

# **Aligning Will & Skill in the Region VI Labor Market**

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**Harry Truman is purported to have said,**



**All my economists  
say, “on the one, or  
on the other hand”  
...what I really  
need is a one-  
handed economist**

# Labor Market Themes of the Day

1. The **U.S. economy** is increasingly subject to **global macroeconomic forces** throughout the world
2. **Demographic shifts** are changing the face of the American labor market; where we live, what we look like
3. **Structural unemployment: Isolated skill shortages** exist despite general labor surplus
4. **Nobody lives in the U.S.:** Distinct regional differences exist in job opportunities by industry & occupation demand by state & MSA
5. Recent U.S job growth has been largely fueled by the **financial services, domestic energy, & various service industries**
6. Occupational demand and earnings are more **bifurcated**. Employers emphasize **skill sets** and experience over degrees
7. **Information technology is not an occupation**, industry or major. It is a ubiquitous skill set that permeates all jobs.

# A Goldilocks Economy....



**Not too Hot...**  
**Not too Cold...**

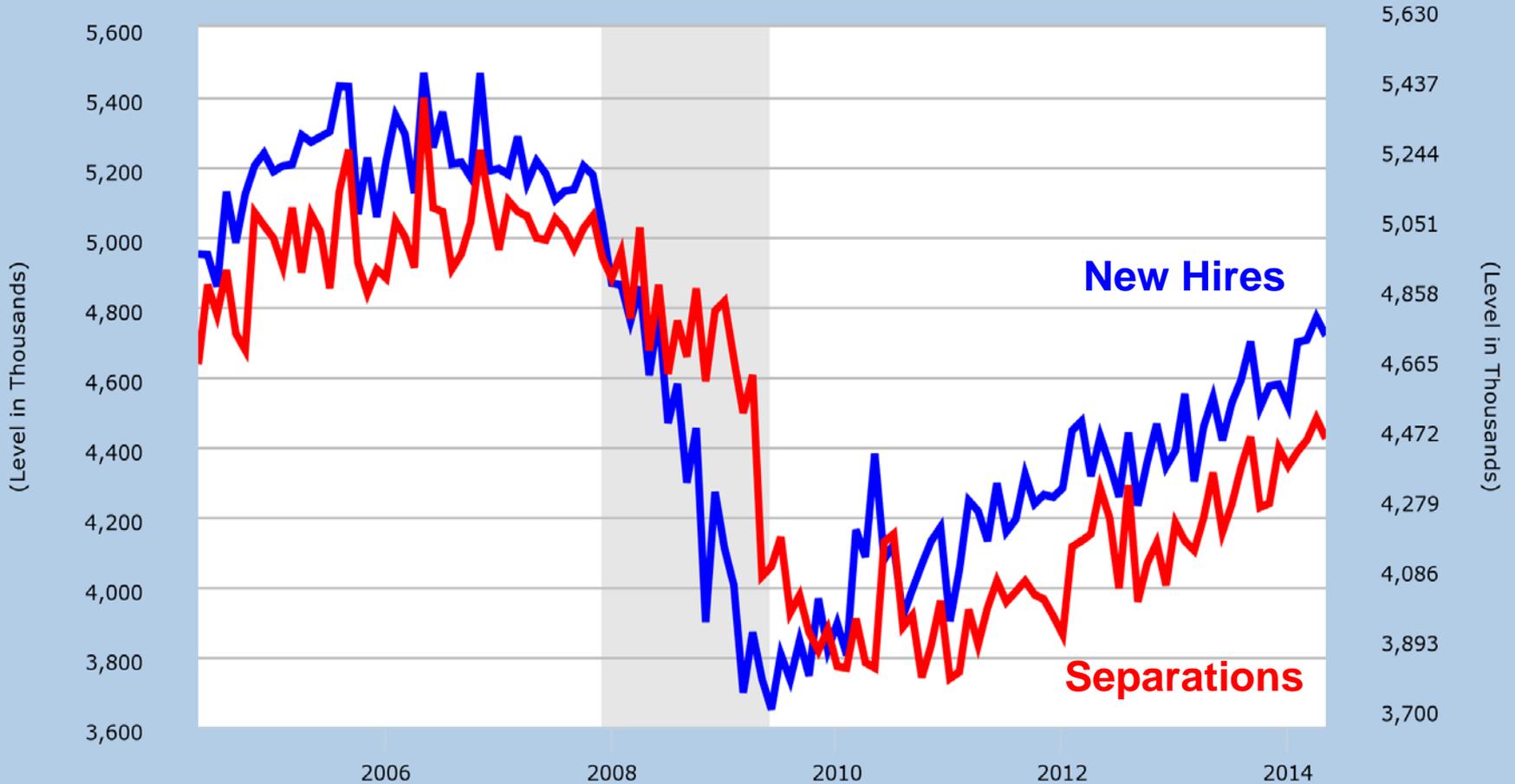
# Finding Trends from Discrete Data Observations

