
NEW SKILLS AT WORK

JPMORGAN CHASE & CO.

STRENGTHENING DALLAS-FORT WORTH

BUILDING A MIDDLE-SKILL PIPELINE TO SUSTAIN
ECONOMIC GROWTH AND EXPAND OPPORTUNITY



DALLAS-FORT WORTH

WELCOME

CONTENTS

	WELCOME
01	ACKNOWLEDGEMENTS
02	EXECUTIVE SUMMARY
08	INTRODUCTION
09	THE OPPORTUNITIES
11	OPPORTUNITIES IN HEALTHCARE
14	OPPORTUNITIES IN INFORMATION TECHNOLOGY
16	THE NEED TO EXPAND OPPORTUNITY
20	RECOMMENDATIONS
23	CONCLUSION
24	APPENDIX A – METHODOLOGY
24	APPENDIX B – CHARTS REFERRED TO IN THE TEXT

We are pleased to share this skills gap report for the Dallas-Fort Worth region. This is the fourth in a series that will examine labor market conditions in metropolitan regions across the United States and in France, Germany, Spain and the United Kingdom and provide data-driven solutions to address the mismatch between employer needs and the skills of job seekers. These reports are a key component of *New Skills at Work*, JPMorgan Chase's five-year \$250 million global workforce readiness and demand-driven training initiative. Communities across the United States are working to rebuild their economies and the good news is that indicators, such as the unemployment rate, tell us we are moving in the right direction. At the same time, we face persistent challenges ensuring that everyone has access to opportunity as economies continue to strengthen and grow.

For JPMorgan Chase, we see an opportunity to reduce the gap between the skilled workforce employers need to be competitive and the training opportunities available to job seekers. This is especially critical for middle-skill jobs – those that require a high school diploma and some post-secondary education and training, but not necessarily a four-year college degree. Aligning workforce training with the skills employers value will benefit job seekers and employers and contribute to more broadly shared economic prosperity.

One obstacle that policymakers, civic leaders and employers face in solving this problem is the lack of actionable data. Everyone involved – from mayors to educators to employers – needs to understand what skills and competencies jobs require so that community colleges, training providers and high school career and technical education programs can align curriculum and credentials to actual industry needs. Good data can help everyone better target their efforts on key sectors and occupations where jobs – particularly those that pay good wages and offer opportunities for advancement – are going unfilled.

By focusing on middle-skill jobs that are part of career pathways, we can help give workers opportunities for mobility and businesses a steady pipeline of skilled talent. We also need to learn from best practices that are already demonstrating success across communities and industries in the U.S. and overseas.

This report has been designed with these requirements in mind. We hope the data presented here will support the work underway in the Dallas-Fort Worth region's healthcare and information technology industries and encourage additional efforts to build a pipeline of skilled workers for career-building jobs.



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Chairman and Chief Executive Officer
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ACKNOWLEDGEMENTS

JPMorgan Chase & Co. is committing \$250 million over five years in a global initiative to help markets build a demand-driven workforce development system, and to prepare youth and adults for careers in high-demand, middle-skill occupations. To advance this work, we are supporting data analysis in domestic and international markets: Chicago, Columbus, Dallas-Fort Worth, Detroit, Houston, Los Angeles, Miami, New York City, San Francisco, France, Germany, Spain and the United Kingdom.



JOBS FOR THE FUTURE

JPMorgan Chase deeply appreciates the work of partners in producing this report. **Jobs for the Future** (www.jff.org), a national partner in the *New Skills at Work* initiative, is lead intermediary for the U.S. reports. Founded in 1983, Jobs for the Future works to ensure that all under-prepared young people and workers have the skills and credentials needed to succeed in our economy, by creating solutions that catalyze change in our education and workforce delivery systems. We are especially thankful for the work of lead researcher Loh-Sze Leung of Leung Consulting and for data collection and analysis by Lois Joy. Alan Richard wrote an early draft. The report has been strengthened by insightful feedback from Lucretia Murphy, Maria Flynn and Steven Baker and by editing from Carol Gerwin, Sophie Besl and Sara Lamback.

Two national organizations provided data and analysis for the U.S. reports: **Economic Modeling Specialists International**, a CareerBuilder company, turns labor market data into useful information that helps organizations understand the connection between economies, people and work (www.economicmodeling.com). **Burning Glass Technologies** develops leading technologies for matching people with jobs through pioneering solutions, and leverages a deep understanding of people and their careers in order to deliver superior workforce and marketplace insight (www.burning-glass.com).

Each report also relies on the insights and feedback of local stakeholders. We would like to express our appreciation to the following individuals and organizations: *Catholic Charities of Dallas*: John Machado, Director of Empowerment Services; *City of Dallas Office of Economic Development*: Lee McKinney, Assistant Director; *CitySquare*: Larry James, CEO; John Siburt, President and COO; Jarie Bradley, VP of Human Resources; *Courtney Consulting Group, LLP*: Mike Courtney, President; *Dallas County Community College District*: Dr. Joe May, Chancellor; Dr. Mary Brumbach, Associate Vice Chancellor, Strategic Initiatives; Dr. Shannon Ydoyaga, Executive Director, Health Careers Resource Center; *Dallas-Fort Worth Hospital Council*: W. Stephen Love, President; *Dallas-Fort Worth Hospital Council Foundation*: Kristin Jenkins, President; Sally Williams, Workforce Center Director; *Dallas Regional Chamber*: Angela Farley, Senior Vice President, Education; Duane Dankesreiter, Vice President, Business Information and Research; Eric Griffin, Director, Business

Information and Research; *Education is Freedom*: Marcia Page, President and CEO; *El Centro College*: Sondra Flemming, Vice President, Academic Affairs; *Enlivant*: Ashley Green, Regional Director of Operations-North Texas; *EPITEC*: Kelleen Young, Senior Business Development Manager; *Federal Reserve Bank of Dallas*: Alfreda Norman, Senior Vice President; *Fort Worth Chamber of Commerce*: Cynthia Miller, Senior Director, Workforce Development and Education; Betty Harvey, Manager of Workforce Development; *Goodwill Industries Dallas*: Kamala Kannon, Executive Director; *Jewish Family Services*: Allison Harding, Director, Career & Employment Services; *Lockheed Martin*: Jon Gustafson, Director, Workforce and Economic Development; *Metrocrest Social Services*: Camilla Zimbal, Sr. Director of Social Services; *NPower North Texas*: Kris Falvo, Regional Director; *Per Scholas*: Plinio Ayala, CEO; Billy Lane, Managing Director; *Sharing Life Community Outreach*: Teresa Jackson, Executive Director; *Social Impact Architects*: Suzanne Smith, Founder and Managing Director; *Tarrant County College District*: Frederick Schmidt, Manager of Community & Industry Education Program Development; *Texas Department of State Health Services, Health Professions Resource Center*; *Texas Woman's University*: Mari Tietze, Associate Professor; *The Senior Source*: Andrea Anderson, Employment Specialist; *The Wilkinson Center*: Anne Reeder, Executive Director; *United Way of Metropolitan Dallas*: Susan Hoff, Chief Strategy and Operating Officer; Greg Mangum, Senior Director, Community Economic Stability Planning and Coordination; Galen Smith, Director, Community Financial Stability; *University of Texas-Dallas*: Dr. Tim Bray, Clinical Assistant Professor of Criminology; *University of Texas-Southwestern Medical Center*: Jill Kreissl, University Hospitals Director, Human Resources; *Workforce Solutions Greater Dallas*: Laurie Bouillion Larrea, Executive Director; Richard Perez, Research Manager; *Workforce Solutions for North Central Texas*: Kay O'Dell, Workforce Development Manager; Kent Andersen, Business Development Manager; and *Workforce Solutions for Tarrant County*: Judy McDonald, Executive Director; Jill Navarrete, Assistant Director; Jann Miles, Strategic Planning Unit Director. We would also like to thank Melody Barnes, former Assistant to the President and Director of the White House Domestic Policy Council and Co-Chair of the Global Workforce Advisory Council, for her insights, time and support throughout this process.

EXECUTIVE SUMMARY

THE DALLAS-FORT WORTH REGION IS THRIVING

The Dallas-Fort Worth (DFW) region is a magnet for new companies and new residents. The region ranks among the top three U.S. metro areas for business expansions, relocations and employment growth.¹ This positive trend is projected to continue through 2023.

The regional labor market has grown **7%** since the end of the recession in 2009, compared with 5% nationally

The region added over **371,000** new jobs since 2001, outperforming the U.S. economy (1% to 0.8%)

The region has contributed **2.2%** of the nation's net new job growth from 2001 to 2013

Job growth is projected to be **1.7%** per year between 2013 and 2023, higher than the projected national rate of 1.2% per year

The regional unemployment rate as of December 2014 was **4.0%** much lower than the national rate of 5.4%²

(Source: EMSI unless otherwise noted³)

MIDDLE-SKILL JOBS ARE CRITICAL TO THE DFW ECONOMY

Currently there are **960,000** middle-skill jobs in the DFW region. These occupations represent 29% of all positions

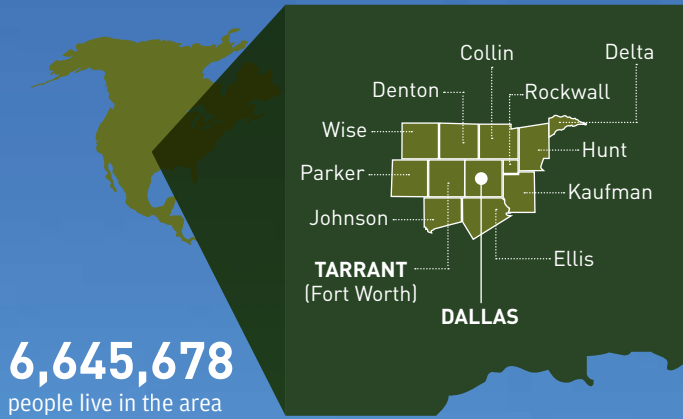
Middle-skill positions pay an average median hourly wage of **\$24.47** 35% higher than the region's living wage of \$18.08

Nearly **42,000** middle-skill job openings are projected every year through 2018

(Source: EMSI⁴)

1 Dallas Regional Chamber. 2014. *Dallas Economic Development Guide*. Retrieved from: trendmag2.trendoffset.com/publication/?i=195133 on February 11, 2015.
2 Bureau of Labor Statistics. 2015. *Dallas-Fort Worth Area Economic Summary*. Retrieved from www.bls.gov/regions/southwest/summary/blsummary_dallasfortworth.pdf on February 11, 2015.
3 EMSI conducted a proprietary analysis of middle-skill opportunities in the DFW region for JPMorgan Chase. All EMSI citations in this report refer to that analysis.
4 EMSI drew upon data from the Massachusetts Institute of Technology's *Living Wage Calculator* for the living wage for a family of three living in the Dallas-Fort Worth Arlington MSA. Additional information can be found here: livingwage.mit.edu

THE DALLAS-FORT WORTH METROPOLITAN AREA



6,645,678

people live in the area

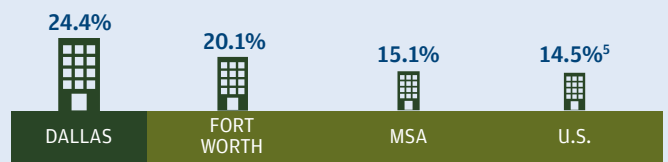
(Source: www.dallaschamber.org)

NOT ALL RESIDENTS ARE BENEFITING FROM THE REGION'S GROWTH

In dramatic contrast to the surrounding region's economic prosperity, the city of Dallas has one of the highest concentrations of poverty in the nation. Many of these residents are unemployed or underemployed, preventing them from benefiting from the region's economic growth.

