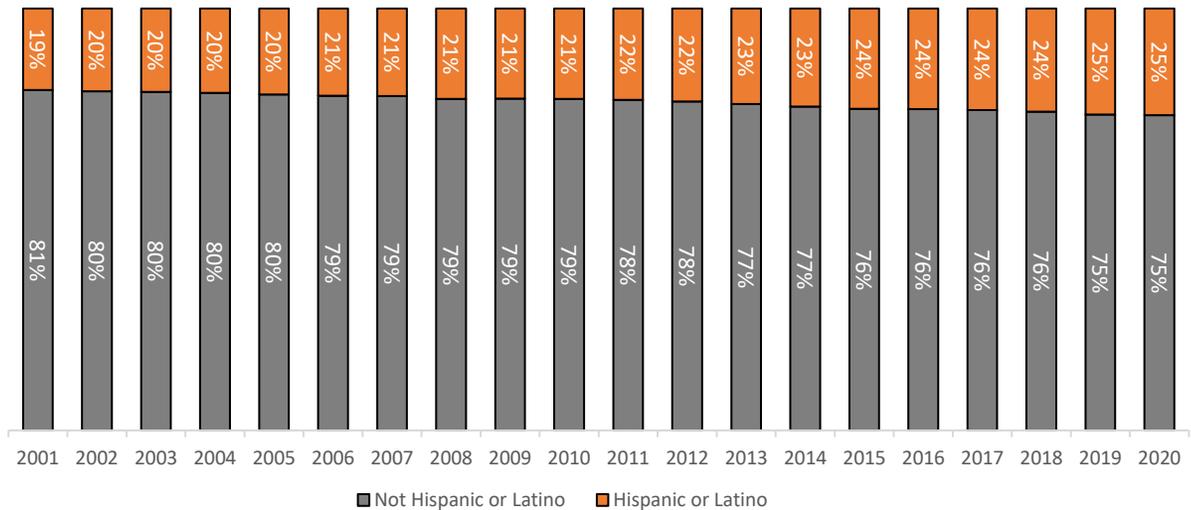
- The charts here example that same race data as on the previous page, but isolate it to just the manufacturing industry. Again, we show Dallas-Fort Worth to provide more context.
- On the manufacturing side, the data shows an increase in the percentage of Black workers in manufacturing. This may be driven, in part, by the growing immigrant population in the community.

Dallas-Fort Worth Workforce Race – Manufacturing: 2001-2020



WORKFORCE DETAIL: ETHNICITY (ALL INDUSTRIES)

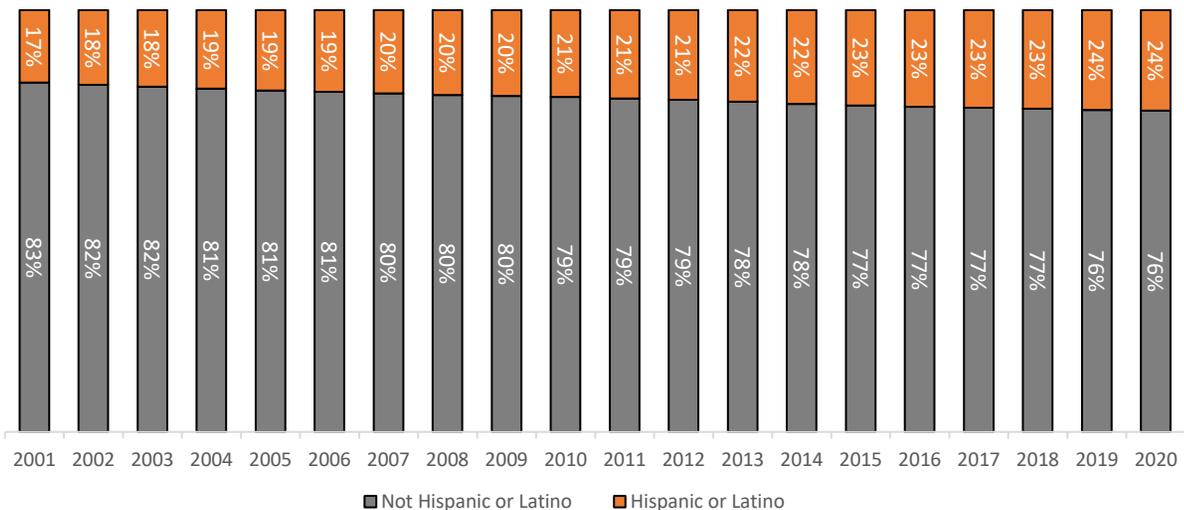
Abilene Workforce Ethnicity – All Industries: 2001-2020



Workforce Ethnicity Summary - Overall

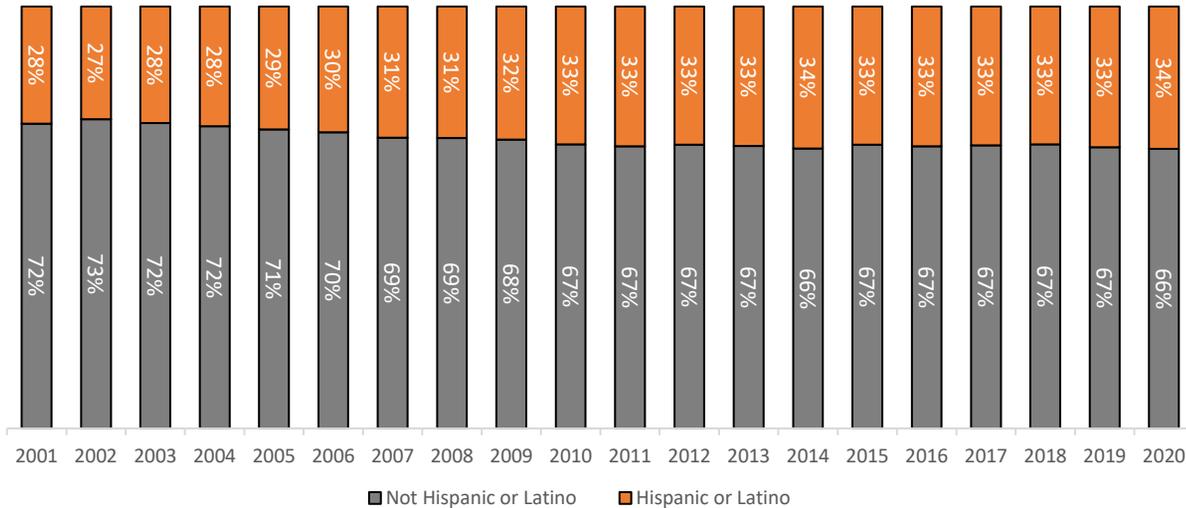
- The charts at left show the percentage of Abilene’s workforce by ethnicity category over the past 20 years. This allows us to see not only current composition, but historical trends. We show the same data for its nearest large market competitor at bottom (Dallas-Fort Worth) to provide context. This includes data for all industries.
- The percentage of Hispanic individuals in the overall workforce is generally similar in Abilene compared to DFW.

Dallas-Fort Worth Workforce Ethnicity – All Industries: 2001-2020



WORKFORCE DETAIL: ETHNICITY (MANUFACTURING ONLY)

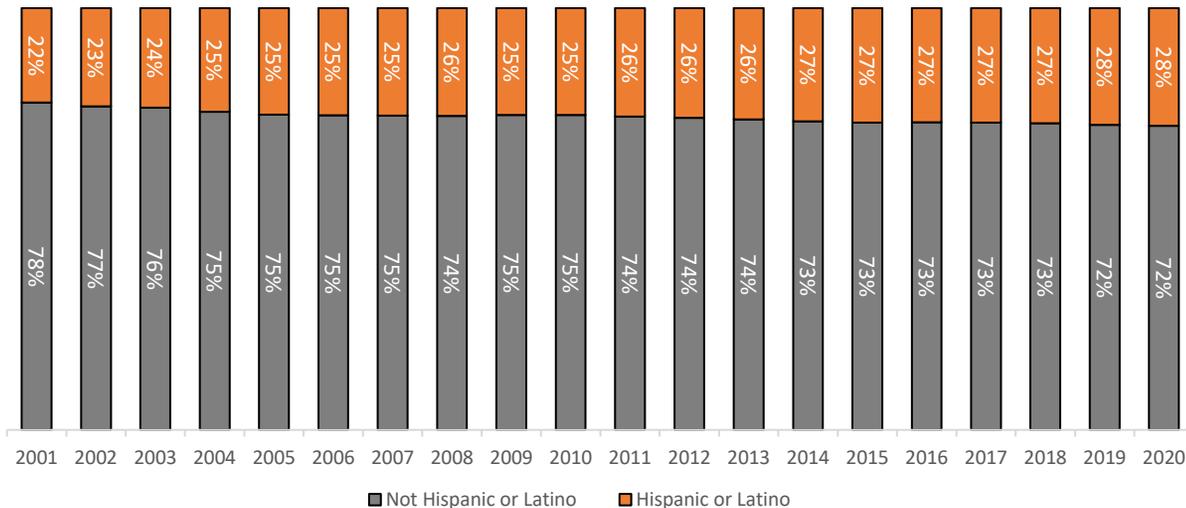
Abilene Workforce Ethnicity – Manufacturing: 2001-2020



Workforce Ethnicity Summary - Manufacturing

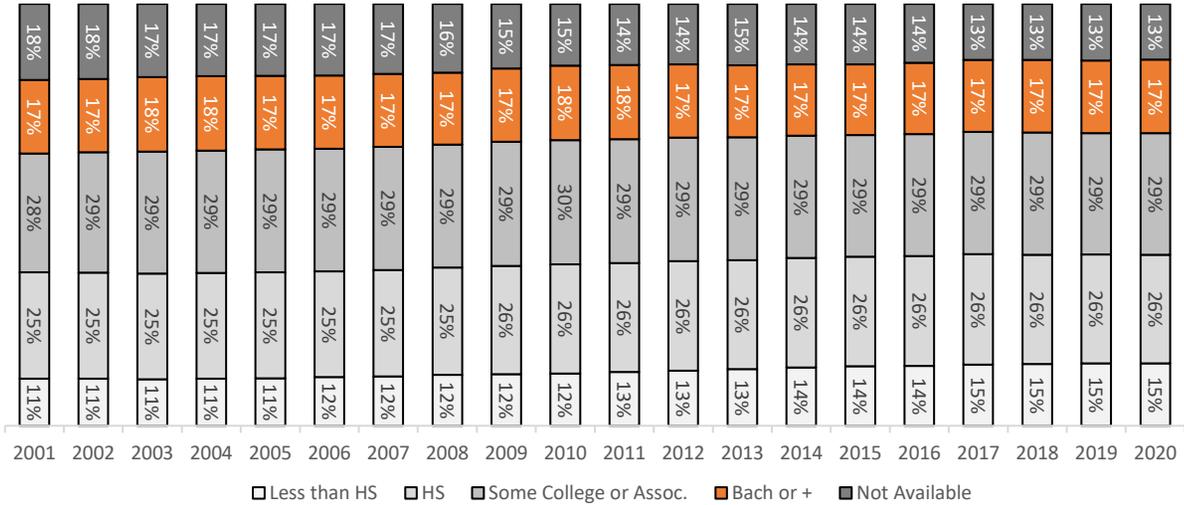
- The charts here example that same ethnicity data as on the previous page but isolate it to just the manufacturing industry. Again, we show Dallas-Fort Worth to provide more context.
- The data show a larger percentage of Hispanic workers in manufacturing in Abilene compared to the overall workforce and compared to manufacturing in DFW. Again, this is a positive note that speaks to the diversity of the manufacturing workforce.

Dallas-Fort Worth Workforce Ethnicity – Manufacturing: 2001-2020



WORKFORCE DETAIL: EDUCATION (ALL INDUSTRIES)

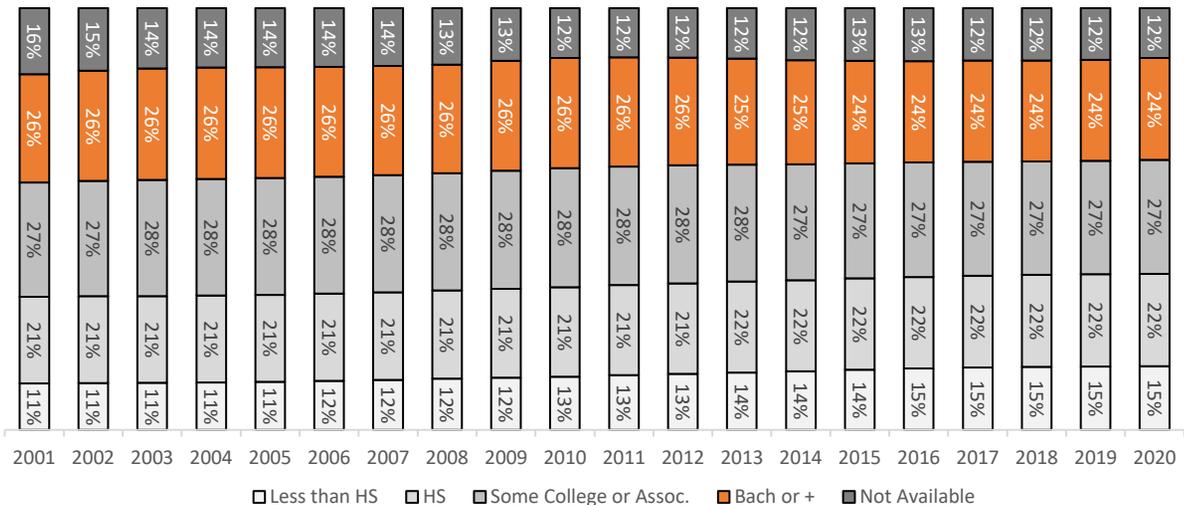
Abilene Workforce Education – All Industries: 2001-2020



Workforce Education Summary - Overall

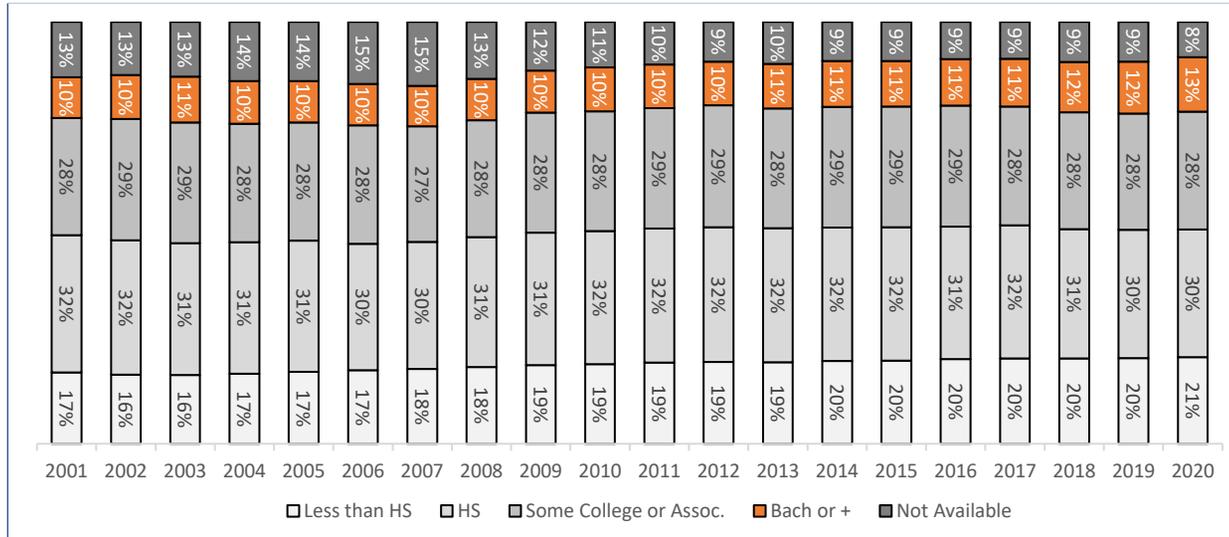
- The charts at left show the percentage of Abilene’s workforce by education category over the past 20 years. This allows us to see not only current composition, but historical trends. We show the same data for its nearest large market competitor at bottom (Dallas-Fort Worth) to provide context. This includes data for all industries. Unfortunately, the data source (QWI) combines those with some college with those with an Associates Degree, which SSG believes is a misguided delineation. As a result, the charts at left highlight the proportion of the workforce with a bachelor’s degree or above.
- The data show a lower percentage of the workforce in Abilene with a bachelor’s degree compared to DFW.

Dallas-Fort Worth Workforce Education – All Industries: 2001-2020



WORKFORCE DETAIL: ETHNICITY (MANUFACTURING ONLY)

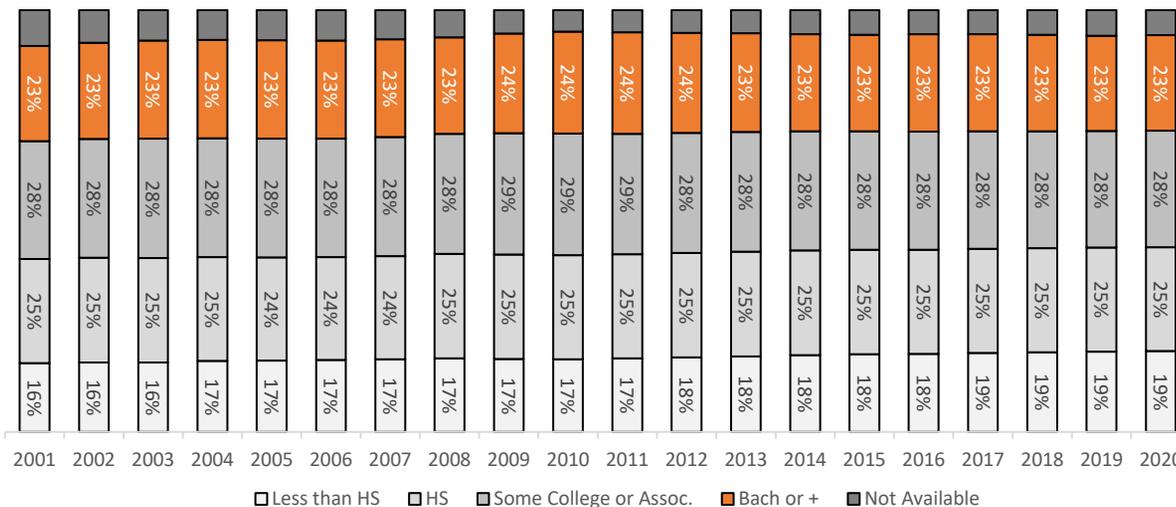
Abilene Workforce Education – Manufacturing: 2001-2020



Workforce Education Summary - Manufacturing

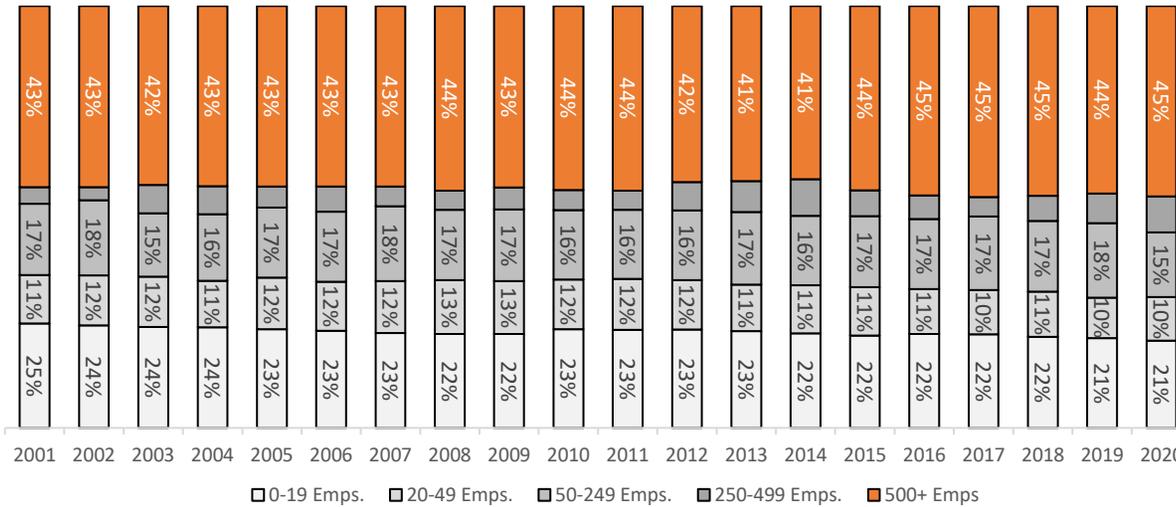
- The charts here example that same education data as on the previous page, but isolate it to just the manufacturing industry. Again, we show Dallas-Fort Worth to provide more context.
- Breaking out the data for manufacturing only, Abilene has a smaller percentage of workers with a bachelor’s degree compared to DFW. That can be caused by the composition of manufacturing companies in Abilene verse its large neighbor to the east.

Dallas-Fort Worth Workforce Education – Manufacturing: 2001-2020



WORKFORCE DETAIL: FIRM DYNAMICS (ALL INDUSTRIES)

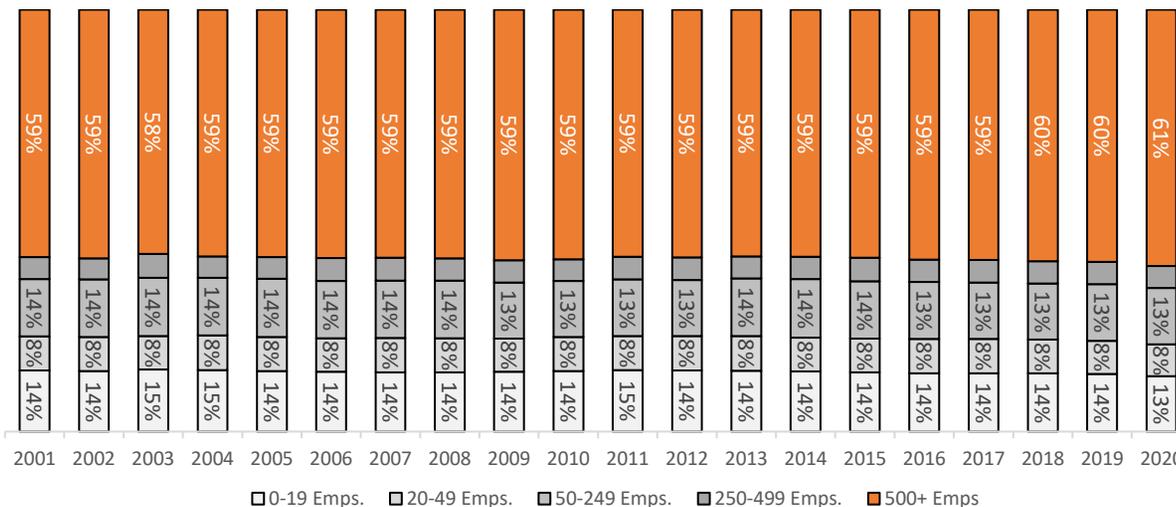
Abilene Employment by Firm Size – All Industries: Distribution 2001-2020



Workforce Age Summary - Overall

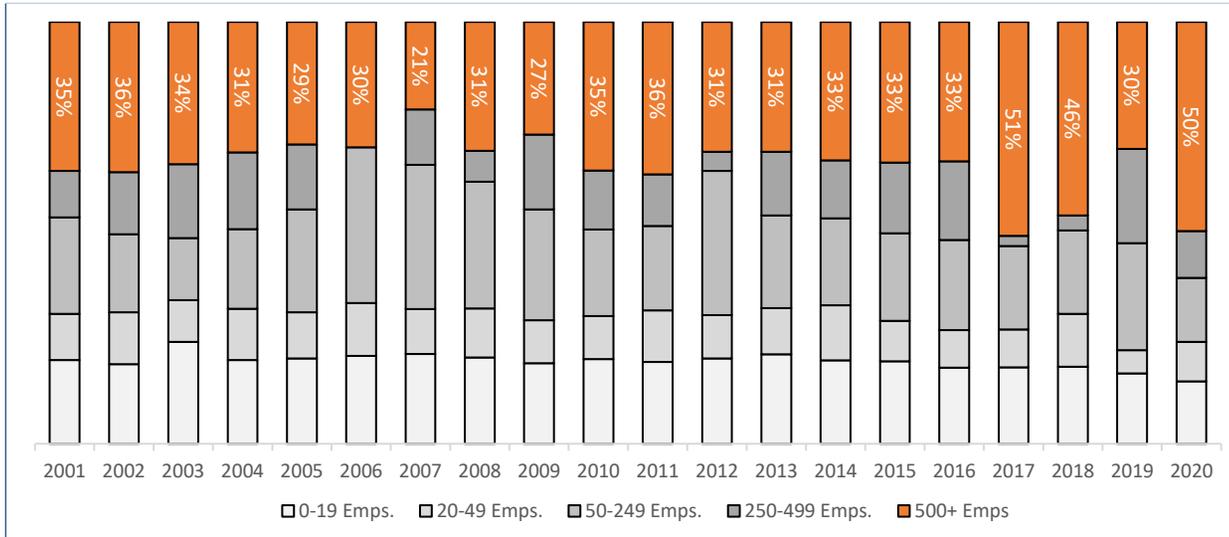
- Finally, we examine broad firm dynamics by showing the level of employment by different firm sizes. This is one way to example overall workforce dynamism in a market.
- Please note that this data uses national definitions of firms. So for example, if ABC Corp has 1,000 employees nationally, but only 100 in Abilene, those workers are still put in the “500+ employees” category).
- Overall, Abilene has a larger share of employment driven by very large firms (as measured nationally). SSG actually thinks this is a positive as it speaks to the overall diversity of small and medium sized businesses in the community.

Dallas-Fort Worth Employment by Firm Size – All Industries: Distribution 2001-2020



WORKFORCE DETAIL: FIRM DYNAMICS (MANUFACTURING ONLY)

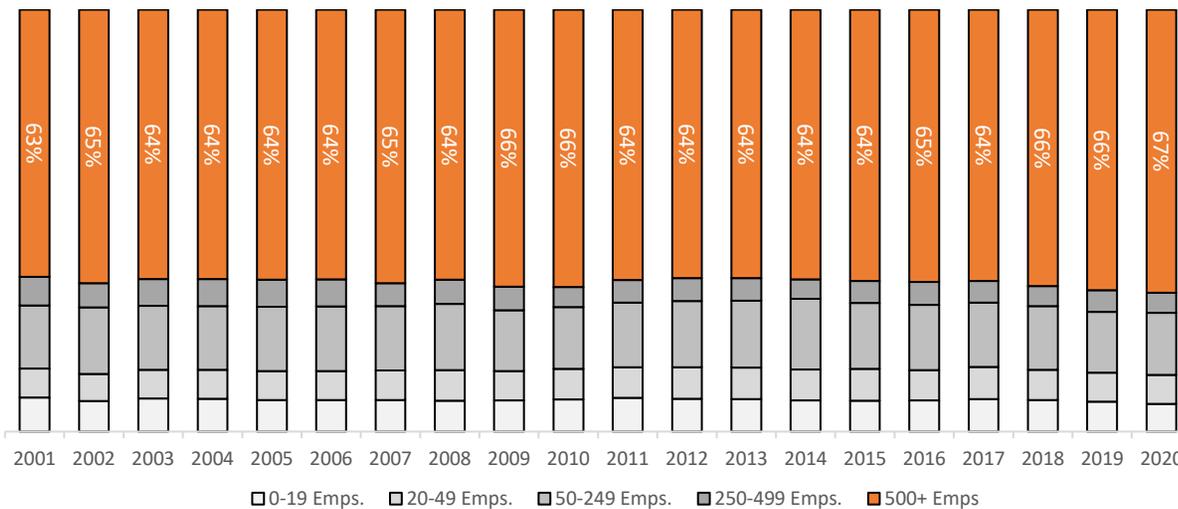
Abilene Employment by Firm Size— Manufacturing: Distribution 2001-2020



Workforce Age Summary - Manufacturing

- The charts here example that same firm size employment data as on the previous page, but isolate it to just the manufacturing industry. Again, we show Dallas-Fort Worth to provide more context.
- As one can see, the data for Abilene varies from year to year (this is based on QWI data collection and or year-to-year changes in the underlying ownership structure of some companies). But on balance, Abilene has a much higher percentage of workers in manufacturing employed by smaller and medium sized firms. Again, SSG believes that to be a very positive factor as it shows much more diversity in firm size and ownership. Oftentimes in other markets (like in DFW) a very high percentage of manufacturing workers are employed by large national and international firms. We think this can be used to show that there is more dynamism in the types of firms in Abilene, which can be more favorable for overall workforce dynamics (e.g. the market is not driven by one or two major employers).

Dallas-Fort Worth Employment by Firm Size— Manufacturing: Distribution 2001-2020



MIGRATION PATTERNS TO & FROM ABILENE

Top Counties for Migration To & From Abilene

County	2015			2016			2017			2018			2019		
	Inbound Migrations	Outbound Migrations	Net Migrations	Inbound Migrations	Outbound Migrations	Net Migrations	Inbound Migrations	Outbound Migrations	Net Migrations	Inbound Migrations	Outbound Migrations	Net Migrations	Inbound Migrations	Outbound Migrations	Net Migrations
Tarrant County, TX	285	351	-66	289	451	-162	376	632	-256	336	381	-45	342	382	-40
Dallas County, TX	155	211	-56	163	198	-35	249	313	-64	202	263	-61	189	237	-48
Tom Green County, TX	142	131	11	196	209	-13	188	230	-43	150	164	-14	119	157	-38
Bexar County, TX	130	191	-61	138	247	-109	220	338	-118	187	233	-45	123	250	-126
Midland County, TX	127	101	25	117	110	7	134	175	-42	126	103	23	189	120	69
Nolan County, TX	113	103	10	139	108	31	187	122	65	118	113	4	108	103	5
Lubbock County, TX	111	114	-3	170	193	-23	234	250	-16	165	185	-20	173	167	6
Harris County, TX	104	116	-12	115	172	-57	198	173	25	130	132	-2	160	125	34
Travis County, TX	88	129	-42	87	173	-86	112	164	-51	82	106	-24	77	134	-56
Ector County, TX	84	75	9	113	74	39	81	102	-22	115	81	34	125	80	45
Haskell County, TX	80	62	18	76	53	23	74	99	-25	85	58	26	84	36	47
Brown County, TX	74	69	5	81	102	-20	110	138	-28	130	66	63	106	106	0
Collin County, TX	74	68	5	75	110	-35	102	121	-19	75	90	-15	66	126	-60
Eastland County, TX	63	78	-16	58	78	-21	86	125	-39	101	72	29	72	74	-2
Wichita County, TX	57	43	14	68	89	-21	126	92	34	85	99	-15	93	91	1
Denton County, TX	55	87	-32	86	147	-61	106	217	-111	96	125	-29	81	121	-41
Bell County, TX	51	52	-1	63	75	-12	61	139	-78	52	73	-21	62	74	-12
Runnels County, TX	49	38	10	74	66	7	60	75	-15	86	47	40	82	35	47
Maricopa County, AZ	46	39	7	41	63	-21	77	55	22	54	48	6	28	64	-36
Coleman County, TX	45	11	34	7	37	-31	7	36	-29	48	45	3	45	9	36
TOTAL	1,931	2,070	-139	2,155	2,755	-601	2,788	3,597	-809	2,421	2,483	-62	2,323	2,491	-168

Migration Summary

- The table above shows the top counties for in-migration to Abilene and out-migration from Abilene over the past five years. SSG uses this data to see patterns of where a community is losing people to, or where its gaining people from.
- For example, this shows that in 2019, 342 people moved from Tarrant County to Abilene, 382 from Abilene to Tarrant County, for a net of -40 (outlined in red).

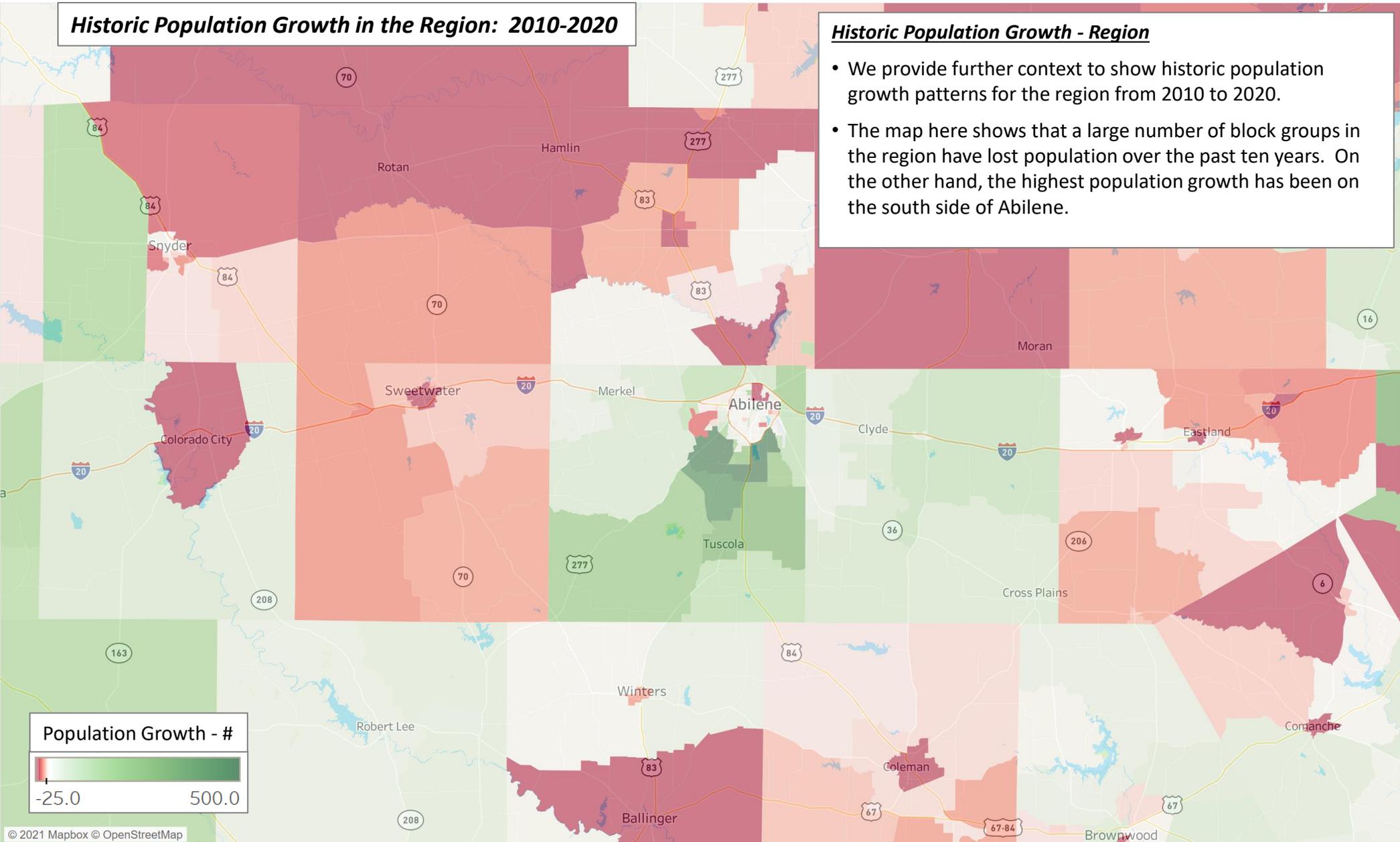
- As expected, the data shows the strongest in- and out-flow to major metro areas within Texas like Tarrant, Dallas, Bexar, and similar communities.
- The data shows a significant increase in outmigration in 2016 and 2017 which is likely impacted by the significant fall in oil prices in late 2014 through early 2016.
- However, out-migration slowed significantly in 2018 and 2019.

REGIONAL PERSPECTIVE: HISTORIC POPULATION GROWTH

Historic Population Growth in the Region: 2010-2020

Historic Population Growth - Region

- We provide further context to show historic population growth patterns for the region from 2010 to 2020.
- The map here shows that a large number of block groups in the region have lost population over the past ten years. On the other hand, the highest population growth has been on the south side of Abilene.



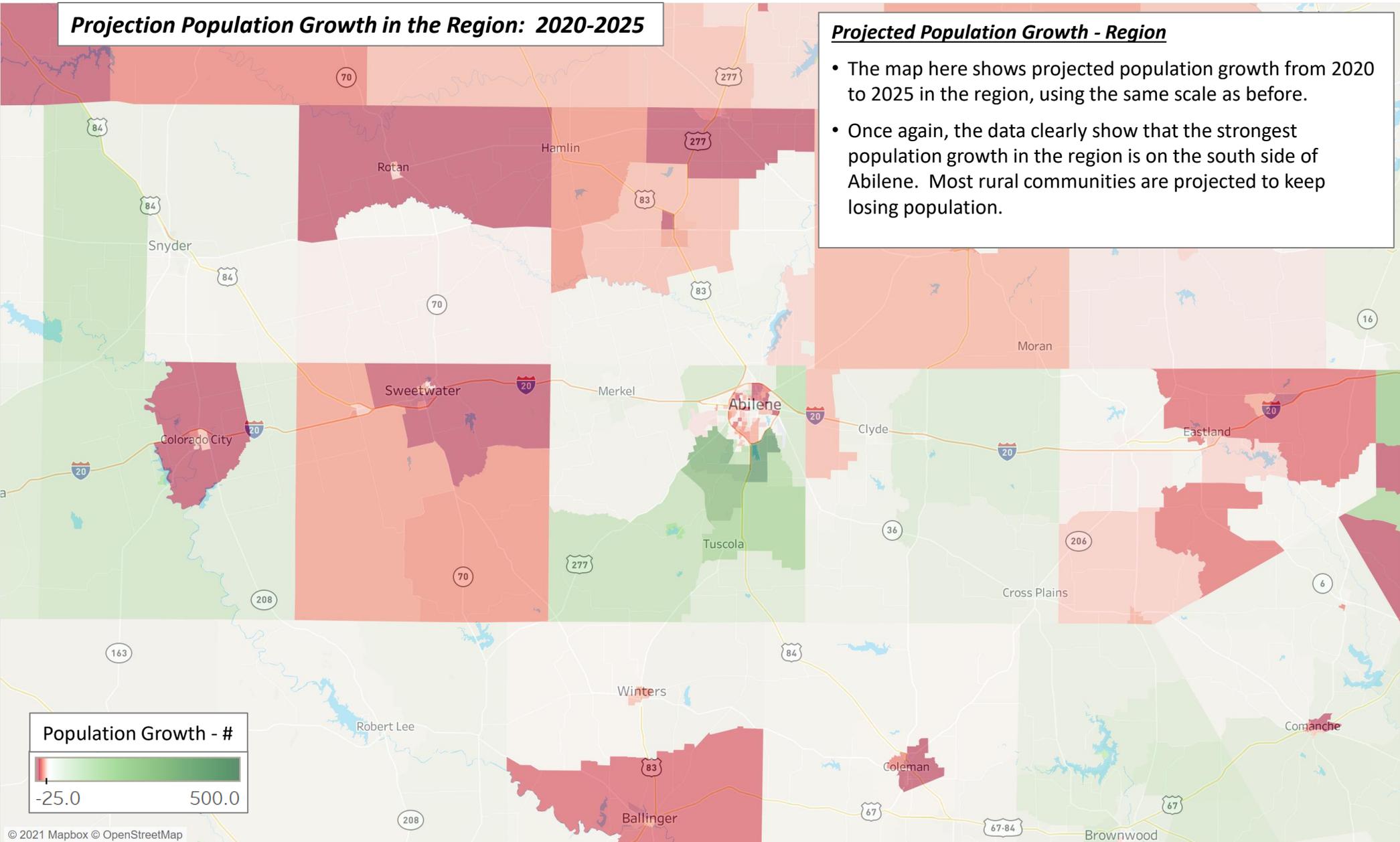
© 2021 Mapbox © OpenStreetMap

REGIONAL PERSPECTIVE: PROJECTED POPULATION GROWTH

Projection Population Growth in the Region: 2020-2025

Projected Population Growth - Region

- The map here shows projected population growth from 2020 to 2025 in the region, using the same scale as before.
- Once again, the data clearly show that the strongest population growth in the region is on the south side of Abilene. Most rural communities are projected to keep losing population.



© 2021 Mapbox © OpenStreetMap

The background features a white field with a light gray dot pattern. On the left, there are overlapping geometric shapes: a dark blue triangle with a dot pattern, a medium blue triangle with a dot pattern, and a white triangle with a dot pattern. Two orange diagonal lines cross the scene from the bottom left towards the top right.

2. OCCUPATIONAL DYNAMICS

2. OCCUPATIONAL DYNAMICS SUMMARY

2. OCCUPATIONAL DYNAMICS



- Supply of Key Skill Sets
- Demand for Key Skill Sets
- Wages & Salaries

Overview & Approach

This section focuses on the specific occupational clusters critical to Abilene’s target industries and other primary, export-oriented sectors. The beginning of this section shares summary and high-level occupational data and then dives into 23 individual clusters of interest. In each section, we measure:

- **Occupational Supply**: the overall count of workers in that cluster, the concentration of workers relative to the national average, and historic/projected growth data.
- **Occupational Demand**: job postings data that shows demand for these positions. We use two different measure of demand data that show different views of competition.
- **Wage & Salary**: two sources of data that show current wage levels along with historical wage growth trends. We use two sources of data here as wage/salary data can oftentimes be misleading compared to actual market rates.

Throughout, we add additional anecdotal data as collected during our conversations with employers and other stakeholders in the region. Unless otherwise stated, this data represents a 40-minute drivetime around Abilene and each comparison market.

Key Strengths

- ✓ **Supply and Demand for Skilled Manufacturing**: There is a strong concentration and relatively lower demand for maintenance and engineering techs – two critical occupational clusters for advanced manufacturing. There’s also a potential niche for aerospace given the maintenance base.
- ✓ **Supply of Healthcare**: There is a strong concentration of healthcare workers, although data and testimony point to high demand. We see some potential to parlay that presence into primary industry.
- ✓ **Demand/Competition Value Proposition for Professional Services**: Although the presence and concentration of key clusters like finance, accounting, HR, IT, and marketing aren’t that strong, there is much lower demand compared to a market like DFW. There’s a particularly strong presence and growth trajectory for marketing workers.
- ✓ **Supply of Supplemental Retail & Hospitality Workers**: There is a high concentration of these workers who tend to be underemployed. With training, these folks can transition into higher skill careers.

Key Challenges

- ? **Sheer Availability of Production Workforce & High Demand**: The data point to lower numbers and concentration of most production-related clusters. With Great Lakes on the horizon, that supply will get squeezed further. A large supply of construction/extraction workers connected to the oil field can help address that concern, but that workforce will (likely) remain transient.
- ? **Supply of Engineering**: The presence and concentration of engineers is low, which may be the biggest challenge for growing and attracting advanced operations.
- ? **Supply of IT and STEM**: While improving, the supply of these types of workers in absolute and concentration terms is not as favorable compared to larger markets.
- ? **Supply of Professional Services**: Similarly, there’s a lower presence and concentration of these workers. The value proposition is much stronger on the demand side.