- **Conclusion:**  
**Go ahead and eat  
whatever you want. It's  
pretty clear that  
speaking English is  
what kills you.**

# Slow National Recovery: Insufficient Aggregate Demand



— Hires: Total Nonfarm (left)  
— Total Separations: Total Nonfarm (right)

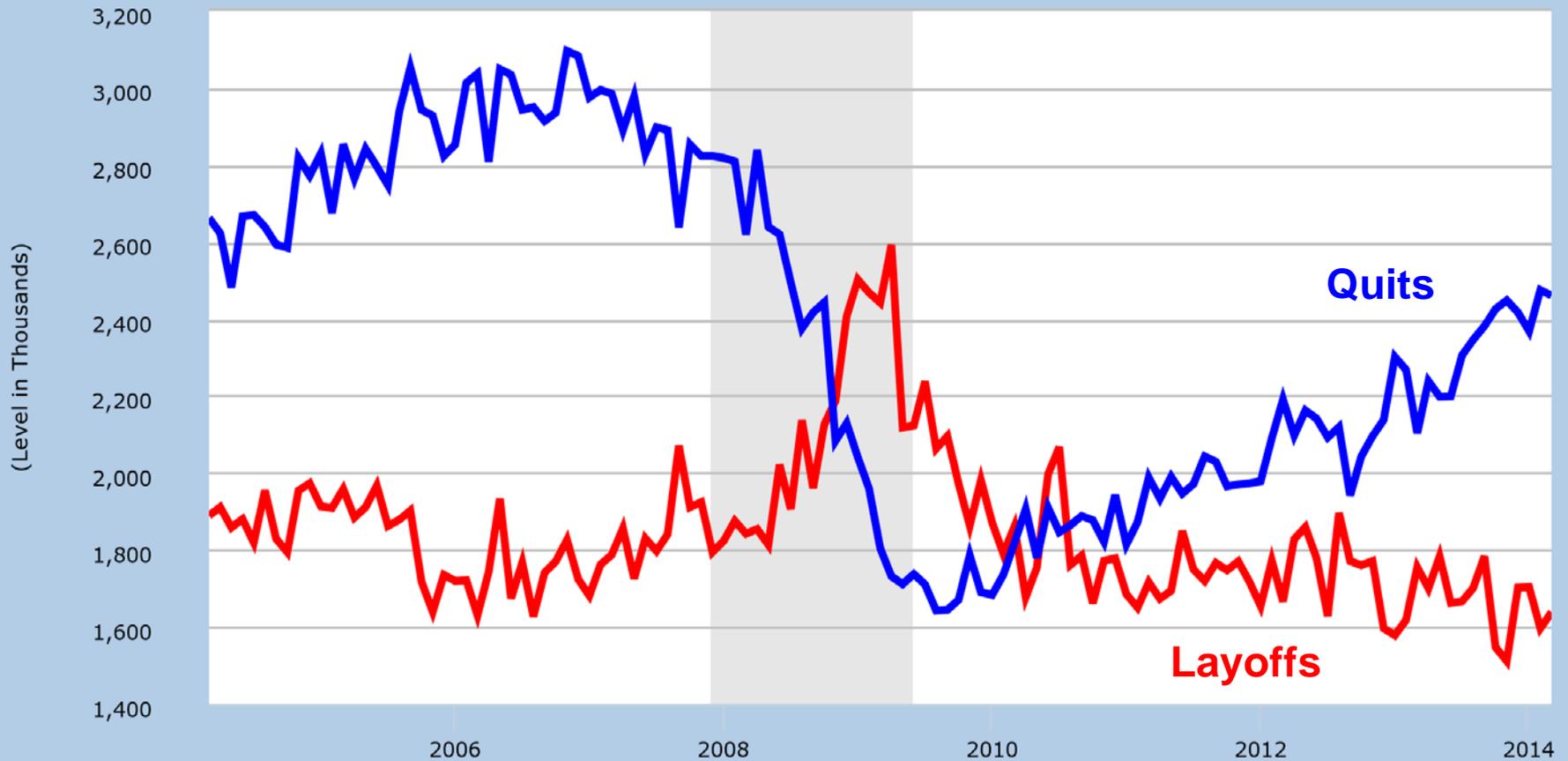


Shaded areas indicate US recessions - 2014 research.stlouisfed.org

# Changing Nature of Separations: Layoffs down, Quits up



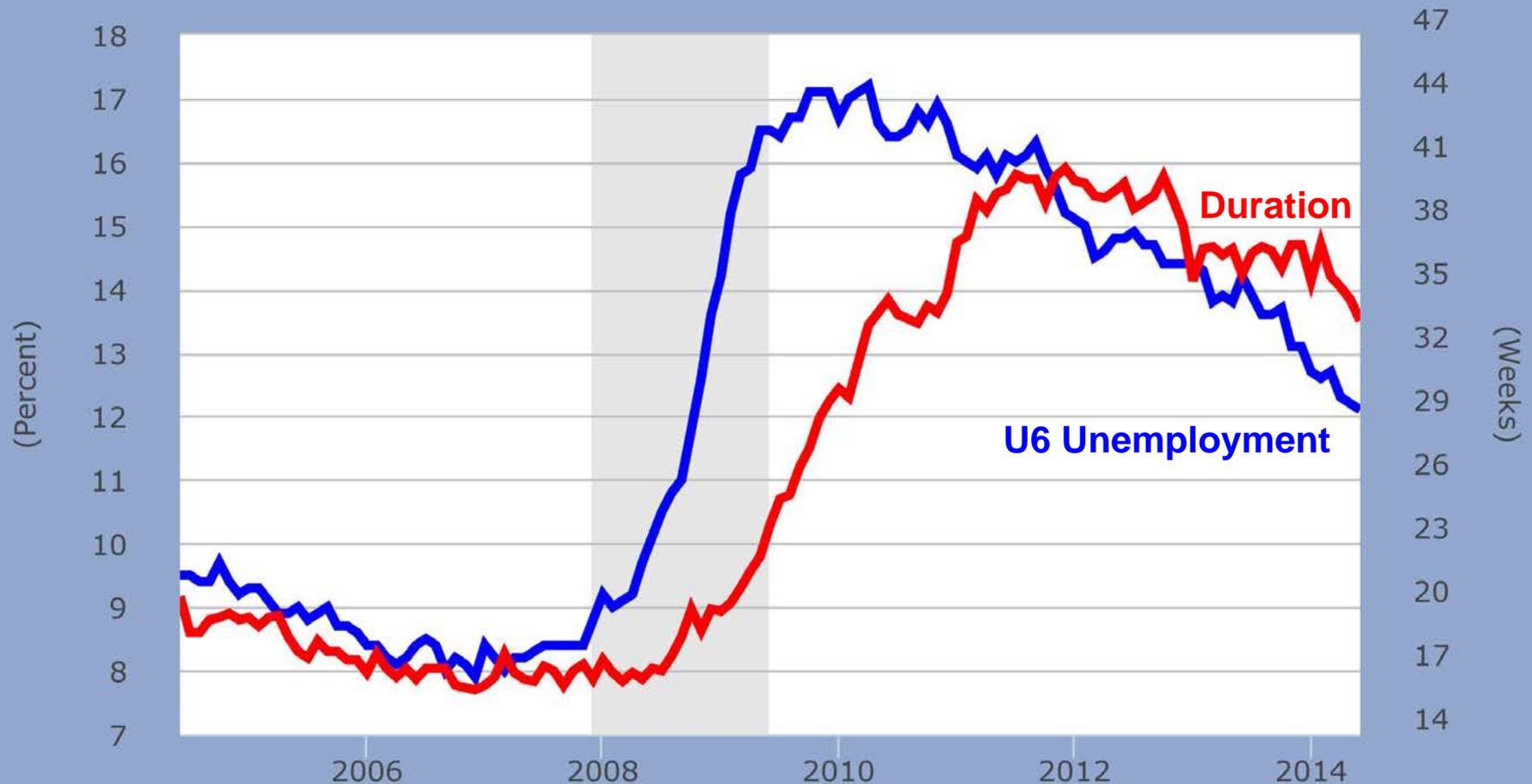
— Layoffs and Discharges: Total Nonfarm  
— Quits: Total Nonfarm