This opportunity gap is disproportionately affecting African-Americans and Hispanics, who represent a large and growing pool of potential middle-skill workers, just as the region needs to expand its talent pipeline.

Poverty

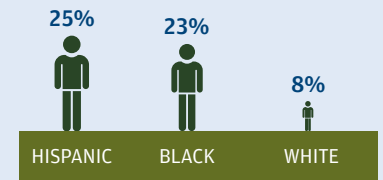


Poverty rate in city of Dallas increased by

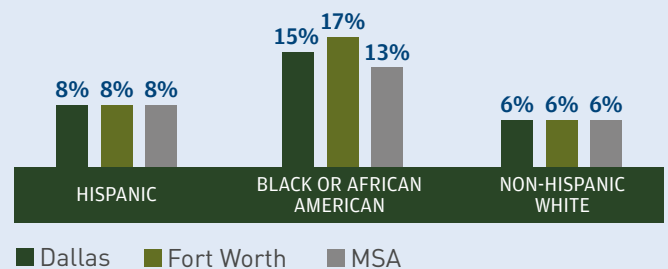
37%

from 2000-2013, while the city's population increased 6% over same time period⁶

Poverty in MSA varies by ethnicity



Unemployment rate varies by geography and race

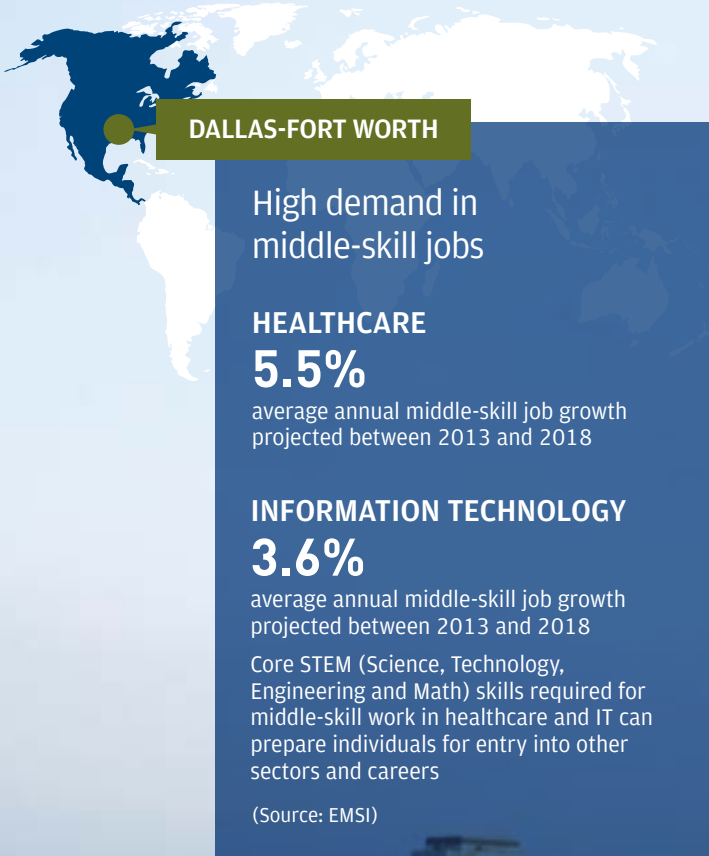


(Source: U.S. Census Bureau. *American Community Survey*, averages for 2011-2013)

⁵ U.S. Census Bureau. *Income and Poverty in the United States: 2013*.

⁶ U.S. Census Bureau. 2000. American FactFinder. Retrieved from factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk on February 10, 2015. U.S. Census Bureau. 2013. State and County QuickFacts. Retrieved from quickfacts.census.gov/qfd/states/48/4819000.html on February 10, 2015.

HEALTHCARE AND INFORMATION TECHNOLOGY LEAD MIDDLE-SKILL DEMAND



DALLAS-FORT WORTH

High demand in middle-skill jobs

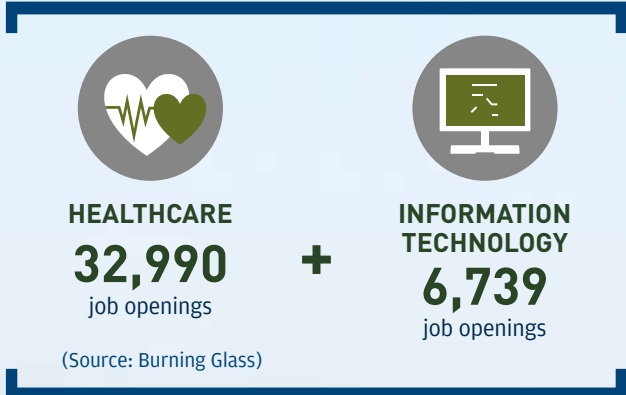
HEALTHCARE
5.5%
average annual middle-skill job growth projected between 2013 and 2018

INFORMATION TECHNOLOGY
3.6%
average annual middle-skill job growth projected between 2013 and 2018

Core STEM (Science, Technology, Engineering and Math) skills required for middle-skill work in healthcare and IT can prepare individuals for entry into other sectors and careers

(Source: EMSI)

Nearly 40,000
middle-skill job openings were in these two sectors in 2013-2014



High wages for in-demand middle-skill jobs




\$20.29
median hourly wage for surgical technologists

\$20.30
median hourly wage for help desk positions

(Source: EMSI)

In addition to healthcare and information technology, the leading economic sectors with middle-skill workforce needs are:

(Source: EMSI)

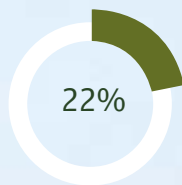
 FINANCE	 AEROSPACE MANUFACTURING	 ELECTRONICS & COMPONENTS MANUFACTURING
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WHERE NEW MIDDLE-SKILL WORKERS WILL COME FROM

Many DFW residents lack the basic academic and job-readiness skills required to start a middle-skill career ladder:

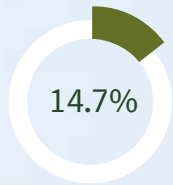
950,000

adults, or 22% of the DFW region's population ages 25 and older, do not have a high school credential⁸



640,000

or 14.7% of individuals in the DFW region ages 16-64 have limited English proficiency⁹



In order to address the DFW region's workforce challenges and the growing opportunity gap, low-income and low-skill individuals need to be among the region's workforce development priorities.

PREPARING MORE PEOPLE FOR MIDDLE-SKILL WORK WILL SUSTAIN ECONOMIC GROWTH AND INCREASE OPPORTUNITIES FOR DFW FAMILIES

Preparing more DFW residents for middle-skill occupations will grow the economy and improve outcomes for DFW families. Businesses will access the steady stream of qualified applicants to meet the demands of the region's economic growth. Residents will earn skills and credentials to position them for skilled, family-sustaining employment. This report is intended to advance efforts already underway by offering a framework for developing a demand-driven career pathways system leading to middle-skill credentials with high labor market value.

EMPLOYERS REPORT CHALLENGES FILLING MIDDLE-SKILL JOBS

The skills gap threatening other U.S. labor markets has had a smaller impact on the DFW economy, perhaps due to the region's robust population growth. Some employers, however, report difficulty in filling high-demand positions and finding applicants with the right skills. In healthcare, for example, many middle-skill jobs are taking up to 50% longer to fill than the regional average duration for open positions.⁷ This emerging trend, along with strong growth in middle-skill jobs, suggests DFW will continue to have challenges over the long term if the region does not expand its talent pipeline for middle-skill occupations.

⁷ Burning Glass conducted a proprietary analysis of middle-skill opportunities in the DFW region for JPMorgan Chase. All Burning Glass citations in this report refer to that analysis.

⁸ U.S. Census Bureau. *American Community Survey*, averages for 2011-2013.

⁹ Brookings Institute. 2014. *Investing in English Skills: The Limited English Proficient Workforce in U.S. Metropolitan Areas*. Retrieved from www.brookings.edu/research/reports2/2014/09/english-skills#/M19100 on February 10, 2015.

EXECUTIVE SUMMARY CONT.

OPPORTUNITIES TO EARN HIGHER INCOMES WITH MORE EDUCATION AND TRAINING



HEALTH INFORMATION PATHWAY



INFORMATION TECHNOLOGY PATHWAY

	Occupation	DFW Median Hourly Wage
Advanced Roles	Health Information Manager	\$35.26
	Coding & Medical Records Supervisor	\$34.77
Upward Middle-Skill Roles	Medical Coder/Coding Specialist	\$25.55
	Health Information Clerk	\$13.52*
Entry-Level Middle-Skill Roles	Medical Assistant	\$14.94

	Occupation	DFW Average Hourly Wage
Advanced Roles	Database Administrator	\$38.30
	Network Administrator	\$34.76
	Information Security Analyst	\$42.77
Upward Middle-Skill Roles	Help Desk Manager	\$49.54
	Network Support	\$36.37
	Advanced Computer Support	\$29.81
Entry-Level Middle-Skill Roles	Help Desk/Entry-Level Computer Support	\$20.30

* National median hourly wage

(Source: Burning Glass)

OUR RECOMMENDATIONS

The region has laid a strong foundation for developing more robust middle-skill career pathways. Dallas and Fort Worth have solid workforce development and community college systems that offer a wide range of industry-recognized credentials in high-demand fields. Local stakeholders have been collaborating to expand the middle-skill talent pool for high-demand jobs. The Regional Workforce Leadership Council has organized “industry clusters” in major sectors, including healthcare and IT, to improve and expand training for prospective and current employees.

The DFW region can build on existing efforts by establishing a career pathways system that effectively engages and prepares low-skill adults to meet the growing demand for middle-skill employees in high-growth sectors. Local stakeholders, especially in Dallas and Fort Worth, are well positioned to accomplish this goal.