OCCUPATIONAL SUMMARY: ADVANCED MANUFACTURING

Cluster	Supply	Demand	Costs
Production (Overall)	<ul style="list-style-type: none"> ✓ Strong historic and projected growth. ? Low counts and very low concentration. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ Mix of results – one data points to higher wages, the other to moderate. ? Higher wage escalation.
Production – Food	<ul style="list-style-type: none"> ✓ Strong historic and projected growth. ? Low counts and very low concentration. 	<ul style="list-style-type: none"> ? Elevated demand for workers based on relative demand and posting intensity indicators. 	<ul style="list-style-type: none"> ✓ Mix of results – one data points to higher wages, the other to moderate. ? High wage escalation in past two years.
Production – Metal	<ul style="list-style-type: none"> ✓ Strong projected growth. Historic growth shows up/downs of oil/gas. ? Low counts and concentration. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ No significant wage escalation. ✓ Mix of results – one data points to higher wages, the other to moderate.
 Maintenance	<ul style="list-style-type: none"> ✓ Strong concentration and historic/projected growth in the cluster. ? Relatively small number. 	<ul style="list-style-type: none"> ✓ Relatively low demand. ✓ Not as big of a challenge to hire based on interviews. 	<ul style="list-style-type: none"> ✓ Both sources point to lower wages and low wage escalation.
Logistics – Direct	<ul style="list-style-type: none"> ✓ Favorable growth trends. ? Moderate number and concentration of workers. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ Both sources point to lower wages and low wage escalation.
Logistics – Support	<ul style="list-style-type: none"> ? Low presence, concentration, and growth compared to others. 	<ul style="list-style-type: none"> ✓ Moderate demand overall. 	<ul style="list-style-type: none"> ✓ Mix of results – one data points to higher wages, the other to moderate. ? Higher wage escalation.
Engineering	<ul style="list-style-type: none"> ✓ Strong historic and projected growth. ? Low counts and very low concentration. 	<ul style="list-style-type: none"> ✓ Relatively low demand. 	<ul style="list-style-type: none"> ✓ Both sources point to lower wages and low wage escalation.
 Engineering Techs	<ul style="list-style-type: none"> ✓ Strong concentration and historic/projected growth in the cluster. ? Relatively small number. 	<ul style="list-style-type: none"> ✓ Relatively low demand. 	<ul style="list-style-type: none"> ✓ No significant wage escalation. ✓ Mix of results – one data points to higher wages, the other to moderate.



Cluster with Potential Strong Value Proposition

OCCUPATIONAL SUMMARY: ADVANCED MANUFACTURING

Cluster	Supply	Demand	Costs
Production (Overall)	<ul style="list-style-type: none"> ✓ Strong historic and projected growth. ? Low counts and very low concentration. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ Mix of results – one data points to higher wages, the other to moderate. ? Higher wage escalation.
Production – Food	<ul style="list-style-type: none"> ✓ Strong historic and projected growth. ? Low counts and very low concentration. 	<ul style="list-style-type: none"> ? Elevated demand for workers based on relative demand and posting intensity indicators. 	<ul style="list-style-type: none"> ✓ Mix of results – one data points to higher wages, the other to moderate. ? High wage escalation in past two years.
Production – Metal	<ul style="list-style-type: none"> ✓ Strong projected growth. Historic growth shows up/downs of oil/gas. ? Low counts and concentration. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ No significant wage escalation. ✓ Mix of results – one data points to higher wages, the other to moderate.
 Maintenance	<ul style="list-style-type: none"> ✓ Strong concentration and historic/projected growth in the cluster. ? Relatively small number. 	<ul style="list-style-type: none"> ✓ Relatively low demand. ✓ Not as big of a challenge to hire based on interviews. 	<ul style="list-style-type: none"> ✓ Both sources point to lower wages and low wage escalation.
Logistics – Direct	<ul style="list-style-type: none"> ✓ Favorable growth trends. ? Moderate number and concentration of workers. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ Both sources point to lower wages and low wage escalation.
Logistics – Support	<ul style="list-style-type: none"> ? Low presence, concentration, and growth compared to others. 	<ul style="list-style-type: none"> ✓ Moderate demand overall. 	<ul style="list-style-type: none"> ✓ Mix of results – one data points to higher wages, the other to moderate. ? Higher wage escalation.
Engineering	<ul style="list-style-type: none"> ✓ Strong historic and projected growth. ? Low counts and very low concentration. 	<ul style="list-style-type: none"> ✓ Relatively low demand. 	<ul style="list-style-type: none"> ✓ Both sources point to lower wages and low wage escalation.
 Engineering Techs	<ul style="list-style-type: none"> ✓ Strong concentration and historic/projected growth in the cluster. ? Relatively small number. 	<ul style="list-style-type: none"> ✓ Relatively low demand. 	<ul style="list-style-type: none"> ✓ No significant wage escalation. ✓ Mix of results – one data points to higher wages, the other to moderate.



Cluster with Potential Strong Value Proposition

OCCUPATIONAL SUMMARY: SUPPORT, AEROSPACE & BIOTECH

Cluster	Supply	Demand	Costs
✓ Construction & Extraction <i>(Oil & Gas)</i>	✓ High concentration and projected growth of these workers.	? Elevated demand for these workers.	✓ Moderate wages and inflation compared to other markets.
✓ Supplemental <i>(Retail & Hospitality)</i>	✓ Especially high concentration of these workers in the region.	? Elevated demand in Abilene, even as these workers are in high demand everywhere.	✓ Moderate wage levels overall. ? But higher wage escalation.

Cluster	Supply	Demand	Costs
✓ Production – Aerospace	✓ Very strong concentration of this occupational clusters. ? Less favorable growth metrics, small numbers.	✓ Low levels of relative demand. ? But high posting intensity meaning employers are working to find emps.	✓ Moderate wages overall. ? Sharply rising wages in the last couple years.
Engineering – Aerospace Specific	? Very low presence and concentration, and less favorable growth.	✓ Low levels of demand and competition.	✓ Moderate salary levels and escalation.

Cluster	Supply	Demand	Costs
Production – Bio & Life Science	? Very low number, concentration, and historic growth of this cluster.	? High demand for these types of workers.	✓ Moderate wage levels and inflation overall.
Science	? Very low number, concentration, and historic growth of this cluster.	✓ Moderate demand levels.	✓ Moderate wage levels and declining wage levels.
Science Techs	? More moderate concentration levels, but low numbers and historical decline.	? Slightly elevated demand for these types of workers.	? Mix of wage data, with EMSI showing very high wage levels (likely skewed).
✓ Health Care & Related	✓ High concentration and growth.	? Very high demand although posting intensity is more moderate.	✓ Moderate wage levels compared to other markets.



Cluster with Potential Strong Value Proposition

OCCUPATIONAL SUMMARY: IT & PROFESSIONAL SERVICES

Cluster	Supply	Demand	Costs
High Skill IT	<ul style="list-style-type: none"> ✓ Favorable historic and projected growth. ? Very low numbers and concentration. 	<ul style="list-style-type: none"> ? Slightly elevated demand, but much less than north Dallas. 	<ul style="list-style-type: none"> ✓ Moderate wage levels and flat/declining wages per EMSI (a sign of lower demand).
Moderate Skill IT	<ul style="list-style-type: none"> ✓ Favorable historic and projected growth. ? Very low numbers and concentration 	<ul style="list-style-type: none"> ✓ More moderate demand compared to the high skill cluster. North Dallas still shows very high competition. 	<ul style="list-style-type: none"> ✓ Moderate wage levels and flat/declining wages per EMSI (a sign of lower demand).

Cluster	Supply	Demand	Costs
Finance	<ul style="list-style-type: none"> ? Relatively low presence and concentration. Growth is positive but moderate. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ Moderate wage levels and flat/declining wages per EMSI (a sign of lower demand).
Accounting	<ul style="list-style-type: none"> ? Higher concentration and presence than finance, but still relatively low. 	<ul style="list-style-type: none"> ? Slightly more elevated demand for workers compared to finance. 	<ul style="list-style-type: none"> ✓ Moderate wage levels and flatter wage escalation.
Human Resources	<ul style="list-style-type: none"> ? Moderate presence, concentration and historic/projected growth. 	<ul style="list-style-type: none"> ✓ Fairly low posting intensity meaning employers are finding workers. ? But high relative demand overall. 	<ul style="list-style-type: none"> ✓ Moderate wage levels and flat/declining wages per EMSI (a sign of lower demand).
Marketing	<ul style="list-style-type: none"> ✓ Low concentration, but much more in line with larger market competitors. ✓ Really high historic growth. 	<ul style="list-style-type: none"> ✓ Fairly low demand compared to other markets. 	<ul style="list-style-type: none"> ? Some data point to elevated and rising wages in this cluster.
Administrative Support	<ul style="list-style-type: none"> ✓ Slightly elevated concentration of workers in this cluster. 	<ul style="list-style-type: none"> ? Elevated demand for these workers. 	<ul style="list-style-type: none"> ✓ Moderate wage levels. ? But increasing wages (like other markets).



Cluster with Potential Strong Value Proposition

BROAD OCCUPATIONAL COMPARISONS

Occupational Concentration for Broad Categories: *Greater than 1.00 means high concentration*

SOC	Description	Abilene	Wichita Falls (Peer Market)	Burleson (Large Market)
49-0000	Installation, Maintenance, and Repair	1.27	1.20	1.11
21-0000	Community and Social Service	1.24	1.00	0.75
47-0000	Construction and Extraction	1.21	0.79	1.10
31-0000	Healthcare Support	1.20	1.05	0.76
29-0000	Healthcare Practitioners and Technical	1.19	1.30	0.90
33-0000	Protective Service	1.17	1.37	0.82
35-0000	Food Preparation and Serving Related	1.17	1.36	1.08
37-0000	Building and Grounds Cleaning and Maintenance	1.12	1.08	0.83
43-0000	Office and Administrative Support	1.11	0.99	1.10
25-0000	Educational Instruction and Library	1.07	1.05	0.90
39-0000	Personal Care and Service	1.00	0.94	0.92
41-0000	Sales and Related	0.93	0.91	1.10
53-0000	Transportation and Material Moving	0.86	0.82	1.33
27-0000	Arts, Design, Entertainment, Sports, and Media	0.84	0.68	0.83
17-0000	Architecture and Engineering	0.76	1.03	1.07
19-0000	Life, Physical, and Social Science	0.71	0.72	0.65
13-0000	Business and Financial Operations	0.64	0.63	0.94
51-0000	Production	0.61	0.76	1.09
23-0000	Legal	0.60	0.56	0.77
15-0000	Computer and Mathematical	0.47	0.58	0.76
45-0000	Farming, Fishing, and Forestry	0.44	0.52	0.29
55-0000	<i>Military-only Occupations</i>	4.97	8.15	0.45

Summary

Before we get into detailed occupational comparisons, we review broad occupation data (at the two-digit SOC code level) to contextualize Abilene vs. a similar market like Wichita Falls and a much larger, fast-growing market like Burleson (south of Fort Worth).

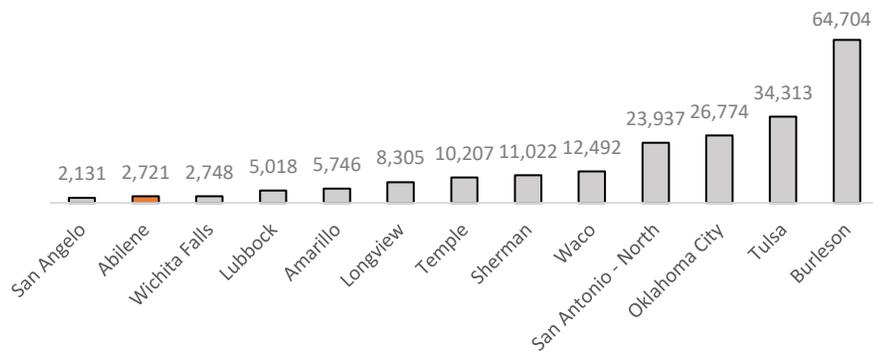
We use location quotient to show the overall concentration of these clusters within each 40-minute labor shed with 1.00 equaling the national average.

In general, this shows that Abilene tends to have a higher concentration of locally-focused occupational clusters like health care, along with some key export-oriented clusters like maintenance and related, and the energy focused construction and extraction. While there are some differences, it generally looks similar to a market like Wichita Falls.

However, Abilene has a lower concentration of some very critical, export oriented and/or high skill clusters that are more concentrated in markets like Burleson (DFW) like engineering, production, business, and others.

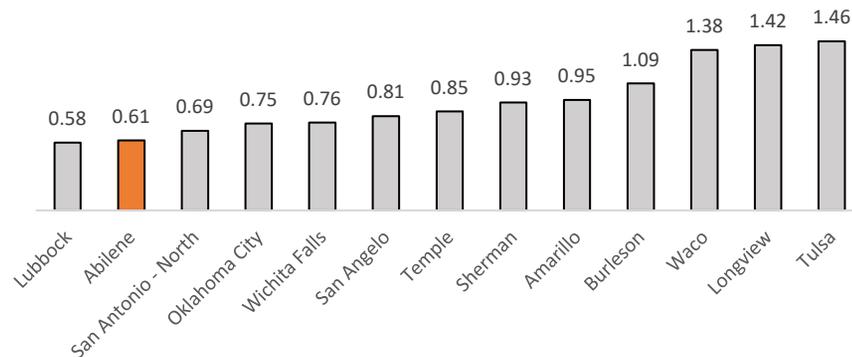
SUPPLY: ALL PRODUCTION

Occupational Presence: Overall count of workers



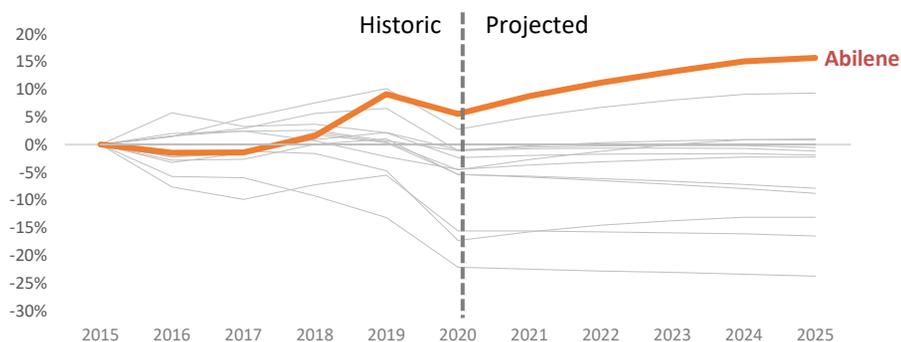
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are nearly 3,000 production workers in Abilene, but this is significantly smaller in sheer number compared to larger markets – especially those like Burleson.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene falls below the national average, while more industrial focused markets i.e. Burleson (Fort Worth), Waco, Longview, and Tulsa are all above the national average.

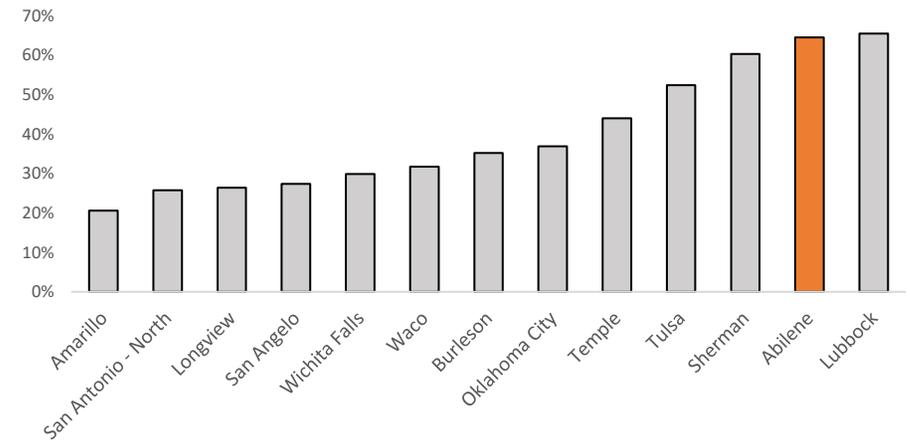
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- While the count and concentration of production workers is relatively low in Abilene, this occupational cluster is expected to grow significantly in the next five years.

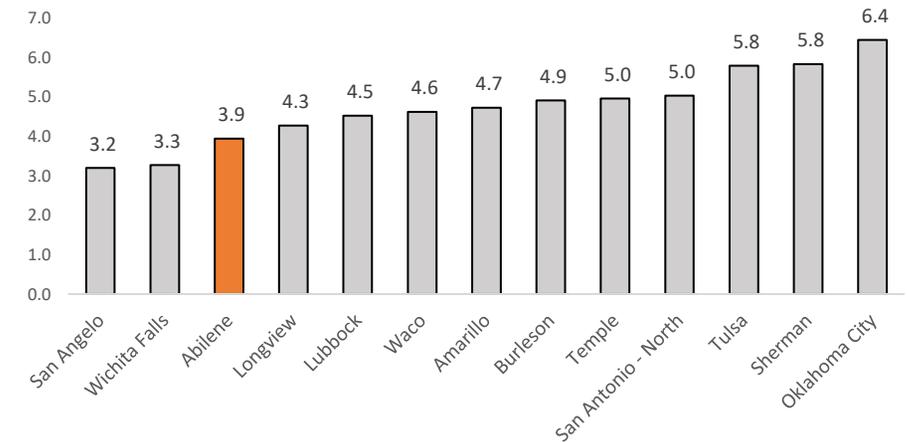
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data shows very high levels of demand in Abilene relative to the size of the occupational cluster.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- However, this data shows relatively lower levels of posting intensity activity, meaning that employers are not working as hard to find workers. Overall, these two data points show a mix of demand levels in Abilene.

Posting Intensity: How hard are employers working to find workers



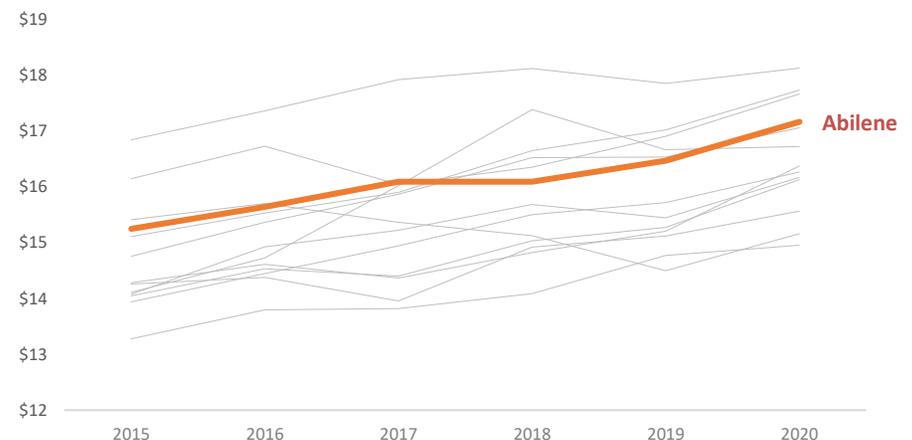
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- The EMSI data shows moderately high wages which may be driven by the impacts of oil and gas. The ERI data shows more moderate wages in the region.

Wage Levels: From Two Distinct Sources

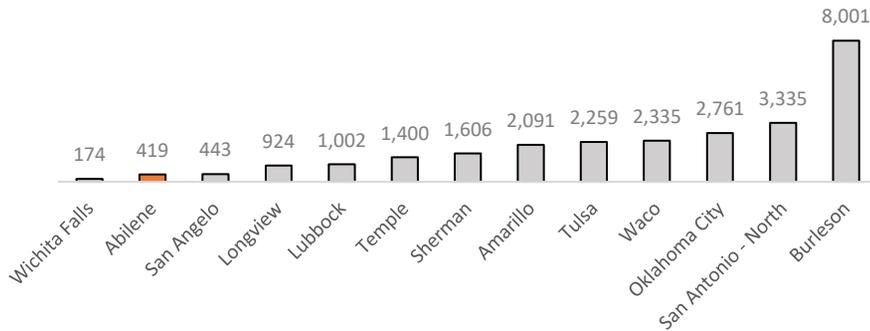
Market	Median Cluster Wage (EMSI)	Machine Operator (ERI)
Lubbock	\$14.95	\$17.14
Wichita Falls	\$15.15	\$17.73
San Angelo	\$15.56	\$18.39
Waco	\$16.12	\$18.00
San Antonio - North	\$16.16	\$18.60
Burleson	\$16.26	\$19.29
Temple	\$16.37	\$17.62
Amarillo	\$16.71	\$19.15
Sherman	\$17.05	\$18.67
Abilene	\$17.16	\$17.66
Longview	\$17.66	\$18.29
Oklahoma City	\$17.72	\$17.94
Tulsa	\$18.11	\$19.45

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Wages are increasing in all markets, but somewhat more quickly in Abilene compared to the other markets.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

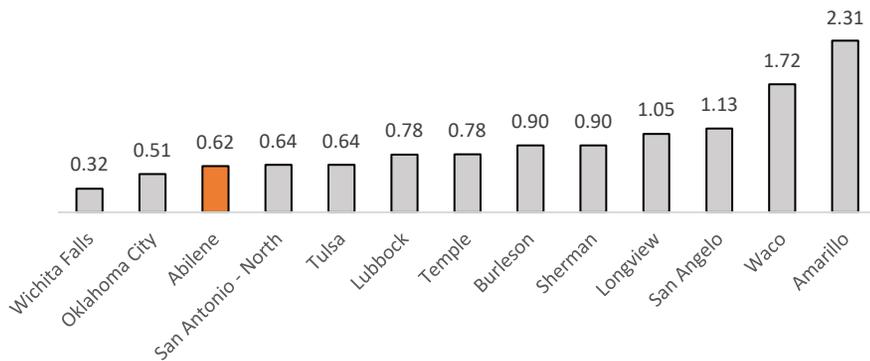


Occupational Presence: Overall count of workers



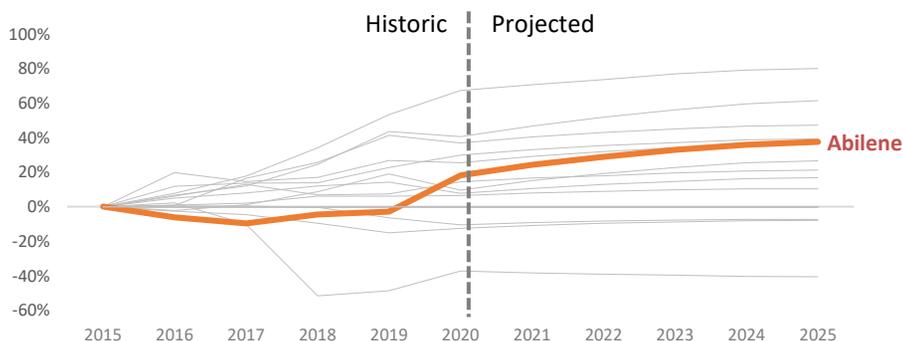
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are less than 500 people employed in this cluster in the greater Abilene region. Please note that this is focused only on workers classified as food production workers (see Appendix). It does not include all workers employed in the food sector (e.g. engineers, maintenance workers, white collar support, etc.)

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration for this cluster is below the national average. This is much less than markets like San Angelo, Waco, and Amarillo that have much higher concentrations compared to the national average.

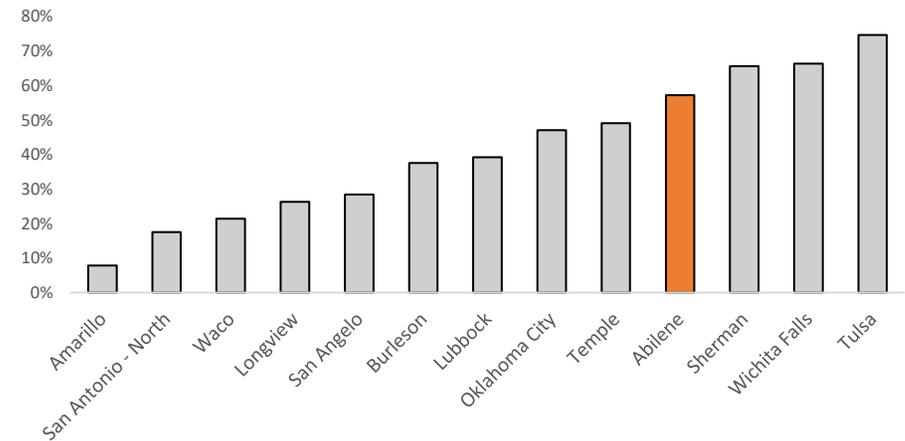
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- With existing employers AbiMar Foods and Great Lakes Cheese, Abilene will likely see many more people working in the food production cluster in coming years.

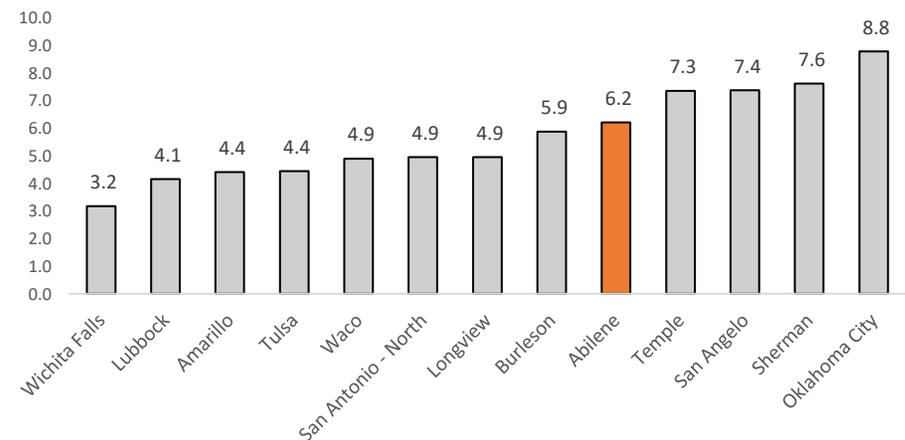
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- This data shows slightly elevated demand in the region for this cluster. It is likely to increase with the addition of Great Lakes Cheese.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- This metric also shows slightly elevated demand. Both metrics shown here point to higher levels of demand for food production workers.

Posting Intensity: How hard are employers working to find workers



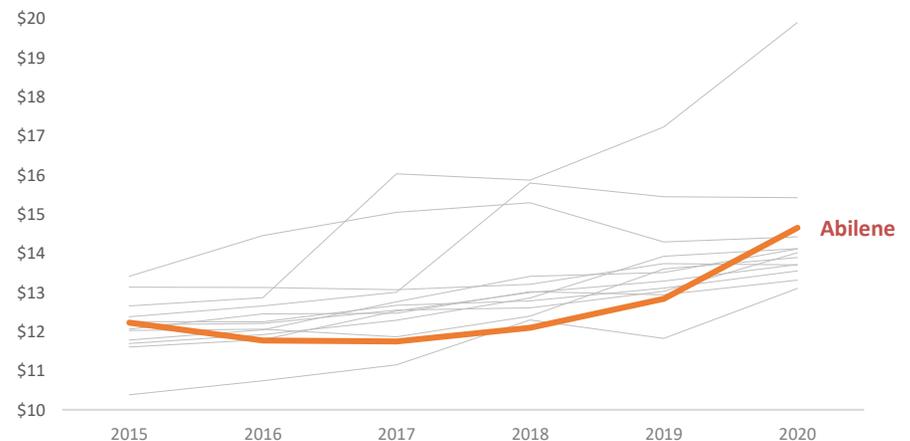
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Again, the EMSI data tends to show higher wage levels in Abilene compared to the more standardized data from ERI.

Wage Levels: From Two Distinct Sources

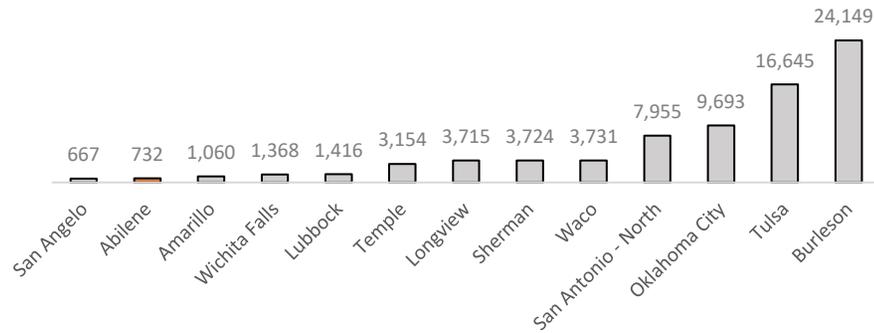
Market	Median Cluster Wage (EMSI)	Food Production Worker (ERI)
Wichita Falls	\$13.10	\$12.07
Oklahoma City	\$13.31	\$12.59
Waco	\$13.54	\$12.38
Sherman	\$13.70	\$12.43
Burleson	\$13.71	\$12.95
Lubbock	\$13.89	\$11.86
Temple	\$14.01	\$12.23
San Antonio - North	\$14.11	\$12.67
Tulsa	\$14.12	\$13.23
San Angelo	\$14.42	\$12.28
Abilene	\$14.65	\$12.15
Amarillo	\$15.42	\$13.03
Longview	\$19.89	\$12.21

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Abilene has seen its wages increase significantly in the past two years after flat growth prior. The outlier on this chart is Longview, which shows extremely high wage growth.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

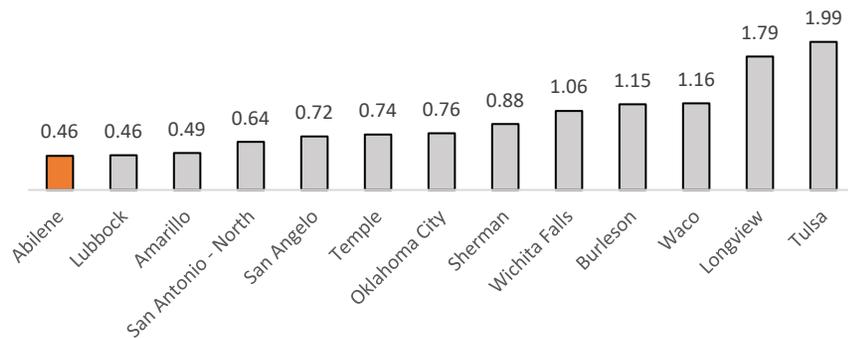


Occupational Presence: Overall count of workers



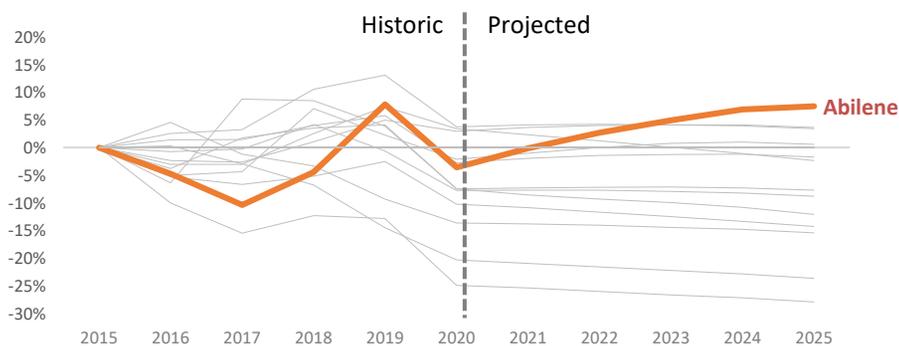
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are less than 1,000 workers employed in the metalworking production cluster, significantly fewer than in the other comparison markets.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has the lowest concentration of metalworking production workers out of these comparison markets. Markets like Longview and Tulsa have very strong concentrations, well above the national average.

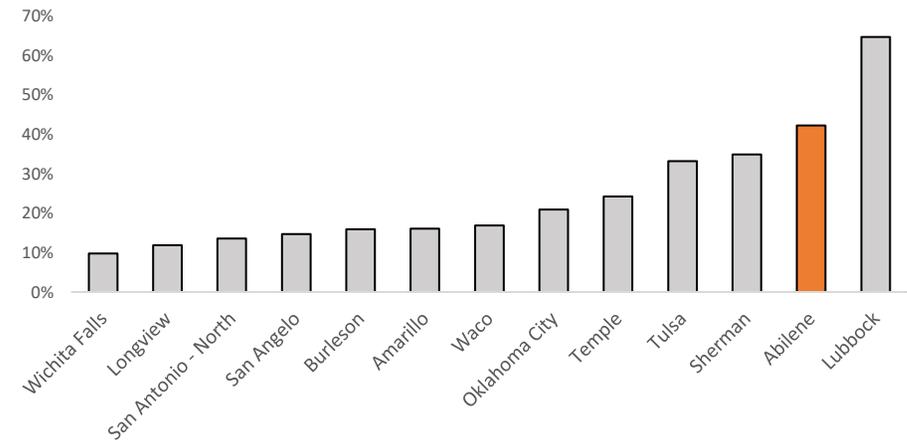
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Again, while count and concentration show less favorably, this occupational cluster is also expected to see significant growth in the next five years.

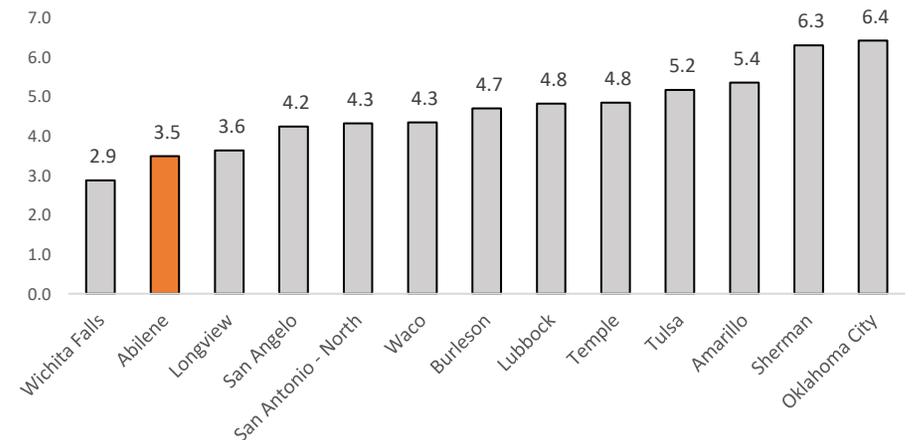
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- This data shows elevated demand in the Abilene markets compared to the others.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The job posting data shows that workers in this sector are not having to work as hard to find workers compared to other markets. These two data points point to mixed results.

Posting Intensity: How hard are employers working to find workers



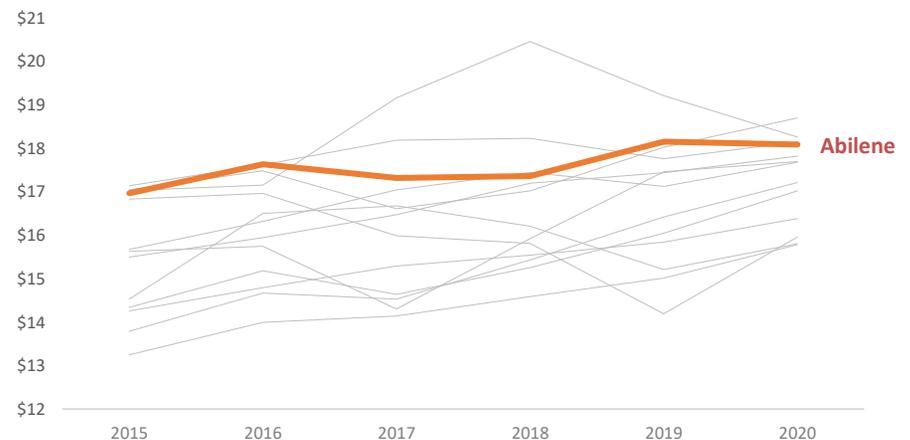
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Like the other production clusters, the EMSI data points to elevated wage levels, potentially driven by the impact of oil and gas. The ERI data points to more moderate wage levels.

Wage Levels: From Two Distinct Sources

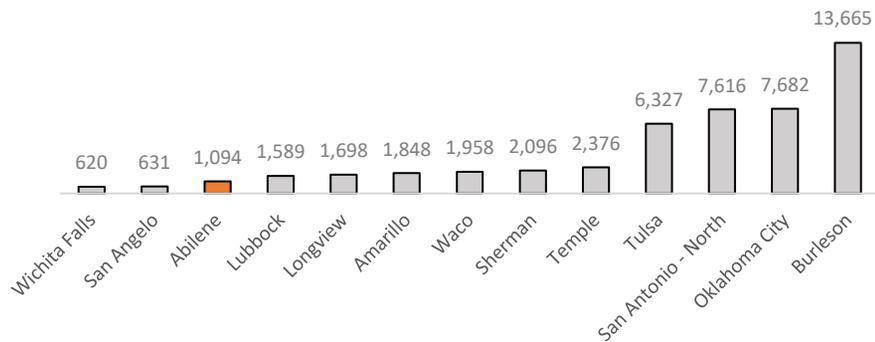
Market	Median Cluster Wage (EMSI)	CNC Machine Operator (ERI)
Lubbock	\$15.78	\$17.58
San Antonio - North	\$15.80	\$18.63
Wichita Falls	\$15.96	\$18.29
Burleson	\$16.38	\$19.43
Temple	\$17.02	\$18.08
Waco	\$17.20	\$18.50
Sherman	\$17.68	\$18.89
San Angelo	\$17.69	\$18.45
Oklahoma City	\$17.82	\$18.30
Abilene	\$18.08	\$18.17
Tulsa	\$18.15	\$20.01
Amarillo	\$18.26	\$19.74
Longview	\$18.69	\$18.88

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Amarillo experienced a spike around 2018 which has since levelled off to be in line with the other comparison markets.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

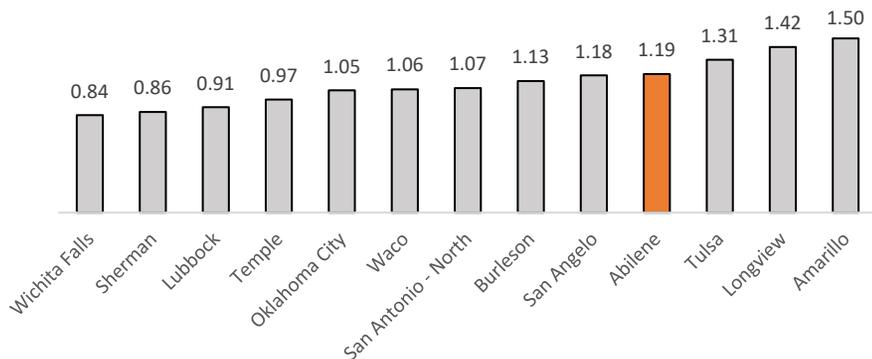


Occupational Presence: Overall count of workers



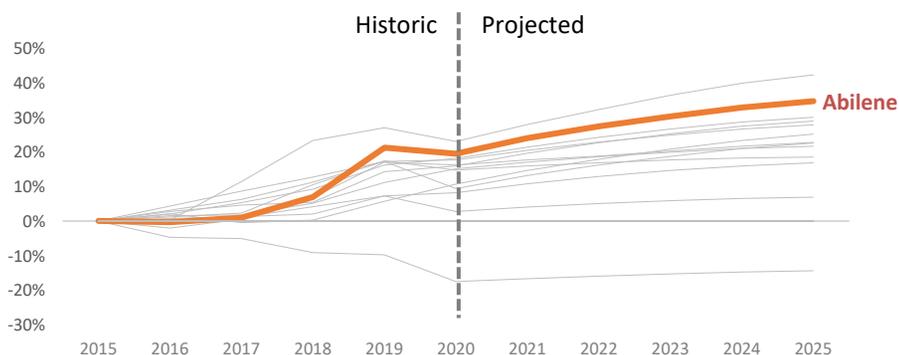
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- Abilene currently has slightly over 1,000 maintenance workers in its laborshed.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has a relatively high concentration of maintenance workers that is above the national average and most of these comparison markets.

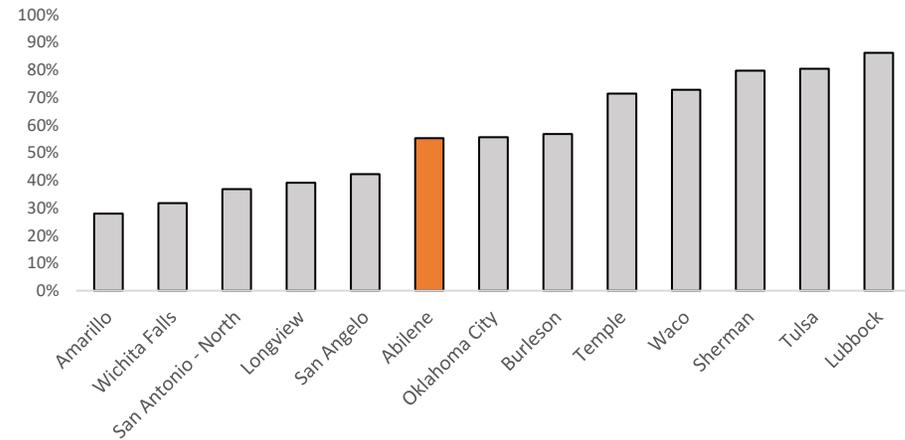
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Growth for the maintenance occupational cluster is particularly favorable for the Abilene labor shed, second only to San Angelo.

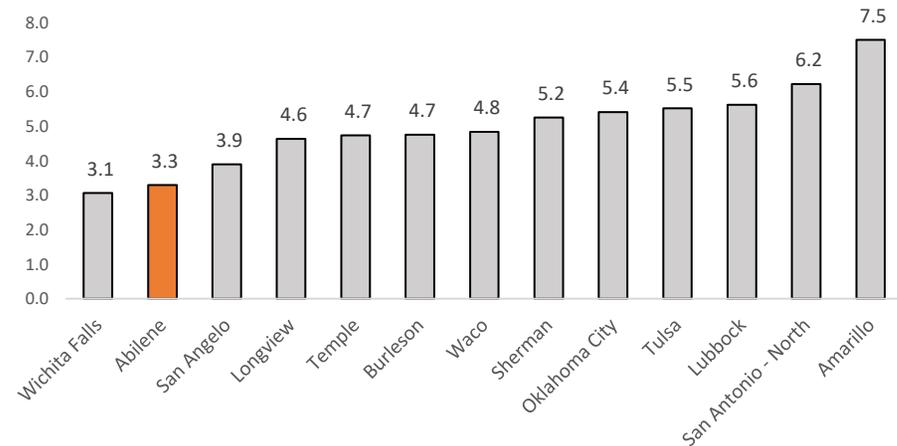
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data here shows only moderate levels of demand for this clusters.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- This posting intensity data is also fairly low. While these types of positions are relatively difficult to find and in high demand across the country, Abilene has both a high concentration and low demand.
- Further, several employers noted that while difficult to hire these types of workers, it was not exceptionally difficult. This contrasts with what SSG oftentimes hears in other markets, namely that maintenance workers are the most difficult skill set to hire for.