# Structural Unemployment Remains a Problem



- Total unemployed, plus all marginally attached workers plus total employed part time for economic reasons (left)
- Average (Mean) Duration of Unemployment (right)



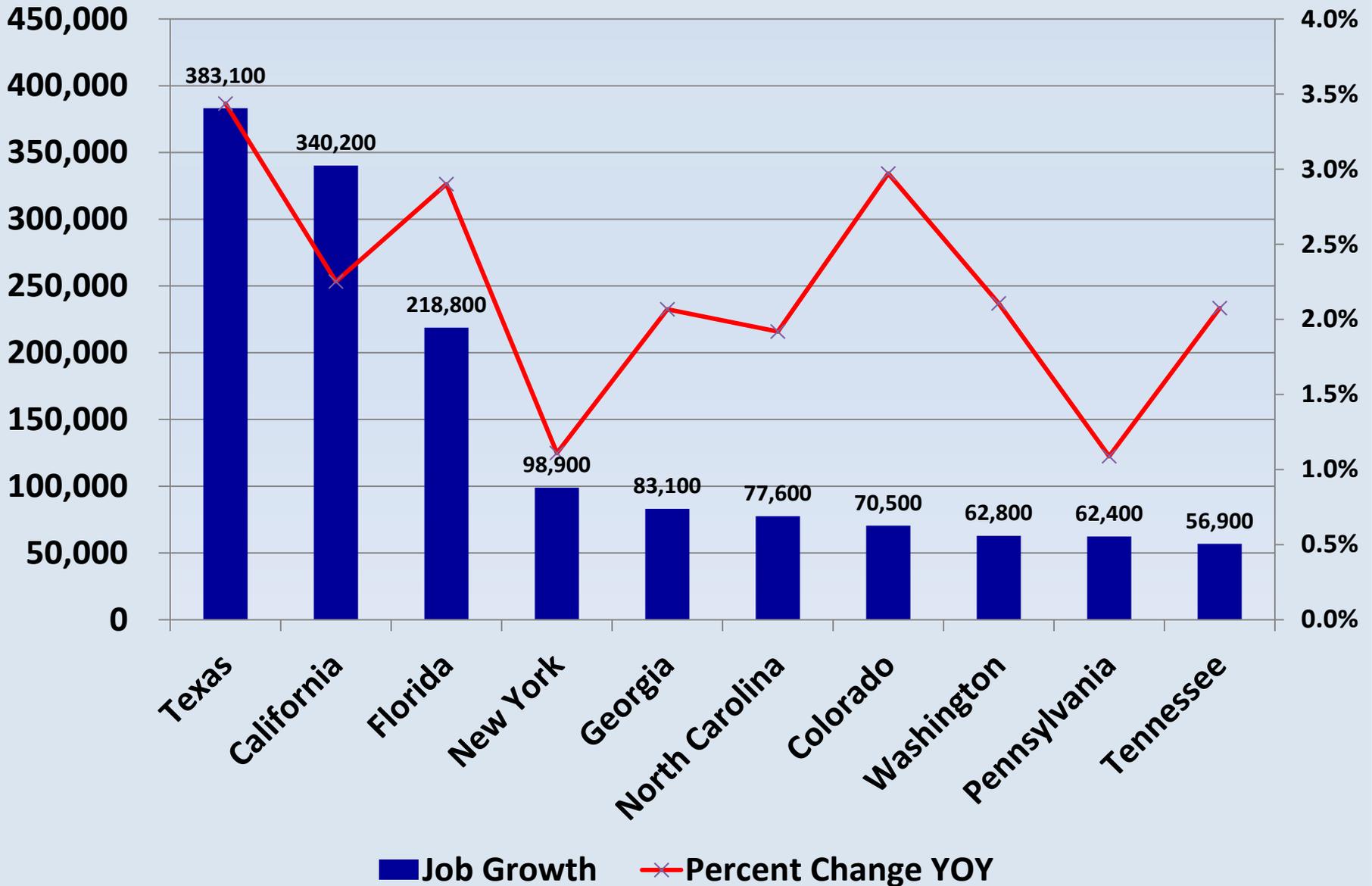
Shaded areas indicate US recessions - 2014 research.stlouisfed.org