DEVELOP A DEMAND-DRIVEN CAREER PATHWAYS SYSTEM TO CONNECT MORE RESIDENTS TO MIDDLE-SKILL JOBS

Recommendation

Strengthen the “first rung” of career pathway programming so that more low-income, low-skilled adults can effectively prepare for and earn middle-skill credentials

Support local institutions in working together to strengthen entry points to career pathway programs. Requirements include a robust basic skills curriculum that integrates academic and workforce readiness instruction aligned with industry demands, and the development of transition strategies that connect students with technical career pathway programs at community colleges.

Recommendation

Invest in comprehensive student supports that help more low-income students persist in and complete middle-skill training

Invest in community-based organizations to expand “wraparound” services, including job coaching, child care, housing assistance, financial coaching and case management to help low-income students overcome barriers to training completion. Allotting funds to community colleges and other training providers for emergency assistance grants and other supports to students can also help.

Recommendation

Promote employer leadership in developing career pathways and expanding sector-based strategies

Recognize and reward employers that invest in employee training, advancement opportunities and living wages. Promote employers that help high-need populations access training, internships and jobs. Encourage businesses to invest in mentoring, career advising and other career advancement efforts.

Recommendation

Develop stronger connections between workforce development resources and the region’s high-need communities and populations

Facilitate the coordination of education and training organizations to help ensure resources reach those in high-need communities. Recent mapping of the workforce ecosystem in the city of Dallas determined gaps in workforce development services, as well as opportunities to expand capacity and increase collaboration among providers. The data also identified specific neighborhoods with highly concentrated poverty and population groups with the greatest need for education and skill development. Similar mapping can be undertaken in other communities in the region.

Recommendation

Increase public awareness of middle-skill job opportunities

Expand initiatives to help K-12 students and their parents better understand middle-skill career pathways and the educational choices that can prepare them to succeed in these jobs. Expand internship and youth employment programs to serve more at-risk or disconnected young adults. Make sure community-based organizations and other providers that work with low-income jobseekers on training or employment are well informed of high-growth occupations and the credentials needed to land these jobs.

Through the *New Skills at Work* initiative, JPMorgan Chase will contribute resources and expertise to accelerate this work in the DFW region and help transform lives and strengthen economies.

INTRODUCTION

The DFW economy is thriving, and strong growth is projected through 2023. **Middle-skill occupations** **1** will offer thousands of job openings that provide middle-class wages and career advancement opportunities in key sectors. While the skills gap threatening other U.S. labor markets has had a smaller impact on the DFW economy, perhaps due to the region's robust population growth, employers are starting to report challenges in filling high-demand positions and finding applicants with the right mix of technical ability and workforce readiness skills.

A larger challenge is the opportunity gap, which appears to be widening due to low educational attainment and high poverty. The opportunity gap is leading to high unemployment for many people of color and young adults, and stakeholders in the region are working hard to address these issues. Low-income residents need better access to and preparation for growing middle-skill jobs in order to improve their financial stability and help ensure the area's long-term economic prosperity. It is imperative that employers, educators and community partners coordinate and scale their efforts to promote and expand **career pathways** **2** that prepare low-skill residents for the region's high-demand, middle-skill careers.

This report highlights employer demand for qualified middle-skill workers in two of the region's key sectors – healthcare and information technology. It also describes the workforce barriers facing large groups of people, particularly in the cities of Dallas and Fort Worth. Drawing on real-time and traditional labor market information and input from local businesses, the report identifies strategies to prepare more DFW residents for middle-skill jobs so they can advance their careers and earnings potential and employers can sustain long-term economic growth. It concludes with detailed recommendations for scaling up and sustaining strategies that can help local businesses find the middle-skill workers they need now and in the future, while helping more residents enter and follow career pathways leading to the middle class.

1 Defining Middle Skills

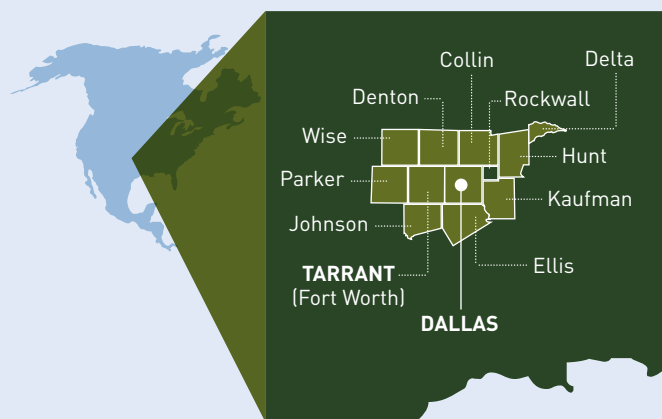
Middle-skill¹⁰ positions require some education or training beyond high school, but not a Bachelor's degree. At least 25% of the workforce for each middle-skill occupation featured in this report earns more than the region's "living wage," which is \$18.08 per hour for a family with two adults and one child.¹¹

2 Career Pathways

The term career pathways, as used in this report, describes education and training programs that offer a well-articulated sequence of courses and work experiences that align with employer skill demands and lead to the completion of industry-valued "stackable" credentials. Stackable credentials offer students multiple clear entry and exit points for education and training as they progress toward an Associate's degree or the highest industry credential required for a specific occupation. This enables people to find jobs with increasing responsibility, by accessing additional short-term training as needed to move ahead. Career pathways can be particularly effective for launching young people and low-skill adults into good jobs because they can be designed to serve a range of populations and skill levels.

A **career pathways system** aligns employers, workforce development agencies, education providers and funders to identify shared goals and drive changes in programs, institutions and policies to address industry demand through *multiple career pathways* in targeted industry sectors.

THE DFW METROPOLITAN AREA



For the purposes of this report, the DFW region includes 11 counties in North Texas. This report pays particular attention to the cities of Dallas and Fort Worth. Recommendations are intended to be instructive for other communities as well.

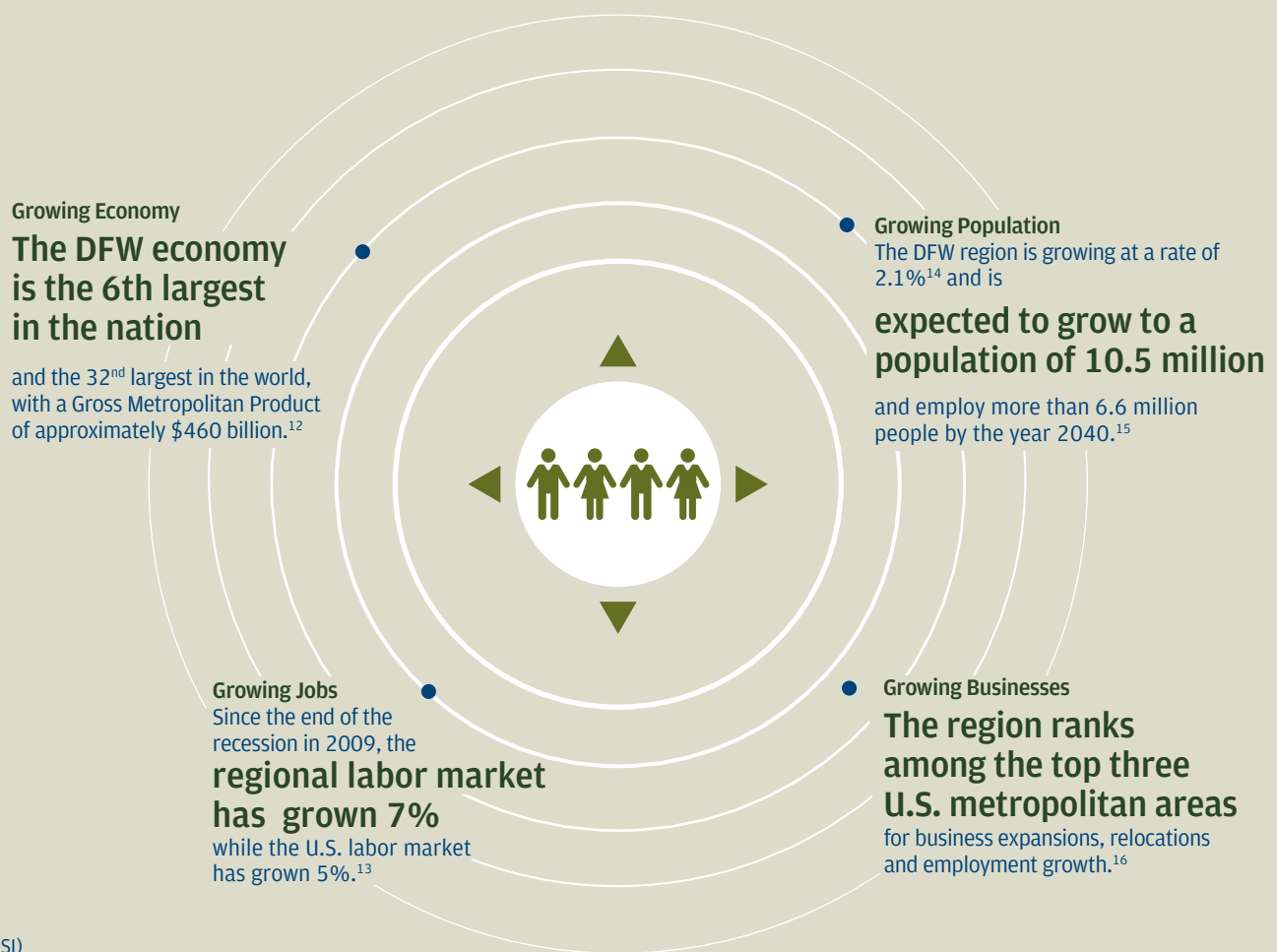
¹⁰See Appendix A for the full definition of "middle skills" used in this analysis.

¹¹EMSI drew upon data from the Massachusetts Institute of Technology's *Living Wage Calculator* for the living wage for a family of three living in the Dallas-Fort Worth Arlington MSA. Additional info can be found here: livingwage.mit.edu

THE OPPORTUNITIES

Business is booming across the DFW region, and employers need to sustain a large pool of middle-skill workers in order to maintain profitability and a competitive edge to attract new companies to the area. Efforts to expand the middle-skill talent supply will also provide critical education and career advancement opportunities for low-income and unemployed residents.

STRONG ECONOMIC GROWTH, DEMAND FOR MIDDLE-SKILL WORKERS



(Source: EMSI)

12IHS Global Insight. 2013. *U.S. Metro Economies: Outlook – Gross Metropolitan Product, with Metro Employment Projections*. Prepared for the U.S. Council of Mayors and the Council on Metro Economies and the New American City. Retrieved from: www.usmayors.org/metroeconomies/2013/201311-report.pdf on February 10, 2015.