Posting Intensity: How hard are employers working to find workers



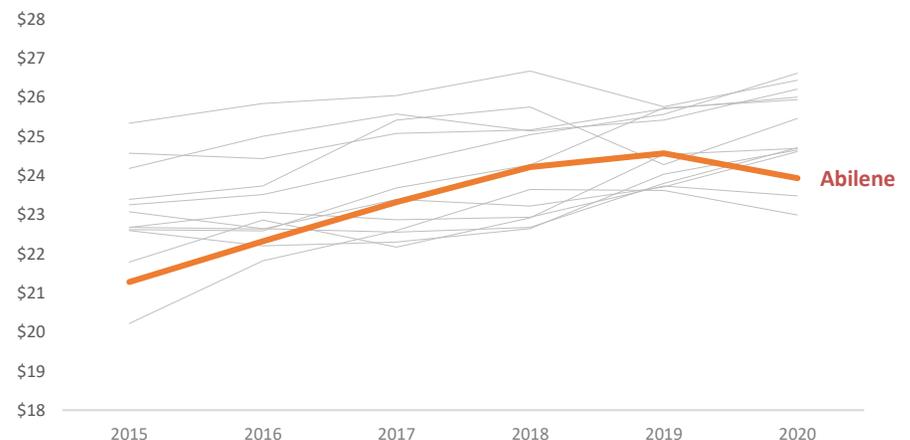
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources here point to comparatively lower wages for this cluster.

Wage Levels: From Two Distinct Sources

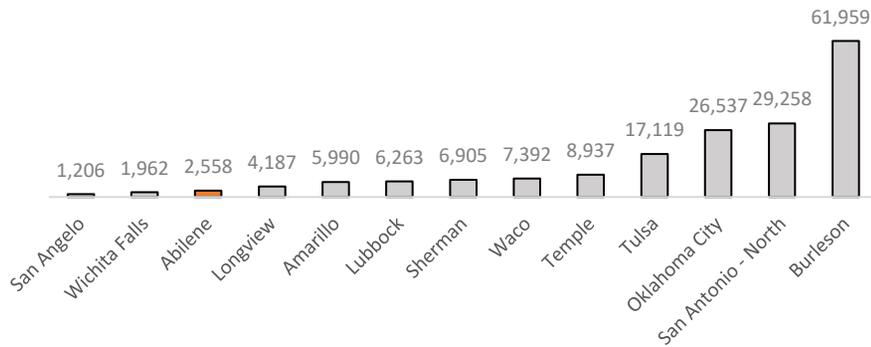
Market	Median Cluster Wage (EMSI)	Maintenance Machinist (ERI)
Lubbock	\$22.99	\$20.47
San Angelo	\$23.47	\$21.81
Abilene	\$23.93	\$21.56
Longview	\$24.60	\$22.20
Temple	\$24.65	\$20.83
Wichita Falls	\$24.68	\$21.36
Waco	\$24.70	\$21.60
Amarillo	\$25.45	\$22.62
Burleson	\$25.93	\$22.77
Sherman	\$26.00	\$22.03
Tulsa	\$26.20	\$23.32
Oklahoma City	\$26.42	\$21.35
San Antonio - North	\$26.60	\$21.95

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- The growth data also shows lower levels of wage escalation, and even a slight decline over the past year.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

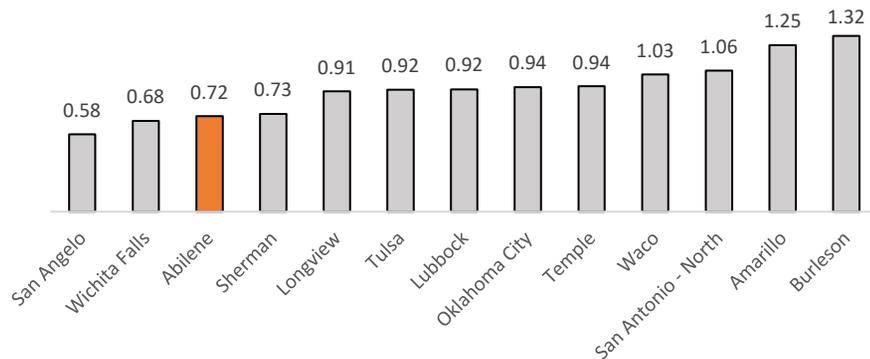


Occupational Presence: Overall count of workers



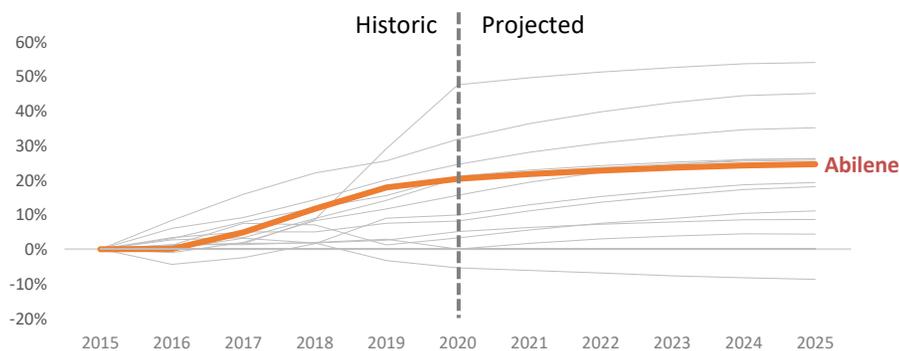
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are approximately 2,500 workers in this cluster in Abilene’s laborshed. This includes workers like picker/packers, forklift drivers, and others.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration is below the national average, and approximately on par with Sherman. Other markets which are more distribution focused have a higher count and concentration of these types of logistics workers.

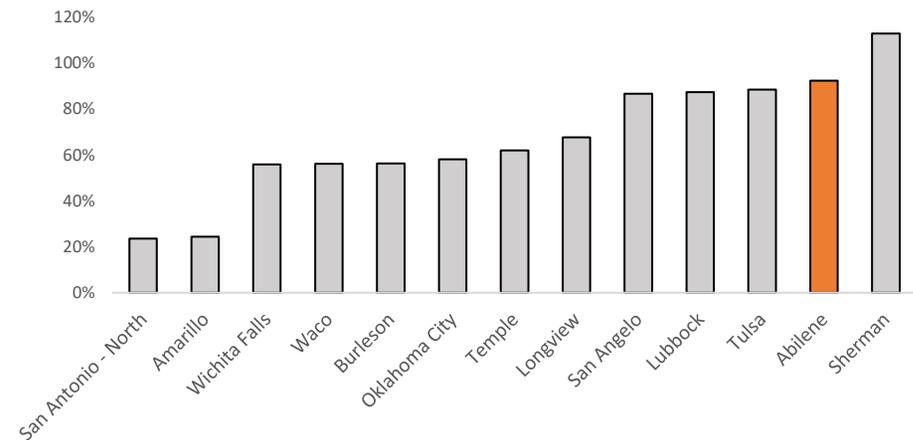
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Abilene is projected to remain steady for its supply of direct logistics workers. This is heavily influenced by the geography of Abilene.

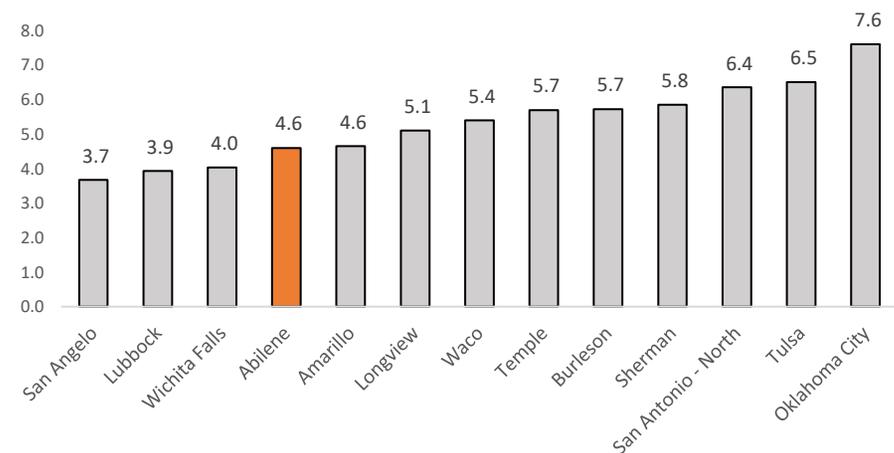
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- This data points to elevated demand for these types of workers.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- However, the posting intensity data points to more moderate levels of demand.

Posting Intensity: How hard are employers working to find workers



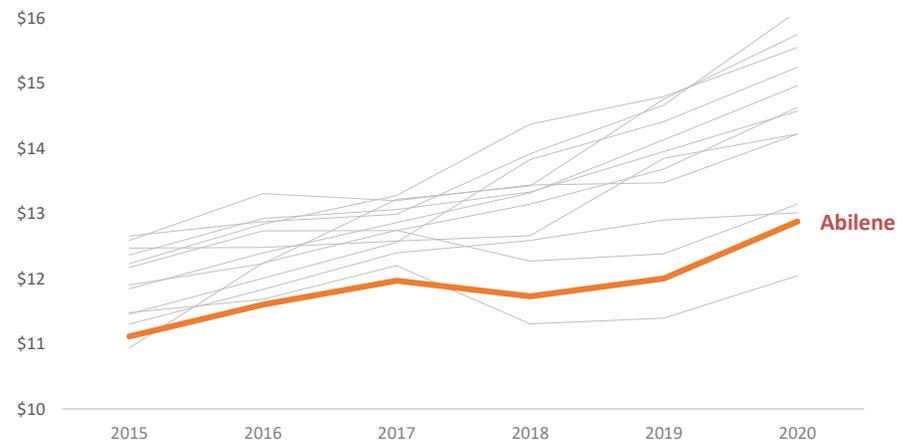
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources point to lower wage levels in Abilene compared to the other markets.

Wage Levels: From Two Distinct Sources

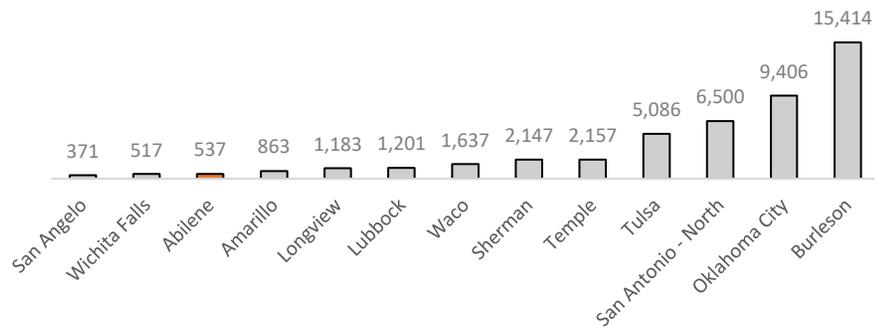
Market	Median Cluster Wage (EMSI)	Forklift Operator (ERI)
Wichita Falls	\$12.04	\$16.11
Abilene	\$12.88	\$16.25
Lubbock	\$13.01	\$16.06
San Angelo	\$13.14	\$16.19
Longview	\$14.21	\$16.52
Tulsa	\$14.21	\$17.51
Temple	\$14.57	\$16.39
Waco	\$14.62	\$16.49
San Antonio - North	\$14.96	\$16.77
Burleson	\$15.24	\$17.51
Sherman	\$15.54	\$16.72
Amarillo	\$15.74	\$16.94
Oklahoma City	\$16.10	\$16.79

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- This is a cluster that has seen strong wage growth over the past year, as shown in the chart. Abilene has also seen those increases, but it still remains towards the bottom of comparison markets.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

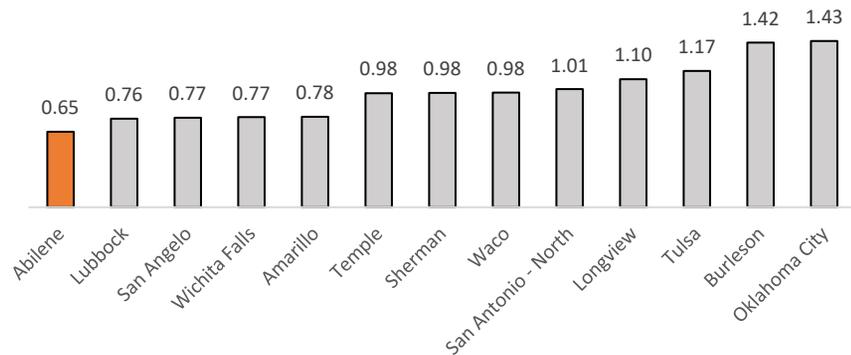


Occupational Presence: Overall count of workers



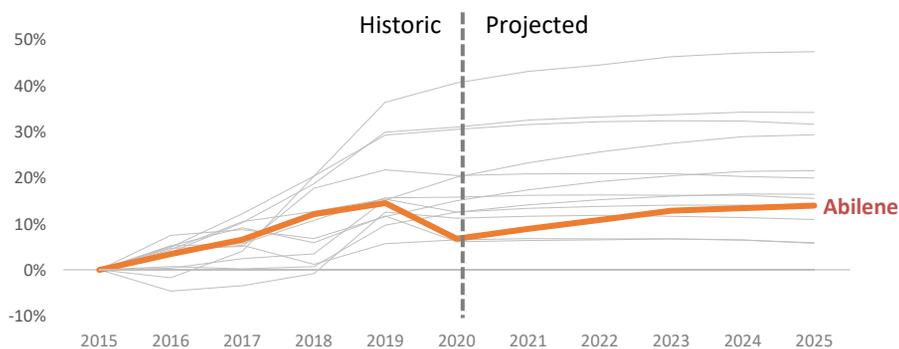
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- Similarly to the other logistics cluster, Abilene has a lower count than most of the comparison markets. Abilene has approximately 500 of these types of workers in its laborshed. This cluster includes clerks, logisticians, and other supporting occupations.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Again, the concentration in Abilene is much lower which is likely due to its geographic positioning which makes “big box” distribution activity less common.

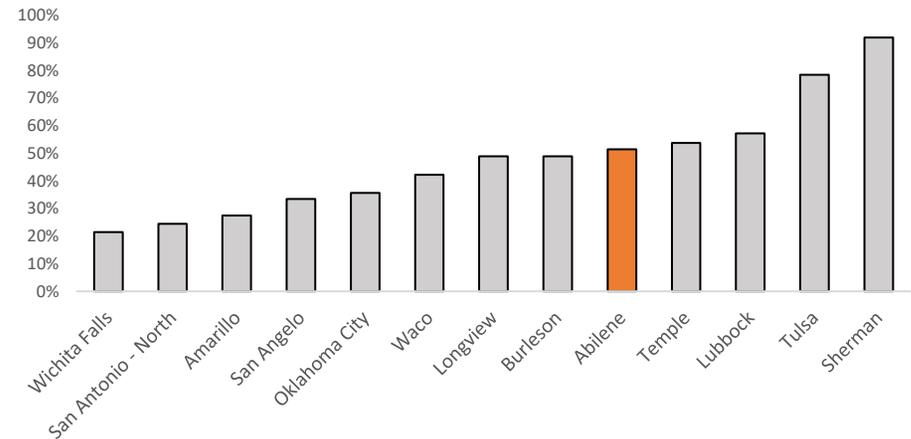
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Growth for this sector is also relatively low compared to these comparison markets.

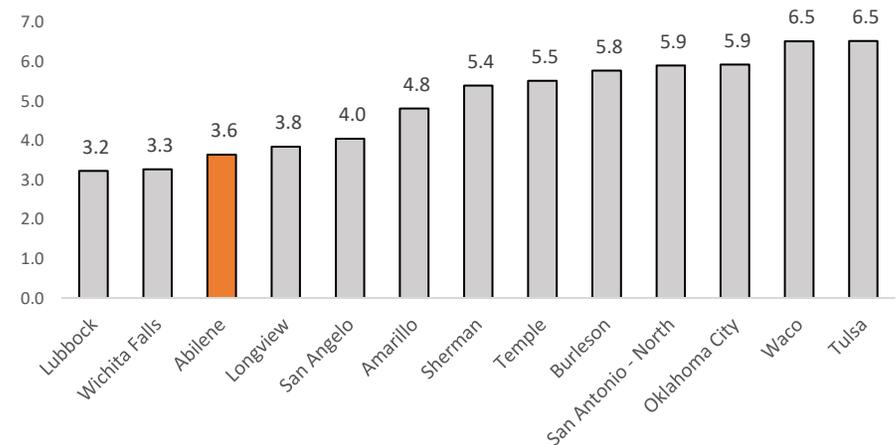
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Abilene has moderate levels of demand for these types of positions based on this data.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data points to lower levels of demand, as employers are not working as hard to hire compared to in other markets.

Posting Intensity: How hard are employers working to find workers



COSTS: LOGISTICS - SUPPORT

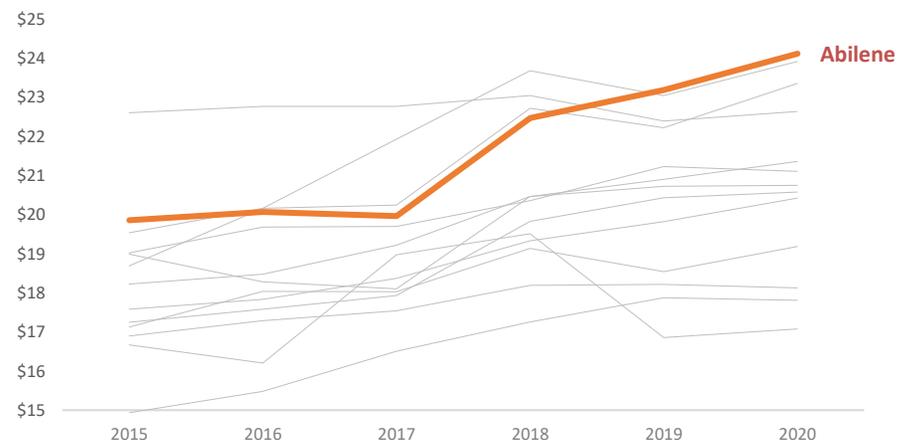
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Curiously, the EMSI data points to very high wage levels for this particular cluster. However, the ERI comparison data shows much more moderate wage levels.

Wage Levels: From Two Distinct Sources

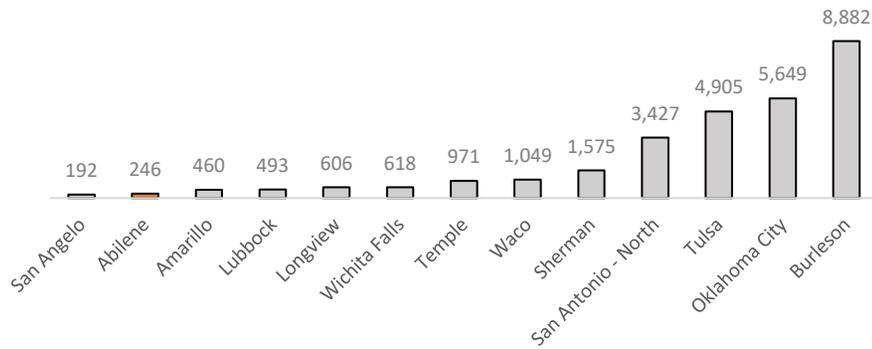
Market	Median Cluster Wage (EMSI)	Procurement Clerk (ERI)
Amarillo	\$17.07	\$20.08
Lubbock	\$17.81	\$19.47
Longview	\$18.12	\$20.15
Waco	\$19.18	\$19.99
Burleson	\$20.42	\$21.33
San Antonio - North	\$20.57	\$20.49
San Angelo	\$20.74	\$19.34
Tulsa	\$21.10	\$21.14
Sherman	\$21.35	\$20.07
Oklahoma City	\$22.63	\$19.79
Temple	\$23.34	\$19.46
Wichita Falls	\$23.91	\$19.90
Abilene	\$24.10	\$19.29

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- The EMSI data also points to much higher wage escalation in this cluster over the past three years.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

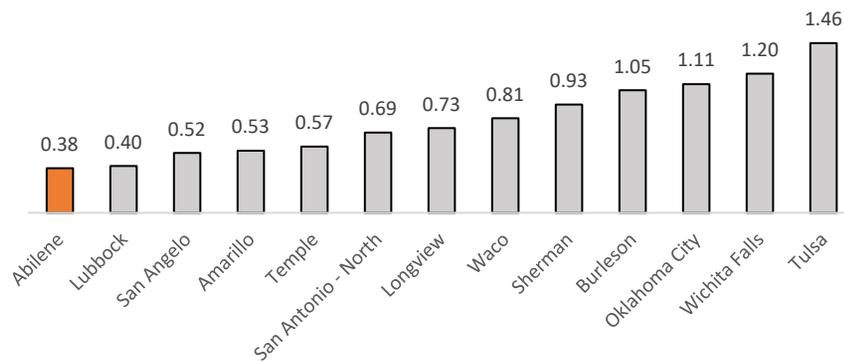


Occupational Presence: Overall count of workers



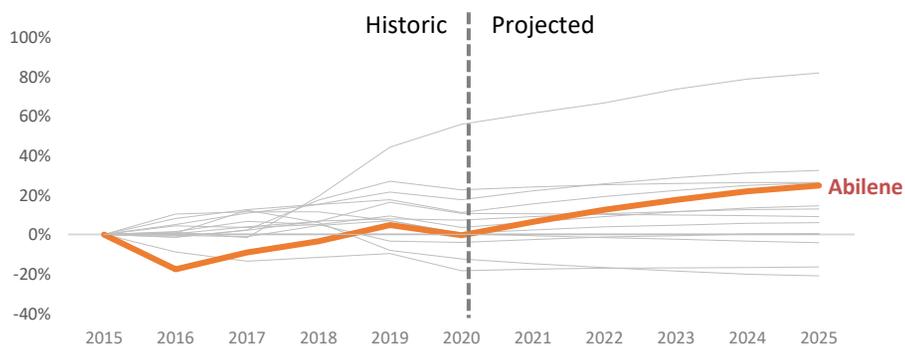
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are approximately 250 engineers in this laborshed, which is significantly fewer than the comparison markets. .

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration of engineers is much lower in Abilene compared to other markets.

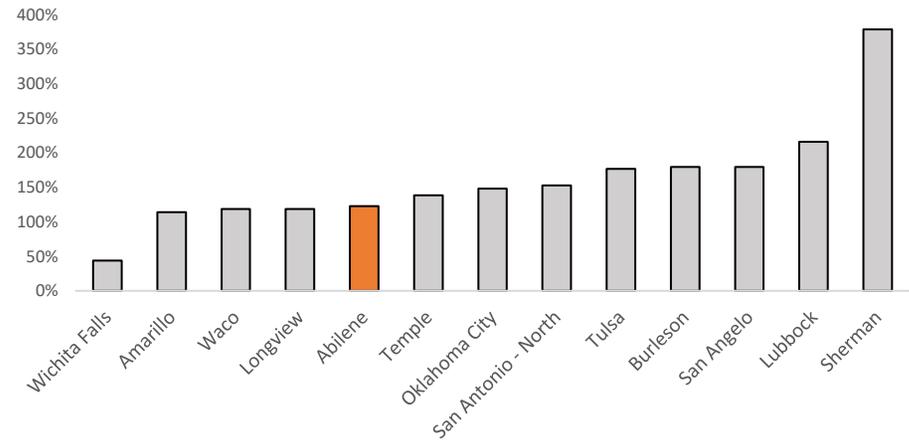
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- While the count and concentration are relatively low, Abilene is projected to see significant positive growth over the next five years.

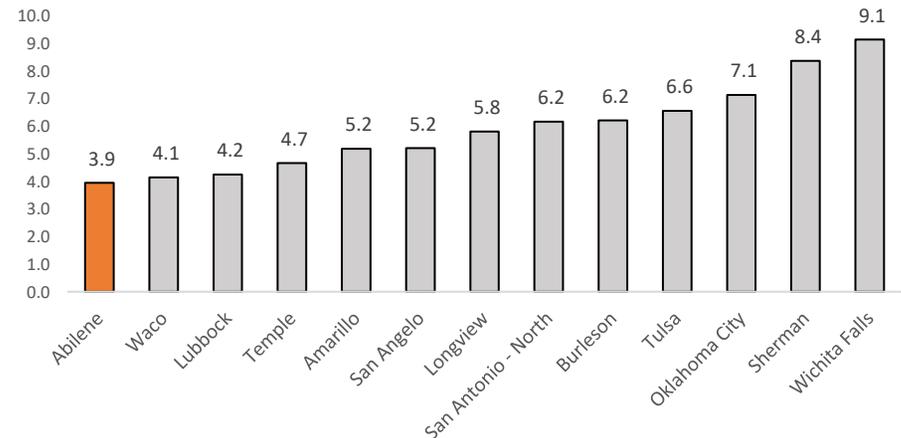
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- This data points to relatively low levels of demand for engineering talent in the Abilene region.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data further supports lower levels of demand for engineers.

Posting Intensity: How hard are employers working to find workers



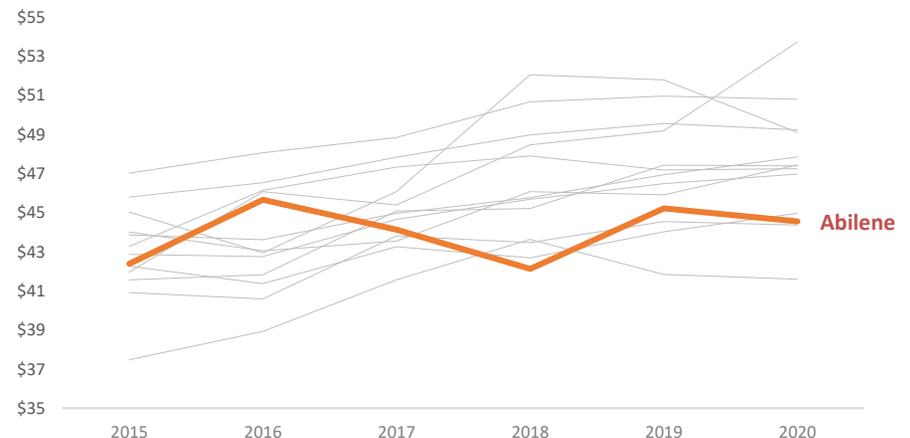
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources point to generally lower salary levels for engineering talent in the region.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Engineer Industrial (ERI)
Lubbock	\$41.59	\$39.03
Longview	\$44.35	\$40.86
Abilene	\$44.54	\$40.04
Tulsa	\$44.95	\$41.57
Waco	\$46.95	\$40.31
San Antonio - North	\$47.23	\$40.99
Wichita Falls	\$47.37	\$39.65
Oklahoma City	\$47.44	\$38.49
Temple	\$47.84	\$40.44
San Angelo	\$49.09	\$40.46
Burleson	\$49.21	\$43.00
Sherman	\$50.78	\$41.31
Amarillo	\$53.71	\$40.75

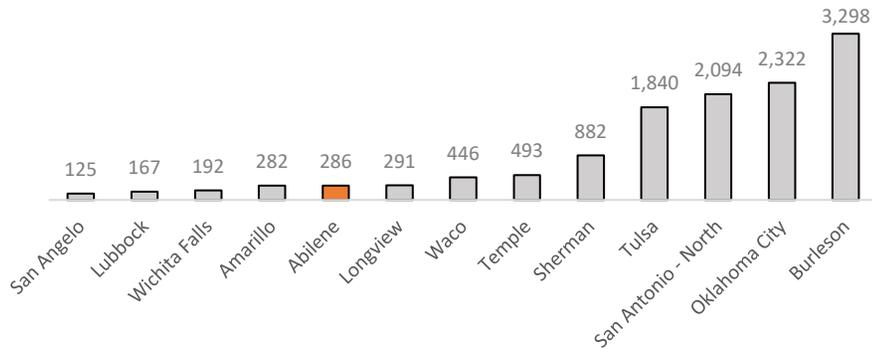
- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Engineering salaries have been somewhat flat in the region, while they have increased in most other markets.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)



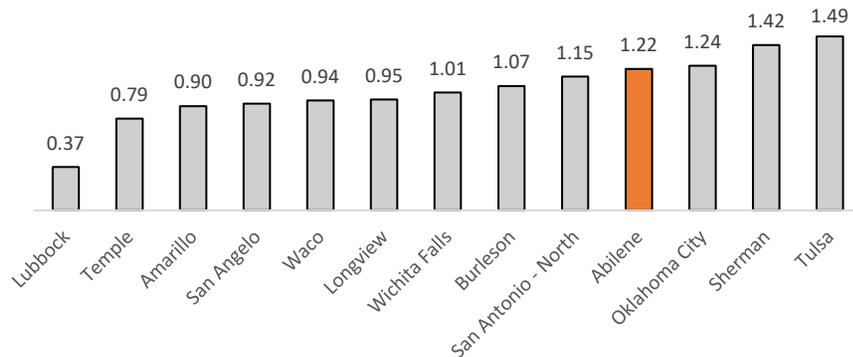
SUPPLY: ENGINEERING TECHNICIANS

Occupational Presence: Overall count of workers



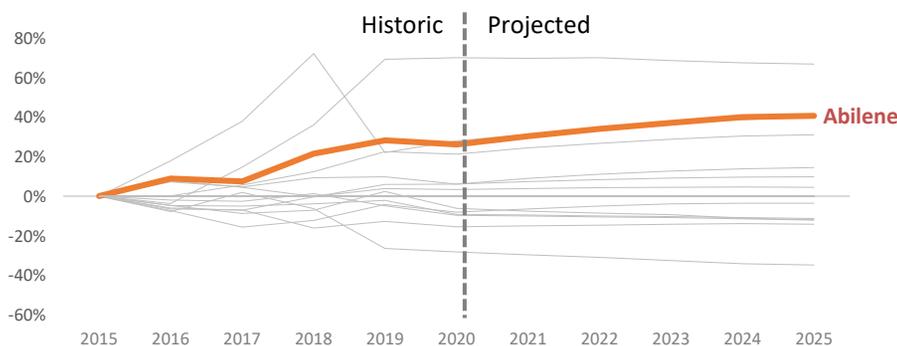
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- Abilene has a higher presence of engineering technicians than engineers. There are approximately 250 of these types of workers.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has a much higher concentration of these types of workers compared to the other industrial clusters. It trails only Oklahoma City, Tulsa, and Sherman.

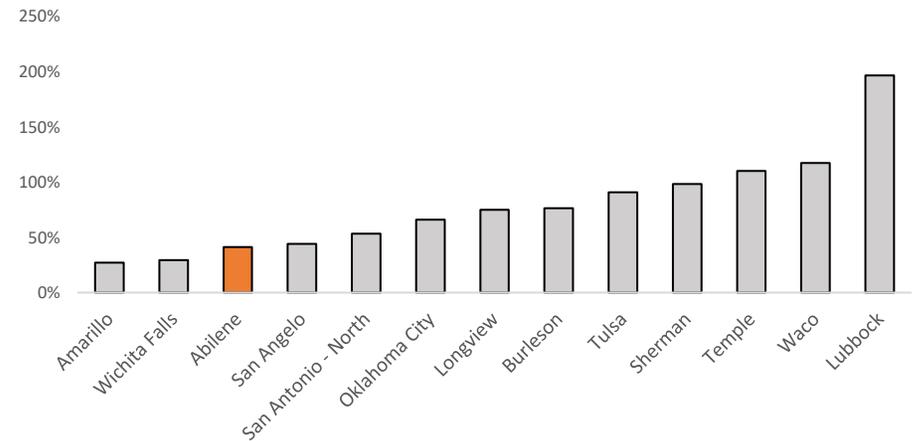
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Historic and projected occupational growth also looks favorable for Abilene.

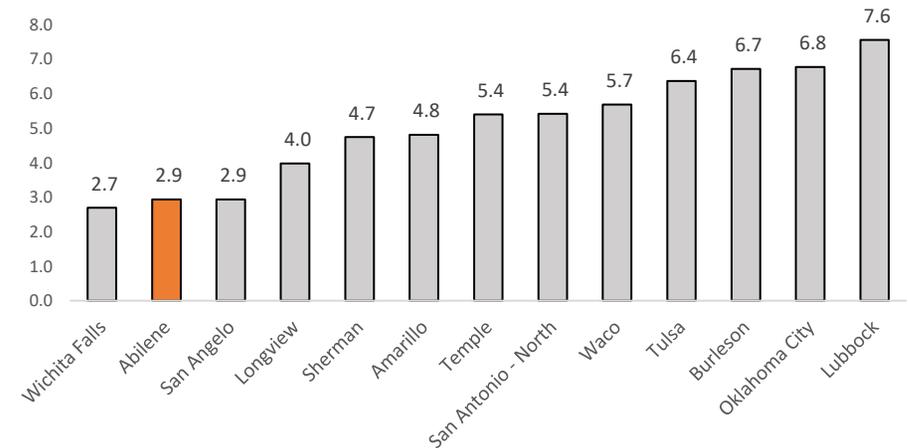
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data points to relatively lower demand for these types of engineering technician positions in the market.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The job posting intensity data further supports that, with low posting metrics compared to the other markets.

Posting Intensity: How hard are employers working to find workers



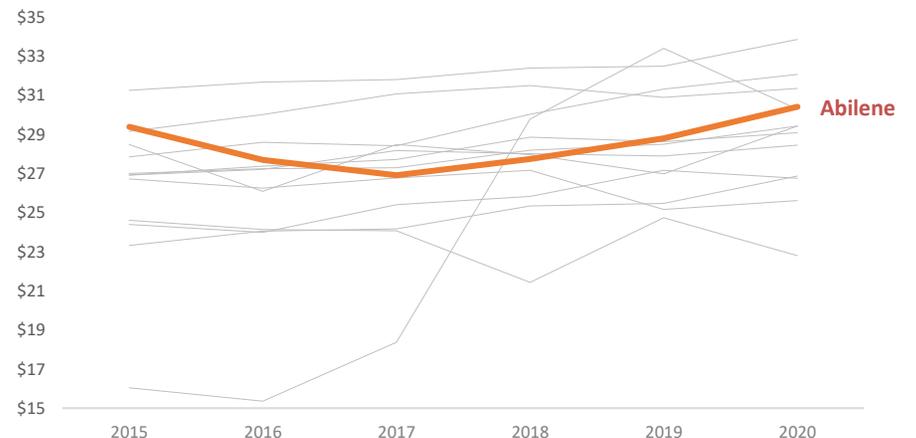
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- The data shows slightly elevated wage levels from EMSI, but more moderate wages levels via ERI.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Engineering Technician (ERI)
Lubbock	\$22.79	\$26.74
Temple	\$25.61	\$28.08
Waco	\$26.75	\$27.95
Longview	\$26.86	\$28.19
San Antonio - North	\$28.43	\$28.60
Tulsa	\$29.08	\$29.93
Burleson	\$29.41	\$29.96
Wichita Falls	\$29.41	\$27.80
San Angelo	\$30.28	\$28.05
Abilene	\$30.40	\$27.68
Oklahoma City	\$31.34	\$27.85
Sherman	\$32.06	\$28.65
Amarillo	\$33.84	\$28.27

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- After a dip in wage levels to 2017, Abilene has seen moderate wage growth in this cluster.

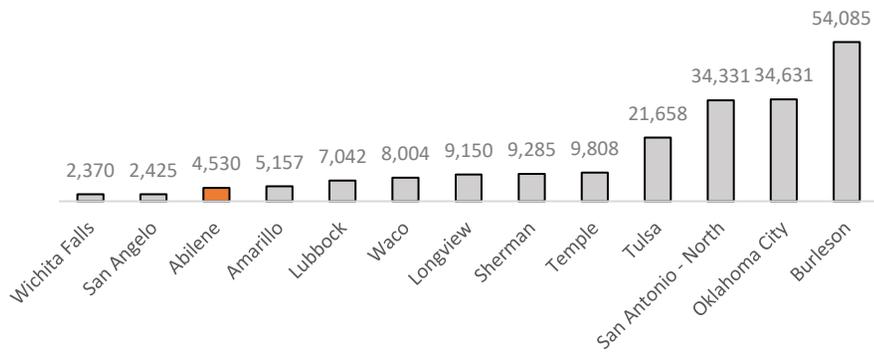
Wage Growth: Nominal wage growth over the past 5 years (EMSI)



SUPPLY: CONSTRUCTION AND EXTRACTION

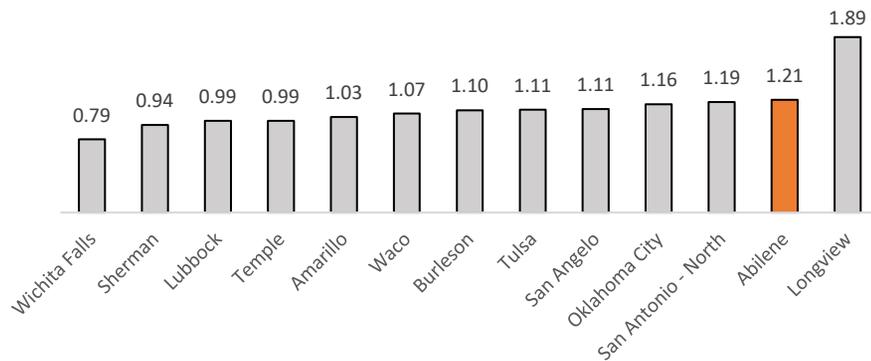
Support

Occupational Presence: Overall count of workers



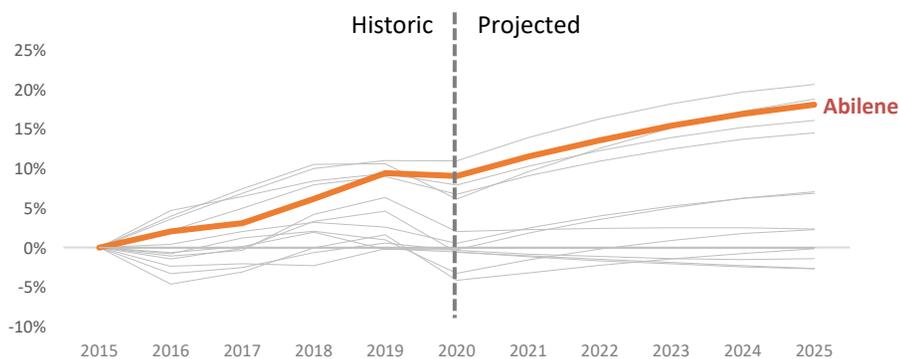
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- These include workers in construction and extraction industries which are very common in the direct oil and gas industries.
- The data show about 4,500 of these types of workers in the region.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has a very high concentration of these types of workers, trailing only Longview.

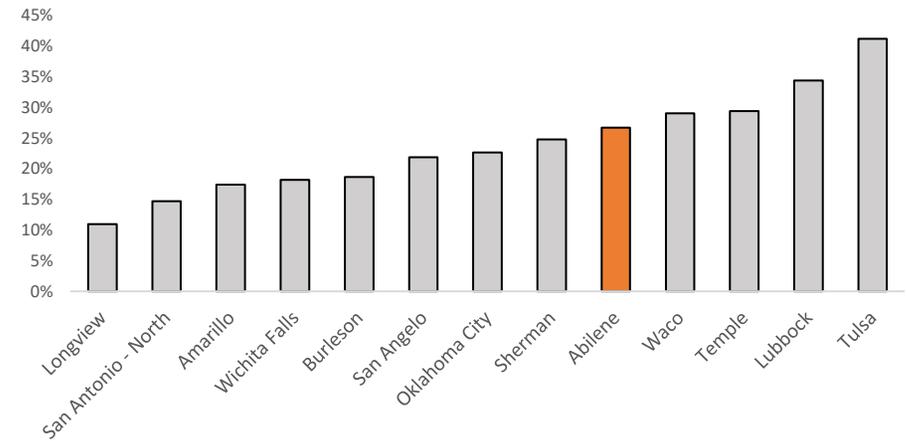
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- The data shows that Abilene did not have as much of a dip in this industry compared to other markets. Projected growth is favorable.

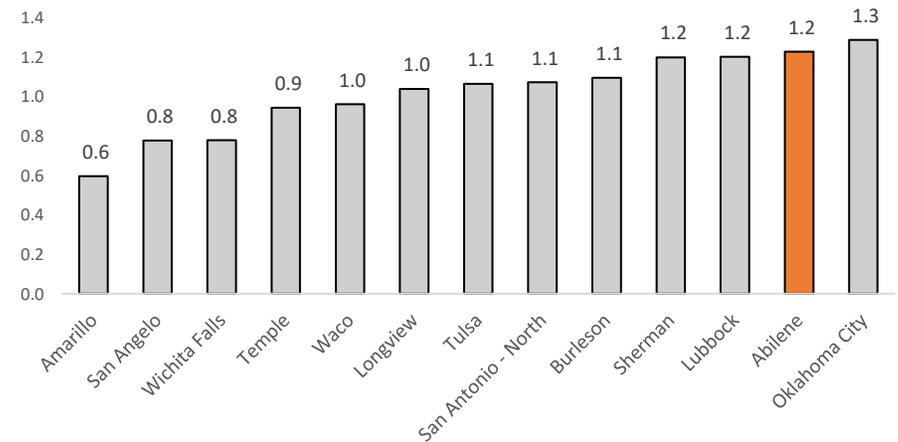
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- This data points to slightly elevated demand for these types of workers.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The job posting intensity data also points to higher levels of demand for these workers.