# What is driving the slow labor market recovery?

## Three Arguments (The Race Against the Machine)

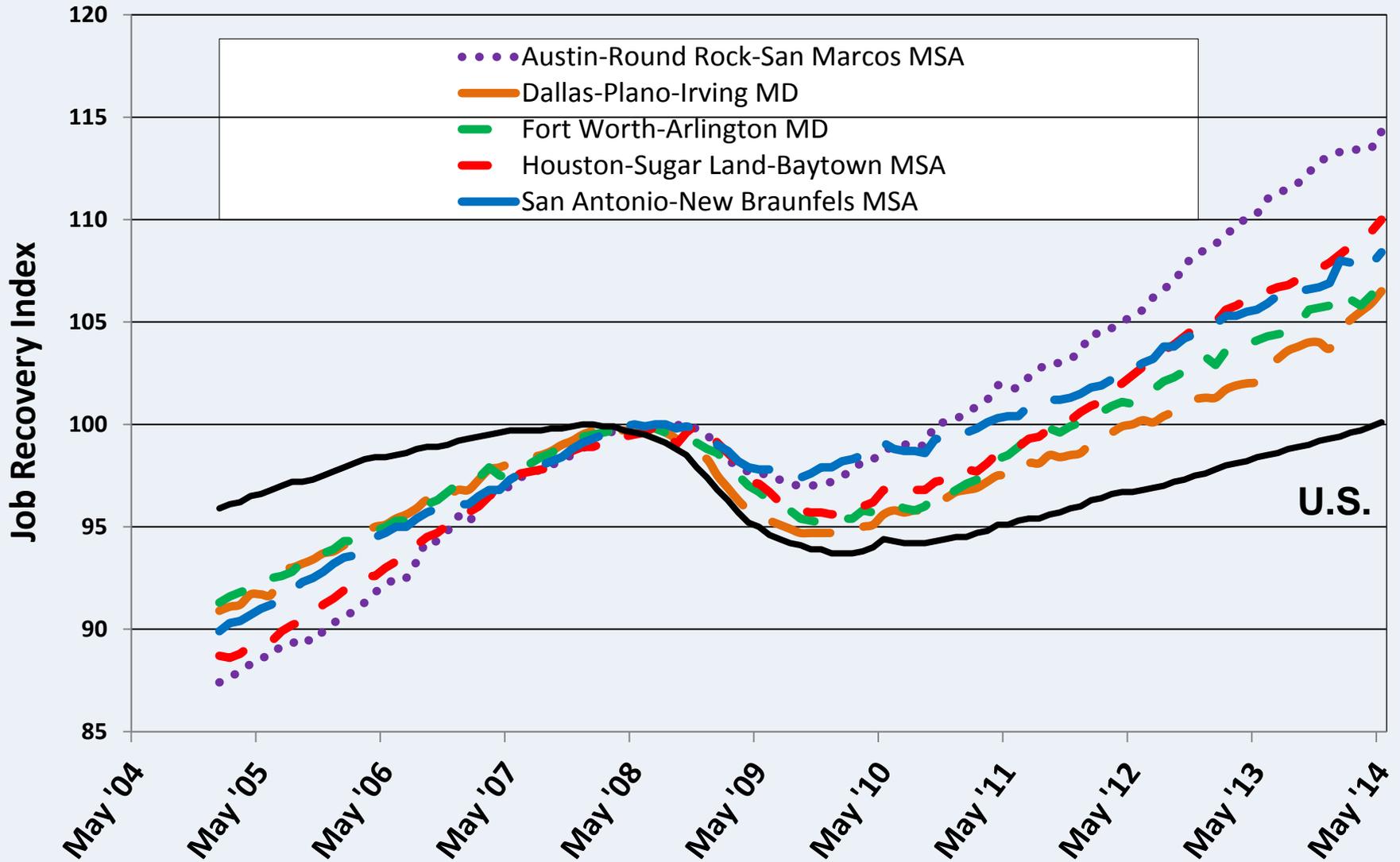
- **Cyclicity** - Insufficient aggregate demand. Just **not enough GDP to stimulate job growth** to match population growth. Global GDP leakages
- **Stagnation** – American dynamism is alive but declining. Insufficient powerful ideas to drive robust economic growth. Global competition **erodes U.S. wage premiums**
- **End of Work** – Fewer workers needed to produce more goods & services. Technological displacement & obsolescence. Affects primary industries & ancillary sectors. Skills matter while some lose the race against the machine. **Creates more pronounced winners and losers.**