13EMSI conducted a proprietary analysis of middle-skill opportunities in the DFW region for JPMorgan Chase. All EMSI citations in this report refer to that analysis.

14Forbes. 2015. *America's 20 Fastest Growing Cities*. Retrieved from: www.forbes.com/pictures/mhj45mhl/3-dallas-tx-2/ on February 11, 2015.

15Dallas Regional Chamber. 2014. *Dallas Economic Development Guide*. 2014. Retrieved from: trendmag2.trendoffset.com/publication/?i=195133 on February 10, 2015.

16*ibid.*

THE DFW ECONOMY IS THRIVING, FUELED BY A DIVERSE ECONOMIC BASE

- Since 2001, the DFW economy has expanded at a robust rate, adding more than 371,000 jobs and contributing 2.2% of the nation's net new job growth.
- Regional job growth is projected to continue growing at a strong pace of 1.7% per year between 2013 and 2023, significantly higher than the projected national growth of 1.2% per year.
- The regional unemployment rate of 4.0% is much lower than the national rate of 5.4%.¹⁷
- Five industries with a significant number of middle-skill positions have driven much of the recent boom and are projected to continue growing through 2018: **finance**,³ healthcare, information technology (IT), aerospace manufacturing, and electronics and component manufacturing.
- The two target sectors for this report – healthcare and information technology – are vital to the economy because of the size of the current workforce in those industries, projected job growth, and proportion of middle-skill occupations.
- Moreover, the core STEM (Science, Technology, Engineering, Math) skills required for middle-skill work in the healthcare and IT industries can prepare individuals for entry into many other high-growth jobs and careers in the region.

[Source: EMSI]

KEY SECTORS FOR MIDDLE-SKILL JOBS

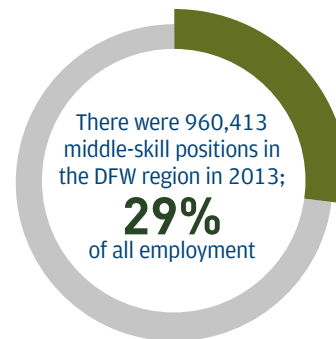
Industry	Total Jobs 2013	Projected Job Growth (2013–2018)	Middle-Skill Jobs (as Proportion of Total Jobs) 2013
Healthcare	295,645	21%	45%
Information Technology	122,731	7%	32%

[Source: EMSI]

3 Middle-Skill Opportunities in Finance

The finance industry is the region's largest sector, employing nearly 334,000 people and projected to grow 20% between 2013 and 2018.¹⁸ While middle-skill jobs are a small proportion of the finance labor force, at 19%, the number of middle-skill positions, more than 63,000, is second only to healthcare.¹⁹ Demand for workers across middle-skill finance occupations is strong, with 22,556 online job postings, or approximately 16% of all middle-skill postings between July 2013 and June 2014.²⁰ Sales and financial transactions and analysis positions are in greatest demand.

NEARLY ONE-THIRD OF JOBS IN HIGH-GROWTH INDUSTRIES REQUIRE MIDDLE-SKILL CREDENTIALS



Middle-skill jobs are projected to produce nearly **42,000** average openings per year, a 2% annual growth rate, through 2018

(Source: EMSI)

Middle-skill jobs pay an average median hourly wage of

\$24.47

exceeding the living wage of \$18.08 for the DFW region

¹⁷Bureau of Labor Statistics. 2015. *Dallas-Fort Worth Area Economic Summary*. Retrieved from www.bls.gov/regions/southwest/summary/blssummary_dallasfortworth.pdf on February 11, 2015.

¹⁸EMSI

¹⁹*Ibid.*

²⁰Burning Glass conducted a proprietary analysis of middle-skill opportunities in the DFW region for JPMorgan Chase. All Burning Glass citations in this report refer to that analysis.



OPPORTUNITIES IN HEALTHCARE

45%

of jobs in the healthcare sector - totaling 133,200 positions - are middle skill

(Source: EMSI and Burning Glass)

5.5%

average annual job growth projected for middle-skill healthcare occupations for 2013-2018

7,095

projected average annual middle-skill healthcare job openings for 2013-2018

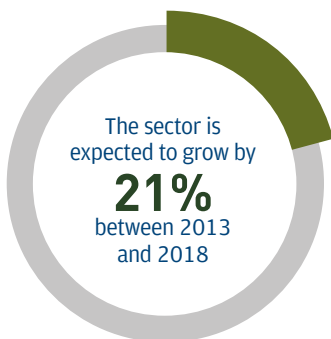
\$29.27

is the median hourly wage for middle-skill healthcare occupations

HIGH DEMAND FOR MIDDLE-SKILL TALENT

The healthcare delivery system is one of the largest sectors in the DFW region and presents many opportunities for area residents who want to **advance their careers** **4**. Healthcare has the largest concentration of middle-skill positions and is among the highest-paying industries.

- The healthcare industry employs nearly 296,000 people²¹ and comprises 15% of all regional economic activity.²²
- The region's hospitals alone generate about \$14.4 billion in revenue per year, and their investment of \$6.6 billion in new facilities is generating new middle-skill opportunities in construction as well as healthcare.²³



In part because the population in North Texas is increasing, while the proportion of older residents is growing.²⁴

- **Registered nurses** **5** comprise the largest middle-skill occupation in healthcare, but the position is also upskilling.

4 Building the Healthcare Pipeline

Dallas County Community College District (DCCCD) has several efforts underway in partnership with employers and community-based organizations to develop middle-skill talent in healthcare. In partnership with Texas Health Resources and Hospital Corporation of America, with a grant from the Texas Workforce Commission, El Centro College will train 540 new and incumbent workers, including registered nurses, licensed vocational nurses and certified nursing assistants in 2015-2016. Workers who complete the training can expect to earn an average hourly wage of \$32.22.²⁵ Support from JPMorgan Chase's *New Skills at Work* initiative in Dallas has launched DCCCD's Project On-Ramp, a partnership to build pathways for certified nursing assistants to advance to patient care technician and medical assistant or medical coder. Successful completers earn a 20% increase in income in less than six months.

5 The Upskilling of Nursing

Nursing has long been considered an excellent middle-skill job opportunity with good pay and growing demand. But credential requirements are changing. Hospital systems now prefer a Bachelor's degree in nursing (BSN) to an Associate's degree (ADN).²⁶ Educational "bridges" that help nurses with ADN or a Licensed Vocational Nurse (LVN) certificate to earn a BSN are increasingly important to sustaining the talent supply. In order to continue meeting growing demand for registered nurses, the region also needs more nurse educators and more clinical placements for both ADN and BSN programs.²⁷ Increasing educational opportunities for nurses may also help diversify the talent pool, a goal of many healthcare employers. Just 22% of registered nurses in Dallas and Tarrant counties are African-American or Hispanic, while 53% of LVNs are African-American or Hispanic.²⁸

²¹ EMSI

²² Dallas Regional Chamber. 2013-14. *The Health Care Impact: Assessing the Scope and Depth of the Health Care Industry in Dallas-Fort Worth*. Retrieved from: dallaschamber.org on February 10, 2015.

²³ *Ibid*. The \$6.6 billion invested in 18 new hospital and clinical facilities happened primarily from 2005 to 2015. The DFW Hospital Council reported that its member hospitals created more than 24,000 construction jobs in 2012 alone.

²⁴ EMSI

²⁵ Author interview with Shannon Ydoyaga, 1/7/15

²⁶ Burning Glass

²⁷ Author interview with Shannon Ydoyaga, Health Careers Resource Center, DCCCD. 1/7/15. Author interview with W. Stephen Love, Dallas-Fort Worth Hospital Council. 12/16/14. Focus Group with Dallas-Fort Worth Hospital Council Foundation Regional Workforce Planning Committee. 1/23/15. Focus Group with Dallas-Fort Worth Hospital Council Human Resources Executive Committee, 2/4/15.

²⁸ Texas Department of State Health Services, Health Professions Resource Center. 2015. Custom report produced for Jobs for the Future for Dallas and Tarrant Counties.

ONLINE JOB POSTINGS INDICATE SPECIFIC NEEDS

- The number of online job postings for healthcare indicates strong demand for middle-skill workers. There were 32,990 healthcare postings in the DFW region from July 2013 to June 2014, accounting for 24% of middle-skill demand, or nearly one in every four middle-skill jobs.²⁹
- Employers report the greatest challenge finding qualified workers for technical jobs that do not involve patient care, such as medical laboratory technicians.
- The duration of online job postings is an indicator of employer difficulty in filling jobs, and this data is consistent with employer feedback. For example, medical office/practice manager positions were posted the longest (47 days), while ads for pharmacy technicians (42 days) and histotechnicians, a specialized lab technician, (39 days) also had posting durations that exceed the average duration for the region (33 days).³⁰
- It is also challenging to find qualified candidates for some patient care positions, including registered nurses (35 days), health technicians (35 days) and dental assistants (44 days).³¹
- Obtaining skills in information technology is becoming increasingly important in patient care, as well as in technical and administrative healthcare jobs. Hospitals, physicians' offices, assisted living facilities and other healthcare employers are seeking clinical staff, including medical assistants and patient care technicians, who have IT proficiency so they can adapt to a growing variety of work responsibilities.³² Training in health informatics, the study and management of health information, including medical insurance, coding and billing, is in particular demand to help employers meet requirements of the Affordable Care Act.³³

TABLE 1. HEALTHCARE OFFERS MANY MIDDLE-SKILL EMPLOYMENT OPPORTUNITIES

Middle-Skill Occupations	Total Job Postings Online (July 2013-June 2014)	Average Duration of Job Posting	Projected 10-Year Growth Rate (2010-2020)	Median Hourly Wage
Registered Nurse	18,446	35 days	32%	\$33.15
Health Technician/Technologist	1,169	35 days	29%	\$19.94
Medical Laboratory Technician	1,030	46 days	22%	\$17.04
Surgical Technologist	987	34 days	24%	\$20.29
Radiology Technologist	755	33 days	35%	\$28.93
Medical Coder	748	30 days	28%	\$17.17
Dental Assistant	722	44 days	34%	\$16.15

(Source: Burning Glass)

²⁹Burning Glass

³⁰*Ibid.*

³¹*Ibid.*

³²Author interview with Shannon Ydoyaga, Health Careers Resource Center, DCCCD. 1/7/2015.

³³Author interview with W. Stephen Love, DFW Hospital Council. 12/16/2014.