Posting Intensity: How hard are employers working to find workers



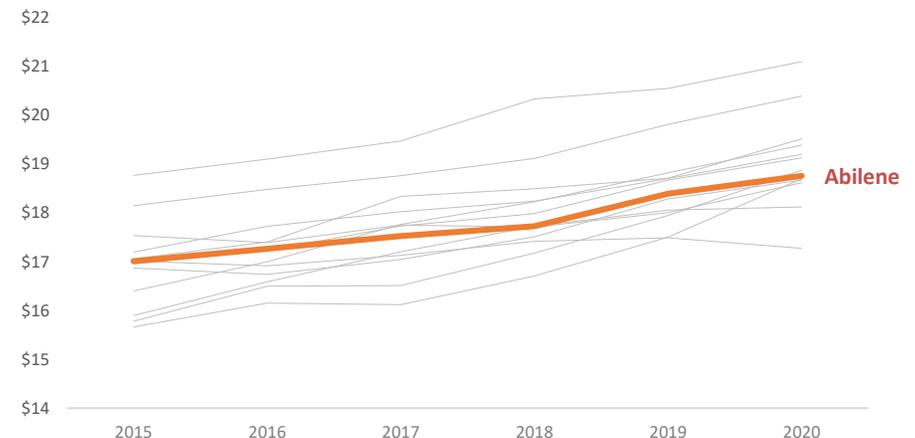
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources point to moderate wage levels for these types of construction and extraction workers. In SSG’s view, this cluster in particular is one where the data from these types of databases may be considerably different from market wages.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Driller Extraction (ERI)
San Angelo	\$17.27	\$29.07
Lubbock	\$18.11	\$28.59
Amarillo	\$18.60	\$29.69
Wichita Falls	\$18.66	\$29.56
Temple	\$18.69	\$28.23
Abilene	\$18.75	\$29.81
Waco	\$18.86	\$28.90
San Antonio - North	\$19.11	\$29.67
Sherman	\$19.19	\$29.75
Burleson	\$19.38	\$30.73
Longview	\$19.51	\$30.08
Tulsa	\$20.38	\$31.13
Oklahoma City	\$21.08	\$29.41

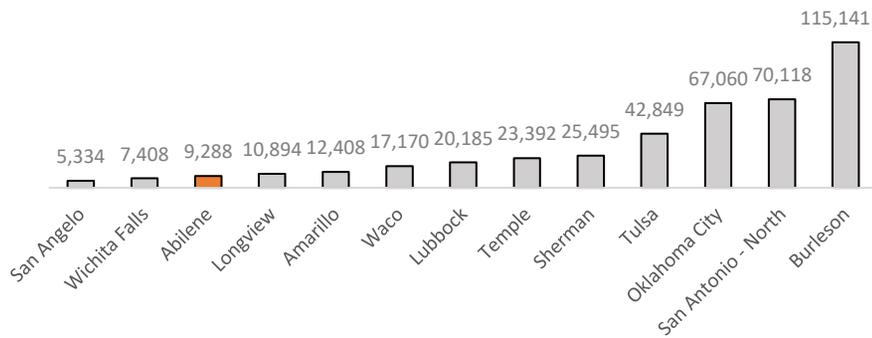
- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Historical wage data shows moderate wage inflation over the past five years.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)



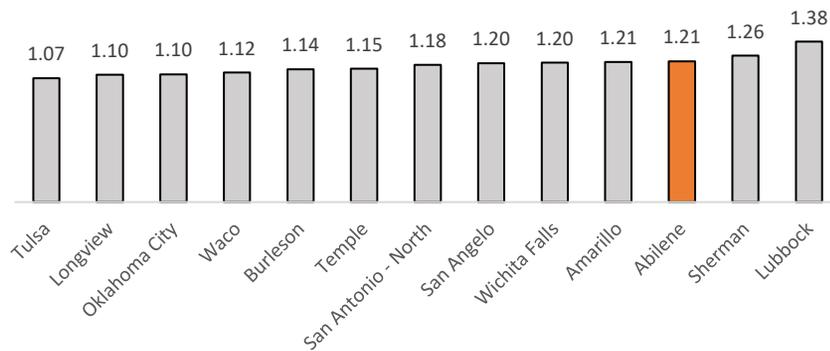
SUPPLY: SUPPLEMENTAL (RETAIL & HOSPITALITY) Support

Occupational Presence: Overall count of workers



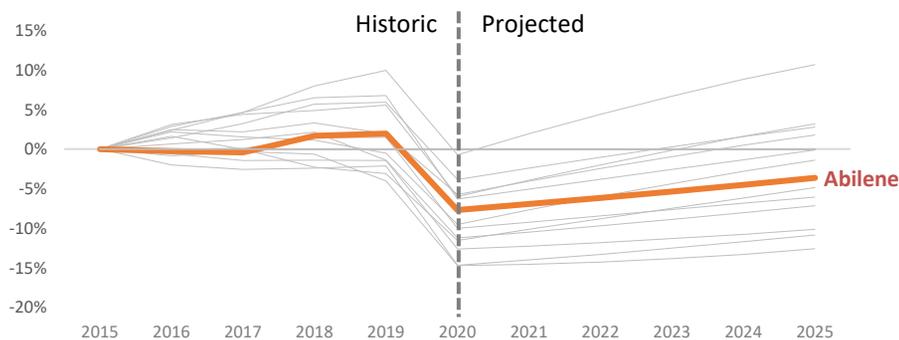
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- This cluster includes workers in retail, hospitality, and food services that with training and support, can work in more value add industries. In other words, these tend to be “underemployed” workers.
- Abilene has nearly 10,000 workers in this cluster.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has a fairly high concentration of these types of workers, even though there tends to be less variance here as most communities have a fair number of these types of workers and associated industries.

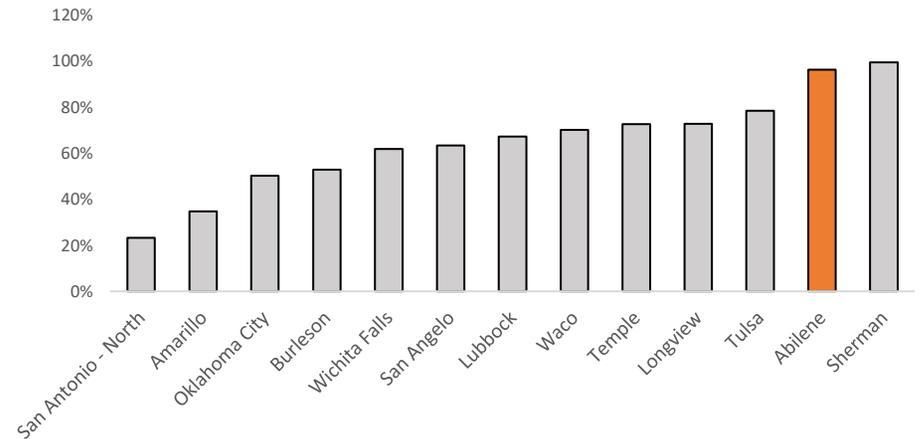
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- All these clusters saw a significant drop off from 2019 to 2020 due to COVID, but nearly all are expected to grow into the future.

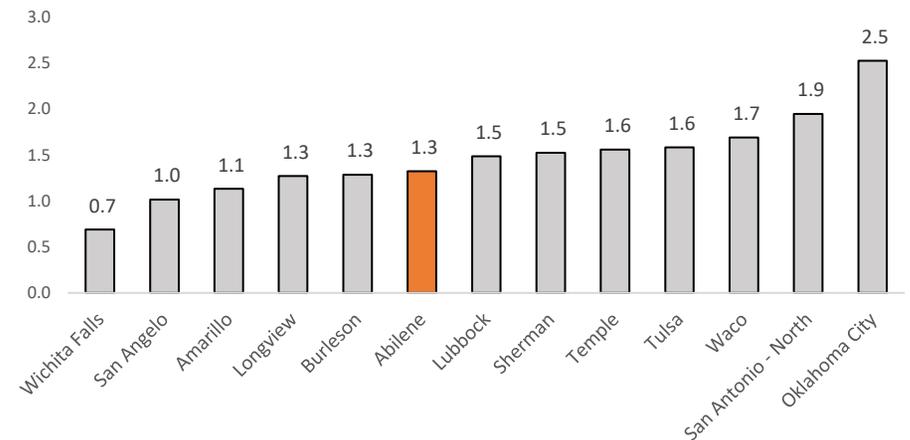
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- This job postings data points to very high levels of demand for these types of workers in the greater Abilene area. Again, due to the pandemic, many of these workers are in high demand across the country.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The job posting intensity data shows more moderate levels of demand in Abilene.

Posting Intensity: How hard are employers working to find workers



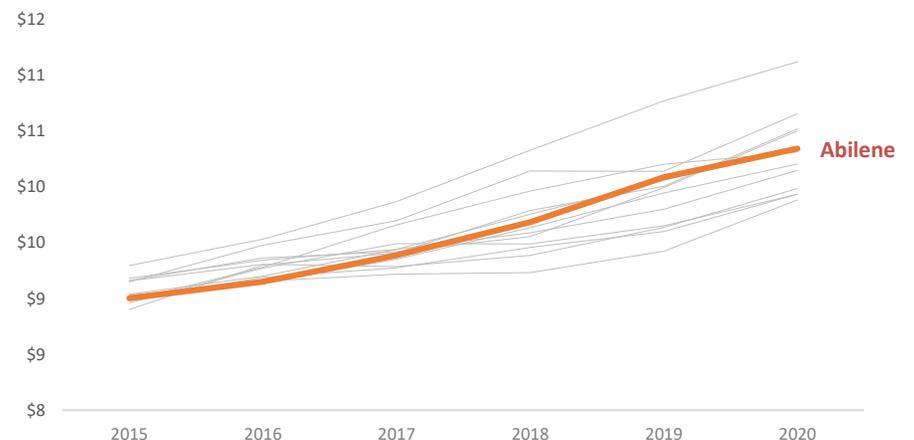
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- The EMSI data points to moderate wages for these workers, while the ERI data points to lower wages.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Waiter/Waitress (ERI)
Wichita Falls	\$9.88	\$12.05
Lubbock	\$9.93	\$12.03
San Angelo	\$9.93	\$12.01
Longview	\$9.98	\$12.37
Tulsa	\$10.14	\$12.62
Temple	\$10.20	\$12.23
Amarillo	\$10.31	\$12.54
Waco	\$10.33	\$12.25
Abilene	\$10.34	\$12.01
Oklahoma City	\$10.50	\$12.27
Burleson	\$10.51	\$12.85
Sherman	\$10.65	\$12.33
San Antonio - North	\$11.11	\$12.62

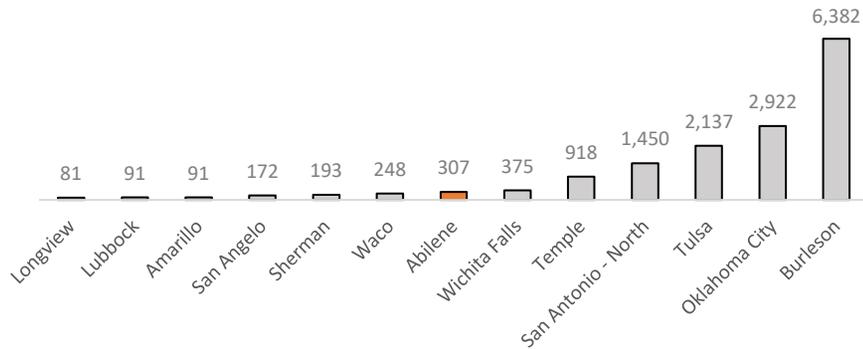
- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Nearly all of these markets have seen significant increases in wages for these lower-skill jobs. Abilene's wage inflation tends to be a bit higher than in the other markets.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)



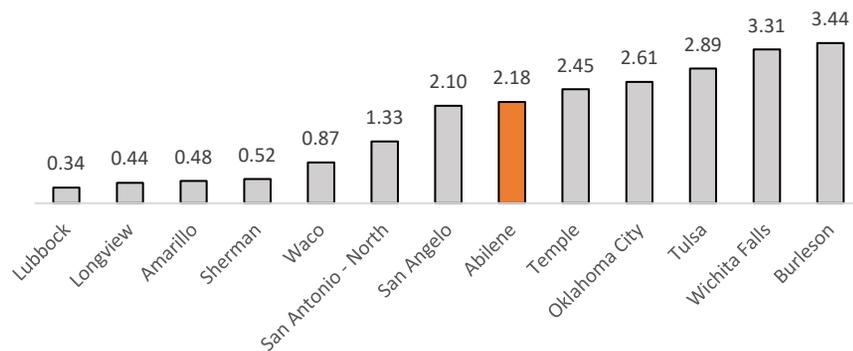
SUPPLY: AEROSPACE PRODUCTION

Occupational Presence: Overall count of workers



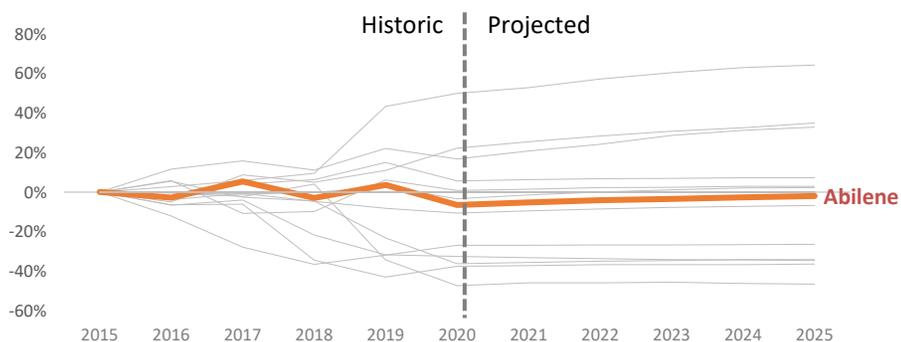
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are over 300 workers in the aerospace production cluster in this laborshed. This is a relatively large number given it's a niche occupational cluster.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration of aerospace production workers in Abilene's laborshed is over double the national average. A number of these markets have strong concentrations of this cluster due to strong aerospace presence (e.g. Tulsa, Burleson) and/or strong military presence (e.g. Wichita Falls, Oklahoma City, Temple).

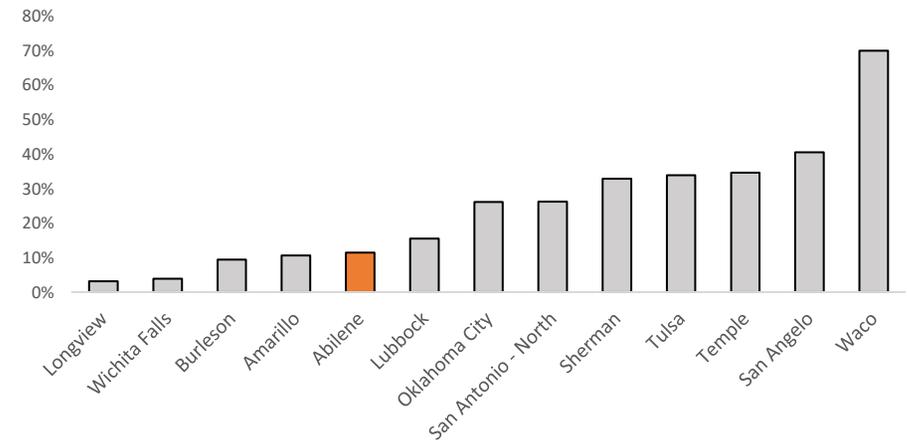
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- This occupational cluster is expected to remain steady, and is not projected to see significant growth.

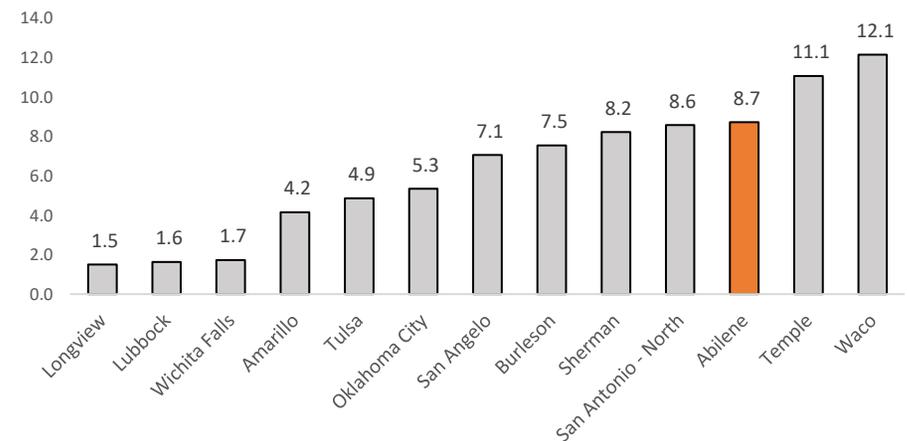
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Demand for this occupational cluster is moderate in Abilene compared to the other markets.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- Contrasting with the data above, the posting intensity data shows high levels of demand for this cluster.

Posting Intensity: How hard are employers working to find workers



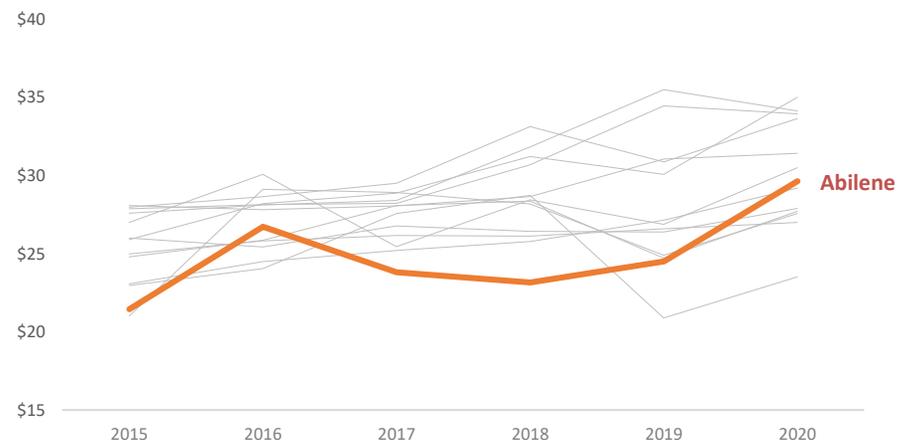
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- The data shows moderate to low wages for this cluster compared to the other markets. Note the very high wages for this industry in markets like Burleson which is picking up data from very large aerospace operations like Lockheed Martin.

Wage Levels: From Two Distinct Sources

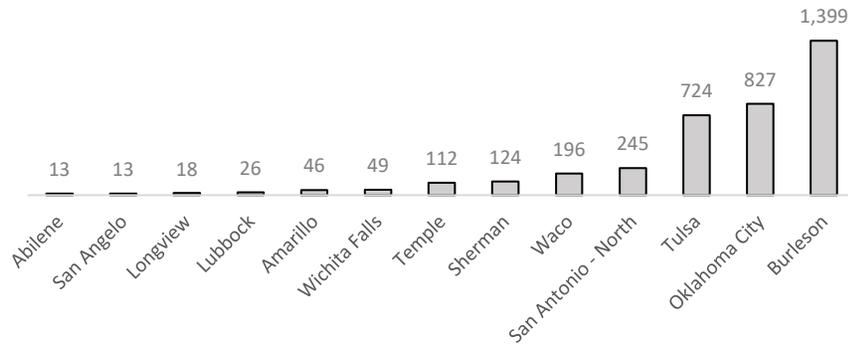
Market	Median Cluster Wage (EMSI)	Machine Operator (ERI)
Waco	\$23.50	\$18.00
Lubbock	\$26.97	\$17.14
Tulsa	\$27.56	\$19.45
Temple	\$27.69	\$17.62
Oklahoma City	\$27.88	\$17.94
San Antonio - North	\$29.19	\$18.60
Abilene	\$29.61	\$17.66
Amarillo	\$30.48	\$19.15
San Angelo	\$31.40	\$18.39
Wichita Falls	\$33.61	\$17.73
Sherman	\$33.91	\$18.67
Burleson	\$34.11	\$19.29
Longview	\$34.97	\$18.29

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- This tends to be a more cyclical industry, and as a result, wages tend to move around as well. Abilene saw a dip in salary levels for this cluster, before a strong increase over the past two years.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

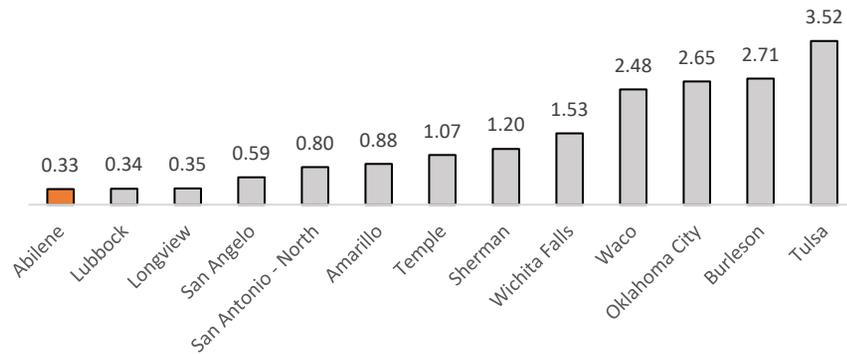


Occupational Presence: Overall count of workers



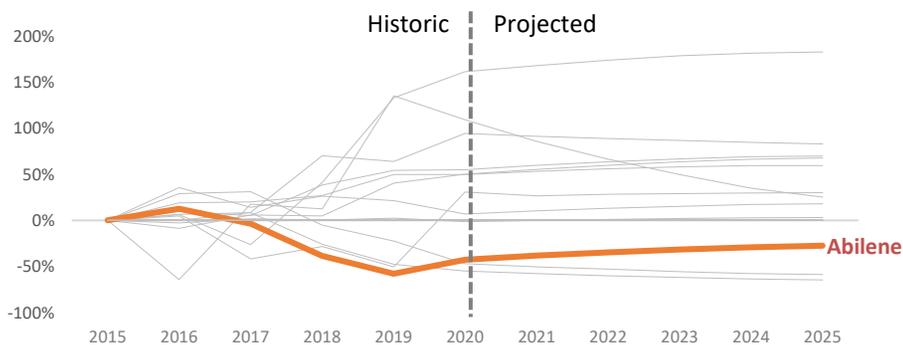
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- Unlike the aerospace production cluster, there are very few workers (~13) employed in the aerospace engineering cluster. This type of data is clearly picking up operations like American's maintenance base which has various types of mechanics and operators, but few engineers.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Concentration for the aerospace engineering cluster is lowest in this laborshed than the comparison markets.

Occupational Growth: 5 Year Historic & Projected (2015 = 0)

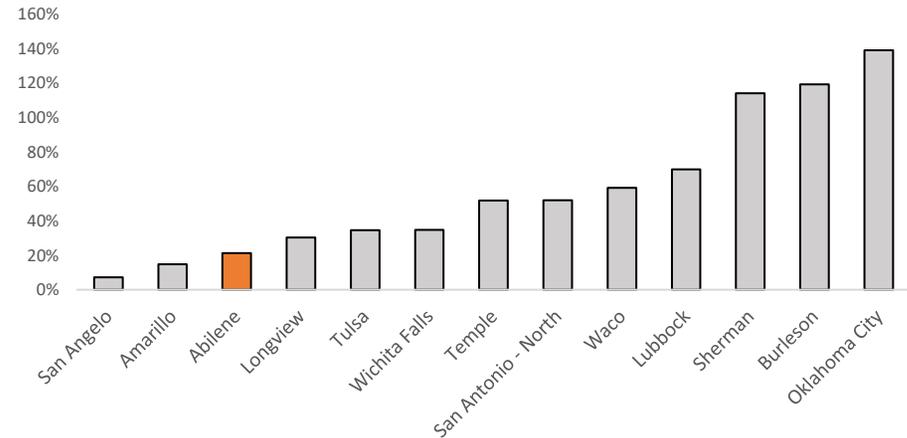


- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Both historic and projected growth hover around 0%, but this could change dramatically at anytime.

Note: San Angelo was removed from this data due to their smaller sample size skewing the data.

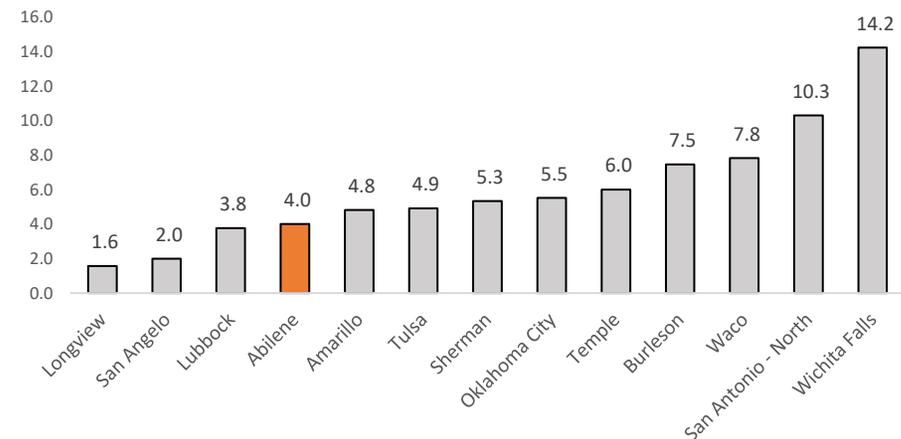
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Demand for these types of aerospace engineering positions is low in the region.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data also points to relatively low demand for these types of workers.

Posting Intensity: How hard are employers working to find workers



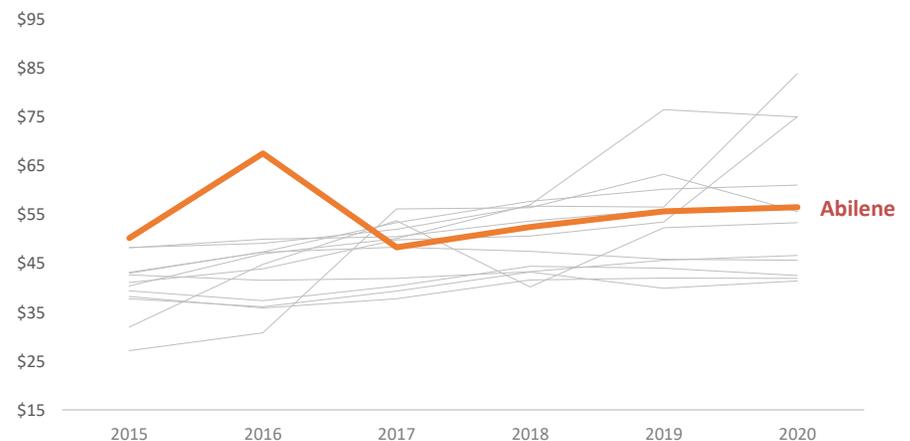
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources point to moderate wage levels for this cluster.

Wage Levels: From Two Distinct Sources

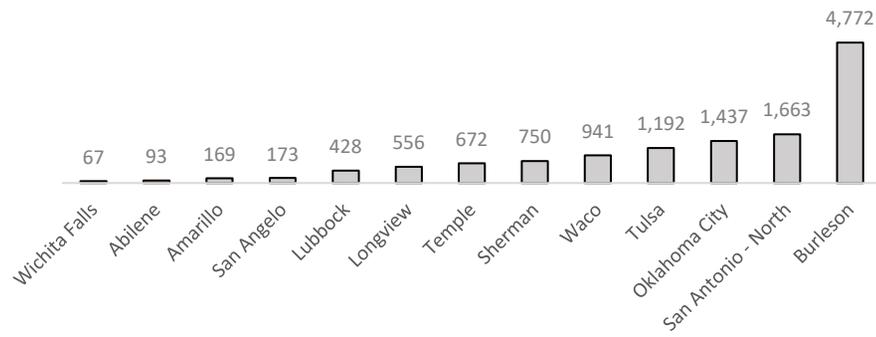
Market	Median Cluster Wage (EMSI)	Engineer Aeronautical (ERI)
Waco	\$41.40	\$50.63
Tulsa	\$41.92	\$51.73
Temple	\$42.47	\$50.87
San Antonio - North	\$45.61	\$51.44
Oklahoma City	\$46.58	\$48.11
Amarillo	\$53.32	\$51.20
Wichita Falls	\$55.59	\$49.92
Burleson	\$56.47	\$53.75
Abilene	\$56.48	\$50.48
Sherman	\$61.00	\$51.88
Lubbock	\$74.89	\$49.39
Longview	\$74.97	\$51.44
San Angelo	\$83.76	\$50.89

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Salary growth has been relatively muted over the past several years, with the exception of a blip in 2016.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

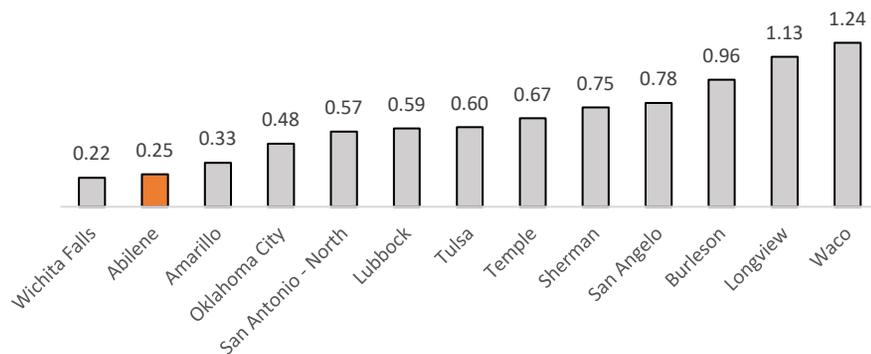


Occupational Presence: Overall count of workers



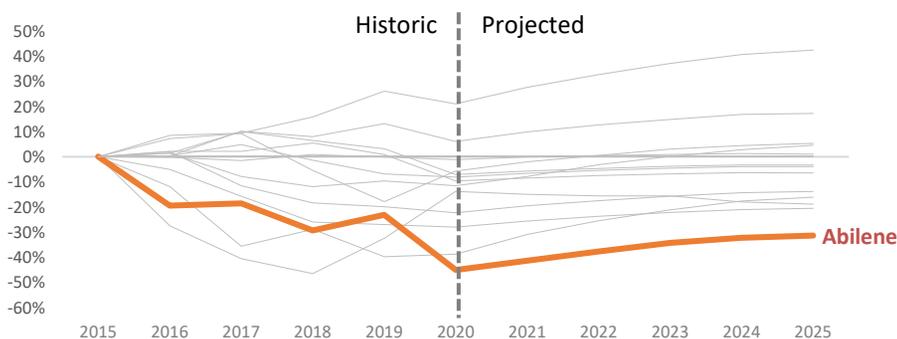
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are almost 100 workers currently employed in this cluster in this laborshed. Like aerospace production, this is a niche cluster and we would expect absolute numbers to be fairly low.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Concentration is very low, indicating that there is currently not a strong presence of these types of workers around Abilene.

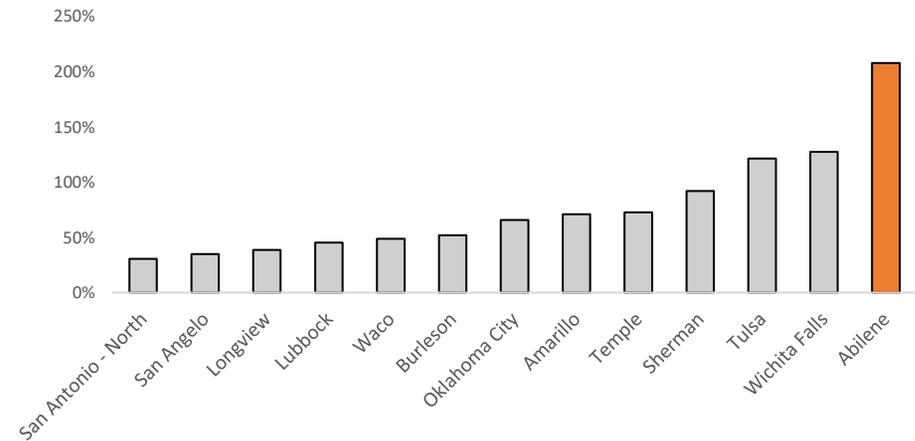
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Historic growth data shows that this cluster has declined over the past five years. However, future projections are more favorable.

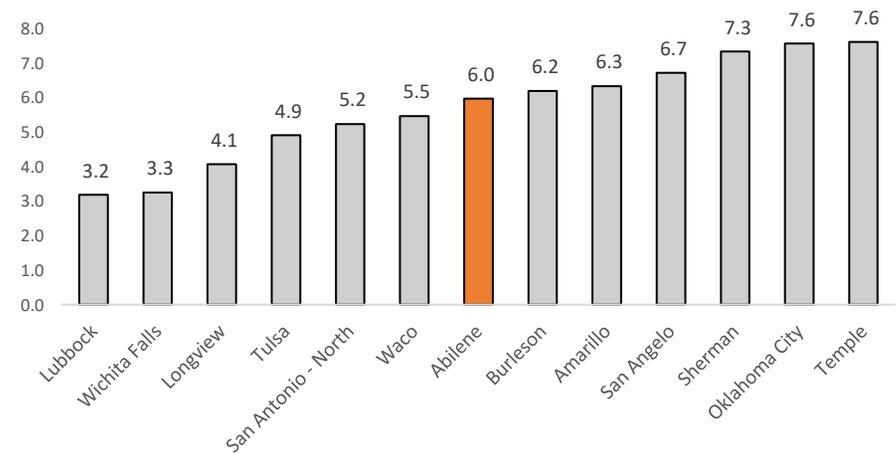
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Relative demand appears much higher in this laborshed than in the comparison markets.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- However, from this measure, demand is still slightly elevated but much more moderate.

Posting Intensity: How hard are employers working to find workers



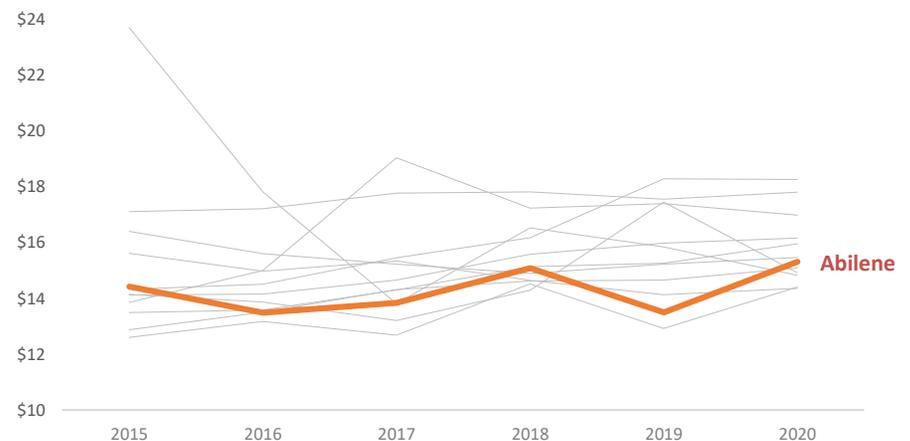
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both sources of data point to moderate wages in the Abilene market.

Wage Levels: From Two Distinct Sources

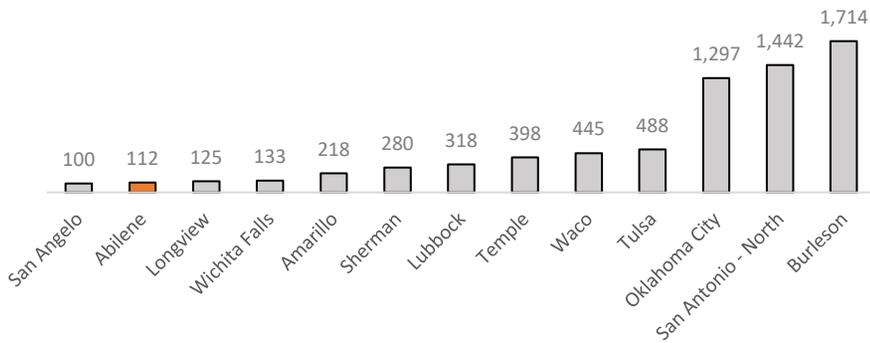
Market	Median Cluster Wage (EMSI)	Chemical Operator (ERI)
Waco	\$14.36	\$22.24
Wichita Falls	\$14.39	\$21.98
San Angelo	\$14.82	\$22.26
Lubbock	\$14.91	\$21.16
San Antonio - North	\$15.08	\$22.42
Abilene	\$15.30	\$21.85
Temple	\$15.46	\$21.67
Burleson	\$15.95	\$23.44
Oklahoma City	\$16.15	\$21.80
Amarillo	\$16.97	\$23.74
Sherman	\$17.79	\$22.73
Tulsa	\$18.24	\$23.99
Longview	\$26.39	\$22.76

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- While wages decreased for a few years in San Angelo, Longview experienced significant wage growth which has continued over time.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

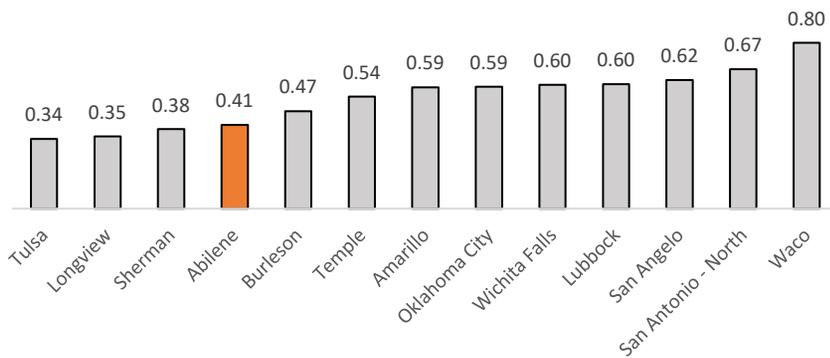


Occupational Presence: Overall count of workers



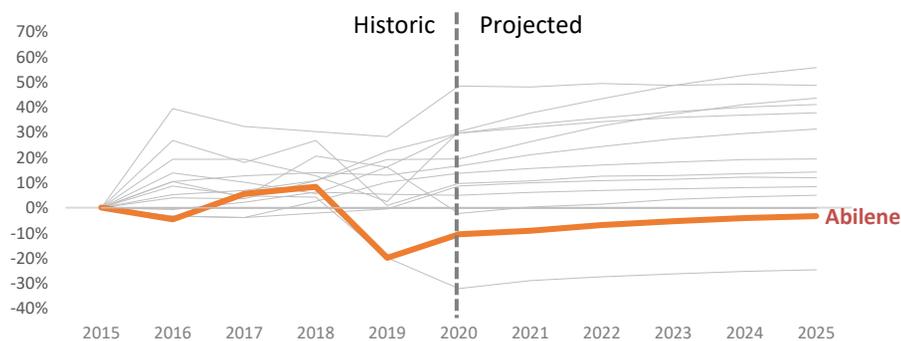
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are a little over 100 workers in this cluster within this laborshed. Again, this is a fairly niche occupational cluster.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration is relatively low and below the national average. However, it is relevant to note that none of these comparison markets are at or above the national average.

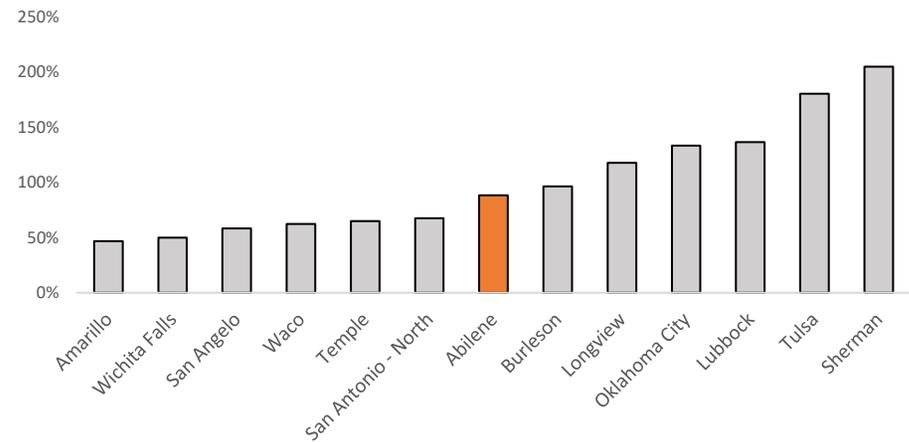
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- The next five years are projected to have low but positive growth for this occupational cluster.

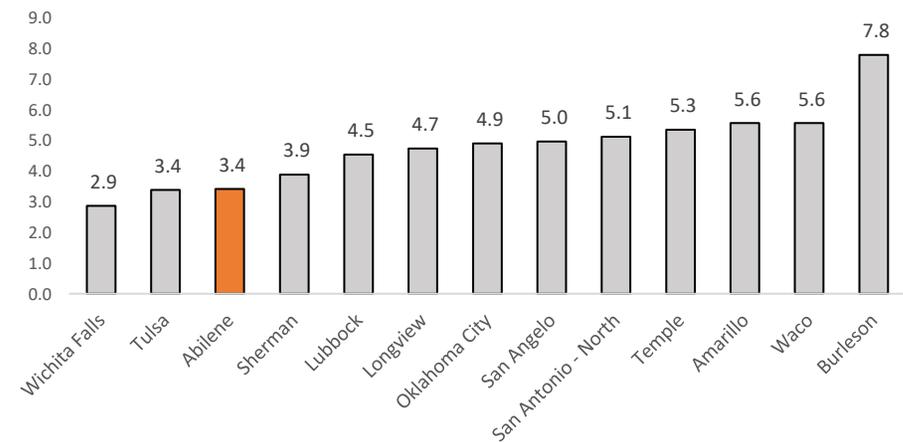
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Abilene has moderate demand for these types of workers compared to its occupational presence.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity points to more moderate demand for this cluster compared to the data above.

Posting Intensity: How hard are employers working to find workers



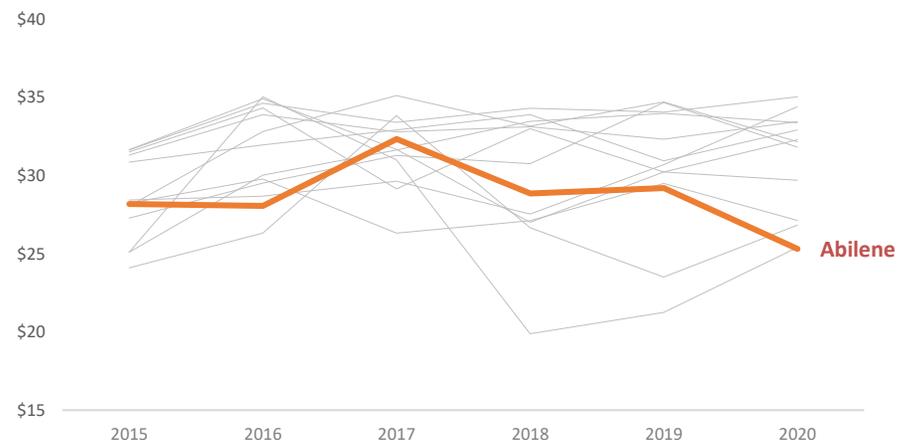
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both sources point to comparatively low salary and wage levels for these types of positions.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Chemist (ERI)
Abilene	\$25.30	\$34.55
San Angelo	\$25.39	\$35.29
Wichita Falls	\$26.81	\$34.78
Lubbock	\$27.11	\$33.63
Longview	\$29.68	\$36.15
Oklahoma City	\$31.80	\$34.44
Temple	\$32.14	\$34.32
Amarillo	\$32.27	\$34.99
San Antonio - North	\$32.89	\$35.43
Waco	\$33.37	\$34.42
Sherman	\$33.41	\$36.46
Tulsa	\$34.37	\$37.99
Burleson	\$35.01	\$37.35

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Curiously, the historical EMSI salary data show a decline in wages/salaries for this cluster over the past few years.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)



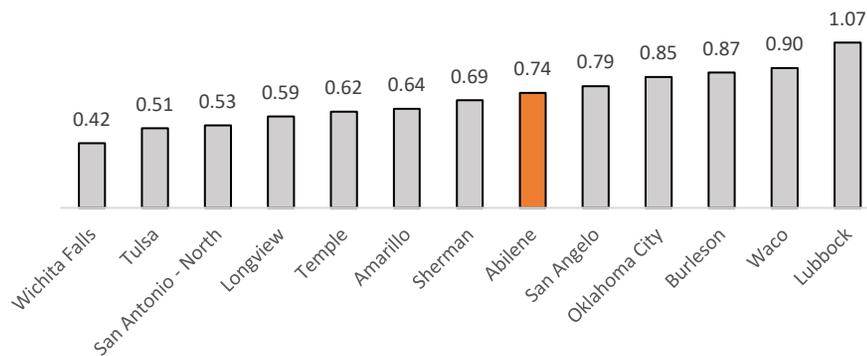
SUPPLY: SCIENCE TECHNICIANS

Occupational Presence: Overall count of workers



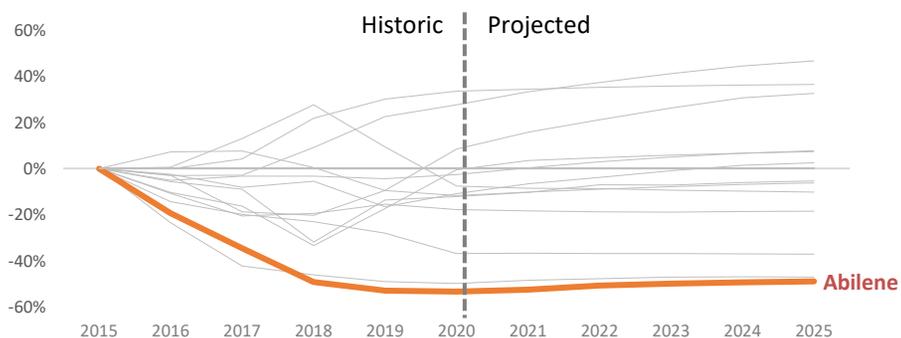
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are less than 100 science technicians in this laborshed.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Concentration of science technicians is higher in Abilene than the majority of these comparison markets. Only Lubbock has a concentration higher than the national average which is likely attributed to the effects of Texas Tech University science programs. Waco (Baylor University) is also relatively high.