# Top 10 Job Growth States May 2013 to 2014



# Texas Big 5 MSAs vs U.S. Employment Recovery from Economic Downturn

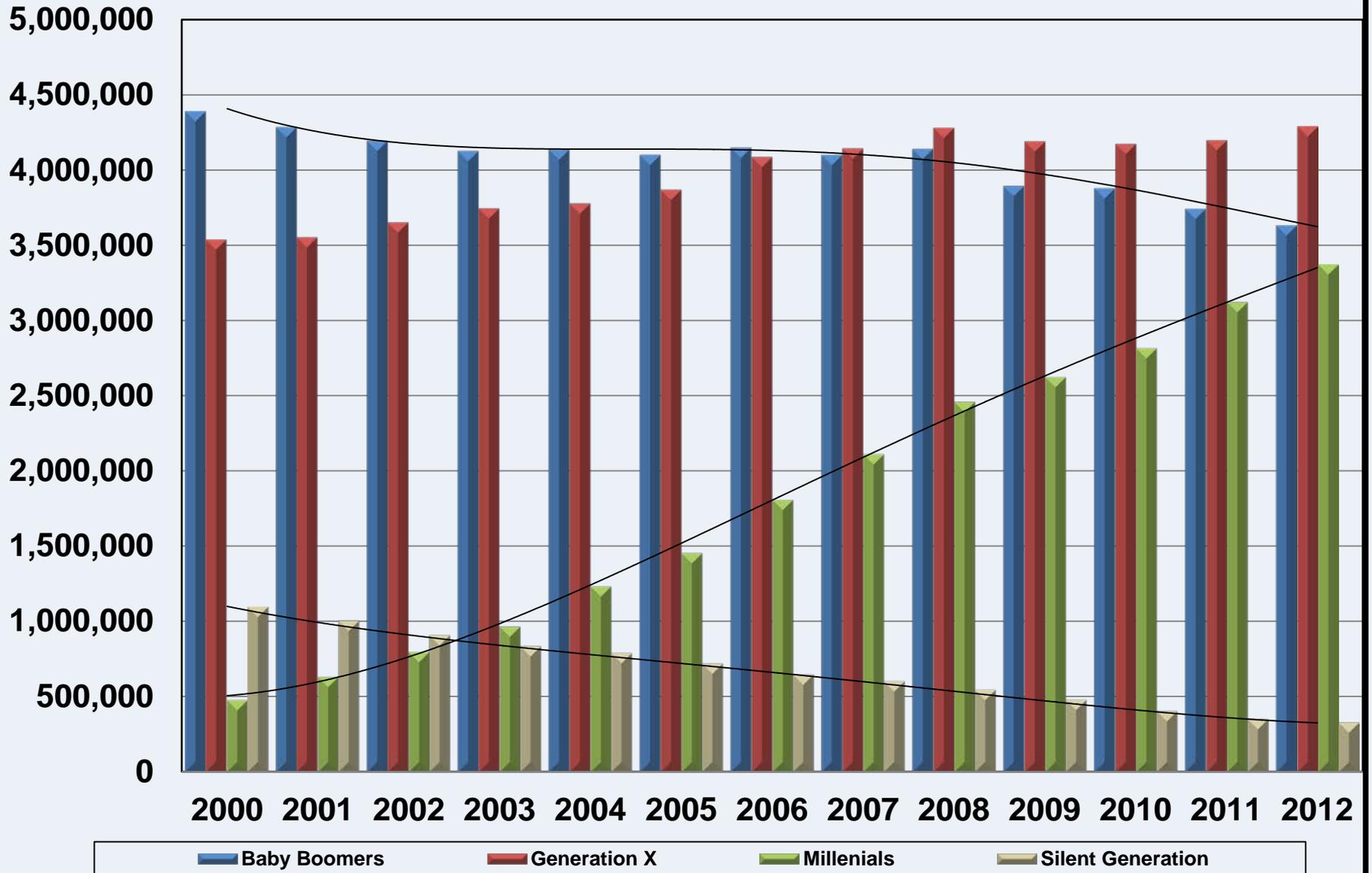
(Seasonally Adjusted, Total Nonfarm, Indexed to Pre-Downturn Peaks)