CAREER PATHWAYS



HEALTHCARE PATHWAY

	Non-Clinical Medical Records and Coding Positions Career Pathway	Clinical Health Information Management Career Pathway	Education	Certifications (Non-Clinical)	Certifications (Clinical)
Advanced	Health Information Manager \$35.26	Health Information Manager \$35.26	BA/BS required	Auditing, Advanced Clinical Billing, HIPAA, RHIA Certification	Auditing, Advanced Clinical Billing, HIPAA, RHIA Certification
Middle-Skill	Coding & Medical Records Supervisor \$34.77	Health Information Technician \$18.00*	Sub-BA required; in some instances, BA or BS preferred	Experience as a coding specialist	Clinical procedures, EMR
	Coding Specialist \$25.55	RN or Clinical Allied Health positions	AS (or for Coding Specialist, the RHIT Certification which is 18-24 months but not AS)	Clinical systems skills/certification, RHIT Certification, CPC	Appropriate clinical credentials
Entry-Level	Health Information Clerk \$13.52*	Medical Assistant/Patient Care Technician \$14.94	HS diploma plus short-term training	Short-term or on-the-job training, CCA certification, ICD-10, medical terminology, basic billing systems	Short-term training (plus certification for PCT)

(Source: Burning Glass)

All wages are DFW Median Hourly Wage except
 * indicates national median hourly wage

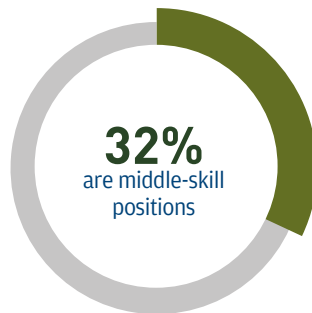


OPPORTUNITIES IN INFORMATION TECHNOLOGY



123,000

total information technology (IT) jobs



\$29.11

median hourly wage for middle-skill IT jobs

(Source: EMSI)

3.6%

projected average annual middle-skill job growth through 2018

(Source: Burning Glass)

NEARLY TWO IN THREE IT OPENINGS ARE FOR HELP DESK JOBS

- Help desk jobs are the largest middle-skill occupational area in IT, accounting for 65% of middle-skill average annual openings.³⁷
- However, 39% of online job postings for help desk roles request a Bachelor's degree, despite having similar skill requirements to postings that do not require a Bachelor's degree.³⁸
- Employers and IT recruiters in the region suggest that the actual skills that job seekers need for middle-skill IT positions can be acquired from education and training that does not have to lead to a four-year degree. In fact, specific IT skills and certifications, such as A+, Cisco, Microsoft Office certifications, and scripting languages, along with problem-solving skills, may be even more important than a diploma. Demonstrated experience is also critical, underscoring the critical importance of work-based learning and internships in this field.³⁹
- These findings can provide a starting point for discussions among stakeholders in the sector to clarify the credential expectations for help desk positions.

TABLE 2. MIDDLE-SKILL EMPLOYMENT OPPORTUNITIES IN IT

	Total Online Job Postings (July 2013–June 2014)	Average Advertised Hourly Salary
Help Desk	4,077	\$20.30
Advanced Computer Support	1,501	\$29.80
Network Support	513	\$36.37
Help Desk Manager	217	\$49.54

(Source: Burning Glass)

STRONG DEMAND FOR MIDDLE SKILLS

- IT is a growing sector offering many career advancement opportunities for people with middle skills. The industry is expected to grow by 7% from 2013-2018, with a 3.6% projected average annual middle-skill job growth for the same time period.³⁴
- Online job postings indicate strong demand for workers, with 6,739 middle-skill job postings from July 2013 to June 2014.³⁵
- A number of high-demand middle-skill IT positions, such as database administrator, network administrator, information security analyst and computer user support specialist, are spread out among high-growth sectors.
- IT positions offer the fourth highest wage of all middle-skill occupation groups across industries in the DFW region.³⁶

³⁴EMSI

³⁵Burning Glass

³⁶Ibid.

³⁷Ibid.

³⁸Ibid.

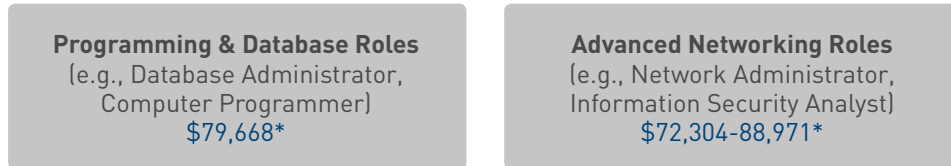
³⁹Author interview with Kelleen Young, Senior Business Development Manager, EPITEC. 12/3/2014. Author interview with Elizabeth Caudill, Manager of Education & Higher Education, Dallas Regional Chamber. 11/20/2014. Author interview with Mike Courtney, President, Courtney Consulting Group, LLP, 2/11/15.

CAREER PATHWAYS

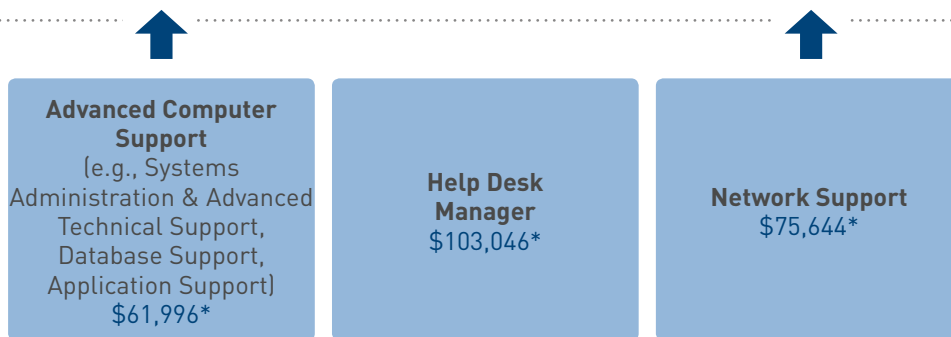


INFORMATION TECHNOLOGY PATHWAY

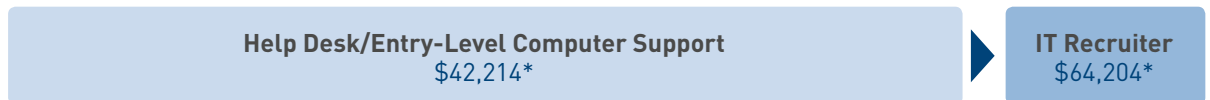
Advanced Roles:
Typically require a BA and substantial experience.



Upward Roles:
Require more technical IT skills or experience and offer a viable transition upward from Help Desk roles.



Help Desk:
Important entry point into IT workforce. Account for over half (65%) of middle-skill IT jobs in Dallas.



Lateral Off-Ramp Roles: Role leveraging similar knowledge and skills outside of the IT field.

■ Entry-Level Roles ■ Middle-Skill Roles ■ Advanced Roles * Average advertised salaries in DFW region.

(Source: Burning Glass)

Middle-Skill Roles:
The most requested credentials, technical skills and baseline skills for the help desk/computer support occupations in the industry sectors.



THE NEED TO EXPAND OPPORTUNITY

For employers to maintain profitability and for the DFW region to maintain its competitive edge, it is more important than ever to help ensure all residents are included in the middle-skill talent pipeline.

MANY RESIDENTS OF DALLAS AND FORT WORTH ARE NOT BENEFITING FROM THE ECONOMIC BOOM

UNEMPLOYMENT

- As of December 2014, the region's unemployment rate of 4.0% was lower than the national rate of 5.4%.⁴⁰ But 140,400 people remained unemployed,⁴¹ and many more individuals were not counted in that total because they had stopped looking for work.
- Racial disparity in unemployment is a significant challenge in the cities of Dallas and Fort Worth. While the unemployment rate for Non-Hispanic Whites was 5.7% in Dallas and in Fort Worth in 2013, the unemployment rate was substantially higher among Hispanics (8% in Dallas and Fort Worth) and African-Americans (15.4% in Dallas and 16.8% in Fort Worth).⁴²
- Long-term unemployment disproportionately affects African-Americans. In the city of Dallas, African-Americans comprise only 24% of the total population, but 54% of the long-term unemployed. In Tarrant County, where Fort Worth is located, African-Americans comprise 14.9% of the population but 31.1% of the **long-term unemployed** **6**.⁴³
- Young adults in the DFW region face many challenges. Overall, 19.5% of young adults ages 16–24 are unemployed.⁴⁴
- According to the 2011 American Community Survey, 14.9% of the DFW region's young adults are considered disconnected – not working or in school.⁴⁵
- The City of Dallas has some of the highest concentrations of disconnected youth in the country: 34.1% of youth are disconnected from school and work in the Fair Park, West Dallas and Northwest Dallas neighborhoods, which is the third highest rate of youth disconnection among more than 900 neighborhoods in major metropolitan areas around the country. The rate is 25% in South Dallas and Oak Cliff neighborhoods. By contrast, West Plano in Collin County (also in the DFW region) has one of the lowest rates of youth disconnection at 6.2%.⁴⁶

6 (Re)Employment for the Long-Term Unemployed

The nation's long-term unemployed face specific challenges. Research suggests that the longer the unemployment the more challenging it is to return to the workforce: skills deteriorate and it becomes more challenging to build new skills that are in high demand in the labor market. But the more virulent challenge is the impact on perception: employers come to see the long-term unemployed as risky hires; and the impact of weeks and months of failed job seeking causes the self-perception of the long-term unemployed to plummet.

In 2014, President Obama issued a call to action to the nation's employers to focus on long-term unemployment and remedy this "stubborn legacy of the recession." JPMorgan Chase accepted this challenge. Through its national *New Skills at Work* initiative, JPMorgan Chase is putting its White House commitment into action by supporting the efforts of local stakeholders to better understand the needs of the long-term unemployed and helping communities and businesses implement best practices that help these job seekers to get back to work.

⁴⁰Bureau of Labor Statistics. 2015. *Dallas-Fort Worth Area Economic Summary*. Retrieved from www.bls.gov/regions/southwest/summary/blssummary_dallasfortworth.pdf on February 11, 2015.

⁴¹Bureau of Labor Statistics. 2015. *Economic News Release*. Retrieved from www.bls.gov/news.release/metro.t01.htm on February 11, 2015.

⁴²U.S. Census Bureau. *American Community Survey, 2011–2013 averages*. These are the most recent unemployment figures available by place, race and ethnicity.