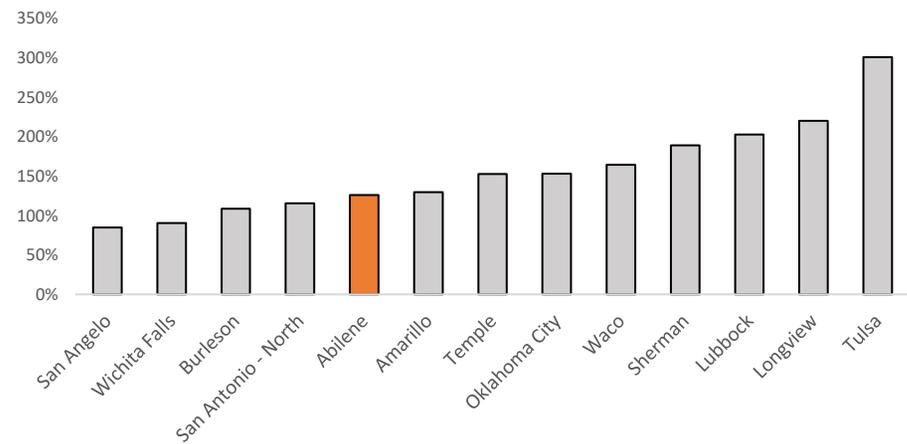
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Abilene has seen a significant drop off in the number of workers in this cluster over the past five years. This is oftentimes due to a closing in the industry or a re-classification of workers.

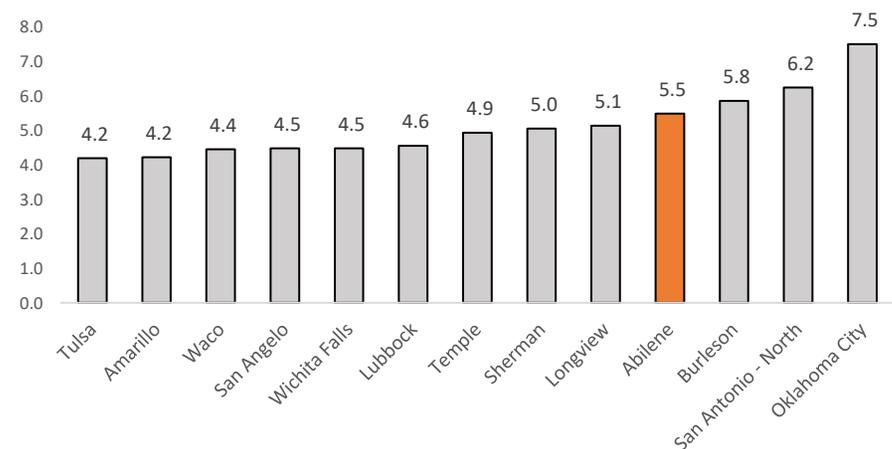
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data show moderate levels of demand for these types of workers. However, this can be impacted by the very small number of workers in the region.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data point to slightly elevated demand and competition.

Posting Intensity: How hard are employers working to find workers



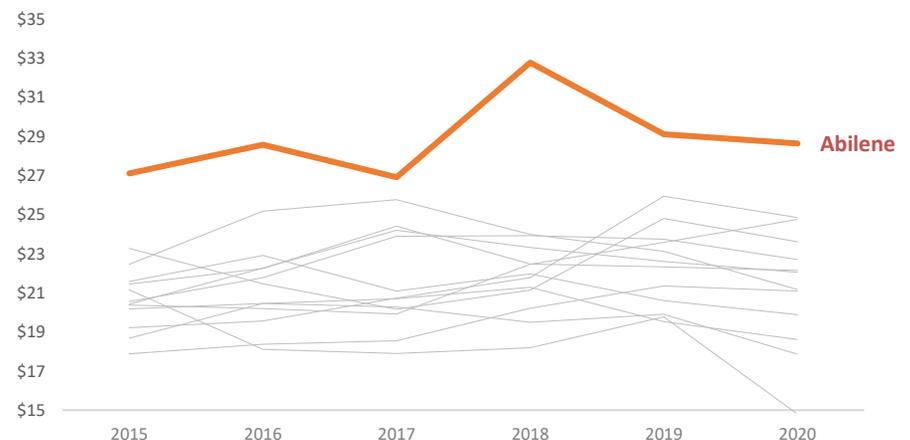
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- This is an example of a cluster with the EMSI data (and very small number of workers in the cluster) is likely skewed too high. The ERI data shows more moderate wage levels as we would expect.

Wage Levels: From Two Distinct Sources

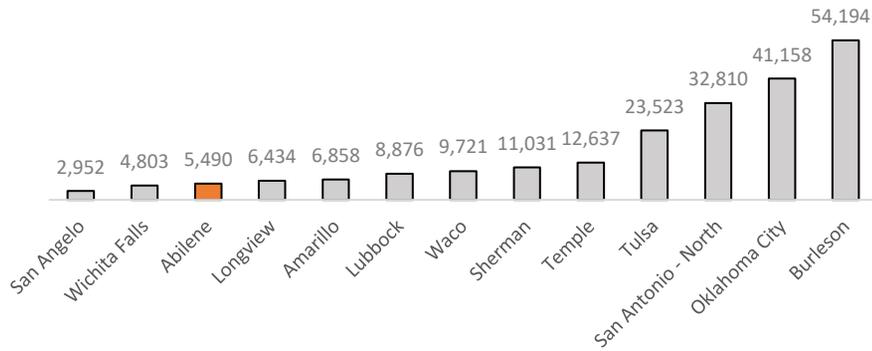
Market	Median Cluster Wage (EMSI)	Chemical Laboratory Technician (ERI)
San Angelo	\$14.81	\$24.11
Amarillo	\$17.86	\$24.50
Lubbock	\$18.61	\$23.22
Longview	\$19.88	\$25.02
Wichita Falls	\$21.08	\$24.00
Tulsa	\$21.17	\$26.15
Waco	\$22.05	\$23.86
Temple	\$22.15	\$23.91
Oklahoma City	\$22.70	\$24.30
Sherman	\$23.61	\$25.14
San Antonio - North	\$24.74	\$24.65
Burleson	\$24.83	\$25.97
Abilene	\$28.63	\$23.65

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Historical data shows that wage/salary levels have moved around from year to year, but are generally at the same level as five years ago.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

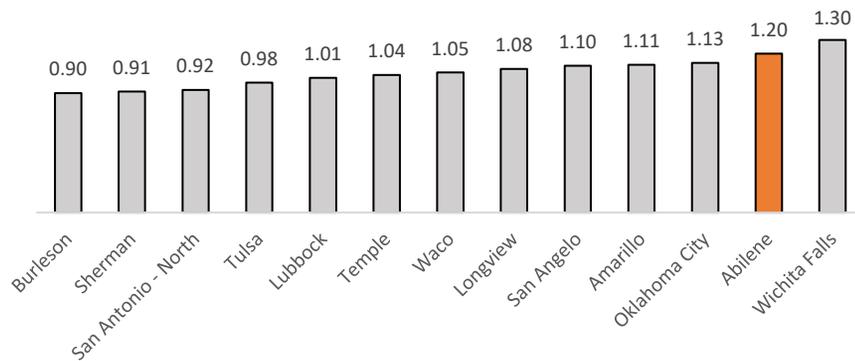


Occupational Presence: Overall count of workers



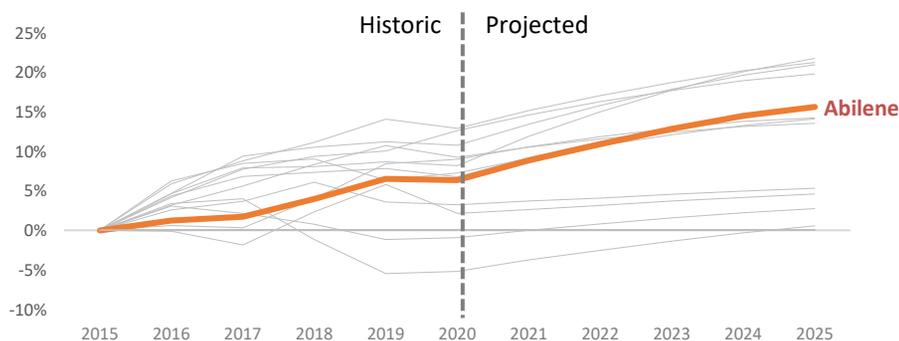
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are slightly under 5,500 healthcare workers in this laborshed.
- Like the Supplemental cluster before, most markets have a large number of these types of workers as the health care industry is common even in small markets.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has a relatively high concentration of healthcare workers when compared to both the national average and these comparison markets. The variance of concentration of this occupational clusters tends to be fairly low, so to see such a high concentration in Abilene is notable.

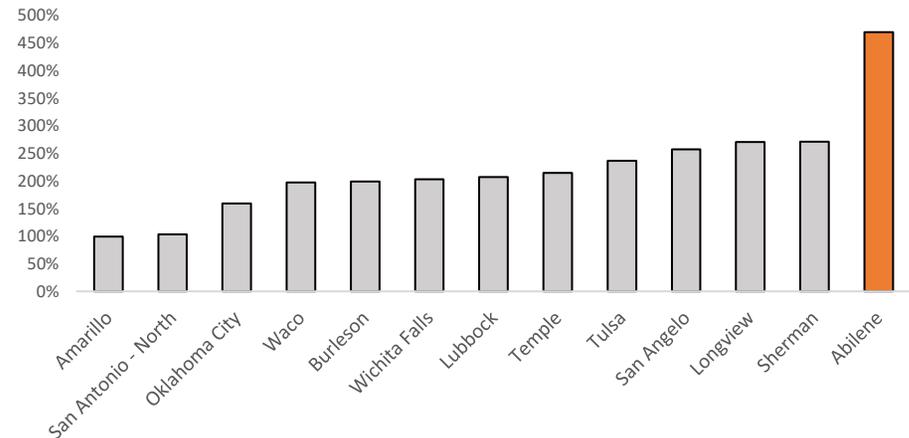
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Growth is projected to continue in this laborshed over the next five years.

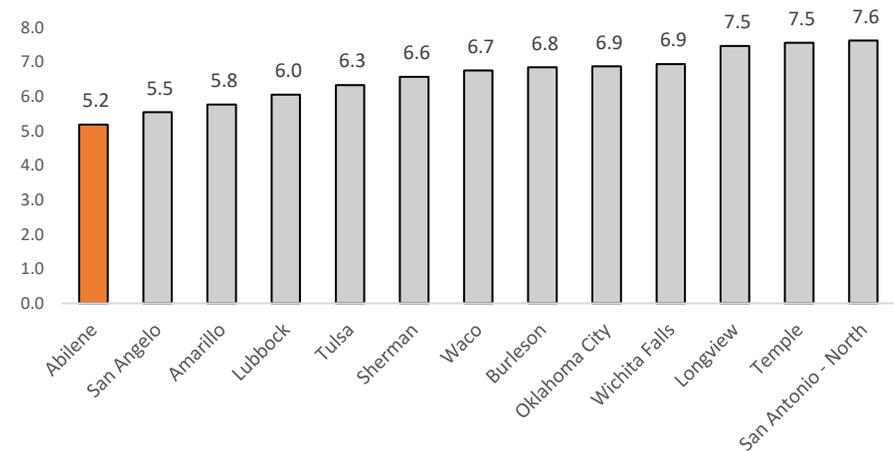
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Demand for health care workers in Abilene is extremely elevated compared to all other markets.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data isn't quite as alarming as the relative demand data above. However, lower posting intensity could be a function of a couple major providers in the community posting their jobs on a more limited number of sites.

Posting Intensity: How hard are employers working to find workers



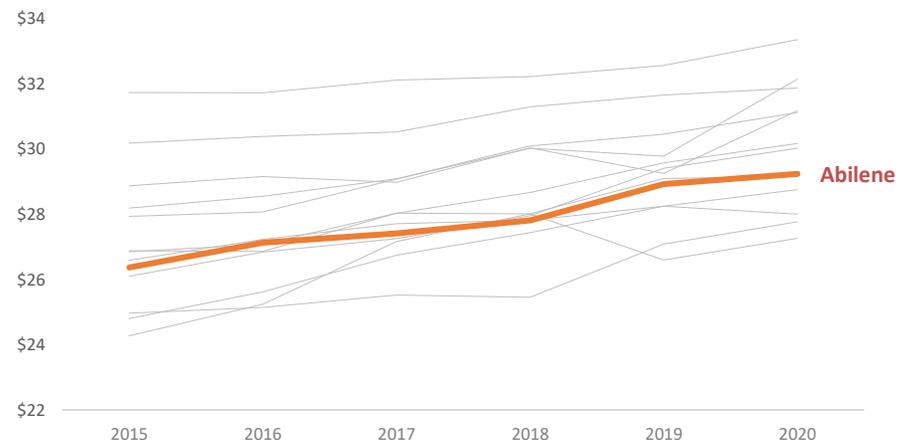
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources show moderate wage and salary levels in Abilene for health care workers.

Wage Levels: From Two Distinct Sources

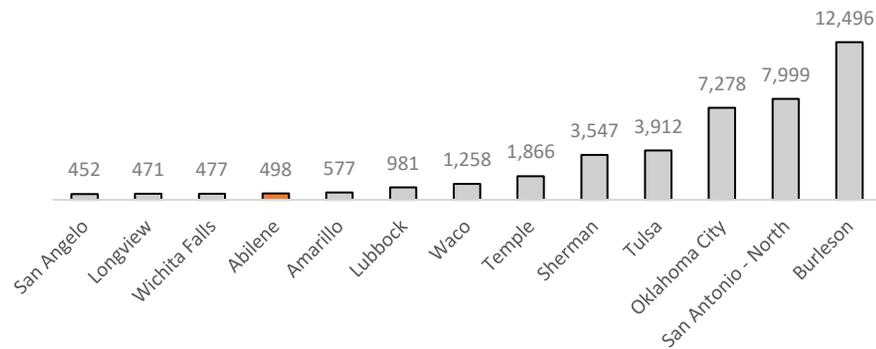
Market	Median Cluster Wage (EMSI)	Nurse Registered (ERI)
San Angelo	\$27.26	\$33.89
Wichita Falls	\$27.77	\$33.76
Longview	\$28.00	\$34.51
Lubbock	\$28.75	\$33.84
Amarillo	\$29.15	\$34.56
Abilene	\$29.24	\$33.75
Tulsa	\$30.03	\$34.82
Oklahoma City	\$30.17	\$32.25
San Antonio - North	\$31.12	\$34.92
Waco	\$31.18	\$34.41
Sherman	\$31.86	\$34.83
Temple	\$32.14	\$34.03
Burleson	\$33.35	\$36.47

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- And while wage levels have grown in Abilene, they're in line with other markets.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

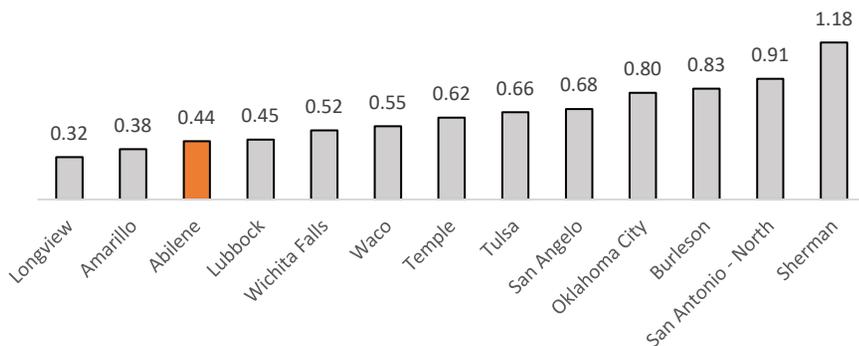


Occupational Presence: Overall count of workers



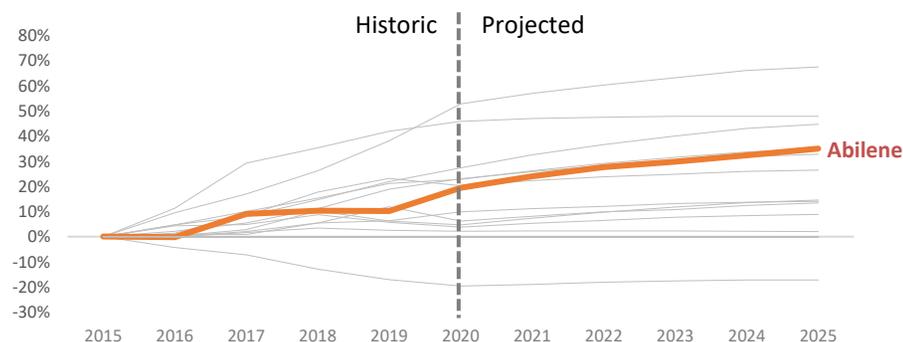
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are almost 500 workers in this laborshed in the high skill IT occupation cluster.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration is below the national average and most similar to the presence of this type of worker in Lubbock. The data for Sherman is picking up the significant number of IT workers in the far north Dallas suburbs.

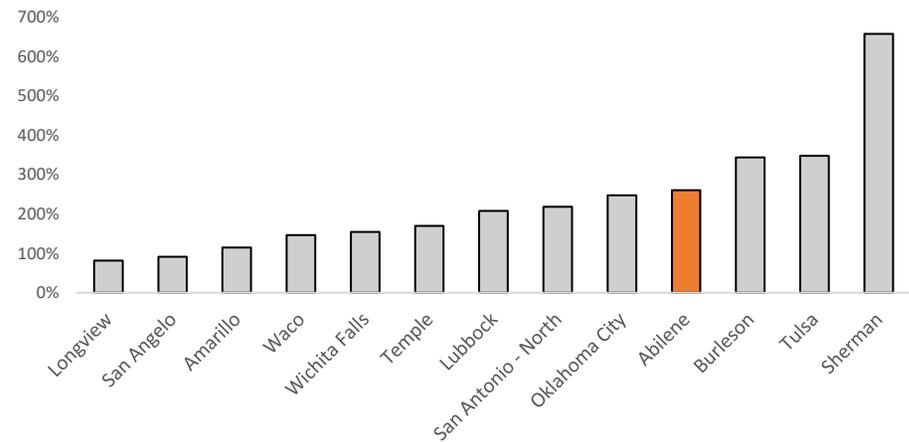
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Abilene’s laborshed is expected to continue to see positive growth over the next five years.

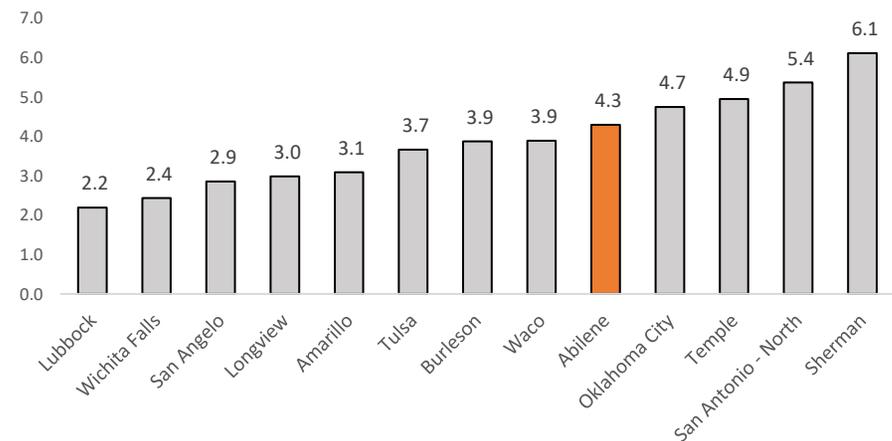
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Demand is slightly elevated for this cluster in Abilene compared to the other markets. Again, we see really high demand in the north Dallas suburbs.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data matches the data above, both showing slightly elevated demand levels. Once again, the data show really high demand in north Dallas.

Posting Intensity: How hard are employers working to find workers



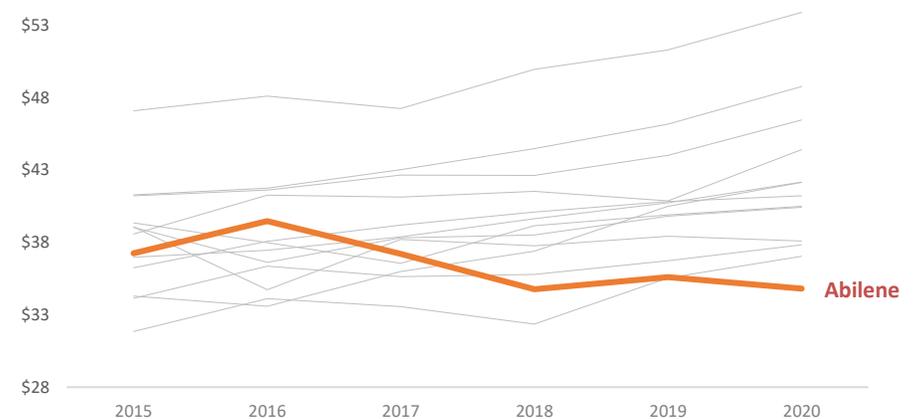
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Interestingly, the EMSI data here shows lower wages compared to ERI. In most of the other clusters reviewed herein, the data has been inverse.

Wage Levels: From Two Distinct Sources

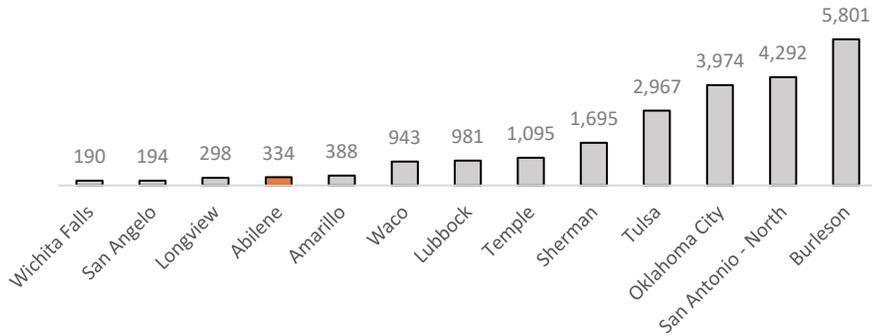
Market	Median Cluster Wage (EMSI)	IT Data Architect (ERI)
Abilene	\$34.80	\$41.84
Lubbock	\$37.03	\$40.60
San Angelo	\$37.81	\$41.42
Waco	\$38.07	\$42.32
Temple	\$40.41	\$42.71
Wichita Falls	\$40.47	\$42.11
Amarillo	\$41.19	\$42.09
Longview	\$42.11	\$43.35
Oklahoma City	\$42.15	\$38.37
Tulsa	\$44.38	\$42.10
San Antonio - North	\$46.42	\$43.62
Burleson	\$48.74	\$44.61
Sherman	\$53.85	\$43.28

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Also interesting, the historic wage growth data from EMSI shows a decline in levels in Abilene over the past few years.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

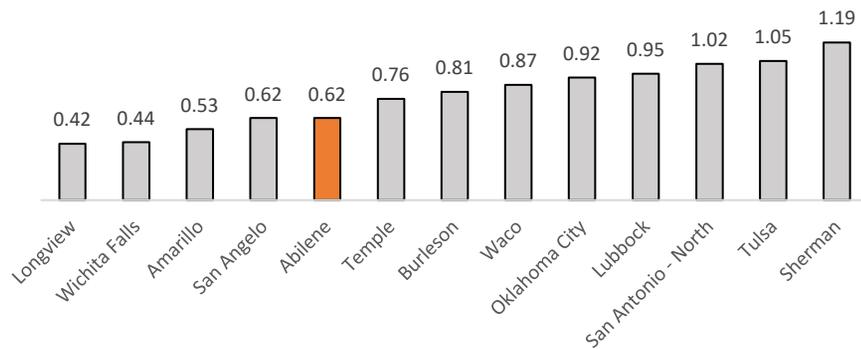


Occupational Presence: Overall count of workers



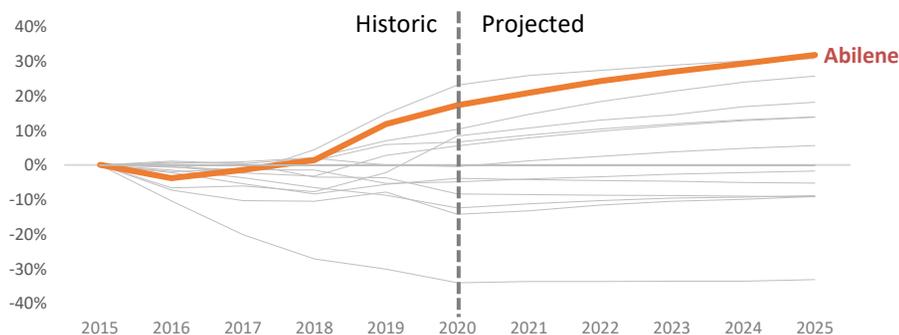
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- This cluster is meant to represent occupations in the IT cluster that are less likely to require a degree or advanced training.
- There are approximately 330 moderate skill IT workers in this laborshed.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The current concentration of this type of worker is well below the national average, but higher than the higher-skilled cluster shown previously.

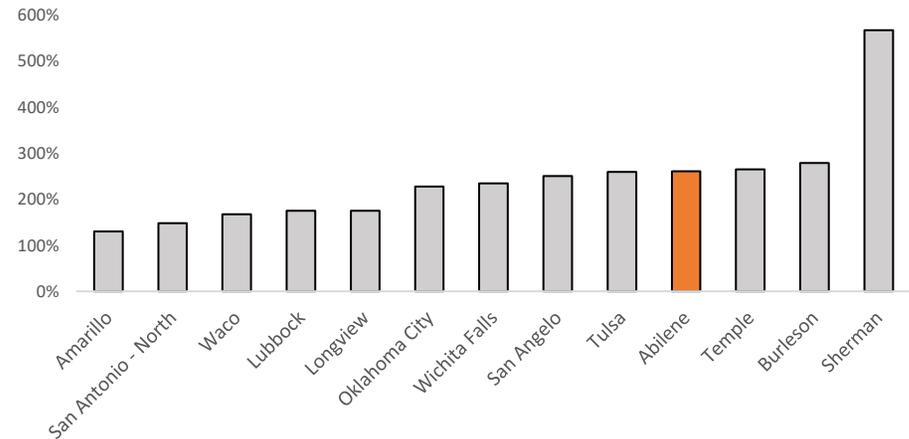
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Abilene is expected to see significant, positive growth in this occupational cluster of the next five years.

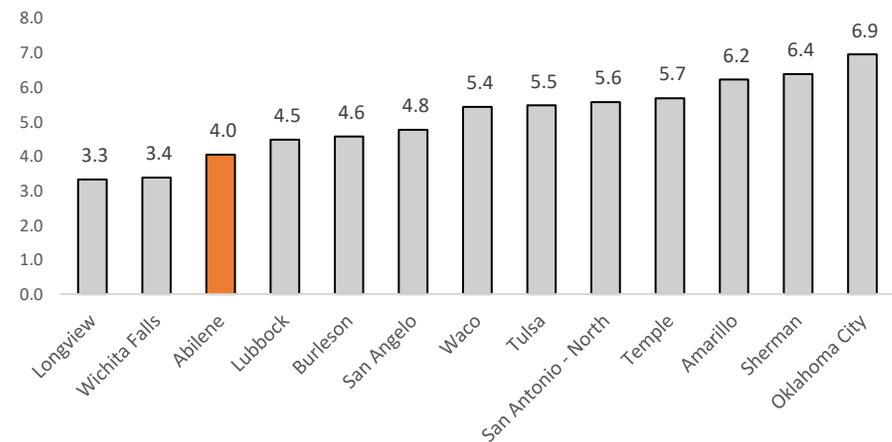
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Abilene shows moderate levels for demand for this cluster, but mainly in line with most other markets. Once again, we see very high levels of demand for IT workers in the north Dallas suburbs.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data is a bit more moderated in Abilene.

Posting Intensity: How hard are employers working to find workers



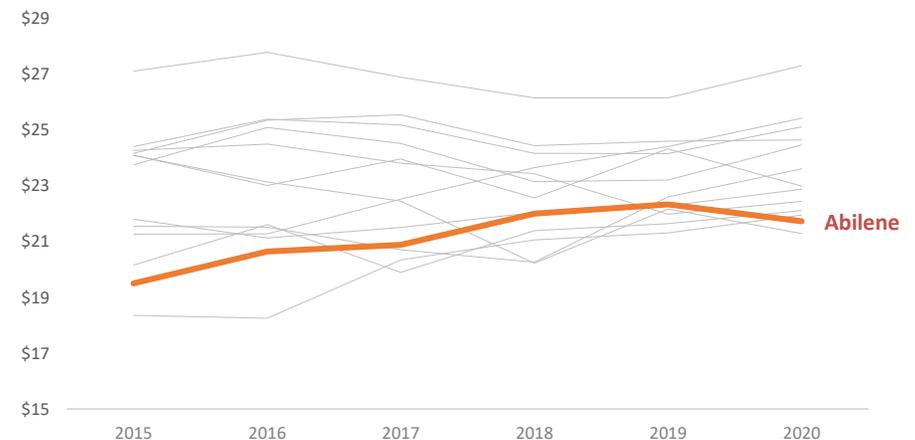
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Like in its sister occupational cluster, the wage data show consistently lower wages in Abilene compared to the other markets.

Wage Levels: From Two Distinct Sources

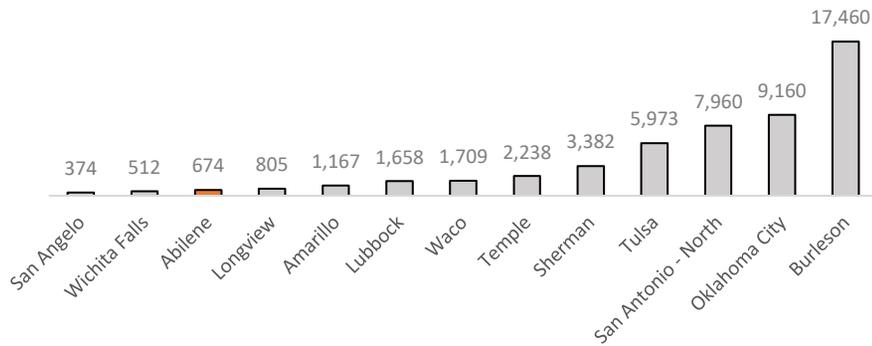
Market	Median Cluster Wage (EMSI)	IT Help Desk Representative (ERI)
Waco	\$21.27	\$22.44
Abilene	\$21.71	\$21.64
Lubbock	\$21.93	\$21.06
San Angelo	\$22.09	\$21.98
Wichita Falls	\$22.43	\$22.16
Amarillo	\$22.86	\$22.58
Temple	\$22.97	\$22.61
Longview	\$23.58	\$22.42
Tulsa	\$24.45	\$23.59
San Antonio - North	\$24.63	\$23.67
Burleson	\$25.10	\$24.41
Oklahoma City	\$25.40	\$21.92
Sherman	\$27.28	\$22.93

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- []

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

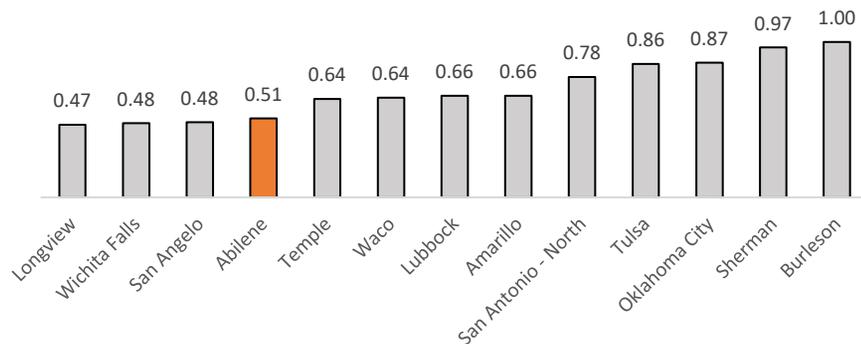


Occupational Presence: Overall count of workers



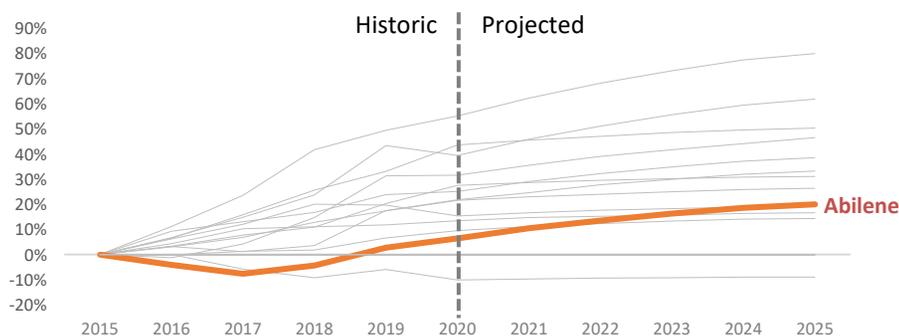
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are approximately 675 workers employed in the finance cluster in this laborshed.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration is relatively low, and not quite as the next “level” as seen in Temple, Waco, Lubbock, and Amarillo – it’s similar to other markets in west central Texas.

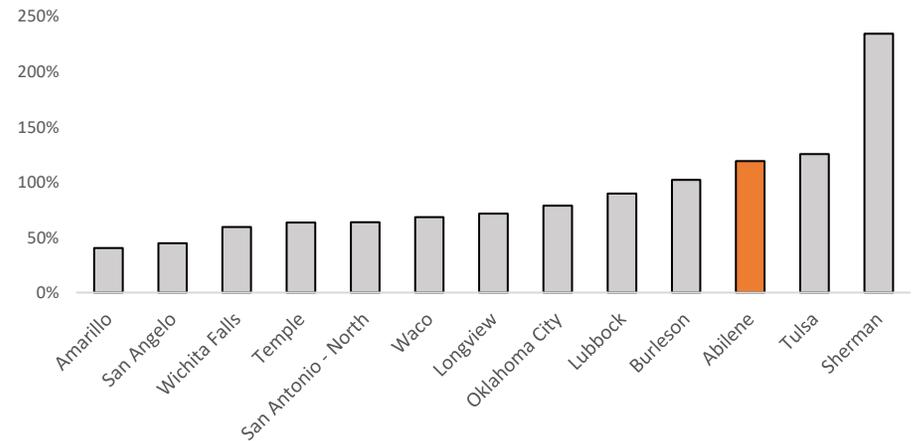
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- While the overall count and concentration for this occupational cluster are less favorable, it is great to see that the projected growth is likely to continue over the next five years.

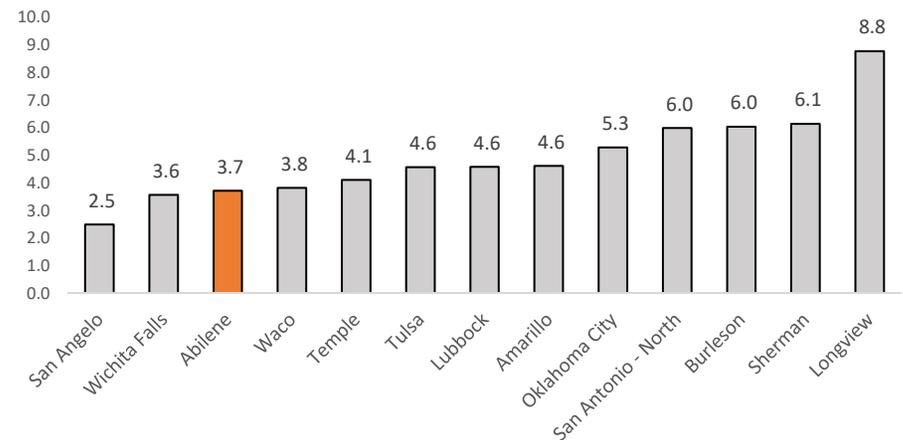
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- Demand for finance workers in Abilene is somewhat elevated. Like the IT sector, again, we see very high demand in Sherman coming from the nearby north Dallas suburbs.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensive data is more moderate in Abilene.

Posting Intensity: How hard are employers working to find workers



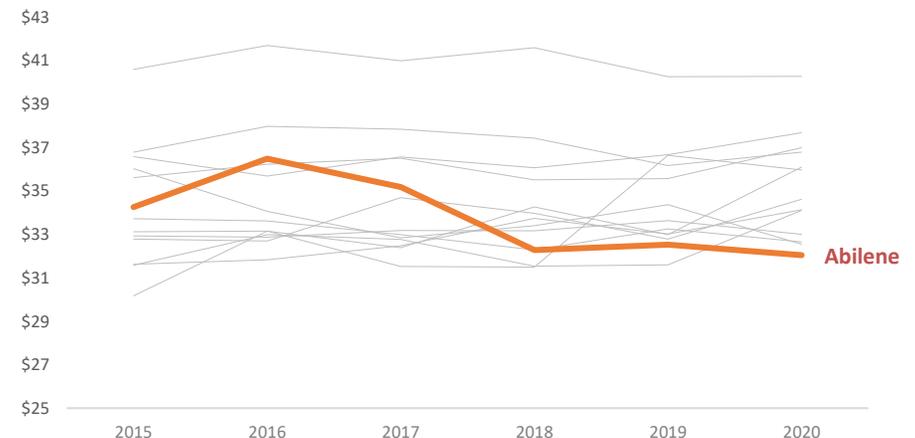
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Like the IT side, both data sources point to low to moderate wages for finance workers in the Abilene area.

Wage Levels: From Two Distinct Sources

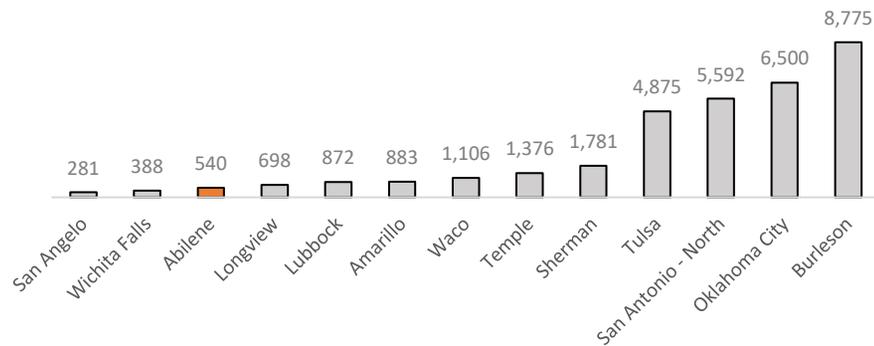
Market	Median Cluster Wage (EMSI)	Financial Analyst (ERI)
Abilene	\$32.04	\$39.52
Waco	\$32.54	\$39.70
Oklahoma City	\$32.64	\$38.06
Temple	\$32.99	\$39.56
Lubbock	\$34.09	\$39.63
San Angelo	\$34.13	\$39.15
Wichita Falls	\$34.60	\$39.43
Amarillo	\$35.95	\$40.67
Longview	\$36.09	\$41.28
Burleson	\$36.77	\$42.60
San Antonio - North	\$36.98	\$41.33
Tulsa	\$37.67	\$41.22
Sherman	\$40.26	\$41.08

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Historical data also point to declining and stagnant wages in this cluster.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

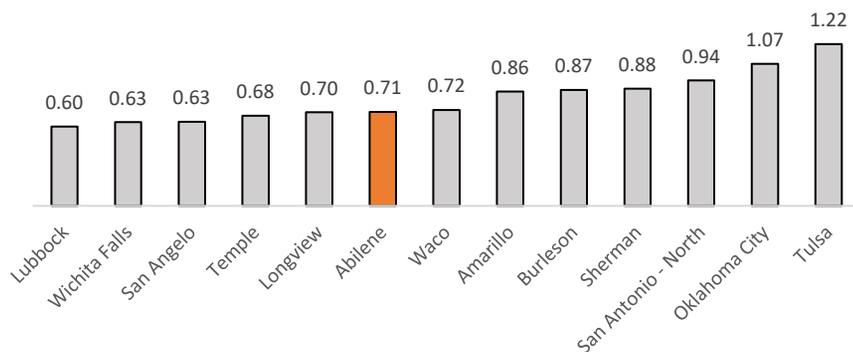


Occupational Presence: Overall count of workers



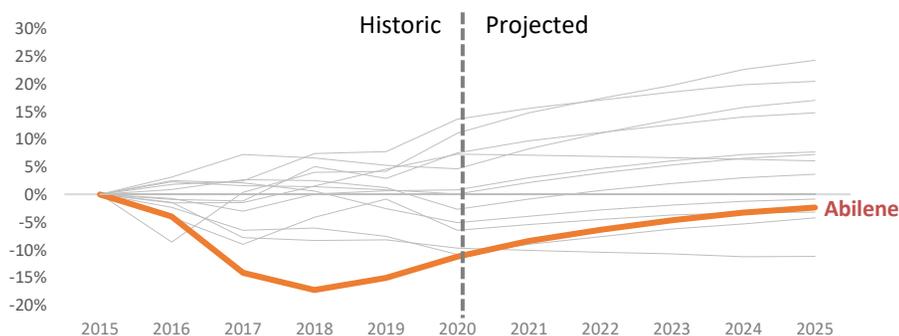
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are over 500 workers in the accounting occupation cluster in this laborshed.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- This laborshed has a concentration of accounting workers below the national average, but similar to the concentrations in Longview and Waco. Both Oklahoma markets have high concentrations of these types of workers.