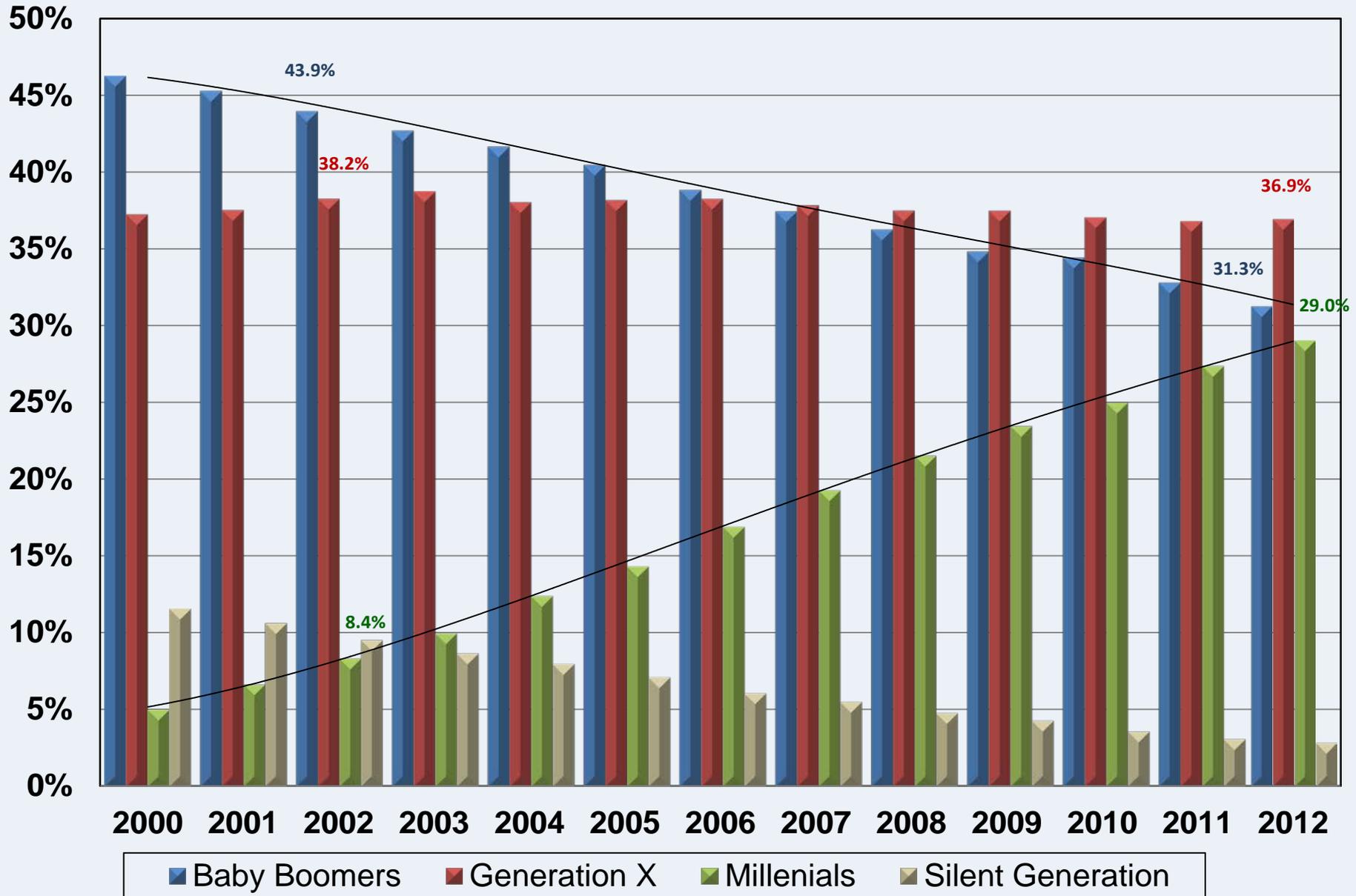
## Top 15 Largest Growth Cities July 1, 2011 to July 1, 2012