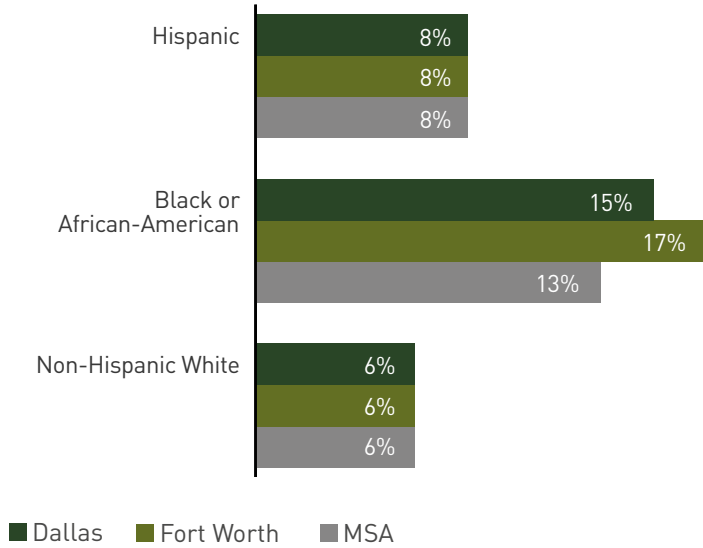
⁴³Long-term unemployment data collected by the Texas Workforce Commission. Analysis for this report conducted by Workforce Solutions Greater Dallas and Workforce Solutions for Tarrant County.

⁴⁴U.S. Census Bureau. *American Community Survey, 2011–2013 averages*.

⁴⁵Lewis, Kristen and Burd-Sharps, Sarah. 2013. *Halve the Gap by 2030: Youth Disconnection in America's Cities, Dallas-Fort Worth Metro Area Close-Up. Measure of America of the Social Science Research Council*. Retrieved from: ssrc-static.s3.amazonaws.com/moa/dallas-ftworth_full.pdf on February 10, 2015.

⁴⁶*Ibid.*

UNEMPLOYMENT BY RACE/ETHNICITY (ACS 2011–2013)



(Source: U.S. Census Bureau. *American Community Survey*, 2011–2013 averages)

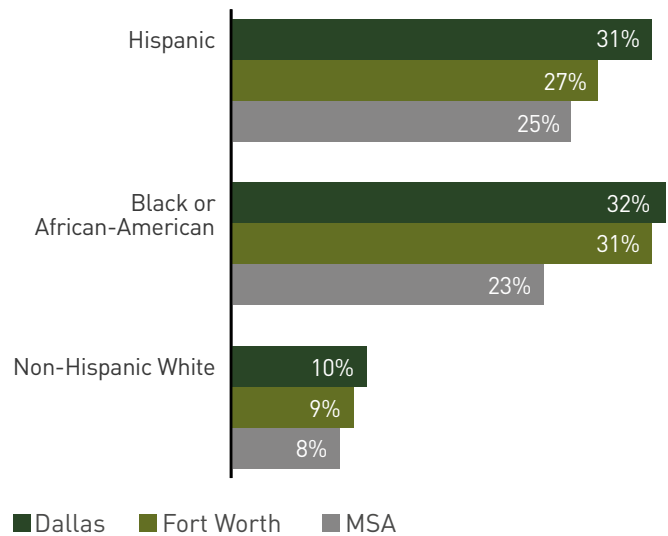
Note: Unemployment for Hispanic and Non-Hispanic White populations is similar in each of the cities of Dallas and Fort Worth, compared with the region overall. However, for African-Americans, the difference in unemployment rates between the cities and the region is substantial.

POVERTY

- Even as the DFW region has experienced impressive economic growth over the past decade, poverty has risen from 11% in 2000⁴⁷ to 15.1% in 2013, a 37% increase.⁴⁸
- Poverty has grown even more dramatically in the city of Dallas, which now has one of the highest concentrations of poverty in the nation. Nearly one in four Dallas residents (24.4%)⁴⁹ lives below the poverty level, up from 17.8%⁵⁰ in 2000. This includes 38% of the city's children. In some Dallas neighborhoods, the child poverty rate is nearly 100%.⁵¹
- More than one in five residents (20.1%) of Fort Worth live in poverty, including 28% of the city's children.
- Racial disparities in poverty are a cause for concern. Only 10% of white Dallas residents live in poverty, compared with 30% of African-American and 27.4% of Hispanic residents.⁵²

- Poverty constricts individuals' ability to take advantage of local resources. Many residents are unable to access the education and training needed to obtain middle-skill jobs because of the cost of training, as well as transportation, healthcare and child care challenges. Individuals working in low-wage jobs may also have to piece together multiple jobs to make ends meet, further constraining their ability to access education and training.
- The growing poverty rate in Dallas has created a sense of urgency to expand economic opportunity. Stakeholders recognize the necessity of a systemic, regional response to these issues in order to help families move themselves out of poverty and to expand the talent pipeline for the region's businesses. Building pathways leading to middle-skill jobs is a critical tool in meeting these challenges.

POVERTY BY RACE/ETHNICITY IN DALLAS, FORT WORTH AND THE MSA



(Source: U.S. Census Bureau. *American Community Survey*, 2011–2013 averages)

47 U.S. Census Bureau. 2000. *American FactFinder*. Retrieved from factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmm on February 10, 2015.

48 U.S. Census Bureau. *American Community Survey*, 2013.

49 U.S. Census Bureau. *American Community Survey*, 2011–2013 averages.

50 U.S. Census Bureau. 2000. *American FactFinder*. Retrieved from factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmm on February 10, 2015.

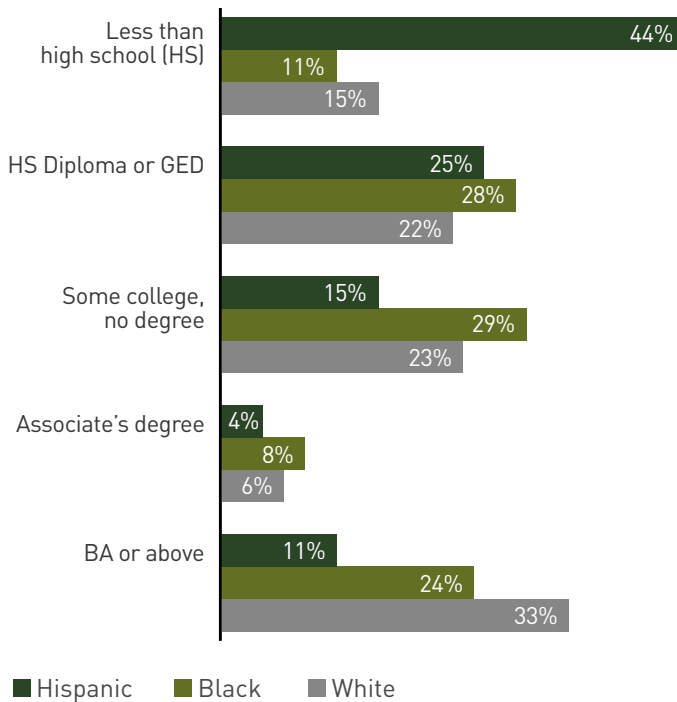
51 Presentation made by the Mayor's Task Force on Poverty, August 20, 2014. Retrieved from: www.dallascityhall.com/council_briefings/briefings0814/Poverty_Task_Force_082014.pdf on February 10, 2015.

52 *Ibid.*

MANY DFW RESIDENTS LACK THE CREDENTIALS AND/OR SKILLS TO TAKE ADVANTAGE OF MIDDLE-SKILL JOB OPPORTUNITIES

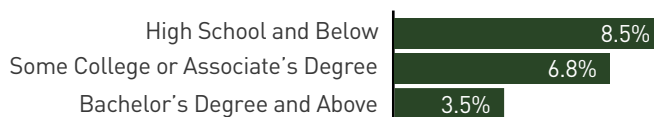
- Low levels of education prevent some residents from accessing middle-skill training and jobs.
- Across the DFW region, 22% of adults, or nearly 950,000 individuals, do not have a high school credential.⁵³
- A significant percentage of the region’s working-age population has limited English proficiency (LEP); 14.7% of individuals ages 16–64, more than 640,000 individuals, speak English “not well” or “not at all.” About 52% of this LEP population lacks a high school credential.⁵⁴
- Hispanic residents in the DFW region have the lowest education levels of any racial or ethnic group, with 44% holding less than a high school credential. In Dallas, this figure is 55%. In addition, only 15% have any post-secondary credential.⁵⁵
- While African-American residents in the DFW region are just as likely as Whites to attend college (61% of African-Americans versus 62% of Whites), they are less likely to complete. Only 32% of African-Americans in the region have earned either an AA or BA, compared with 39% of Whites. Unfortunately, without a post-secondary credential these residents are not only unqualified for many middle-skill jobs but also have likely accrued debt from higher education, reflecting national trends of low-income students becoming indebted but not earning credentials that would make them more marketable.⁵⁶
- The data show a correlation between educational attainment and unemployment, but educational attainment does not fully explain the disparity in unemployment for African-Americans.
- Hispanics have a lower overall level of educational attainment than African-Americans and are much less likely to have a high school diploma, but they have a significantly lower unemployment rate than African-Americans (8.4% in Dallas and 8.2% in Fort Worth). Poverty rates for the two populations are similar.⁵⁷
- Stakeholders addressing this challenge are well positioned to more fully investigate the reasons for disparities in unemployment, including but not limited to factors such as educational quality, interactions with the criminal justice system, and access to transportation in order to connect this critical population to the region’s opportunities.

EDUCATIONAL ATTAINMENT BY RACE IN THE DALLAS-FORT WORTH MSA



(Source: U.S. Census Bureau. *American Community Survey*, 2011–2013 averages)

UNEMPLOYMENT RATE BY EDUCATIONAL ATTAINMENT IN THE DALLAS-FORT WORTH MSA



(Source: U.S. Census Bureau. *American Community Survey*, 2011–2013 averages)

⁵³American Community Survey, averages for 2011–2013.

⁵⁴Brookings Institute. 2014. *Investing in English Skills: The Limited English Proficient Workforce in U.S. Metropolitan Areas*. Retrieved from www.brookings.edu/research/reports/2014/09/english-skills#/M19100 on February 10, 2015.

⁵⁵U.S. Census Bureau. *American Community Survey*, 2011–2013 averages.

⁵⁶Ibid.

⁵⁷Ibid.

EMPLOYERS, EDUCATION AND TRAINING PROVIDERS CAN WORK TOGETHER MORE EFFECTIVELY TO DEVELOP ROBUST PATHWAYS TO MIDDLE-SKILL JOBS

EDUCATION AND TRAINING PROVIDERS NEED MORE CAPACITY TO MEET THE GROWING DEMAND FOR MIDDLE-SKILL WORKERS

- Challenges in the region, such as unemployment and poverty, affect some populations more than others. As a result, community-based organizations working with these target populations are often the first stop for people seeking education or training to gain or improve employment. In the cities of Dallas and Fort Worth, few of these organizations currently have the capacity to engage in workforce training at scale, or to become eligible training providers under the current publicly funded workforce system.
- Further, few community-based organizations have the deep relationships with employers in high-growth, high-demand sectors necessary to inform the development of education and training pathways for high-demand jobs.