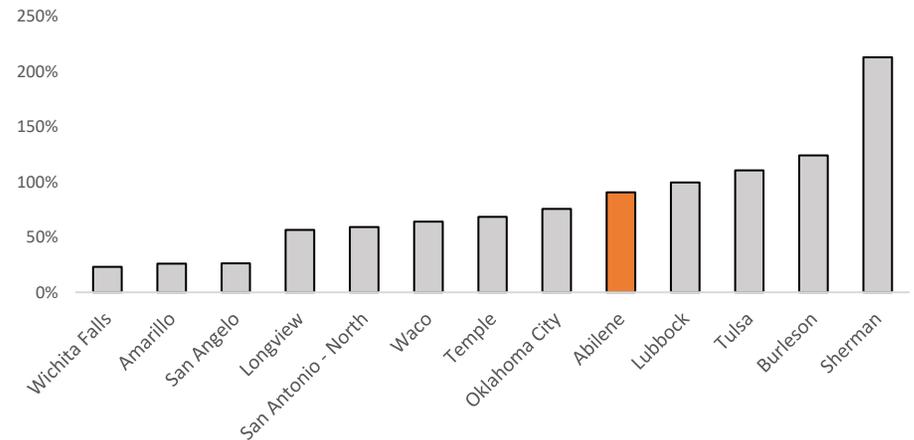
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Despite the dip observed in 2017-2018, Abilene’s laborshed is projected to see growth in this cluster and will return to close to 2015 levels in the next five or so years.

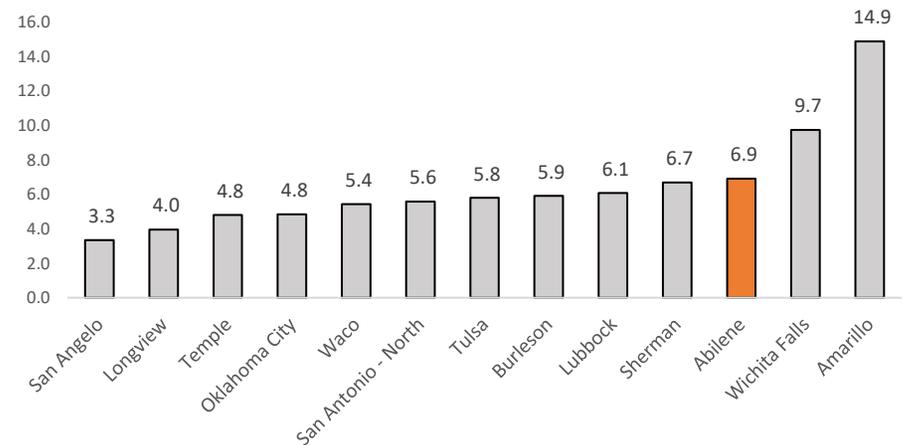
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- There is moderate levels of demand for accounting workers in Abilene compared to the other markets.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data show slightly more elevated demand in the region.

Posting Intensity: How hard are employers working to find workers



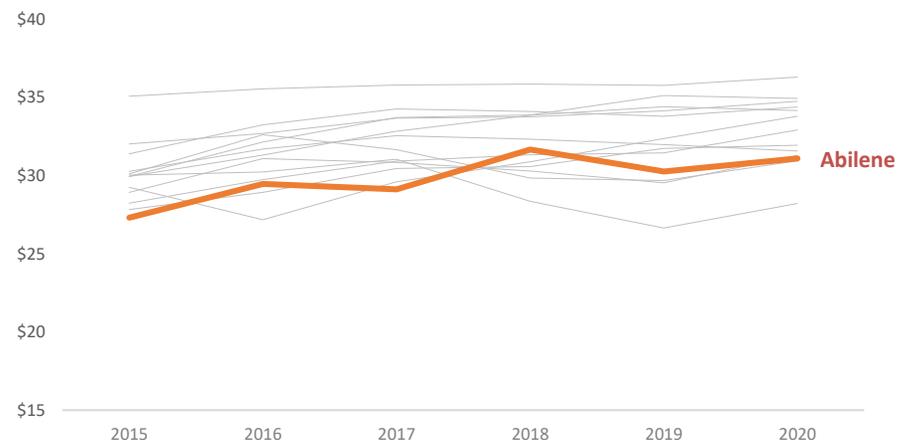
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Like the finance cluster, both data sources point to relatively modest wage levels in Abilene.

Wage Levels: From Two Distinct Sources

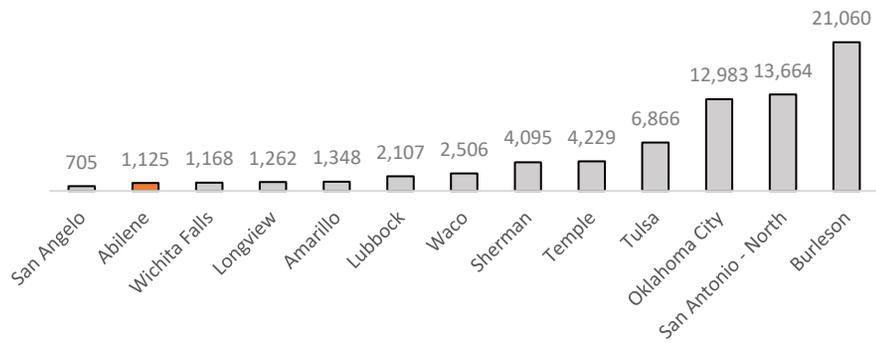
Market	Median Cluster Wage (EMSI)	Accountant (ERI)
San Angelo	\$28.19	\$32.58
Waco	\$30.93	\$33.12
Abilene	\$31.07	\$32.90
Temple	\$31.26	\$33.04
San Antonio – North	\$31.56	\$34.79
Lubbock	\$31.91	\$32.83
Oklahoma City	\$32.89	\$31.99
Wichita Falls	\$33.78	\$32.94
Longview	\$34.13	\$34.24
Tulsa	\$34.36	\$34.61
Burleson	\$34.73	\$35.87
Amarillo	\$34.91	\$34.00
Sherman	\$36.27	\$34.20

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Wage inflation over the past five years is also relatively moderate.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

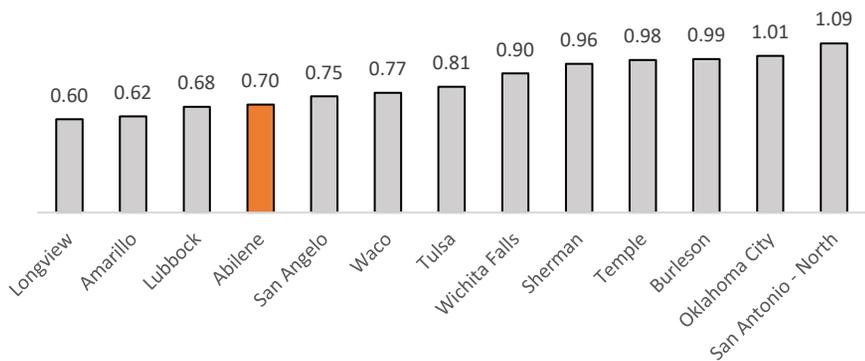


Occupational Presence: Overall count of workers



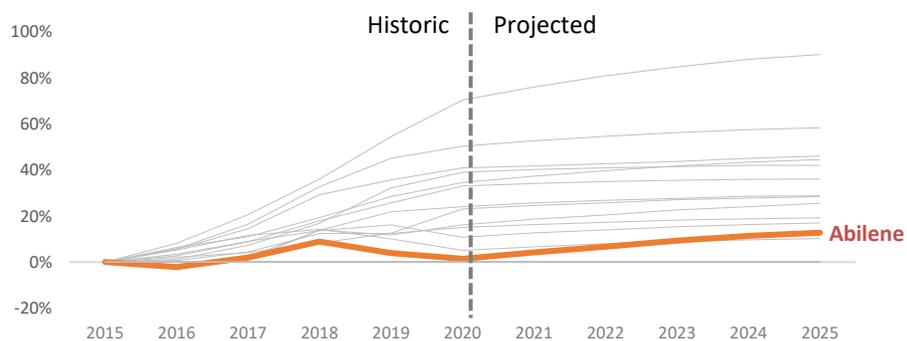
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are over 1,000 workers in human resources in this laborshed.
- However, as one stakeholder mentioned during our community visit, it is becoming commonplace for workers in other positions to also take on human resource roles, so this number is likely higher than shown here.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- The concentration of this cluster is relatively low in this laborshed.

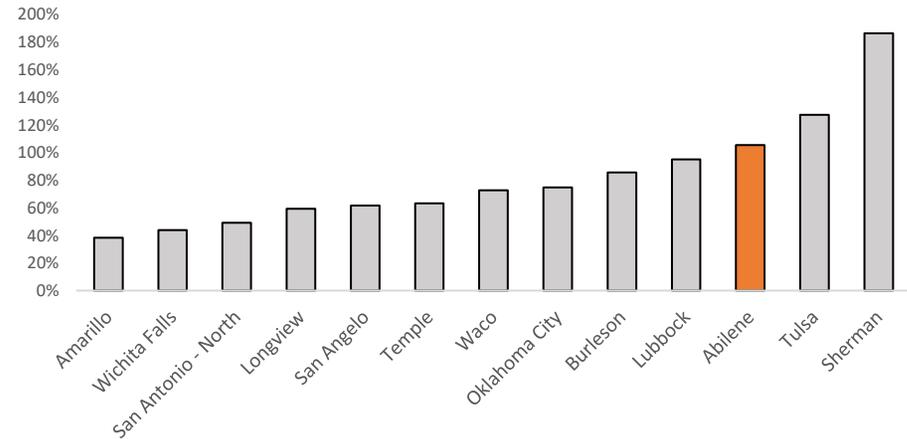
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- While growth has been historically low in this cluster for Abilene, there is projected to be some positive growth in the next few years.

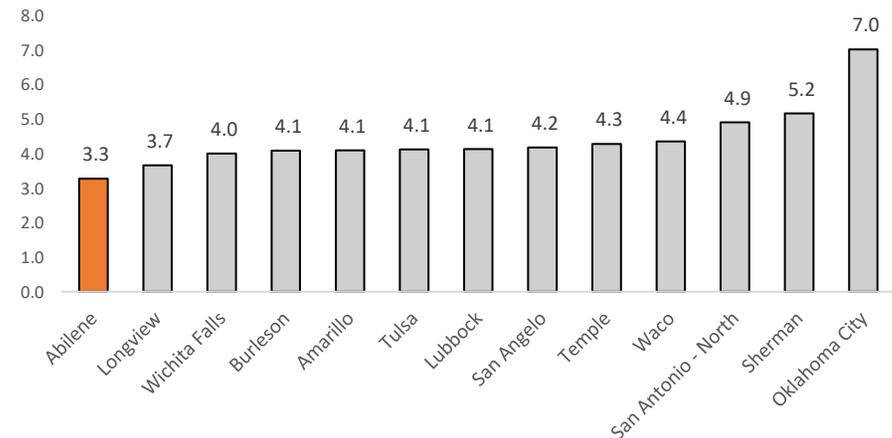
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data shows elevated demand levels for human resources workers in the Abilene area.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- However, the posting intensity data point to lower demand – this pattern is similar to the finance cluster.

Posting Intensity: How hard are employers working to find workers



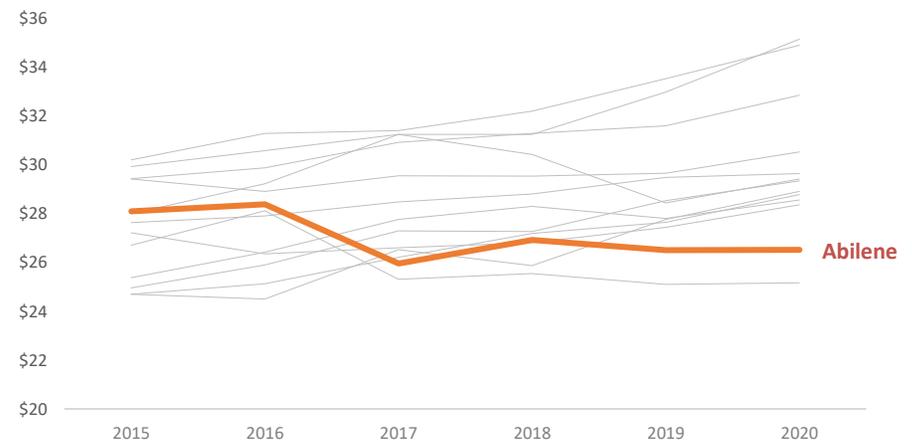
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Like other professional services clusters, both data sources point to relatively moderate wage and salary levels in the region.

Wage Levels: From Two Distinct Sources

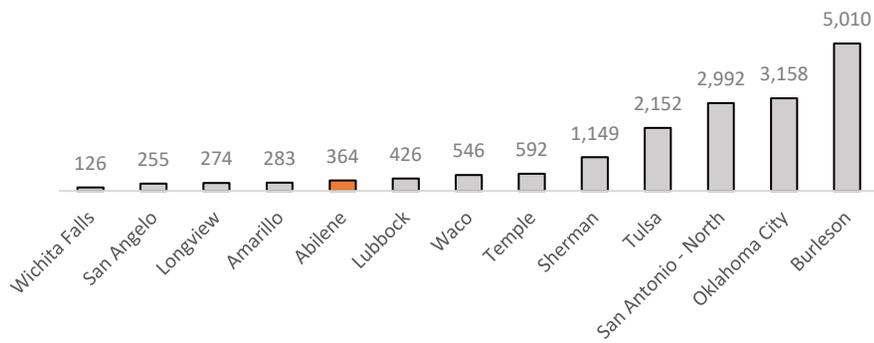
Market	Median Cluster Wage (EMSI)	HR Associate (ERI)
Lubbock	\$25.16	\$23.16
Abilene	\$26.50	\$22.89
Waco	\$28.36	\$23.51
Wichita Falls	\$28.55	\$23.35
San Angelo	\$28.77	\$22.87
Longview	\$28.89	\$23.75
Tulsa	\$29.33	\$24.82
Amarillo	\$29.40	\$23.60
Oklahoma City	\$29.62	\$23.32
Temple	\$30.51	\$23.01
San Antonio - North	\$32.82	\$24.25
Sherman	\$34.88	\$24.16
Burleson	\$35.12	\$25.47

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- Like the finance cluster, the historical EMSI data show flat and/or declining wages in this cluster. Nearly all other clusters have shown growth.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)

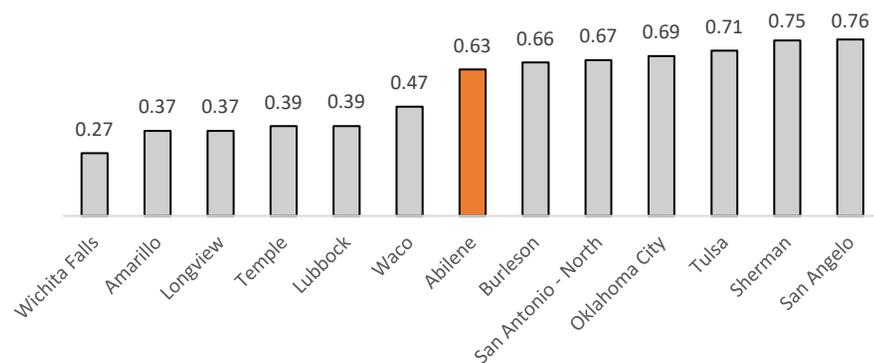


Occupational Presence: Overall count of workers



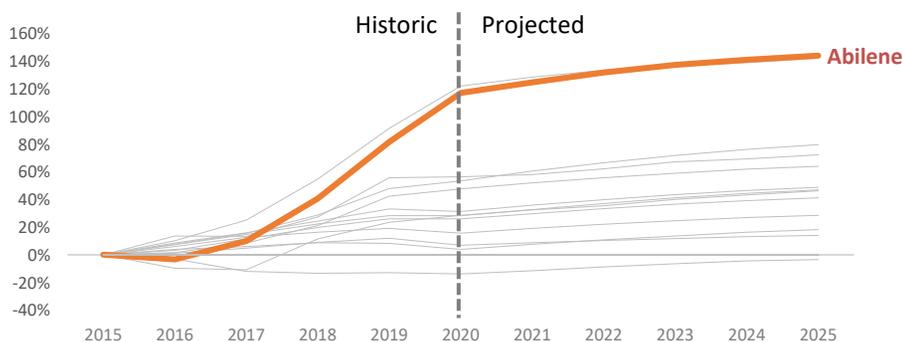
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- There are over 350 workers employed in the marketing occupation cluster in this laborshed.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Although low, the concentration for this cluster is in closer to larger markets (Dallas-Fort Worth, Oklahoma City, Tulsa, San Antonio) than its smaller market peers.

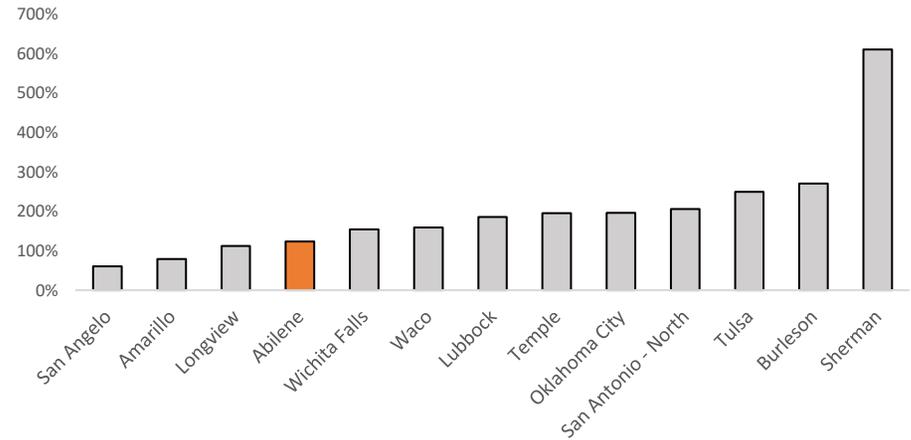
Occupational Growth: 5 Year Historic & Projected (2015 = 0)



- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- The historic growth data show a significant increase in this cluster over the past five years.
- Notably, one existing employer spoke to marketing as a potential opportunity for growth in the community.

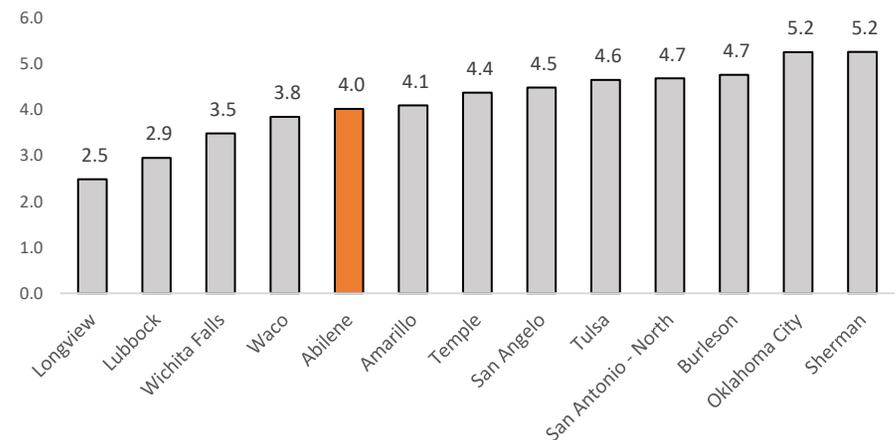
- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data show fairly low levels of demand for marketing workers compared to the comparison markets. Once again, we see very high levels of competition in the north Dallas region.

Relative Demand: Measure of hiring demand vs. occupational presence



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The posting intensity data is consistent with the above, which also shows modest levels of demand.

Posting Intensity: How hard are employers working to find workers



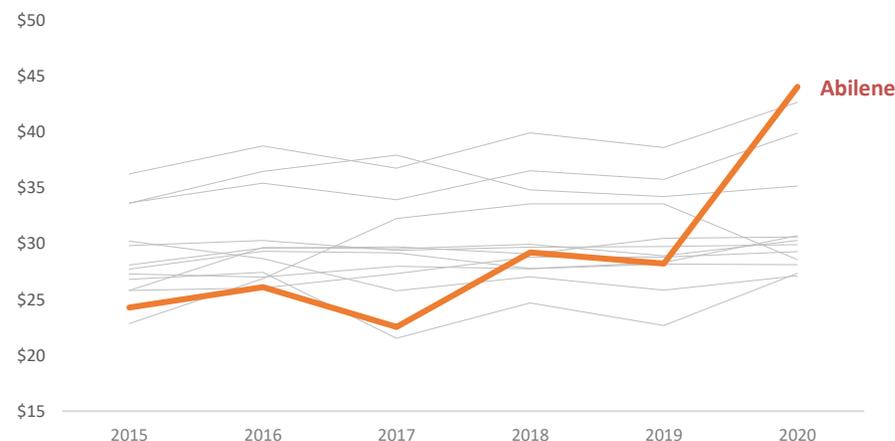
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- With that significant growth in occupational presence, the EMSI data shows surprisingly high wages for this cluster. The more comparative ERI data show more modest wages.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Marketing Analyst (ERI)
Lubbock	\$27.09	\$29.93
Wichita Falls	\$27.32	\$29.82
Waco	\$28.08	\$30.41
Longview	\$28.55	\$31.35
Oklahoma City	\$29.26	\$29.52
Tulsa	\$29.89	\$32.10
Amarillo	\$30.26	\$31.16
Temple	\$30.58	\$30.66
San Angelo	\$30.68	\$29.80
San Antonio - North	\$35.12	\$32.37
Burleson	\$39.86	\$33.33
Sherman	\$42.60	\$31.11
Abilene	\$43.99	\$30.00

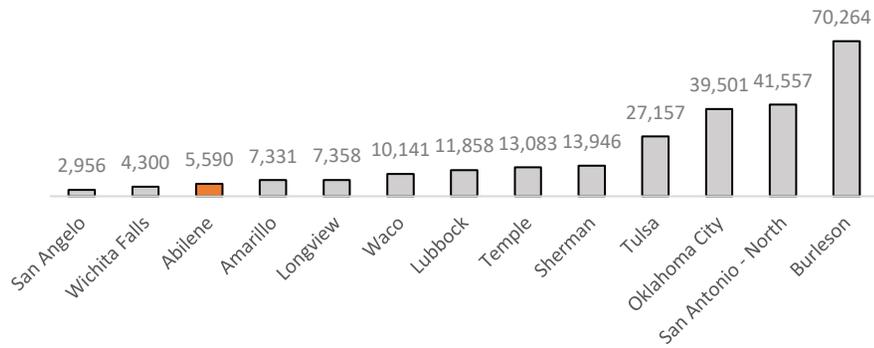
- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- And again, historic wage data from EMSI shows a spike in growth in the past year.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)



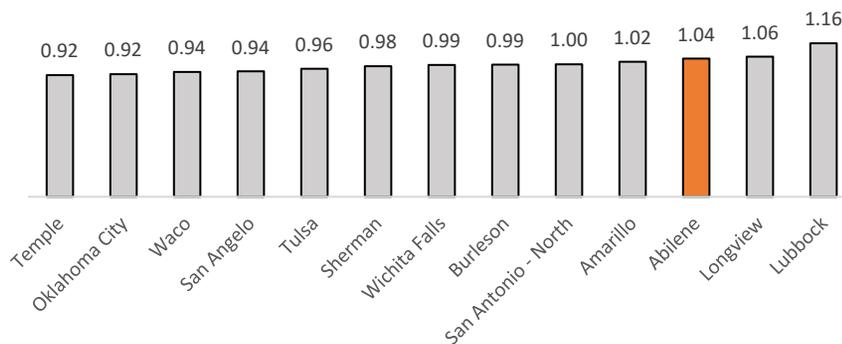
SUPPLY: ADMINISTRATIVE SUPPORT SERVICES *Prof. Services*

Occupational Presence: Overall count of workers



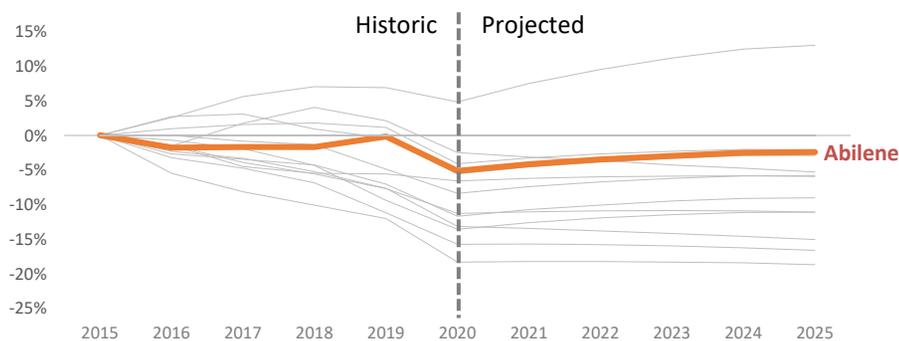
- The chart at left shows the absolute number of workers in this cluster within a 40-minute drive time of each site.
- This cluster includes a number of different types of administrative support positions that are typically lower or middle-skill jobs. Some of these workers could be considered underemployed.
- Abilene has just over 5,500 of these workers.

Occupational Concentration: Greater than 1.00 means high concentration



- The chart at left shows the concentration of workers in this cluster within a 40-minute drive time.
- Abilene has a slightly higher concentration of these workers compared to the other markets and the U.S. average.
- Again, this cluster is relatively ubiquitous in most markets.

Occupational Growth: 5 Year Historic & Projected (2015 = 0)

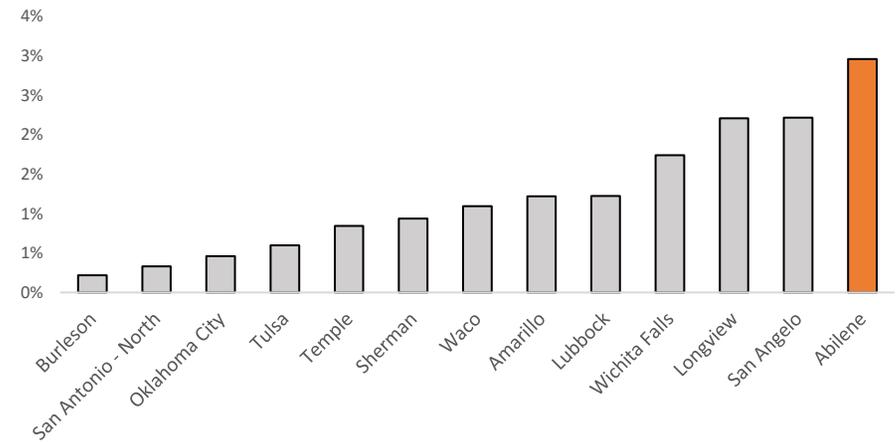


- The chart at left shows five years of historic growth trends and five years of projected growth for this cluster.
- Nearly all these markets saw a decline from 2019 to 2020 (based in large part on COVID). Few are expected to see significant growth into the future (with the exception of Sherman and the far north Dallas suburbs).

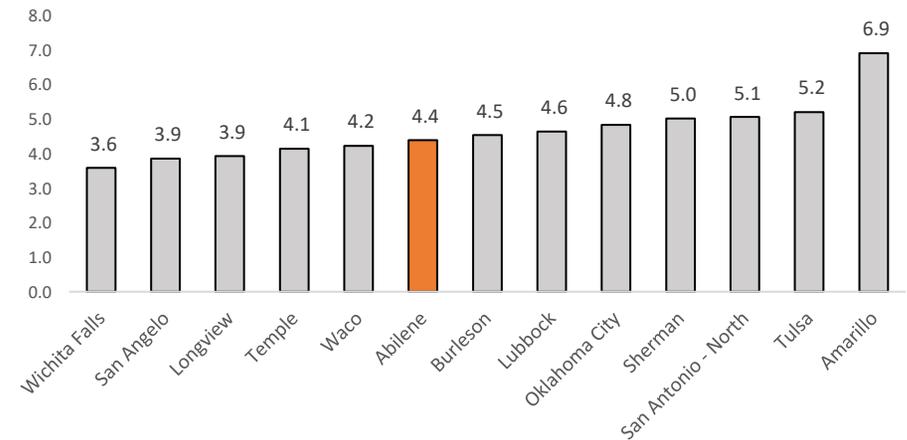
DEMAND: ADMINISTRATIVE SUPPORT SERVICES *Prof. Services*

- The chart at top right shows the relative demand for workers in this cluster by comparing unique job postings over the past year (i.e. demand) compared to the number of workers employed in that occupational cluster. This is meant to give a relative view of demand vs. supply.
- The data point to very high levels of demand for these workers in Abilene.

Relative Demand: Measure of hiring demand vs. occupational presence



Posting Intensity: How hard are employers working to find workers



- The chart at bottom right shows Posting Intensity – a measure of how hard employers are working to post jobs and hire new positions. Higher values mean that employers are working harder and utilizing more channels to fill positions.
- The job posting intensity data is more moderate and aligned with most other markets.

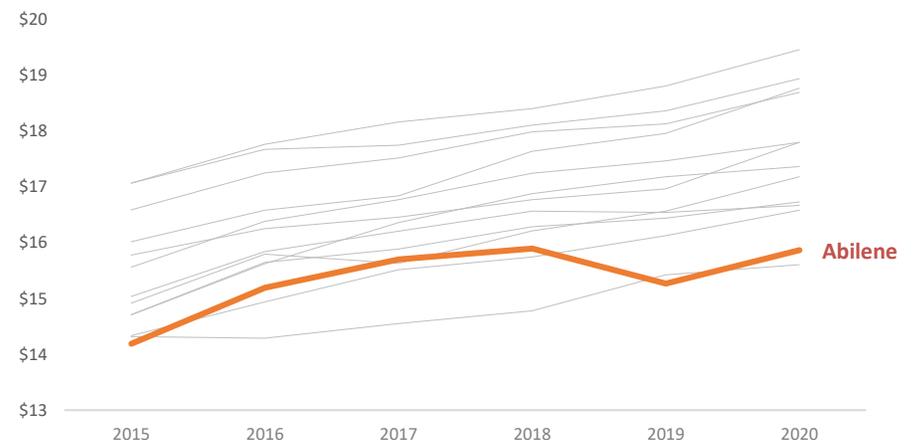
- The table at top right shows salary and wage data for this occupational cluster. SSG utilizes two different databases for this analysis. The EMSI data blends wage information from all occupations within this cluster. However, it can be biased (e.g. if a community has fewer high-skill positions, wages will be biased downwards). As a result, we also use an example job title from another source, ERI, which compares the exact same position in one market versus another.
- Both data sources point to moderate wage levels in Abilene for these types of administrative support positions.

Wage Levels: From Two Distinct Sources

Market	Median Cluster Wage (EMSI)	Administrative Assistant (ERI)
Wichita Falls	\$15.60	\$18.93
Abilene	\$15.86	\$18.62
San Angelo	\$16.58	\$18.58
Amarillo	\$16.66	\$19.25
Temple	\$16.73	\$18.69
Waco	\$17.17	\$19.18
Lubbock	\$17.36	\$18.70
Oklahoma City	\$17.79	\$18.88
Longview	\$17.79	\$19.14
San Antonio - North	\$18.68	\$19.67
Tulsa	\$18.75	\$20.05
Sherman	\$18.93	\$19.39
Burleson	\$19.45	\$20.47

- The chart at bottom right shows the growth in wages for this cluster over the past five years. This chart uses the EMSI data as noted above. The emphasis here is on the change over time rather than on absolute wage/salary levels.
- All these markets show similar wage growth trajectories over the past five years.

Wage Growth: Nominal wage growth over the past 5 years (EMSI)



The background features a white field with a light gray dot pattern. On the left side, there are overlapping geometric shapes: a dark blue triangle at the top, a medium blue triangle below it, and a white triangle at the bottom. Two parallel orange lines run diagonally across the page, starting from the left edge and extending towards the bottom right.

3. TRAINING & EDUCATION

3. TRAINING & EDUCATION SUMMARY

3. TRAINING & EDUCATION



- K-12
- Technical Training
- Colleges & Universities
- Workforce Development

Overview & Approach

In SSG’s view, a robust training and educational offering is critical to any site selection project regardless of the industry or end user. Further, there is no silver bullet or singular offering that makes for a “good” educational market – it requires a mix of providers and stakeholders from every level of education, training, and workforce development to tell a compelling story.

The challenge with training and educational analyses is that it requires a mix of data-driven analysis, but also very strong “storytelling” As a result, we leverage both quantitative and qualitative data to evaluate the training and education value proposition. Specifically:

- **Quantitative Data:** Completions analysis from local colleges and training institutions, job profile analytics to show where workers tend to get training from, and further profile analytics to show potential “leakage” of local graduates to other markets.
- **Qualitative Data:** Interviews with workforce development, training, and educational partners, coupled with SSG’s experience in other markets.

Key Strengths

- ✓ **Significant University Presence:** Communities of this size are fortunate to have one college, let alone three with relevant programs.
- ✓ **Strong Technical Training Presence:** Both TSTC and Cisco offer highly relevant programs and are strongly embedded with employers. TSTC has an especially attractive facility and multi-tool/disciplinary industrial program.
- ✓ **Large Number of Relevant Completions:** Colleges and training facilities put out a large number of completions in highly relevant fields like business, health, and sciences. Engineering and IT completions are more limited, but programs exist.
- ✓ **Extremely Proactive Workforce Development:** The Workforce Solutions team is one of the most engaged teams we’ve ever met. Its focus on K-12 and long-term workforce planning is exceptional.
- ✓ **Very Engaged K-12:** The investment in the LIFT is just one way K-12 is demonstrating its commitment to career exploration and training.
- ✓ **Industry Engagement:** Multiple employers and stakeholders highlighted the strength of industry engagement via Big Country Manufacturers Alliance.

Key Challenges

- ? **Completion Data from TSTC:** Because of centralization of its completion data, IPEDS does not show completions in Abilene (and inflates Waco’s). As a result, target completions are underestimated.
- ? **Engineering & ACU Data:** While we are glad to see engineering programming at ACU, graduates are classified under a general category meaning companies looking for specific engineering requirements (e.g. EE) may miss them. Many engineering profiles in the community are from Texas Tech and Texas A&M.
- ? **Leakage to Dallas & Large Markets:** Not surprisingly, the data show large number of local graduates in Dallas and other Texas markets.
- ? **Two Technical Training Options:** While more is always better, the storytelling on TSTC & Cisco interaction can be challenging.
- ? **Engagement with 4-Years & Employers:** While employers were complimentary of relevant programming at 4-years, some noted that engagement between academics and business could be enhanced.

STAKEHOLDER REVIEW: SSG'S PERSPECTIVE

While the following pages provide ample data on education and training in the region, we begin with SSG's summary of its meetings with education, training, and workforce development stakeholders in the community. In SSG's corporate experience, while data is always important, at least when it comes to selling training and educational resources in community, "feel" and "storytelling" are far more resonant to existing and potential employers. Based on our corporate experience and visiting dozens of communities each year, SSG first offers its observations on that overall educational storytelling.

In summary, SSG was especially impressed by the educational and training resources available in the Abilene area. That doesn't necessarily come through in the data (we'll comment on that on the following pages), but in our view, this market shows very well. Further, while there were some exceptions we'll discuss, most employers were especially positive about their interactions with training facilities and partners in the region, especially as it relates to technical training partners. The following offers more specific comments on each level of training offerings based on stakeholder testimony and SSG's view.

Technical Training: Cisco College & TSTC

Employers were generally very positive about their interaction and engagement with programs and officials at Cisco College. Paraphrasing one: "Cisco has a really good team". Several noted that they were engaged with program development, meeting with classes, and hiring students.

SSG was particularly impressed by its supervisory training program – training designed to help production operators and workers grow into more leadership roles. In our experience, industrial employers across the country have been asking for this type of training for years, knowing that its not necessarily easy to take a skilled

production workers and turn him/her into a manager. Technical aptitude does not always translate to leadership skills. We've seen more training institutions start to incorporate that type of training, and we're very glad to see that offered at Cisco. We're also glad to see traditional industrial programs like welding offered. Finally, while mostly relevant to local and regional hospitals and health care providers, the relevant programs and training in the health sciences is attractive and certainly could have spin-off opportunities for more primary-industry focused companies in the life sciences.

Based on our experience, Cisco's overall campus in Abilene shows relatively well, although some of the industrial training space appears antiquated especially when compared to nearby TSTC. In SSG's view, companies do not necessarily place a lot of weight on the overall age and quality of facilities, but newer and more modern facilities show better to prospects. SSG certainly understands the hurdles Cisco faces as it relates to funding for its physical plant and equipment due to a limited ad valorem pull.

Abilene is very fortunate to also be home to a TSTC facility. In our view, TSTC's Abilene facility was one of the most attractive training spaces we've seen in some time. We were particularly impressed by the space for its multi-tool, multi-disciplinary industrial space. In our recent project experience, more and more companies are looking for a multi-skilled "jack of all trades" who has training in a number of mechanical and industrial disciplines. This is one of the few dedicated training spaces to that type of training we've seen. TSTC has one of the most attractive welding labs we've seen, and a unique metallurgy support lab. The aviation programming is also clearly a unique asset.

We'll touch on it in the next pages, but one concern we see with TSTC is that completion data are not assigned to the Abilene campus but are rather centralized in Waco. As a result, there's some concern that Abilene is not getting full credit for the TSTC pipeline.

(continued)

STAKEHOLDER REVIEW: SSG'S PERSPECTIVE

While there is certainly a benefit of having multiple training facilities in the community, it can also lead to challenges in terms of competing or duplicative programming, asymmetric resources, and similar issues. From SSG's view, one of the bigger issues is simply storytelling to prospective and current employers on how these two similar, but different institutions work together to meet the needs of the community and employers. Further, SSG simply sees challenges throughout the recruitment process of prospects getting confused on "which institution does what" and feeling like they need to choose which school to work with. While most stakeholders reported a sense of collaboration between Cisco and TSTC, we would encourage all partners to work together to ensure clear messaging and that prospects understand two institutions is an advantage, not a barrier. SSG recently conducted site tours with a client in another Texas market with both a community college and TSTC campus – we met jointly with both institutions and any concern about competition rather than collaboration was immediately resolved.

K-12 System

SSG was very excited to see the amount of focus Abilene is putting on career training and exploration at the middle- and high school levels. Stakeholders we met with discussed programs related to summer internships for high school students, "Hello, High School" for 8th graders, NEXTUniversity for students going on to technical training, and a number of other programs and initiatives. SSG does not have a "checklist" for the types of K-12 career programs that make a community competitive but based on our project experience and seeing workforce pitches across the country, in our view, Abilene has exactly the types of programs and initiatives at the K-12 level that we see in the most competitive communities.

SSG is thrilled to see the community's investment the LIFT facility

and believe that will be a centerpiece for marketing the community's educational and training value proposition for years to come. We've seen communities use similar types of training facilities to host corporate site visits and have even started their formal community pitch focusing on just this type of investment. In fact, we've purposely put a picture of the LIFT on the cover of this report, just as a small sign of how important we think those types of investments in K-12 career education can be for a community.

Workforce Solutions

Based on our conversation with the team, SSG sees Abilene's Workforce Solution team as one of the most proactive, engaging workforce development teams we've ever met with in Texas. In our corporate and economic development work, we typically see the gamut of workforce development stakeholders, from those who are focused only on processing and coordinating their traditional WIOA work, to those who are more engaged with employers, workforce training, and the overall workforce ecosystem. Based on our conversation, it's clear to SSG that this team is uniquely focused on long-term workforce development all the way into K-12 program development. Simply, SSG was very impressed by the team.

(continued)

STAKEHOLDER REVIEW: SSG'S PERSPECTIVE

Colleges and Universities

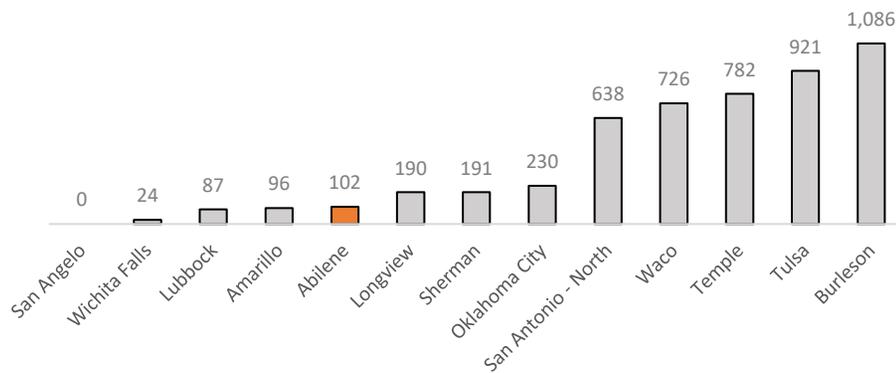
Abilene is very fortunate to have not one, but three universities in the community. And based on the completions analyses herein, each offer programs (especially in Business, Healthcare, Sciences, and to a lesser extent IT and Engineering) that are very relevant to the types of industries and occupations this report is focused on.

Because of its industrial work, SSG has a bias towards understanding a community's educational value proposition for engineering talent. We're very glad to see that engineering programming and degrees are offered at ACU. On detailed review, we see that ACU offers tracking in different disciplines of engineering (e.g. Civil, Electrical, Industrial, Mechanical). However, in completions analyses herein (which we also conduct for our corporate projects), all engineering completions are categorized as General Engineering and are reported to IPEDS as such. In our corporate experience, there could be some concern that prospects looking for specific engineering needs (especially Electrical, Industrial, and Mechanical for manufacturing requirements), may not see these types of relevant programming on a typical completions analysis. In our view, industrial prospects can oftentimes put a heavy (sometimes too heavy) emphasis on locating near colleges and universities that can provide a pipeline of engineering talent far into the future. As a result, anything ACU and the community at large can do to promote and share detailed information on that engineering talent should be emphasized.

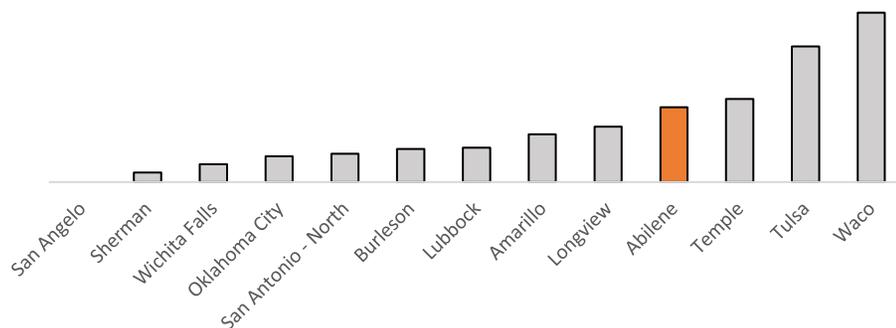
Several employers and other stakeholders noted positive momentum as it related to IT training and employment opportunities in the region. While SSG would not call it a "concern" or "critique", some employers noted what seemed to be a missing opportunity to build deeper connections between employers, the colleges, and their IT-related training. Paraphrasing one employer who said that the community (employers and colleges alike) are not as strategic as they could be to build the IT sector.