REGIONAL WORKFORCE CAPACITY IS ROBUST, BUT STRATEGIES AND RESOURCES COULD BE USED MORE EFFICIENTLY

- Workforce Investment Boards and Chambers of Commerce in the region have come together to address demand and supply issues. However, there is an opportunity to develop more robust pathways to middle-skill jobs through improved information sharing between employers, community-based organizations, education providers and programs serving young adults.
- There are areas where the DFW region's education and training infrastructure is not fully aligned with industry needs and demands. Employers increasingly emphasize the need for work experience linked to content and theory, producing graduates who are industry ready in terms of applied skills, expectations and **workplace fundamentals** **7**.

- Apprenticeships can be a valuable training resource to help build a pipeline of skilled workers for growing businesses, prepare job seekers and incumbent workers for middle-skill opportunities, and provide opportunities for trainees to “learn and earn.” However, apprenticeships are underutilized and often misunderstood by education and training organizations, as well as by businesses that may find them daunting to develop and administer.
- The new Workforce Innovation and Opportunity Act (WIOA) requires regions to spend at least 75% of their annual allocation of funds for youth services (“youth formula funds”) and encourages the use of work-based learning strategies, paid and unpaid work experiences that incorporate academic and occupational education for out-of-school and in-school youth.⁵⁸ Stakeholders in the DFW region have an opportunity to figure out how to leverage these new resources and increase their own investments to help more youth and young adults connect to the labor market.

7 Workforce Readiness Skills

From troubleshooting computer networks to inserting IVs, technical proficiency is a prerequisite for middle-skill work. But technical skills are no longer enough to ensure success on the job. Employers need new hires with solid workforce readiness skills, such as teamwork, collaboration, written and oral communication, professionalism, time management, critical thinking, and problem solving.⁵⁹ Unfortunately, too many workers do not have these skills when they are hired, and employers do not want the responsibility of teaching them. They do not think they do it well; they prefer to provide training specific to their business.⁶⁰ In order to help ensure that new employees are successful in the workplace, it's important for education and training providers to integrate workforce readiness instruction into their adult basic education and technical training programs.

⁵⁸Bird, Kisha, Foster, Marcie, and Ganzglass, Evelyn. *New Opportunities to Improve Economic Opportunity for Low-income Youth and Adults: Key Provisions of the Workforce Innovation and Opportunity Act*. Retrieved from: www.clasp.org/resources-and-publications/publication-1/KeyProvisionsofWIOA-Final.pdf on February 10, 2015.

⁵⁹These skills are identified by a variety of names, ranging from “21st Century skills” to “soft skills,” with various definitions, but generally include basic professional competencies.

⁶⁰Wright, Mary and Casner-Lotto, Jill. 2009. *The Ill-Prepared U.S. Workforce*, Mary Wright & Jill Casner-Lotto, August 2009. The Conference Board. Retrieved from: www.conference-board.org/topics/publicationdetail.cfm?publicationid=1676 on February 10, 2015.

RECOMMENDATIONS

Establishing a career pathways system that effectively engages and prepares low-skill adults to become part of the growing middle-skill workforce is required to maintain the DFW region's long-term economic growth. Stakeholders in the region, especially in the cities of Dallas and Fort Worth, are **well positioned to accomplish this goal 8**. The recommendations below - drawing on data collected for this report, research in the region, and conversations with leaders from industry, community colleges, workforce development and community-based organizations - identify high-leverage strategies and action steps to scale existing work into a system of career pathways aligned with demand in high-growth sectors.

DEVELOP A DEMAND-DRIVEN CAREER PATHWAYS SYSTEM TO CONNECT MORE RESIDENTS TO MIDDLE-SKILL JOBS

Recommendation One

Strengthen the “first rung” of career pathway programming so that low-income, low-skill adults can more effectively prepare for and earn middle-skill credentials.

- Ensure that workforce readiness training, basic skills education and comprehensive supports are integrated into **technical career pathways 9** within community colleges so that programs more effectively prepare low-skill residents for middle-skill occupations in high-demand industries.
- Expand the capacity of community-based organizations to deliver job-readiness training and basic skills education that are aligned with career pathway programs, so that these “first-rung” programs are readily accessible to low-income residents, particularly in under-served areas of Dallas and Fort Worth, and effective at preparing participants for the next step.
- Expand on the example of Workforce Solutions Greater Dallas' efforts to align the adult basic education system with local community college and workforce requirements, so the region's adult education programs provide a pathway to further credentials and skills.
- Draw on completion and outcomes data from local Workforce Investment Boards to highlight best practices and effective models of middle-skill training that can be further developed or scaled.

8 Building on Regional Strengths

The DFW region has a strong foundation for developing more robust middle-skill career pathways, including solid workforce development and community college systems that offer a wide range of industry-recognized credentials in high-demand fields. In Dallas, local workforce development agencies, community colleges, philanthropic institutions and businesses have been collaborating through the *United Way of Metropolitan Dallas' Pathways to Work* initiative to support economic growth and expand the middle-skill talent pool for high-demand jobs. The Fort Worth Chamber has developed the *Job Links EXCEerator* initiative to help workforce training providers, staffing firms and higher education institutions understand the needs of employers, build collaborative human resource relationships and quickly fill open positions with qualified candidates. The Regional Workforce Leadership Council, with business leaders, representatives of the region's three Workforce Investment Boards⁶¹ and regional chambers of commerce,⁶² has organized “industry clusters” in major sectors, including healthcare and IT, to improve and expand training for prospective and current employees and to steer and leverage resources.

9 Accelerate TEXAS

Accelerate TEXAS integrates basic skills instruction with career pathways to help adult students acquire technical skills and industry credentials in high-demand occupations. As part of the statewide initiative created by the Texas Workforce Commission and the Texas Higher Education Coordinating Board, the Trinity River campus of the Tarrant County College District developed an exemplary pathway for healthcare careers.

⁶¹The three workforce boards in the DFW region are Workforce Solutions Greater Dallas, Workforce Solutions for Tarrant County and Workforce Solutions for North Central Texas.

⁶²The three chambers of commerce in the DFW region are the Dallas Regional Chamber, the Fort Worth Chamber of Commerce and the Arlington Chamber of Commerce.

Recommendation Two

Invest in strategies that increase low-income individuals' persistence in and completion of middle-skill training and credentials leading to employment.

- Identify and encourage individuals with “some college, but no degree” to return to school and complete their education or training in a high-demand sector.
- Expand bridge and pre-college programs that better prepare individuals for post-secondary education.
- Build capacity of education and workforce providers, including community-based organizations, to develop comprehensive wrap-around services, such as coaching, financial capability, housing assistance, emergency tuition assistance and child care. Integrate these services with workforce training.
- Encourage businesses to partner in creating career pathway programs and invest in mentoring, advising and flexible tuition assistance programs.
- Expand paid internships and other “learn and earn” models to help participants support their families while gaining work experience and **new skills** ¹⁰.
- Help adult basic education students maximize the recently re-instated Ability to Benefit legislation so that, if qualified, students can access Pell grant funding without first obtaining their high school credential.

¹⁰ Connecting Veterans to Middle-Skill IT Jobs

NPower aims to help 100 North Texas veterans each year make a successful transition to a civilian IT career. The 20-week Technology Service Corps Program – in partnership with the Texas Veterans Commission, the Dallas County Community College District and community-based organizations – includes 12 weeks of training for A+ certification; a one-week introduction to cloud computing or health information technology; and a seven-week, full-time paid apprenticeship. Corporate partners teach professional skills, host site visits and provide mentors. A career specialist helps graduates find jobs, and a guidance specialist helps them maintain employment. Since 2013, 74 individuals have enrolled and 57 have graduated. About 77% of graduates are working full time with an average hourly wage of \$20.67 or are pursuing further education. In partnership with the University of Texas-Arlington, NPower will expand its Technology Service Corps program in 2015, offering expanded training and certification in the ServiceNow cloud-based management program.

Recommendation Three

Develop stronger alignment between workforce development resources and the region's high-need communities and populations.

- Facilitate the coordination of education and training organizations to help ensure resources reach those in high need communities. A map of the **workforce “ecosystem”** ¹¹ can help ensure that efforts are not duplicated and resources are leveraged effectively to scale programming for low-skill residents in the region.
- Expand resources dedicated to helping low-income individuals navigate the complex education and training landscape in order to connect with programs and services that will help them find the training and jobs that meet their needs.
- Create a community workforce and education database that enables community-based organizations to connect constituents with workforce resources, funding and supportive services; track the outcomes of residents as they move into work; and reduce duplication of effort.
- Expand post-secondary education and industry-focused training accessible to urban residents by providing resources such as college advising, financial aid and courses near neighborhoods impacted by unemployment and poverty.
- Leverage federal funding, such as the recently reauthorized WIOA legislation and resources to expand apprenticeship training, to build the region's capacity to offer work-based learning as part of the middle-skill career pathway.

¹¹ Mapping Workforce Gaps

In 2014, Workforce Solutions Greater Dallas, Dallas County Community College District, Dallas Regional Chamber and United Way of Metropolitan Dallas launched a collaboration to map the Dallas workforce ecosystem, which allowed the community to identify strengths, gaps and opportunities for collaboration. The collaborators also conducted a number of community conversations to vet the resulting inventory. Together, this work is resulting in improved alignment of workforce and education services and identification of key areas for greater investment and collaboration. The collaborators will next release a report to set goals and opportunities for co-creating a 21st century workforce system for the Dallas community.

Recommendation Four

Increase public awareness of middle-skill job opportunities in order to help residents make informed decisions about career, education and training options.

- Expand initiatives to help K-12 students better understand **career pathway options 12** and how early educational choices can prepare them to succeed in higher education and careers.
- Expand summer **youth employment programs 13** so more students have the opportunity to gain professional work experience.
- Develop consumer-friendly marketing campaigns to share information about careers and industry-recognized credentials in healthcare, finance and IT.
- Train staff at community-based workforce, adult education and literacy providers. Ensure that these community advocates can bring information to residents from the Regional Workforce Leadership Council and other sources about in-demand jobs, training opportunities, and required industry credentials.
- Invest in programs that provide disconnected young adults with critical work experience and career exploration opportunities, especially in high-growth industry sectors, and leverage new federal funding and regulations through WIOA to do so.