PRODUCTION & MAINTENANCE COMPLETIONS

Production Completions: Most Recent Year (2019)



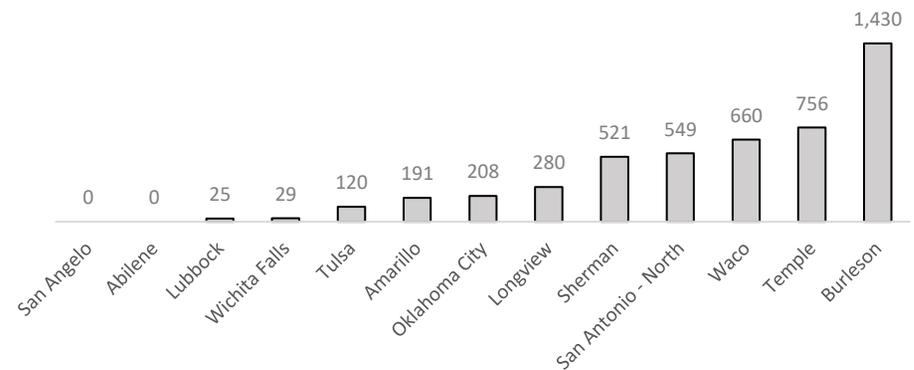
Production Completions: Per Capita, Adjusted for Population



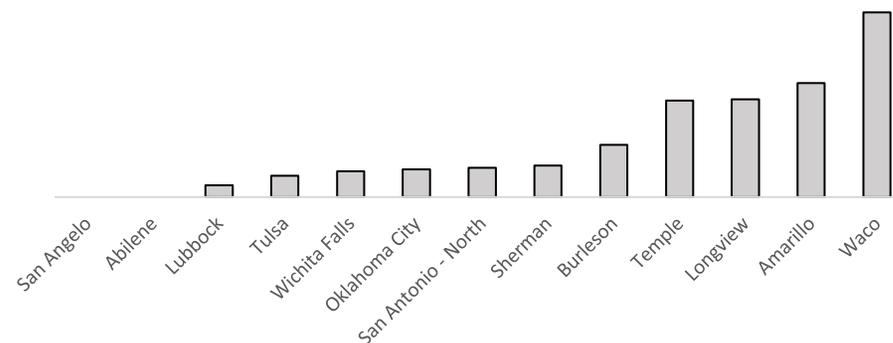
Production Completions Summary

- The figures above show all production completions within a broader 60-minute drive time of each site. This includes completions in areas like machining, welding, and similar.
- Please note that TSTC completions are not shown here, as those are reported from its central offices. The number of completions represented here are comprised from Cisco College and Ranger College and are low compared to the other larger markets, although they're more favorable on a per capita basis.

Maintenance Completions: Most Recent Year (2019)



Maintenance Completions: Per Capita, Adjusted for Population

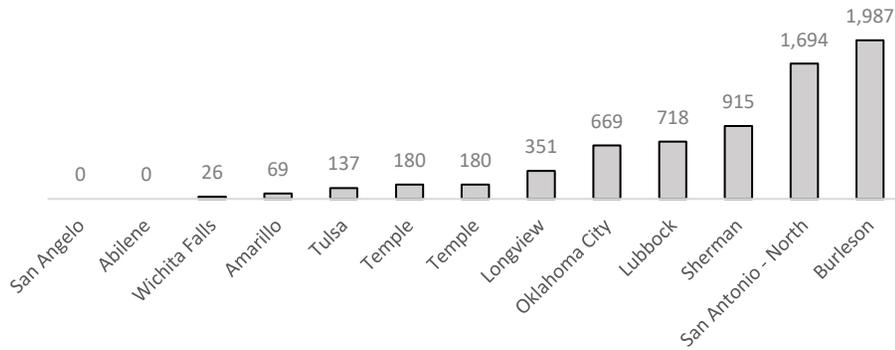


Maintenance Completions Summary

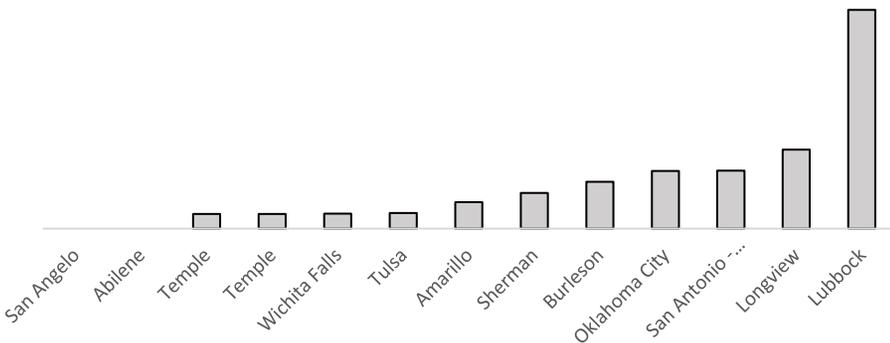
- The figures above show all maintenance completions within a broader 60-minute drive time of each site. This includes programs like industrial maintenance, electric, and HVAC.
- The completions shown here are from a legacy ACU program which does not appear to be offered in recent years and TSTC completions which were reported up to 2015. Cisco completions are only in HVAC and automobile which are not shown above.

TARGET ENGINEERING & ENG. TECH COMPLETIONS

Target Engineering Degree Completions: Most Recent Year (2019)



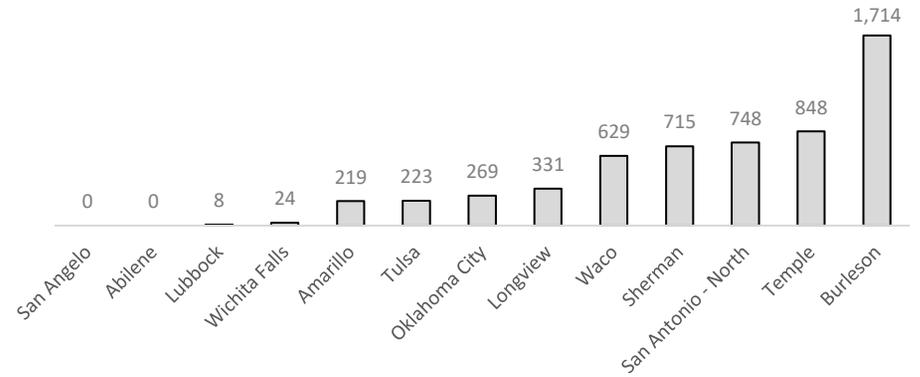
Target Engineering Degree Completions:
Per Capita, Adjusted for Population



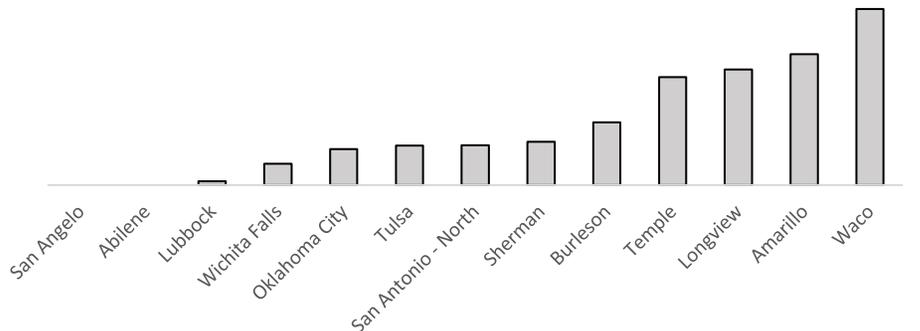
Engineering Degree Completions Summary

- The figures above show engineering degree completions within a broader 60-minute drive time of Abilene.
- The data is for completions with a subject that related to primary business i.e. industrial or materials engineering. While Abilene Christian University offers an engineering program, they do not report completions in a specific discipline, which may not be seen by prospective employers or consultants.

Engineering Technician Completions: Most Recent Year (2019)



Engineering Technician Completions:
Per Capita, Adjusted for Population

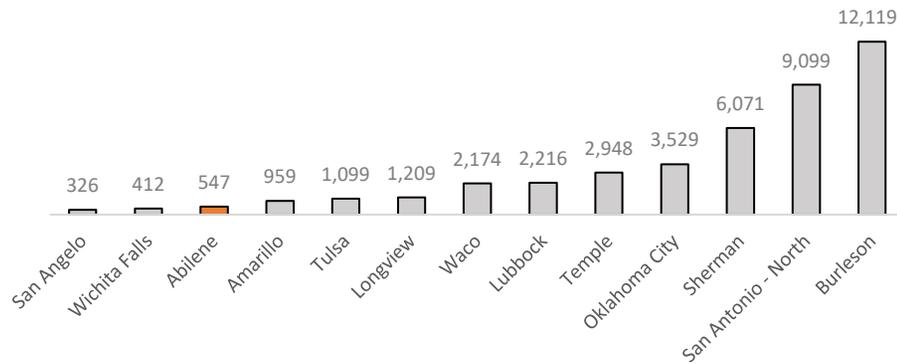


Engineering Technician Completions Summary

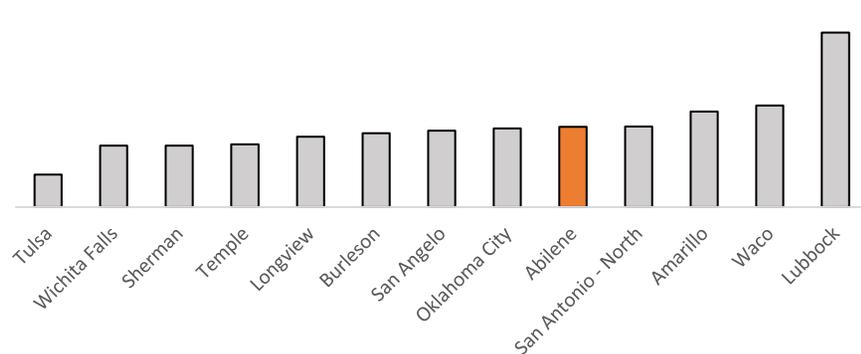
- The figures above show all engineering technician completions within a broader 60-minute drive time of each site.
- Again, this does not include TSTC completions. TSTC reported their completions by location up until 2015, where we see the drop off in completions above.

BUSINESS & IT COMPLETIONS

Business Completions: Most Recent Year (2019)



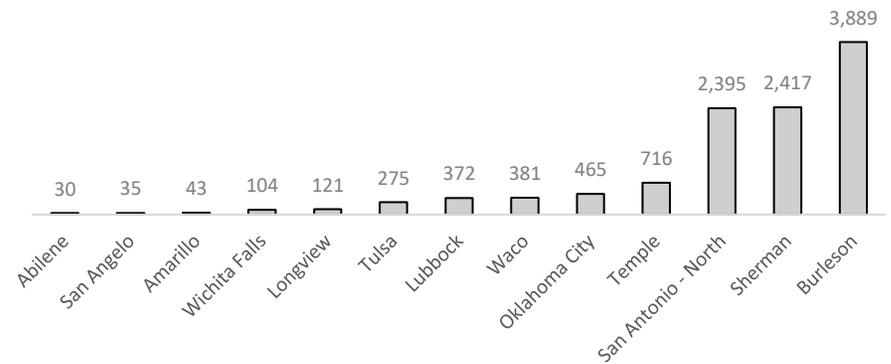
Business Completions: Per Capita, Adjusted for Population



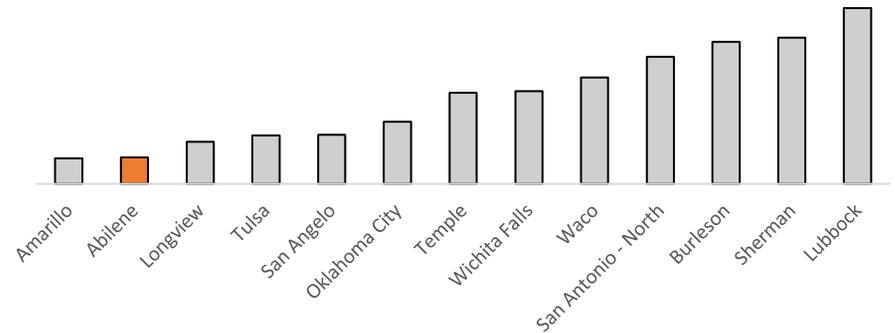
Business Completions Summary

- The figures above show business completions within a broader 60-minute drive time of Abilene.
- While Abilene is in line with other smaller comparison markets (Wichita Falls), it trails significantly behind larger markets with major universities in large metros like Dallas-Fort Worth and San Antonio. On a per capita basis, it falls more in the middle.

IT Completions: Most Recent Year (2019)



IT Completions: Per Capita, Adjusted for Population

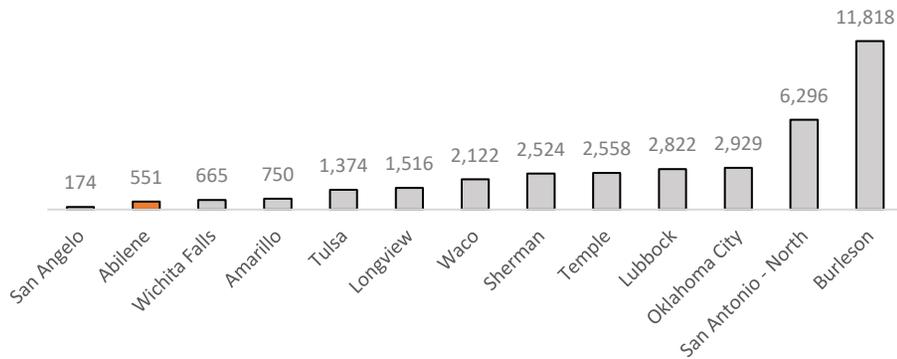


IT Completions Summary

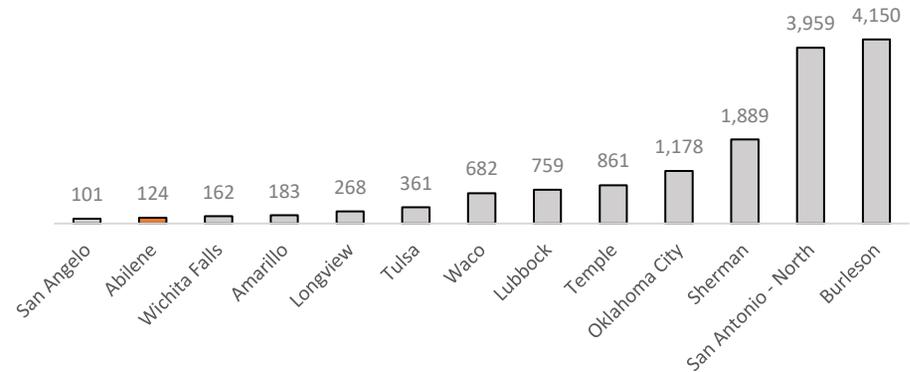
- The figures above show all IT completions within a broader 60-minute drive time of each site.
- Similarly to business, IT completions lag significantly behind some of these larger comparison markets. There has been significant growth over the past ten years in those large metros. Even on a per capita basis, the number of completions is small.

HEALTH & SCIENCE COMPLETIONS

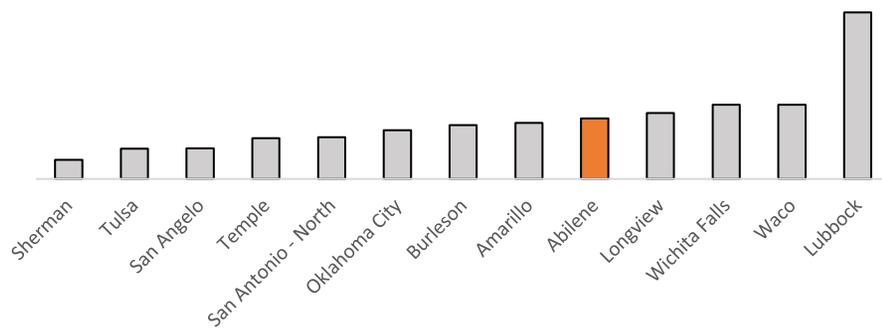
Health Completions: Most Recent Year (2019)



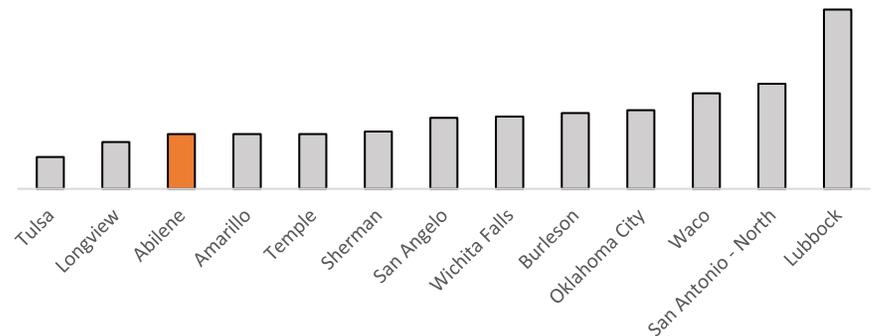
Science Completions: Most Recent Year (2019)



Health Completions: Per Capita, Adjusted for Population



Science Completions: Per Capita, Adjusted for Population



Health Completions Summary

- The figures above show health completions within a broader 60-minute drive time of Abilene.
- Abilene has a relatively small number of health completions, but the data looks more favorable on a per capita basis.

Science Completions Summary

- The figures above show all science completions within a broader 60-minute drive time of each site.
- Science completions also lag behind many of these larger comparison markets on both an absolute and per capita basis.

Source: IPEDS via EMSI. Completions CIP categories defined in the Appendix.

ABILENE CHRISTIAN UNIVERSITY: DETAILED COMPLETIONS

Completions Summary

- The table at right shows detailed completions data for the past five years from Abilene Christian University.
- SSG has classified programs into broad categories like Business, Engineering, Health, IT, and Science.
- As noted on the previous page, ACU's engineering completions are categorized under a general CIP code. As a result, employers who are focused on a particular discipline like Electrical, Mechanical, or Industrial, may not see that ACU has relevant engineering students. In SSG's experience, most companies are looking for a specific type of engineering, so this type of categorization could be a challenge, albeit a small one.
- ACU has a very large number of Business graduates which could be especially relevant.
- There's also a large number of Science and Health related degrees.
- The IT programs are very important, but overall completion numbers are low.

CIP Code	Cluster	Description	2020	2019	2018	2017	2016	5 Year Total
52.0201	Business	Business Administration and Management, General	142	147	61	54	44	448
52.0301	Business	Accounting	68	110	80	65	75	398
52.1401	Business	Marketing/Marketing Management, General	38	49	35	44	46	212
52.0801	Business	Finance, General	71	58	28	32	23	212
52.1206	Business	Information Resources Management	7	2	4	9	8	30
52.1201	Business	Management Information Systems, General	0	2	0	0	0	2
14.0101	Engineering	Engineering, General	17	16	10	20	7	70
51.0203	Health	Speech-Language Pathology/Pathologist	73	84	63	52	61	333
51.3801	Health	Registered Nursing/Registered Nurse	67	51	47	44	45	254
51.2306	Health	Occupational Therapy/Therapist	29	25	25	22	0	101
51.3101	Health	Dietetics/Dietitian	13	13	21	7	11	65
51.3199	Health	Dietetics and Clinical Nutrition Services, Other	9	11	12	0	12	44
51.3818	Health	Nursing Practice	21	10	0	0	0	31
51.0701	Health	Health/Health Care Administration/Management	8	6	0	0	0	14
51.1199	Health	Health/Medical Preparatory Programs, Other	1	0	1	0	1	3
11.0701	IT	Computer Science	11	14	20	7	7	59
11.0103	IT	Information Technology	4	3	7	6	7	27
26.0101	Science	Biology/Biological Sciences, General	30	31	27	28	40	156
26.0202	Science	Biochemistry	16	13	13	19	11	72
27.0101	Science	Mathematics, General	6	4	8	5	1	24
40.0801	Science	Physics, General	4	1	6	6	4	21
40.0501	Science	Chemistry, General	4	4	2	6	2	18



HARDIN-SIMMONS UNIVERSITY: DETAILED COMPLETIONS

Completions Summary

- The table at right shows detailed completions data for the past five years from Hardin-Simmons.
- SSG has classified programs into broad categories like Business, Business, Health, IT, and Science.
- Like ACU, Hardin-Simmons has a large number of Business graduates overall.
- There's also a relatively large number of Health and Science graduates.
- Again, SSG is glad to see a Computer Programming offering, but completion numbers are very small.

CIP Code	Cluster	Description	2020	2019	2018	2017	2016	5 Year Total
52.0201	Business	Business Administration and Management, General	72	54	40	24	14	204
52.0701	Business	Entrepreneurship/Entrepreneurial Studies	28	28	16	35	21	128
52.0301	Business	Accounting	9	15	8	17	16	65
52.0801	Business	Finance, General	7	12	14	12	12	57
52.1301	Business	Management Science	11	9	7	4	10	41
52.1401	Business	Marketing/Marketing Management, General	12	3	3	9	2	29
52.0213	Business	Organizational Leadership	9	7	5	1	3	25
52.1201	Business	Management Information Systems, General	4	2	0	0	0	6
52.0803	Business	Banking and Financial Support Services	1	5	0	0	0	6
51.2308	Health	Physical Therapy/Therapist	28	27	26	29	28	138
51.3801	Health	Registered Nursing/Registered Nurse	9	8	21	22	26	86
51.0204	Health	Audiology/Audiologist and Speech-Language Pathology/Pathologist	4	5	11	14	10	44
51.3805	Health	Family Practice Nurse/Nursing	4	9	5	5	4	27
51.0912	Health	Physician Assistant	29	0	0	0	0	29
51.3813	Health	Clinical Nurse Specialist	1	1	3	2	0	7
51.3203	Health	Nursing Education	0	2	1	2	0	5
11.0201	IT	Computer Programming/Programmer, General	5	3	6	5	9	28
26.0101	Science	Biology/Biological Sciences, General	28	27	24	29	23	131
27.0101	Science	Mathematics, General	4	6	8	7	1	26
26.021	Science	Biochemistry and Molecular Biology	7	1	0	2	2	12
40.0601	Science	Geology/Earth Science, General	0	0	1	6	3	10
40.0699	Science	Geological and Earth Sciences/Geosciences, Other	4	4	3	0	0	11
40.0501	Science	Chemistry, General	0	1	1	2	0	4
40.0801	Science	Physics, General	0	0	0	1	0	1



HARDIN-SIMMONS
UNIVERSITY

MCMURRY UNIVERSITY: DETAILED COMPLETIONS

Completions Summary

- The table at right shows detailed completions data for McMurry University.
- SSG has classified programs into broad categories like Business, Health, IT, and Science.
- While numbers are smaller than the other universities, there are a number of relevant completion cluster especially related to Business.
- There are some potentially relevant Health and IT related completions, but those are fairly limited in size.

CIP Code	Cluster	Description	2020	2019	2018	2017	2016	5 Year Total
52.0101	Business	Business/Commerce, General	30	16	13	7	16	82
52.0201	Business	Business Administration and Management, General	7	7	7	10	7	38
52.0301	Business	Accounting	14	7	2	5	7	35
52.1401	Business	Marketing/Marketing Management, General	8	3	6	8	7	32
52.0801	Business	Finance, General	4	5	3	3	3	18
52.1201	Business	Management Information Systems, General	1	1	0	0	0	2
51.3801	Health	Registered Nursing/Registered Nurse	9	4	9	7	15	44
51.3805	Health	Family Practice Nurse/Nursing	2	0	0	1	2	5
11.0101	IT	Computer and Information Sciences, General	3	2	5	2	4	16
11.0103	IT	Information Technology	1	0	1	1	2	5



CISCO COLLEGE: DETAILED COMPLETIONS

Completions Summary

- The table at right shows detailed completions data for the past five years for Cisco college, which includes all of its campuses.
- Cisco has a very large number of health-related, welding, and business completions, along with a small number of IT-related ones.

CIP Code	Cluster	Description	2020	2019	2018	2017	2016	5 Year Total
52.0201	Business	Business Administration and Management, General	3	15	25	15	39	97
52.0408	Business	General Office Occupations and Clerical Services	7	5	6	9	8	35
52.0401	Business	Administrative Assistant and Secretarial Science, General	0	0	0	0	1	1
51.3901	Health	Licensed Practical/Vocational Nurse Training	72	46	54	52	39	263
51.3801	Health	Registered Nursing/Registered Nurse	83	55	48	50	38	274
51.0801	Health	Medical/Clinical Assistant	25	14	19	14	18	90
51.0908	Health	Respiratory Care Therapy/Therapist	12	7	10	8	8	45
51.0909	Health	Surgical Technology/Technologist	14	9	10	5	2	40
51.0805	Health	Pharmacy Technician/Assistant	0	10	6	0	3	19
11.0101	IT	Computer and Information Sciences, General	6	3	4	4	1	18
48.0508	Production	Welding Technology/Welder	23	44	25	47	53	192
48.0599	Production	Precision Metal Working, Other	0	0	5	0	0	5



CISCO COLLEGE

PROFILE ANALYTICS: WHERE WORKERS IN ABILENE RECEIVED DEGREES

In addition to understanding completions data for local and regional institutions, SSG examines profiles of the incumbent workforce to understand where workers in key occupational clusters receive their training. SSG believes this is a critical and often overlooked measure for prospective and current employers to understand which local, regional, or national universities they can potentially draw talent from.

The data here shows talent profile data (e.g. LinkedIn profiles) for people in the Abilene MSA by the broad occupational cluster noted below. This includes individuals reporting a bachelors, masters, or doctorate degree. The data shows which college or university are most commonly associated with those profiles.

- **Business:** The highest number of profiles associated with business occupations are associated with ACU and Hardin-Simmons. Texas Tech and Texas A&M are also well represented.
- **Information Technology:** The data for IT occupations is similar, with a high proportion of ACU, Hardin-Simmons, and McMurry University profiles.
- **Engineering:** in part due to the smaller number of engineering graduates in the immediate region, Texas Tech and Texas A&M are more highly represented for engineering job profiles.

Business (SOC 11,13)

City of Profile	Count of Profiles	Percent of Profiles
Abilene Christian University	836	22.69%
Hardin-Simmons University	466	12.65%
Texas Tech University	313	8.50%
McMurry University	293	7.95%
Texas A&M University	171	4.64%
Angelo State University	154	4.18%
Tarleton State University	133	3.61%
Community College of the Air Force	100	2.71%
Cisco College	85	2.31%
The University of Texas at Austin	81	2.20%
University of North Texas	67	1.82%
Baylor University	65	1.76%
University of Texas at Arlington	59	1.60%
University of Phoenix	56	1.52%
West Texas A&M University	53	1.44%

IT (SOC 15)

City of Profile	Count of Profiles	Percent of Profiles
Abilene Christian University	97	22.45%
Hardin-Simmons University	57	13.19%
McMurry University	38	8.80%
Community College of the Air Force	33	7.64%
Texas Tech University	30	6.94%
Texas State Technical College	21	4.86%
Cisco College	18	4.17%
Tarleton State University	18	4.17%
Texas A&M University	14	3.24%
University of Phoenix	12	2.78%
Western Governors University	10	2.31%
Angelo State University	9	2.08%
Texas State University	8	1.85%
University of Texas at Arlington	8	1.85%
American Public University System	7	1.62%

Engineering (SOC 17)

City of Profile	Count of Profiles	Percent of Profiles
Texas Tech University	42	19.18%
Abilene Christian University	29	13.24%
Texas A&M University	20	9.13%
Hardin-Simmons University	14	6.39%
Community College of the Air Force	12	5.48%
Embry-Riddle Aeronautical University	11	5.02%
Tarleton State University	7	3.20%
McMurry University	6	2.74%
The University of Texas at Austin	6	2.74%
University of Texas at Arlington	5	2.28%
Angelo State University	3	1.37%
Baylor University	3	1.37%
Brigham Young University	3	1.37%
Old Dominion University	3	1.37%
University of Illinois Global Campus	3	1.37%

PROFILE ANALYTICS: WHERE WORKERS IN ABILENE RECEIVED DEGREES

In addition to understanding completions data for local and regional institutions, SSG examines profiles of the incumbent workforce to understand where workers in key occupational clusters receive their training. SSG believes this is a critical and often overlooked measure for prospective and current employers to understand which local, regional, or national universities they can potentially draw talent from.

The data here shows talent profile data (e.g. LinkedIn profiles) for people in the Abilene MSA by the broad occupational cluster noted below. This includes individuals reporting a bachelors, masters, or doctorate degree. The data shows which college or university are most commonly associated with those profiles.

- **Science:** There are very few profiles for science-related workers associated with institutions outside of the immediate region.
- **Healthcare:** Healthcare workers are relatively evenly represented by ACU, Hardin-Simmons, and Texas Tech Health Sciences.
- **Overall:** Texas Tech, Texas A&M, and Angelo State are the most common colleges outside of the region that are associated with workers in Abilene.

Science (SOC 19)

City of Profile	Count of Profiles	Percent of Profiles
Abilene Christian University	41	25.47%
Hardin-Simmons University	17	10.56%
McMurry University	13	8.07%
Tarleton State University	8	4.97%
Texas A&M University	8	4.97%
Texas Tech University Health Sciences Center	8	4.97%
Angelo State University	4	2.48%
Cisco College	4	2.48%
Columbia Southern University	4	2.48%
Howard Payne University	4	2.48%
Texas Tech University	4	2.48%
American Public University System	3	1.86%
Community College of the Air Force	3	1.86%
Midwestern State Univ.	3	1.86%
Texas A&M University-Corpus Christi	3	1.86%

Healthcare (SOC 29)

City of Profile	Count of Profiles	Percent of Profiles
Abilene Christian University	172	19.18%
Hardin-Simmons University	145	16.16%
Texas Tech University Health Sciences Center	116	12.93%
Texas Tech University	57	6.35%
McMurry University	50	5.57%
Cisco College	49	5.46%
Angelo State University	41	4.57%
University of Texas at Arlington	36	4.01%
Texas A&M University	32	3.57%
Grand Canyon University	28	3.12%
Texas State Tech. College	19	2.12%
The University of Texas at Austin	18	2.01%
Western Governors University	17	1.90%
Midwestern State University	16	1.78%
Texas State University	15	1.67%

All Codes

City of Profile	Count of Profiles	Percent of Profiles
Abilene Christian University	2,499	23.07%
Hardin-Simmons University	1,511	13.95%
McMurry University	872	8.05%
Texas Tech University	799	7.38%
Texas A&M University	422	3.90%
Angelo State University	405	3.74%
Community College of the Air Force	343	3.17%
Tarleton State University	339	3.13%
Cisco College	334	3.08%
Texas Tech University Health Sciences Center	229	2.11%
The University of Texas at Austin	210	1.94%
University of Texas at Arlington	193	1.78%
University of North Texas	186	1.72%
University of Phoenix	181	1.67%
Baylor University	169	1.56%

PROFILE ANALYTICS: WHERE ABILENE CHRISTIAN GRADUATES ARE LOCATED

The data below further leverage profile analytics data to identify markets/cities associated with individuals who report degrees from Abilene Christian University. In other words, this helps locate where ACU graduates ultimately end up based on profile (i.e. LinkedIn data).

We segment this data by broad occupational codes (2-digit SOC codes) to identify any differences across different occupational types. Results for three major categories are shown below:

- **Business:** This category has the highest number and proportion of profiles associated with Dallas overall.
- **Information Technology:** This category also has a very high number of profiles associated with Dallas, but it also has a large share associated with Austin and San Antonio.
- **Engineering:** Again, the higher number and percentage of profiles are associated with Dallas, Austin, and Houston.

Overall, these categories show a slightly lower percentage of profiles associated with Abilene compared to Healthcare and Science profiles, as seen on the next page.

Business (SOC 11,13)

City of Profile	Count of Profiles	Percent of Profiles
Dallas, TX	1,539	16.63%
Abilene, TX	795	8.59%
Houston, TX	479	5.17%
Austin, TX	461	4.98%
Fort Worth, TX	276	2.98%
San Antonio, TX	237	2.56%
Nashville, TN	118	1.27%
Denver, CO	108	1.17%
Lubbock, TX	108	1.17%
Plano, TX	101	1.09%
Midland, TX	84	0.91%
McKinney, TX	64	0.69%
Arlington, TX	63	0.68%
Frisco, TX	60	0.65%
Los Angeles, CA	60	0.65%

IT (SOC 15)

City of Profile	Count of Profiles	Percent of Profiles
Dallas, TX	125	12.02%
Abilene, TX	97	9.33%
Austin, TX	79	7.60%
San Antonio, TX	50	4.81%
Houston, TX	44	4.23%
Fort Worth, TX	26	2.50%
Denver, CO	22	2.12%
Plano, TX	16	1.54%
Arlington, TX	12	1.15%
Atlanta, GA	9	0.87%
Carrollton, TX	9	0.87%
McKinney, TX	9	0.87%
Chicago, IL	8	0.77%
Los Angeles, CA	8	0.77%
Lubbock, TX	8	0.77%

Engineering (SOC 17)

City of Profile	Count of Profiles	Percent of Profiles
Dallas, TX	39	13.13%
Abilene, TX	28	9.43%
Austin, TX	17	5.72%
Houston, TX	15	5.05%
Fort Worth, TX	10	3.37%
Midland, TX	9	3.03%
Lubbock, TX	7	2.36%
San Antonio, TX	6	2.02%
Denver, CO	5	1.68%
Seattle, WA	4	1.35%
Tulsa, OK	4	1.35%
Allen, TX	3	1.01%
Arlington, TX	3	1.01%
Irving, TX	3	1.01%
Katy, TX	3	1.01%

PROFILE ANALYTICS: WHERE ABILENE CHRISTIAN GRADUATES ARE LOCATED

The data below further leverage profile analytics data to identify markets/cities associated with individuals who report degrees from Abilene Christian University. In other words, this helps locate where ACU graduates ultimately end up based on profile (i.e. LinkedIn data).

We segment this data by broad occupational codes (2-digit SOC codes) to identify any differences across different occupational types. Results for three major categories are shown below:

- **Science:** Although the number of profiles in this cluster are small, it has the highest number associated with Abilene, even more than in Dallas.
- **Healthcare:** This category also has a large number of profiles associated with Abilene, just trailing Dallas.
- **All Codes:** Overall, while there are some differences across different categories, the majority of profiles are associated with major Texas markets like Dallas, Austin, Houston, and San Antonio.

Science (SOC 19)

City of Profile	Count of Profiles	Percent of Profiles
Abilene, TX	39	14.55%
Dallas, TX	34	12.69%
Austin, TX	13	4.85%
Fort Worth, TX	9	3.36%
Houston, TX	9	3.36%
Lubbock, TX	6	2.24%
San Antonio, TX	5	1.87%
College Station, TX	4	1.49%
Midland, TX	3	1.12%
Minneapolis, MN	3	1.12%
Phoenix, AZ	3	1.12%
Tyler, TX	3	1.12%
Baton Rouge, LA	2	0.75%
Broken Arrow, OK	2	0.75%
Chicago, IL	2	0.75%

Healthcare (SOC 29)

City of Profile	Count of Profiles	Percent of Profiles
Dallas, TX	173	14.09%
Abilene, TX	165	13.44%
San Antonio, TX	53	4.32%
Austin, TX	52	4.23%
Fort Worth, TX	50	4.07%
Houston, TX	49	3.99%
Lubbock, TX	27	2.20%
Denver, CO	16	1.30%
Midland, TX	13	1.06%
Tyler, TX	13	1.06%
Amarillo, TX	11	0.90%
Nashville, TN	9	0.73%
Portland, OR	9	0.73%
Garland, TX	8	0.65%
Allen, TX	7	0.57%

All Codes

City of Profile	Count of Profiles	Percent of Profiles
Dallas, TX	3,062	14.05%
Abilene, TX	2,395	10.99%
Austin, TX	1,090	5.00%
Houston, TX	1,010	4.63%
San Antonio, TX	647	2.97%
Fort Worth, TX	628	2.88%
Lubbock, TX	314	1.44%
Nashville, TN	254	1.17%
Denver, CO	239	1.10%
Plano, TX	199	0.91%
Midland, TX	189	0.87%
Arlington, TX	158	0.72%
Los Angeles, CA	151	0.69%
Amarillo, TX	141	0.65%
McKinney, TX	139	0.64%

The background features a white field with a light gray dot pattern. On the left, there are overlapping geometric shapes: a dark blue triangle with a fine dot pattern, a medium blue triangle with a coarser dot pattern, and a white triangle with a dot pattern. Two parallel orange lines run diagonally across the bottom right.

4. QUALITY OF PLACE

4. QUALITY OF PLACE SUMMARY

4. QUALITY OF PLACE



- Some data (housing, crime, rankings)
- But much more qualitative-focused

Overview & Approach

The final section of the report focuses on Abilene’s overall quality of place. While this has always played a role in economic and workforce development along with corporate site selection, in recent years it has become increasingly relevant as talent attraction and retention (especially for skilled workers) has risen in its importance. While we can use some data to show key distinctions between it and other markets, quality of life (or lack thereof) can’t really be shown through charts and data. As a result, we use the following:

- **Heavily Qualitative Approach**: Relying on stakeholder commentary along with SSG’s experience visiting markets across the country to give a subjective view of the community’s quality of life and its marketing pitch thereto.
- **Leveraging Some Data**: Quality of life is a pitch better shown in person than told through data and graphs. That being said, we leverage some key data points to highlight key quality of life advantages and challenges in the community overall. Namely, we look at housing, crime, and some ancillary employment data.

Key Strengths

- ✓ **Downtown Redevelopment**: SSG was impressed by the amount and quality of downtown and nearby re-development. Most stakeholders commented on the positive momentum, too. SSG found it to be a really attractive downtown that shows well compared to communities its size.
- ✓ **“Great Place to Raise a Family”**: We also see the clear community focused housing, school district, retail, and restaurant options important to families. This is a common pitch that SSG hears in similar situated communities.
- ✓ **Housing Costs**: Data shows housing price increases, but nothing like the increases in places like Dallas and other large markets.
- ✓ **Air Access**: For a market this size, having two outbound options via American and United is a differentiator.
- ✓ **Faith-Based Culture + Diversity**: Abilene has a really unique and strong story of how it combines a strong religious ethos with diversity. SSG sees a lot of similarities here with how fast-growing Utah pitches itself.

Key Challenges

- ? **“Great Place to Raise a Family”**: We (somewhat) jokingly also put this heading on the challenge side, but ensuring that the community continues to develop to be attractive to younger people and families will be a critical challenge. In SSG’s experience, sometimes a “great place to raise a family” is code for “not a great place to be a young person”.)
- ? **Access to Childcare**: Multiple stakeholders noted challenges with adequate childcare in the community. Employment data for that specific sector supports that there’s fewer opportunities here.
- ? **Continued Infill and Development of Downtown and Surrounding Neighborhoods**: Again, SSG is very excited by the development of the area and knows there are additional opportunities to keep development the area, infill vacant properties, and the like.

QUALITY OF PLACE: STAKEHOLDER & SSG VIEWS

In SSG's corporate location experience, the best way to evaluate quality of place is to listen to how stakeholders describe their community. We can (and do) use data to compare one community to another but hearing how existing employers and other residents talk about their community in one market compared to another is a critical way to provide critical information in the site selection process.

Oftentimes when SSG visits similar sized communities across the country, we hear the message that this is a "good place to raise a family". Abilene certainly checks the box on a number of key attributes to make it an attractive community for families. We heard many stakeholders comment on the positives of quality health care access, choice in schooling in terms of districts, recreational opportunities, single-family housing choice, and quality retail and restaurant options. Some mentioned the need for more family-focused activities and recreational opportunities, but on balance, Abilene certainly appears to meet those family-focused requirements.

However, we also find that sometimes a "great place to raise a family" is code for "a tough place to be young and single." It can be very challenging for smaller markets to strike that balance. Fortunately, the other major theme we heard in conversations with stakeholders was the message of "positive momentum." This momentum was focused especially focused on redevelopment efforts in and around downtown. SSG was impressed by the amount of redevelopment and beautification efforts in the central business corridor, with a number of vibrant restaurants and other establishments. Several also commented on not just the physical changes to downtown and the community, but to the overall "spirit" of the community. One called it much more entrepreneurial than it had ever been before. One commented on the number of "hidden gems" in the community, both old and new. One commented on the transition of Abilene from a town of more of a city – trying to retain the best of the former but gain the advantages of the latter. Overall, SSG heard a consistent story of positive change and optimism.

In addition, there are two other community attributes that stand out.

First, SSG was impressed by the engagement between the community and Dyess Air Force Base. We visit a lot of communities with strong military presence and the relationship between the two partners appears to be top notch. One main challenge we see based on conversations, especially with employers, was that connecting exiting military and/or spouses more formally with employers was a challenge. Either there was a mismatch between exiting airmen's skills and interests or accessing programs like SkillBridge was difficult. Stated differently, we find that base communities and their economic development teams do a great job of selling the opportunity to hire and retain existing military. But when we and our clients speak with existing employers on that pipeline, we oftentimes hear that those connections could be stronger. We encourage Abilene to find better ways to formalize relationships for existing airmen by further understanding their skills and careers interests and supporting employers with utilizing existing programs like Skill Bridge. In short, SSG can see the positive impact the Dyess has on the community but believe there are opportunities to strengthen it from a direct workforce perspective.

The second is the strong immigrant and refugee population in the community. In terms of direct workforce needs, a couple employers noted that these new Americans are a critically important part of their workforces. But above and beyond that, SSG sees the opportunity that these communities provide to further diversify and grow the community. From a story-telling perspective, SSG sees a significant opportunity to tell Abilene's story about this part of its community and how it aligns with its traditionally strong religious ethos. In many ways, Abilene reminds SSG of our work in Utah, one of the fastest growing states in the country. That state and many of its communities have been able to combine its very strong religious and conservative character, with an openness to different cultures and backgrounds.

In summary, SSG clearly sees Abilene's established "family friendly" pitch coupled with positive momentum. The military and immigrant population only add to what SSG sees as a really strong quality of life value proposition.

QUALITY OF PLACE: HOUSING COSTS

Housing Costs over Time

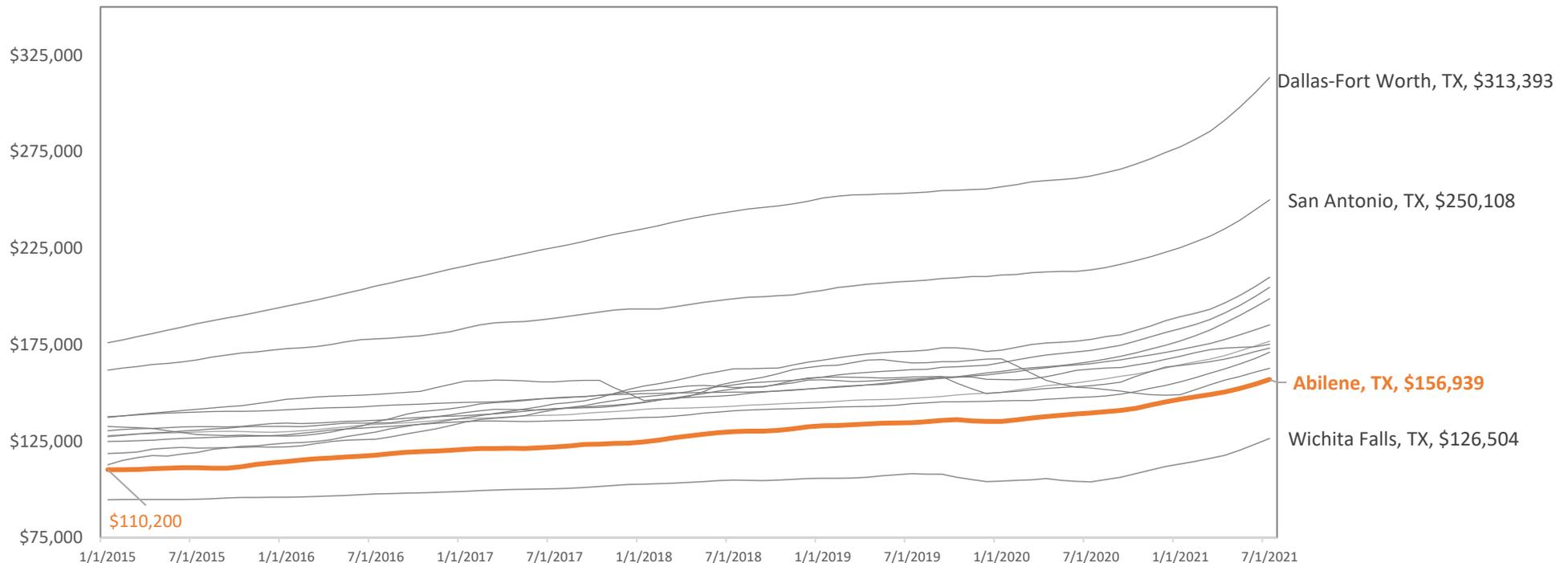
Housing is an important consideration in a community from both a workforce perspective and from a quality-of-life perspective. Workers need to be able to find affordable housing for themselves and their families. Therefore, we look at housing prices over time to see how prices have changed over the past five years.

We utilize Zillow data which is a smoothed, seasonal adjusted measure of the typical home value in the 35th to 65th percentile range. This reflects the price of a typical home and allows us to observe market changes over time.

From the chart below, we can see that housing prices have increased across almost all of these comparison markets and especially in the last year. Home prices have increased dramatically in Dallas and San Antonio. The gap between those large markets and the smaller ones has widened considerably.

Abilene and most of the other markets have also seen increases, but not nearly as dramatically. In recent years, housing costs and availability have grown in their importance to workforce diligence in site selection. SSG sees a clear opportunity here to pitch affordability of housing as one of Abilene's major advantages.

Housing Prices Since 2015 by MSA



QUALITY OF PLACE: CRIME

Crime Data

While crime data can vary depending on reporting mechanism, SSG uses it from time to time to evaluate overall crime rates in candidate communities as a measure of quality of life.

To that end, the table below shows 2020 data reported to the FBI for Violent Crime and Property crime.

Overall, the Abilene MSA has moderate levels of violent crime and fairly low levels of property crime based on this data. Again, while this data can vary based on reporting procedures, it shows Abilene in a favorable light.

Crime Data by Market

	Violent Crime (weighted indices)					Property Crime (weighted indices)			
	Violent Crime (Total)	Murder	Rape	Robbery	Assault	Property Crime (Total)	Burglary	Larceny	Motor Vehicle Theft
Lubbock, TX	149.3	89.9	141.4	75.4	187.4	139.5	153.2	143.2	71.6
Tulsa, OK	120.5	103.1	137.6	77.9	139.9	103.1	127.5	94.1	111.9
Oklahoma City, OK	119.7	133.4	155.3	89.6	130.3	142.5	155	139.5	132.3
Amarillo, TX	119.6	91.7	137.1	67.2	143.9	132.9	125.9	142.5	70.5
Waco, TX	119.1	101.8	152.3	98.3	126.0	131.3	141.5	135.0	70.5
Dallas-Fort Worth-Arlington, TX	106.0	101.6	110.2	120.4	98.6	124.0	126.9	123.3	121.8
Longview, TX	99.4	99.5	120.8	60.6	116.2	101.5	117.5	100.5	65.9
Abilene, TX	95.2	65.1	153.1	57.7	108.2	99.2	115.6	100.8	42.0
San Angelo, TX	94.3	62.3	155.8	36.8	116.8	121.2	117	131.8	45.5
Wichita Falls, TX	91.2	78.0	126.9	69.1	98.5	113.5	120.9	117.3	59.7
San Antonio-New Braunfels, TX	84.7	100.1	107.6	82.8	82.8	143.6	129.2	152.6	109.1
Killeen-Temple, TX	80.7	68.9	143.9	56.9	85.5	92.1	102.8	94.8	39.4
Sherman-Denison, TX	67.5	64.0	88.9	36.9	80.4	92.2	101.0	94.6	45.9

QUALITY OF PLACE: CHURCH & CHILDCARE

Church Summary

- In several conversations, community stakeholders in Abilene noted that the community is deep in the “Bible belt” and as a result, has a number of different churches and places of worship. The table below shows the concentration of employment in Religious Organizations (the technical industry code for churches and similar). This uses the same analysis as shown throughout this report herein to show relative presence of an industry.
- Abilene has the highest concentration of religious employment of the candidate markets, but all are above the national average. This makes sense since Abilene is known to have the most churches per capita of any city in the U.S. We note this simply to demonstrate this aspect of the community and how churches are an integral part of the community.

Industry Concentration: Religions Organizations

Greater than 1.00 means high concentration

Area	Concentration
Abilene	1.82
Longview	1.71
Lubbock	1.60
Amarillo	1.59
Tulsa	1.53
San Angelo	1.52
Oklahoma City	1.51
Sherman	1.37
Wichita Falls	1.30
Burleson	1.29
Waco	1.28
Temple	1.27
San Antonio - North	1.03

Childcare Summary

- Some stakeholders also mentioned significant challenges as it relates to childcare access in the community. This is a significant challenge nationwide that has been exacerbated by the pandemic.
- Again, we conducted a simple industry concentration analysis to identify the relative concentration of childcare employment in Abilene and the comparison markets. Because there can be a large informal childcare market in many communities, this is certainly not a comprehensive assessment. However, all things being equal, the data below points to Abilene having a low concentration of employment in this sector. SSG highly encourages the community and key stakeholders to identify ways to confront this challenge.

Industry Concentration: Child Day Care Services

Greater than 1.00 means high concentration

Area	Concentration
Sherman	1.33
Oklahoma City	1.14
Lubbock	1.10
Amarillo	1.07
Tulsa	0.99
Temple	0.95
Burleson	0.92
Longview	0.89
Waco	0.81
San Antonio - North	0.79
Abilene	0.73
San Angelo	0.72
Wichita Falls	0.70

QUALITY OF PLACE: RESTAURANTS

Restaurant Summary

- The presence of restaurants and entertainment in a community are important for two key reasons 1) keeping people in Abilene, instead of flocking to metro areas like Dallas-Fort Worth 2) having a good “feel” in the community where employers can imagine living and doing business in in the future.
- Similar to the previous page, concentrations for restaurant industry presence in each of the comparison markets are shown below. Each of these, including Abilene, are above the national average. Abilene looks very similar to another growing market, Waco.
- SSG was very fortunate to enjoy some of Abilene’s numerous restaurants, breweries, and coffee shops that showcase the community’s unique character. Communities of Abilene’s size don’t always have this type of local flavor and diversity, and SSG believes this is another important part of the overall strong quality of place value proposition.

Industry Concentration: Restaurants

Greater than 1.00 means high concentration

Area	Concentration
Lubbock	1.68
Amarillo	1.45
Oklahoma City	1.33
Sherman	1.31
Wichita Falls	1.28
Temple	1.27
San Antonio - North	1.27
Waco	1.21
Abilene	1.21
Tulsa	1.20
Burleson	1.20
San Angelo	1.17
Longview	1.16



The background features a white field with a light gray dot pattern. On the left side, there are two overlapping triangular shapes: a dark blue one on top and a medium blue one below it. Two parallel orange lines run diagonally across the page, starting from the left edge and extending towards the bottom right.

STRATEGIC RECOMMENDATIONS

STRATEGIC RECOMMENDATIONS: EDUCATION



1. Further Enhance and Invest in Education & Training

- Employer & Four-Year Coordination: If there's any challenge on the education and training side, it's in the area of coordination between four-year institutions and employers. This is based on some employers commenting that they thought there should be more opportunities to bridge the gap between the classroom and industry in the community. To be clear, this is not an uncommon challenge whatsoever based on SSG's experience in other communities. SSG simply recommends trying to find ways to bridge the gap between educational institutions, their career services, and work opportunities in the community. This is especially important for growing clusters like information technology and professional services. This can also help confront the threat of graduates leaving Abilene for "better" career opportunities in larger markets like Dallas.
- Coordination Between TSTC & Cisco: This is a somewhat unique challenge that is also an advantage: having two distinct, public technical training institutions in the community. Each has different advantages in terms of programming, funding streams, facilities, and other factors. From SSG's site selection perspective, we can easily imagine challenges with storytelling to new or existing employers on how they can work with one or both institutions. This is a similar challenge to training in Oklahoma and Tennessee, for example, states where technical training and the community college system are bifurcated. SSG simply wants to ensure that the community can make sure its pitch highlights the strengths of having two institutions rather than the potential for competition between the two.
- Work-Based Learning: SSG is not the type of firm to be able to evaluate the efficacy of work-based learning programs. But what we can say from a site selection and marketing perspective: it is tremendously effective in showing prospective and existing companies the community's commitment to education and training. In simpler terms: it sells. As a result, we cannot emphasize enough our view that further investment in work-based learning programs (especially for high school students) is a tremendous asset.
- Comprehensive Story from K-PhD: Again, SSG is tremendously impressed by the training and educational assets and investment in Abilene. This is one of the few communities where there appears to be strong engagement across all levels of education, training, workforce development and employers (with some room for improvement as noted above). As a result, we think there's a real opportunity to tell a comprehensive story about the community's commitment to workforce training in written or visual form throughout the site selection process.

STRATEGIC RECOMMENDATIONS: QUALITY OF LIFE



2. Keep Investing on Community & Quality of Life

- Keep Finding Ways to Improve Childcare Access: Affordable and available childcare is a significant problem across the country, and Abilene is not immune to the challenge. Several employers and other stakeholders noted how lack of childcare was hindering efforts to attract workers. There's no single solution to address this challenge. However, based on SSG's experience in other communities, we highlight some examples of partnerships and strategies to help address the challenge:
 - Childcare offered in training facilities
 - Childcare offered in industrial parks
 - Subsidized off-hour childcare
 - Ensuring school bus stops/routing through Industrial Parks along with short-term childcare (gap between school hours and shift changes, for example)
 - Coordinate childcare timing and offerings through faith-based organizations
 - Training programs for independent childcare providers
 - Matching student age population with childcare work opportunities
- Keep investing in Downtown Redevelopment: Quality of place goes hand-in-hand with talent attraction and talent retention. We'll simply say that SSG is very impressed by the redevelopment efforts in downtown Abilene and adjacent neighborhoods. We encourage continued investment as it play an increasingly important role in a community's workforce value proposition, especially for retaining and attracting younger people.

STRATEGIC RECOMMENDATIONS: MILITARY



3. Identify More Ways to Formalize & Operationalize that Transition for Exiting Airmen

- SkillBridge: SSG is familiar with the SkillBridge program and certainly sees its value to help the active military transition to civilian life and jobs. However, both in Abilene and in other communities, SSG hears a common refrain that it can be a cumbersome program to take advantage of. While we are confident that stakeholders in Abilene have worked previously to help employers leverage that talent pipeline.
- Improve Data Collection on Exiting Skill Sets and Interests: Another common theme SSG sees in other military communities is challenges related to rigorously documenting and analyzing the available skill sets AND interests of exiting airmen and their spouses. SSG sees this challenge in Abilene, as well. As a result, SSG recommends working with Dyess stakeholders to develop a standard and ongoing survey instrument to better collect that type of data on an ongoing basis.
- Early Intervention/Introduction of Airmen to Career Opportunities in the Community: Another common denominator SSG sees in communities that more effectively retain existing military members in their communities is ensuring very early interventions – that is, making sure that military members know about potential career opportunities in their community long before they are formally discharged. SSG recommends finding pathways to make those introductions even starting during community orientation programming. As a related side note, SSG was pleased to hear about the strong efforts to introduce new airmen to the community upon arrival.

STRATEGIC RECOMMENDATIONS: RECRUITMENT



4. Target Industry – Recruitment and Promoting Existing Growth

- Keeping the Pedal Down on Manufacturing Recruitment: Simply said, industrial site selection is as active as it's ever been. And furthermore, many companies have their eye on Texas for expansion and relocation opportunities. Based on that, SSG believes Abilene has a very strong value proposition for manufacturing looking to locate in Texas. The Great Lakes project proves that Abilene is a very viable option for a large-scale, capital-intensive operation. And based on the results of this analysis, SSG believes there is a strong value proposition especially for smaller and mid-size advanced manufacturing operations based on the types of workers available, and more importantly, a very strong workforce training story. In SSG's view, the biggest hindrance to industrial activity in Abilene is not workforce based, but logistics based. In short, Abilene is on the far western fringe of where industrial projects typically look. For access to consumers and customers, they are much more likely to locate in the greater I-35 corridor or further east to achieve better coverage. Unfortunately, Abilene is simply located too far west, adjacent to very rural parts of Texas. Although there are niche industries that can leverage that geographic positioning (e.g. access to dairy or energy activity in west Texas/east New Mexico), selling logistics and customer access in Abilene can be more challenging than say a Waco or Longview/Tyler. While well outside of the scope of this analysis, SSG would recommend further focusing in confronting that concern on logistics positioning (e.g. via additional study, analysis, etc.) or using its strong workforce training story to trump deficiencies related to logistics accessibility.
- More Creative Solutions on Professional Services: Given the flux in office market dynamics right now due to COVID, pure recruitment of professional service type projects right now is challenging. Further, while SSG highlights more workforce advantages on the "demand" side of the equation here (e.g. less competition) rather than advantages on the "supply" side, recruiting large scale professional services operations is a challenge. That being said, we do see opportunities to leverage two main advantages: a big and growing 4-year institution with a lot of business, IT, and related graduates, along with existing case studies on professional services operations that are large and successful in a smaller/mid-size market like Abilene. Further, we also recommend ensuring that there is strong support in the community for entrepreneurship initiatives, especially as those can play an outsize role in supporting technology-based companies.

The background features a white field with a light gray dot pattern. On the left, there are overlapping geometric shapes: a black triangle with a dark dot pattern, a gray triangle with a medium dot pattern, and a white triangle with a light dot pattern. Two parallel orange lines run diagonally across the bottom right.

APPENDIX

- *Occupational Definitions*

OCCUPATIONAL CLUSTERS DERIVED FROM TARGET INDUSTRIES

ALL PRODUCTION	
SOC	Description
51-0000	All Production Occupations

FOOD PRODUCTION	
SOC	Description
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders
51-3092	Food Batchmakers
51-3093	Food Cooking Machine Operators and Tenders
51-3099	Food Processing Workers, All Other
51-9011	Chemical Equipment Operators and Tenders
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders
51-9111	Packaging and Filling Machine Operators and Tenders
51-3011	Bakers
51-3021	Butchers and Meat Cutters
51-3022	Meat, Poultry, and Fish Cutters and Trimmers
51-3023	Slaughterers and Meat Packers

METALWORKING PRODUCTION	
SOC	Description
51-2041	Structural Metal Fabricators and Fitters
51-2098	Miscellaneous Assemblers and Fabricators
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic
51-4031	Cutting, Punching, and Press Machine Setters, Operators and Tenders, Metal and Plastic
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4041	Machinists
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4111	Tool and Die Makers
51-4121	Welders, Cutters, Solderers, and Brazers
51-9161	Computer Numerically Controlled Tool Operators
51-9162	Computer Numerically Controlled Tool Programmers
51-4022	Forging Machine Setters, Operators and Tenders, Metal and Plastic
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic

51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
51-4051	Metal-Refining Furnace Operators and Tenders
51-4052	Pourers and Casters, Metal
51-4061	Model Makers, Metal and Plastic
51-4199	Metal Workers and Plastic Workers, All Other

OCCUPATIONAL CLUSTERS DERIVED FROM TARGET INDUSTRIES

MAINTENANCE	
SOC	Description
47-2111	Electricians
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment
49-9041	Industrial Machinery Mechanics
49-9043	Maintenance Workers, Machinery
49-9044	Millwrights

LOGISTICS – DIRECT	
SOC	Description
53-1047	First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors
53-7011	Conveyor Operators and Tenders
53-7051	Industrial Truck and Tractor Operators
53-7062	Laborers and Freight, Stock, and Material Movers, Hand
53-7063	Machine Feeders and Offbearers
53-7064	Packers and Packagers, Hand
53-7065	Stockers and Order Fillers

ENGINEERING	
SOC	Description
17-2011	Aerospace Engineers
17-2021	Agricultural Engineers
17-2031	Bioengineers and Biomedical Engineers
17-2041	Chemical Engineers
17-2061	Computer Hardware Engineers
17-2071	Electrical Engineers
17-2081	Environmental Engineers
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors
17-2112	Industrial Engineers
17-2131	Materials Engineers
17-2141	Mechanical Engineers
17-2171	Petroleum Engineers
17-2199	Engineers, All Other

ENGINEERING TECHNICIANS	
SOC	Description
17-3012	Electrical and Electronics Drafters
17-3013	Mechanical Drafters
17-3019	Drafters, All Other
17-3021	Aerospace Engineering and Operations Technologists and Technicians
17-3023	Electrical and Electronic Engineering Technologists and Technicians
17-3024	Electro-Mechanical and Mechatronics Technicians
17-3025	Environmental Engineering Technicians
17-3026	Industrial Engineering Technicians
17-3027	Mechanical Engineering Technicians
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other

LOGISTICS - SUPPORT	
SOC	Description
11-3071	Transportation, Storage, and Distribution Managers
13-1081	Logisticians
43-3061	Procurement Clerks
43-5011	Cargo and Freight Agents
43-5061	Production, Planning, and Expediting Clerks
43-5071	Shipping, Receiving, and Traffic Clerks

OCCUPATIONAL CLUSTERS DERIVED FROM TARGET INDUSTRIES

AEROSPACE PRODUCTION	
SOC	Description
49-2091	Avionics Technicians
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment
49-3011	Aircraft Mechanics and Service Technicians
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers

AEROSPACE ENGINEERING	
SOC	Description
17-2011	Aerospace Engineers
17-3021	Aerospace Engineering and Operations Technologists and Technicians

HEALTHCARE AND RELATED	
SOC	Description
29-0000	Healthcare Occupations

SCIENCE	
SOC	Description
19-1011	Animal Scientists
19-1012	Food Scientists and Technologists
19-1013	Soil and Plant Scientists
19-1021	Biochemists and Biophysicists
19-1022	Microbiologists
19-1023	Zoologists and Wildlife Biologists
19-1029	Biological Scientists, All Other
19-1031	Conservation Scientists
19-1041	Epidemiologists
19-1042	Medical Scientists, Except Epidemiologists
19-1099	Life Scientists, All Other
19-2031	Chemists
19-2032	Materials Scientists
19-2041	Environmental Scientists and Specialists
19-2099	Physical Scientists, All Other

SCIENCE TECHNICIANS	
SOC	Description
19-4011	Agricultural and Food Science Technicians
19-4021	Biological Technicians
19-4042	Environmental Science and Protection Technicians, Including Health
19-4099	Life, Physical, and Social Science Technicians, All Other

PRODUCTION – BIO & LIFE SCIENCE	
SOC	Description
51-8091	Chemical Plant and System Operators
51-9011	Chemical Equipment Operators and Tenders
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
51-9081	Dental Laboratory Technicians
51-9082	Medical Appliance Technicians
51-9083	Ophthalmic Laboratory Technicians
51-9111	Packaging and Filling Machine Operators and Tenders

OCCUPATIONAL CLUSTERS DERIVED FROM TARGET INDUSTRIES

ADMINISTRATIVE SUPPORT SERVICES	
SOC	Description
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
43-3031	Bookkeeping, Accounting, and Auditing Clerks
43-6014	Secretaries and Administrative Assistants
43-9061	Office Clerks, General
43-1011	First-Line Supervisors of Office and Administrative Support Workers
43-4171	Receptionists and Information Clerks

HUMAN RESOURCES	
SOC	Description
11-3111	Compensation and Benefits Managers
11-3121	Human Resources Managers
11-3131	Training and Development Managers
13-1071	Human Resources Specialists
13-1141	Compensation, Benefits, and Job Analysis Specialists
13-1151	Training and Development Specialists
13-1198	Business Operations Specialists, All Other
43-3051	Payroll and Timekeeping Clerks
43-4161	Human Resources Assistants, Except Payroll and Timekeeping

FINANCE	
SOC	Description
11-3031	Financial Managers
13-1041	Compliance Officers
13-2021	Property Appraisers and Assessors
13-2031	Budget Analysts
13-2041	Credit Analysts
13-2052	Personal Financial Advisors
13-2061	Financial Examiners
13-2098	Financial Specialists, All Other
15-2021	Mathematicians
15-2031	Operations Research Analysts
15-2041	Statisticians
19-3011	Economists
41-3031	Securities, Commodities, and Financial Services Sales Agents

ACCOUNTING	
SOC	Description
13-2011	Accountants and Auditors
13-2081	Tax Examiners and Collectors, and Revenue Agents
15-2011	Actuaries

MARKETING	
SOC	Description
11-2021	Marketing Managers
13-1161	Market Research Analysts and Marketing Specialists
41-3011	Advertising Sales Agents

HIGH SKILL IT	
SOC	Description
11-3021	Computer and Information Systems Managers
15-1121	Computer Systems Analysts
15-1122	Information Security Analysts
15-1131	Computer Programmers
15-1132	Software Developers, Applications
15-1133	Software Developers, Systems Software
15-1143	Computer Network Architects
15-1199	Computer Occupations, All Other
15-2021	Mathematicians
15-2031	Operations Research Analysts
15-2041	Statisticians
17-2061	Computer Hardware Engineers

MODERATE SKILL IT	
SOC	Description
15-1257	Web Developers and Digital Interface Designers
15-1232	Computer User Support Specialists
15-1231	Computer Network Support Specialists

OCCUPATIONAL CLUSTERS DERIVED FROM TARGET INDUSTRIES

SUPPLEMENTAL (RETAIL & HOSPITALITY)	
SOC	Description
35-2011	Cooks, Fast Food
35-2015	Cooks, Short Order
35-3023	Fast Food and Counter Workers
35-3031	Waiters and Waitresses
35-3041	Food Servers, Nonrestaurant
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers
35-9021	Dishwashers
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
35-9099	Food Preparation and Serving Related Workers, All Other
41-2011	Cashiers
41-2021	Counter and Rental Clerks
41-2031	Retail Salespersons

CONSTRUCTION & EXTRACTION	
SOC	Description
47-0000	Construction and Extraction Occupations

SSG Notes

- Although these clusters are not directly relevant to the target industries, we highlight them here as supplemental sources of labor.
- The “Supplemental” category includes workers in areas of retail, food service, and hospitality, which tend to be lower skilled jobs and can oftentimes be underemployed. With proper training and support, these types of workers can transition into more value added jobs and careers.
- The Construction & Extraction category is the broad 2-digit SOC category that captures workers employed in construction or directly in extraction-related activities in the energy industry. Again, these workers can potentially be a source for skilled, blue collar work.

PROGRAM CLUSTERS DERIVED FROM TARGET INDUSTRIES

PRODUCTION	
CIP	Description
48.00	Precision Production Trades, General
48.05	Precision Metal Working

MAINTENANCE	
CIP	Description
15.03	Electrical Engineering Technologies/Technicians
15.04	Electromechanical Instrumentation and Maintenance Technologies/Technicians
15.05	Environmental Control Technologies/Technicians
15.06	Industrial Production Technologies/Technicians
15.07	Quality Control and Safety Technologies/Technicians
15.08	Mechanical Engineering Related Technologies/Technicians
47.01	Electrical/Electronics Maintenance and Repair Technology
47.03	Heavy/Industrial Equipment Maintenance Technologies

ENGINEERING	
CIP	Description
14.07	Chemical Engineering
14.10	Electrical, Electronics, and Communications Engineering
14.19	Mechanical Engineering
14.27	Systems Engineering
14.35	Industrial Engineering
14.36	Manufacturing Engineering
14.41	Electromechanical Engineering
14.42	Mechatronics, Robotics, and Automation Engineering

ENGINEERING TECHNICIANS	
CIP	Description
15.00	Engineering Technology, General
15.03	Electrical Engineering Technologies/Technicians
15.04	Electromechanical Instrumentation and Maintenance Technologies/Technicians
15.05	Environmental Control Technologies/Technicians
15.06	Industrial Production Technologies/Technicians
15.07	Quality Control and Safety Technologies/Technicians
15.08	Mechanical Engineering Related Technologies/Technicians
15.13	Drafting/Design Engineering Technologies/Technicians
15.15	Engineering-Related Fields

SSG Notes

- The engineering and engineering technician completion clusters here do not show all completions, but rather just those from programs that are typically relevant for industrial requirements based on our experience.

PROGRAM CLUSTERS DERIVED FROM TARGET INDUSTRIES

BUSINESS	
CIP	Description
52.02	Business Administration, Management and Operations
52.03	Accounting and Related Services
52.04	Business Operations Support and Assistant Services
52.05	Business/Corporate Communications
52.06	Business/Managerial Economics
52.07	Entrepreneurial and Small Business Operations
52.08	Finance and Financial Management Services
52.09	Hospitality Administration/Management
52.1	Human Resources Management and Services
52.11	International Business
52.12	Management Information Systems and Services
52.13	Management Sciences and Quantitative Methods
52.14	Marketing
52.15	Real Estate
52.16	Taxation
52.17	Insurance
52.18	General Sales, Merchandising and Related Marketing Operations
52.19	Specialized Sales, Merchandising and Marketing Operations
52.2	Construction Management
52.21	Telecommunications Management
52.99	Business, Management, Marketing, and Related Support Services, Other
52.02	Business Administration, Management and Operations

IT	
CIP	Description
11.0101	Computer and Information Sciences, General
11.0102	Artificial Intelligence
11.0103	Information Technology
11.0104	Informatics
11.0199	Computer and Information Sciences, Other
11.0201	Computer Programming/Programmer, General
11.0202	Computer Programming, Specific Applications
11.0203	Computer Programming, Vendor/Product Certification
11.0299	Computer Programming, Other
11.0301	Data Processing and Data Processing Technology/Technician
11.0401	Information Science/Studies
11.0501	Computer Systems Analysis/Analyst
11.0601	Data Entry/Microcomputer Applications, General
11.0602	Word Processing
11.0699	Data Entry/Microcomputer Applications, Other
11.0701	Computer Science
11.0801	Web Page, Digital/Multimedia and Information Resources Design
11.0802	Data Modeling/Warehousing and Database Administration
11.0803	Computer Graphics
11.0804	Modeling, Virtual Environments and Simulation

11.0899	Computer Software and Media Applications, Other
11.0901	Computer Systems Networking and Telecommunications
11.1001	Network and System Administration/Administrator
11.1002	System, Networking, and LAN/WAN Management/Manager
11.1003	Computer and Information Systems Security/Auditing/Information Assurance
11.1004	Web/Multimedia Management and Webmaster
11.1005	Information Technology Project Management
11.1006	Computer Support Specialist
11.1099	Computer/Information Technology Services Administration and Management, Other
11.9999	Computer and Information Sciences and Support Services, Other

PROGRAM CLUSTERS DERIVED FROM TARGET INDUSTRIES

HEALTH	
CIP	Description
51	Health Services/Allied Health/Health Sciences, General
51.01	Chiropractic
51.02	Communication Disorders Sciences and Services
51.04	Dentistry
51.05	Advanced/Graduate Dentistry and Oral Sciences
51.06	Dental Support Services and Allied Professions
51.07	Health and Medical Administrative Services
51.08	Allied Health and Medical Assisting Services
51.09	Allied Health Diagnostic, Intervention, and Treatment Professions
51.1	Clinical/Medical Laboratory Science/Research and Allied Professions
51.11	Health/Medical Preparatory Programs
51.12	Medicine
51.14	Medical Clinical Sciences/Graduate Medical Studies
51.15	Mental and Social Health Services and Allied Professions
51.17	Optometry
51.18	Ophthalmic and Optometric Support Services and Allied Professions
51.19	Osteopathic Medicine/Osteopathy
51.2	Pharmacy, Pharmaceutical Sciences, and Administration
51.21	Podiatric Medicine/Podiatry
51.22	Public Health

51.23	Rehabilitation and Therapeutic Professions
51.24	Veterinary Medicine
51.25	Veterinary Biomedical and Clinical Sciences
51.26	Health Aides/Attendants/Orderlies
51.27	Medical Illustration and Informatics
51.31	Dietetics and Clinical Nutrition Services
51.32	Bioethics/Medical Ethics
51.33	Alternative and Complementary Medicine and Medical Systems
51.34	Alternative and Complementary Medical Support Services
51.35	Somatic Bodywork and Related Therapeutic Services
51.36	Movement and Mind-Body Therapies and Education
51.37	Energy and Biologically Based Therapies
51.38	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing
51.39	Practical Nursing, Vocational Nursing and Nursing Assistants
51.99	Health Professions and Related Clinical Sciences, Other

PROGRAM CLUSTERS DERIVED FROM TARGET INDUSTRIES

SCIENCE	
CIP	Description
26.01	Biology, General
26.02	Biochemistry, Biophysics and Molecular Biology
26.03	Botany/Plant Biology
26.04	Cell/Cellular Biology and Anatomical Sciences
26.05	Microbiological Sciences and Immunology
26.07	Zoology/Animal Biology
26.08	Genetics
26.09	Physiology, Pathology and Related Sciences
26.1	Pharmacology and Toxicology
26.11	Biomathematics, Bioinformatics, and Computational Biology
26.12	Biotechnology
26.13	Ecology, Evolution, Systematics, and Population Biology
26.14	Molecular Medicine
26.15	Neurobiology and Neurosciences
26.99	Biological and Biomedical Sciences, Other
27.01	Mathematics
27.03	Applied Mathematics
27.05	Statistics
27.99	Mathematics and Statistics, Other
40.01	Physical Sciences, General

40.02	Astronomy and Astrophysics
40.04	Atmospheric Sciences and Meteorology
40.05	Chemistry
40.06	Geological and Earth Sciences/Geosciences
40.08	Physics
40.1	Materials Sciences
40.99	Physical Sciences, Other

APPENDIX

- *Baseline Target Industry Analysis*

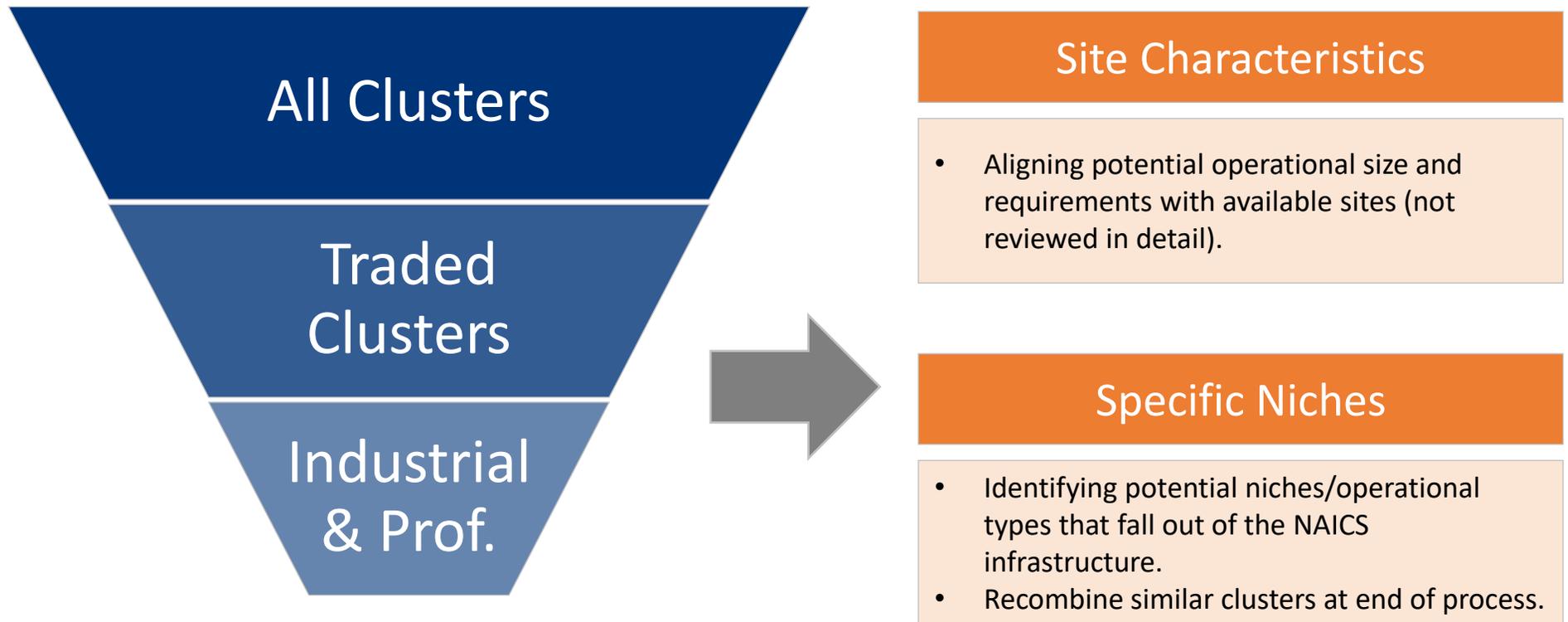
SSG TARGET ANALYSIS: OVERALL APPROACH

The graphic below highlights the key criteria that SSG uses to evaluate and recommend target industries. We utilize a data-driven methodology that scores and ranks every potential cluster based on how it aligns with the key quantitative criteria shown below in blue: growing industries, supporting the wage and tax base, aligning with the community's workforce value proposition, and helping diversify the local economy.

Finally, we add some common sense to recommend target industries that the community could realistically attract based on our site selection experience, view of current and potential deal flow, and other factors.

Quantitative		Growth	<ul style="list-style-type: none">Industries that have grown and are projected to grow at the national and regional levels.
		Wage & Tax Base	<ul style="list-style-type: none">Industries that have high wages (absolute and relative) and higher impact on the regional economy (ROI).
		Workforce Alignment	<ul style="list-style-type: none">Industries that align with current and future workforce value proposition.
		Diversify	<ul style="list-style-type: none">Industries that offer further market diversification.
Qualitative		Site Characteristics	<ul style="list-style-type: none">Real estate options that currently (or with strategic investment) can meet the needs of target industries. (Not reviewed in in this analysis other than a brief visit to community industrial parks).
		Pragmatic	<ul style="list-style-type: none">Common sense strategies that align with community's vision and resources.

SSG TARGET ANALYSIS: CLUSTER METHODOLOGY



The analysis utilizes the Cluster framework and associated 2012 NAICS definitions developed by the [U.S. Cluster Mapping project](#).

Key Definitions:

- **Industry Cluster:** A group of inter-related industries that drive wealth creation in a region, primarily through export of goods/services. A cluster represents the entire value chain of a broadly defined industry, spanning suppliers to end products, including support services and specialized infrastructure.
- **Traded Cluster:** A cluster which serves markets beyond the region in which it is located, while a local cluster will be defined as a cluster which serves the market in which it is located.

SSG TARGET ANALYSIS: WEIGHTS & DATA



INDUSTRY GROWTH	20.0%
U.S. Growth - Historic - Absolute	5.0%
U.S. Growth - Historic - Percentage	10.0%
U.S. Growth - Projected - Absolute	15.0%
U.S. Growth - Projected - Percentage	20.0%
Regional Growth - Historic - Absolute	5.0%
Regional Growth - Historic - Percentage	5.0%
Regional Growth - Projected - Absolute	10.0%
Regional Growth - Projected - Percentage	15.0%
Absolute Cluster Size	0.0%
GRP % Change over Year	10.0%
WAGE & TAX BASE	30.0%
U.S. Wage Level - Overall	7.5%
Regional Wage Level - Overall	10.0%
U.S. Wage Level - Target Wage Level	15.0%
Regional Wage Level - Target Wage Level	30.0%
TARGET WAGE LEVEL (1)	~100% (\$25/Hour)
Total Sales Multiplier (State)	6.7%
Total Jobs Multiplier (State)	6.7%
Total Earnings Multiplier (State)	6.7%
WORKFORCE ALIGNMENT (2)	40.0%
Occupational Alignment - Absolute	25.0%
Occupational Alignment - Concentration	50.0%
Regional Completions (2 hours - Bach+)	10.0%
Regional Completions (2 hours - <Bach)	5.0%
Local Completions	10.0%
DIVERSIFY (3)	10.0%
Absolute Cluster Size	20.0%
Concentration	80.0%



Notes on Analysis

1. Wage & Tax Base – Target Wages

This criteria allows SSG and the community to select a target wage level that most aligns with their overall objectives and the characteristics for the community. For this engagement, we use an average hourly wage of \$25.00/hour.

Raising this threshold will favor industries with higher paying jobs (but may be unrealistic for the community). And on the contrary, lowering this threshold will favor industries with lower paying jobs, that may be more accessible, but less desirable.

2. Complementary/Workforce Alignment

Site Selection Group used national staffing patterns for each industry cluster to identify the most common occupations present in each cluster. SSG then calculated the presence and concentration of those occupations within a 60-minute drive time of the site. In short, this identifies the types of industries that align well with the region's current workforce. SSG made similar estimates using higher education completion data, to identify which occupations align well with the types of educational completions (defined by CIP codes) coming out of local and regional educational institutions.

3. Diversify

These measures are inverted, that is, they reward industries that have no or minimal presence in an area. These measures temper focusing on industries that already have a significant presence in the region.

SSG TARGET ANALYSIS: PRELIMINARY RESULTS FOR ABILENE

The figure at right shows the results of the quantitative target industry analysis for Abilene. As noted on the previous page, these results give preference to clusters that pay at or about the average regional wage of \$25/hour.

Based on that target, the results of the analyses, and SSG’s qualitative view of the site, we highlight and list key clusters here that may be best aligned with the community’s overall value proposition. We do not simply select the highest scoring clusters, but use the results to prioritize and understand the inherent strengths and weaknesses of the community to attract and retain, and grow primary industry.

SSG highlights those additional clusters that based on the results of this analysis, we recommend including in the workforce analysis. Those include:

- **Professional Services-Related Clusters**
- **Food Production**

Please note that SSG filters out clusters that are extremely small/niche nationally (i.e. in the bottom 10% of clusters by overall size).

CLUSTER	TOTAL SCORE	INDUSTRY GROWTH	WAGE & TAX BASE	WORKFORCE ALIGNMENT	DIVERSIFY
Insurance Services	63.1%	64.9%	70.4%	73.6%	4.4%
Environmental Services	62.3%	56.1%	66.3%	65.5%	59.2%
Distribution and Electronic Commerce	61.2%	67.5%	63.8%	63.4%	28.0%
Transportation and Logistics	60.1%	65.4%	54.8%	73.3%	20.0%
Business Services	58.4%	86.3%	53.5%	46.3%	26.0%
Education and Knowledge Creation	58.0%	72.8%	40.0%	78.6%	6.4%
Food Processing and Manufacturing	56.7%	76.6%	51.0%	58.0%	10.8%
Financial Services	55.8%	66.7%	38.4%	69.7%	34.0%
Lighting and Electrical Equipment	55.1%	39.7%	62.4%	60.0%	64.8%
Biopharmaceuticals	54.5%	72.2%	58.9%	19.9%	91.6%
Downstream Chemical Products	54.2%	49.9%	68.5%	32.6%	88.8%
Nonmetal Mining	53.5%	57.7%	46.0%	64.8%	30.0%
Livestock Processing	53.1%	75.3%	56.9%	37.3%	22.0%
Water Transportation	53.0%	50.1%	56.6%	66.8%	10.0%
Marketing, Design, and Publishing	52.7%	51.4%	54.4%	54.7%	45.6%
Construction Products and Services	52.1%	42.9%	50.7%	75.4%	14.4%
Medical Devices	50.6%	59.2%	45.9%	34.8%	86.8%
Information Technology and Analytical Instruments	50.2%	78.0%	35.3%	31.4%	68.0%
Vulcanized and Fired Materials	49.8%	49.4%	65.5%	43.9%	21.6%
Downstream Metal Products	49.2%	48.5%	60.1%	50.7%	14.0%
Production Technology and Heavy Machinery	49.1%	59.1%	53.1%	42.7%	26.4%
Upstream Chemical Products	48.8%	58.7%	65.9%	19.6%	55.6%
Music and Sound Recording	48.4%	59.9%	32.7%	43.5%	75.2%
Electric Power Generation and Transmission	44.8%	39.3%	40.9%	62.2%	21.2%
Leather and Related Products	44.5%	64.1%	25.0%	44.4%	44.8%
Fishing and Fishing Products	44.5%	25.4%	83.0%	6.5%	100.0%
Video Production and Distribution	44.3%	67.0%	43.0%	22.2%	46.4%
Recreational and Small Electronic Goods	42.3%	47.5%	32.2%	37.3%	71.6%
Upstream Metal Manufacturing	42.1%	34.8%	58.2%	28.1%	58.0%
Plastics	41.8%	41.5%	67.1%	18.1%	38.4%
Textile Manufacturing	41.8%	35.5%	71.0%	10.8%	66.0%
Metalworking Technology	41.3%	33.6%	53.3%	30.5%	60.8%
Footwear	41.0%	39.8%	36.0%	57.7%	9.2%
Aerospace Vehicles and Defense	40.9%	44.2%	38.5%	32.0%	64.8%
Automotive	37.8%	53.5%	45.8%	3.0%	70.8%
Paper and Packaging	37.6%	18.9%	60.3%	20.4%	77.6%
Trailers, Motor Homes, and Appliances	37.3%	32.3%	44.2%	26.8%	63.2%
Wood Products	35.8%	30.9%	45.3%	16.7%	79.6%
Furniture	34.1%	24.3%	44.7%	19.6%	75.2%



8235 Douglas Avenue
Suite 500
Dallas, Tx 75225

siterelectiongroup.com