12 Pick Your Path: Business Engagement in K-12 Education and Career Pathways

A 2013 Texas law requires eighth-graders to select a career-related area of study for high school: STEM (Science, Technology, Engineering and Mathematics), Business and Industry, Public Service, Arts and Humanities, or Multidisciplinary Studies. The Dallas Regional Chamber developed a Pick Your Path guide in English and Spanish to help students, parents and counselors keep track of the steps required for graduating with an “endorsement” in one’s chosen field. The chamber also trains school counselors about current job openings and trends for high-growth sectors in order to help students and parents make informed decisions about careers and help sustain the regional economy in the long run. www.dallaschamber.org/wp-content/uploads/2014/07/PickYourPath1.pdf

13 High School Students Work, Learn, Earn in Paid Summer Internships

The Mayor’s Intern Fellows Program in Dallas is a model for connecting young people with meaningful work experiences that introduce them to potential careers. A partnership with local businesses and nonprofit organizations, the program provides 300 public and charter high school students with an eight-week paid summer internship in a field of interest, including architecture, banking, healthcare, law, technology and government. Employers hire and supervise the teens for at least 20 hours per week and pay a minimum of \$9 per hour. Interns are selected through a competitive process. In 2014, approximately 1,700 young people applied for summer internships. Greater business investment would allow the program to expand. www.mayorsinterns.org/

Recommendation Five

Promote employer leadership in developing career pathways and expanding sector-based strategies.

- Build upon existing employer recognition programs to further highlight businesses and employer consortia that invest in career pathway programs, frontline employee training and advancement opportunities, and living wages. Develop and share case studies that provide details about the return on investment of these efforts and how they can be **expanded** **14**.
- Improve outreach to employers to increase awareness of work experience programs, including apprenticeships, and their resources and benefits. Streamline processes and paperwork to increase participation.
- Recognize employers who provide opportunities for disconnected young adults and low-income community residents to access training, internships and jobs.

14 Employer Leadership is Key to Developing and Sustaining Middle-Skill Pathways

Employers within two important regional industries – Aerospace and Transportation, Distribution and Logistics – are teaming up through the Regional Workforce Leadership Council to develop sector-based programs to train current and future employees. These efforts would be good examples to replicate in the healthcare and information technology sectors.

- Bell Helicopter, Lockheed Martin and Vought Aircraft Industries have led the Aerospace and Advanced Manufacturing Industry Cluster, staffed by Workforce Solutions for Tarrant County, to develop the “Gotta Jet?” career awareness program, an industry-wide entry-level training program and advanced training in CNC machining, composite bonding, welding and aircraft assembly. Training partners include Tarrant County College and Community Learning Center.
- The North Texas Supply Chain Council – established by Workforce Solutions for North Central Texas, with the Texas Manufacturing Assistance Center – has engaged logistics companies to analyze industry need and create a certification for frontline logistics workers. Their collaboration resulted in the launch of two new “stackable” credentials, a Certified Logistics Associate and a Certified Logistics Technician, which have provided industry entry points for more than 1,000 Texans as of 2014. www.dfw-rwlc.com/industry

CONCLUSION

The DFW region’s future is bright, but more needs to be done to help ensure that all residents can access opportunities to gain the skills that employers value and that lead to the middle class. Further, some key local industries need a growing number of workers to fill middle-skill jobs that can help more DFW residents participate in the region’s economic growth. The good news is that significant efforts are already underway to increase education and skill levels and to align postsecondary and workforce development programs with industry needs.

Through the *New Skills at Work* initiative, JPMorgan Chase proposes to help enhance these efforts by offering guidance on how to develop a demand-driven career pathways system to launch young people and low-skill adults into good jobs with advancement potential. Starting with the middle-skill occupations open in the healthcare and information technology sectors, JPMorgan Chase has provided a targeted opportunity to implement this strategy in the DFW region, help fortify the regional economy for the future, and advance the vision that all residents have the opportunity for good jobs that enable them to support themselves and their families.

APPENDIX A – Methodology

All data in this report are provided for the Dallas-Fort Worth region, defined as the Dallas-Fort Worth-Arlington Metropolitan Statistical Area unless otherwise noted. The MSA includes the following 11 counties: Collin, Dallas, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwell, Tarrant and Wise.

Methodology to Identify “Middle-Skill” Occupations

Four criteria were used to identify middle-skill occupations, as follows:

1. Selected occupations must pass a minimum requirement for the percentage of their workforce that possesses a high school diploma and less than a four-year degree.
2. 25% or more of the workforce for each target occupation must surpass the living wage for families with two adults and one child.
3. Each occupation must surpass a minimum growth rate over the past three years.
4. Occupations with limited annual openings are filtered out. The term “middle-skill” typically refers to the level of education required by a job. This study expands the common definition by adding three additional criteria (wage, growth rate and number of annual openings). This expanded approach will make sure selected occupations are not only middle skill but also provide a living wage and are growing.

To provide a picture of the economy (e.g. description of employment, unemployment, workforce and education) the report uses EMSI’s data aggregated from over 90 federal, state and private sources. EMSI aggregates data such as the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics, Local Area Personal Income (LAPI) from the

Bureau of Economic Analysis, County Business Patterns (CBP) from the Census Bureau and Education Completers data from the Department of Education. EMSI applies proprietary methods to remove suppressions and include data for proprietors to yield a comprehensive representation of the regional workforce. Unlike the Bureau of Labor Statistics data, EMSI’s trademarked methodology includes underreported self-employment, investment trusts and partnerships, certain farms, and tax-exempt nonprofit cooperatives.

The report includes analytical information from Burning Glass Technologies, which provides real-time labor market demand information from online job postings. Real-Time Labor Market Information (RT LMI) is data gleaned from a large number of online job postings. Several private sector entities have developed software that collects online job postings by “scraping” or “spidering” the listings from the Internet and organizing them into standardized data categories, especially the North American Industry Classification System (NAICS) and the Standard Occupational Classification (SOC) system. These private-sector entities have also built tools that permit analysis by those looking for current and detailed information on hiring trends and employer demand (including certifications and skill prerequisites).

Burning Glass aggregates and codes data from online job postings based on the North American Industry Classification System (NAICS), Standard Occupational Classification (SOC) and the Occupational Information Network (O*NET). Burning Glass’ patented parsing and data extraction capabilities can extract, derive and infer more than 70 data elements from any online job posting, providing in-depth insights into employers’ demand for skills and credentials.

This analysis does not include participation in the informal economy.

APPENDIX B – Charts Referred to in the Text

Additional information about job growth, historic unemployment rates, and the high-demand industries and middle-skill occupations discussed in this report, including data on wages, required credentials and online job postings, is at: www.jpmorganchase.com/skillsatwork.

TABLE 1. TARGET INDUSTRY SECTOR EMPLOYMENT

Category	2013 Jobs	2013–2018 % Change	% Middle Skill	Location Quotient 2013
Finance and Insurance	333,656	20%	19%	2.66
Healthcare	295,645	21%	45%	1.39
Information Communications Technology	122,731	7%	32%	1.43
Aerospace Manufacturing	33,136	7%	32%	0.74
Electronics and Component Manufacturing	21,171	(8%)	25%	2.45

(Source: EMSI QCEW, Non-QCEW & Self Employed, 2014.2)

TABLE 2. SELECTED MIDDLE-SKILL OCCUPATION DEMAND IN HEALTHCARE, FINANCIAL SERVICES AND INFORMATION TECHNOLOGY BY AVERAGE ANNUAL OPENINGS, 2013–2018

Occupation	Employed (2013)	Median Hourly Wage	Average Openings (2013–2018)*	Ads 2013–2014	% employed in Target Industry Sectors		
					Healthcare	IT	Finance
Registered Nurses	56,447	\$33.34	2,973	18,446	71%	0%	1%
First-Line Supervisors of Office and Administrative Support Workers	37,645	\$25.24	1,739	4,012	9%	3%	15%
Bookkeeping, Accounting and Auditing Clerks	40,674	\$17.66	1,251	5,430	3%	3%	9%
Insurance Sales Agents	21,842	\$22.17	1,239	1,523	99%	0%	0%
Sales Representatives, Services, All Other	24,482	\$24.27	1,125	857	1%	22%	6%
Licensed Practical and Licensed Vocational Nurses	18,230	\$22.42	1,105	1,632	69%	0%	0%
Bill and Account Collectors	19,112	\$15.32	1,039	1,480	8%	2%	31%
Computer User Support Specialists	18,575	\$22.73	738	4,077	2%	34%	6%
Billing and Posting Clerks	14,509	\$16.14	656	745	29%	3%	6%
Software Developers, Systems Software	14,062	\$46.20	476	2,811	0%	43%	5%
Loan Officers	11,136	\$27.30	473	1,495	0%	0%	71%
Financial Managers	11,263	\$53.61	450	5,240	2%	3%	34%
Dental Assistants	6,136	\$16.96	401	722	95%	0%	0%
Network and Computer Systems Administrators	11,015	\$36.81	362	4,800	2%	31%	8%
Medical and Health Services Managers	5,264	\$42.72	342	218	68%	3%	0%
Loan Interviewers and Clerks	11,529	\$18.42	341	325	0%	0%	75%
Dental Hygienists	4,464	\$36.33	339	152	98%	0%	0%
Insurance Claims and Policy Processing Clerks	6,542	\$17.19	330	278	1%	0%	93%
Medical Records and Health Information Technicians	4,796	\$16.17	292	79	63%	1%	1%
Personal Financial Advisors	6,414	\$31.73	287	1,573	0%	0%	95%
Pharmacy Technicians	7,757	\$15.99	262	1,424	17%	0%	1%
First-Line Supervisors of Non-Retail Sales Workers	11,023	\$30.48	244	1,633	0%	4%	24%
Emergency Medical Technicians and Paramedics	2,641	\$15.11	181	419	70%	0%	0%
Radiologic Technologists	3,595	\$28.39	179	755	85%	0%	0%
Computer Network Support Specialists	6,561	\$32.96	174	513	1%	42%	7%
Information Security Analysts	3,311	\$38.49	164	2,362	1%	33%	15%
Database Administrators	4,202	\$38.21	158	4,764	2%	31%	13%
Computer Network Architects	4,685	\$43.01	152	513	1%	48%	7%
Financial Specialists, All Other	4,669	\$28.14	140	691	1%	2%	34%
Surgical Technologists	3,087	\$20.95	134	987	87%	0%	0%
Human Resources Assistants, Except Payroll and Timekeeping	3,600	\$18.91	133	630	6%	5%	5%
Physical Therapist Assistants	1,620	\$32.54	130	501	92%	0%	0%
Respiratory Therapists	2,871	\$27.01	125	525	73%	0%	0%
Opticians, Dispensing	2,113	\$16.50	122	84	42%	0%	0%
Credit Analysts	2,395	\$29.65	119	587	0%	5%	51%

[Source: EMSI QCEW, Non-QCEW & Self Employed, 2014.2; Burning Glass]

*Occupations listed have at least 100 Projected Average Annual Openings in 2013–2018

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MORE INFORMATION

For more information on *New Skills at Work*, visit www.jpmorganchase.com/skillsatwork

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