Rank	Area Name	State Name	Increase	2012 Population
1	New York city	New York	67,058	8,336,697
2	Houston city	Texas	34,625	2,160,821
3	Los Angeles city	California	34,483	3,857,799
4	San Antonio city	Texas	25,400	1,382,951
5	Austin city	Texas	25,395	842,592
6	Phoenix city	Arizona	24,536	1,488,750
7	Dallas city	Texas	23,341	1,241,162
8	Charlotte city	North Carolina	18,989	775,202
9	San Diego city	California	18,074	1,338,348
10	Fort Worth city	Texas	16,328	777,992
11	Denver city	Colorado	14,980	634,265
12	Washington city	D. C.	13,303	632,323
13	San Jose city	California	12,751	982,765
14	Seattle city	Washington	12,638	634,535
15	Nashville	Tennessee	12,323	624,496

# Texas Generational Employment Levels 2000-2012



# Generational Percentages of Texas Employment 2000-2012



# How many Millennials does it take to screw in a light bulb?

1. One to  the instructions
2. One to post the instructions on the wall  
of their  page
3. One to post the  video of their  
work showing collaboration

**One Baby Boomer to tell them what a  
terrific, wonderful, spectacular job they  
did with the light bulb**

# U.S. Industry Employment 3rd QTR 2011-2013

Industry	2013 EMP	ABS CHG	AWW
Restaurants/Eating Places	9,401,135	692,631	\$316
Individual and Family Services	2,120,348	658,958	\$433
Employment Services	3,443,088	337,977	\$611
Misc. General Merchandise Stores	1,826,142	216,107	\$429
Company/Enterprise Headquarters	2,101,401	172,874	\$2,089
Computer Systems Design Services	1,741,054	153,263	\$2,014
Building Equipment Contractors	1,780,487	124,529	\$1,149
Services to Buildings and Dwellings	1,914,739	115,801	\$520
Mgmt., Scientific & Tech Consulting	1,229,935	106,397	\$1,833
Grocery Stores	2,614,597	100,544	\$443
Offices of Physicians	2,505,662	90,278	\$1,802
Home Health Care Services	1,248,594	84,554	\$547
Automobile Dealers	1,151,085	84,110	\$1,056
Insurance Agencies & Brokerages	961,652	74,923	\$1,348
Traveler Accommodation	1,835,171	70,202	\$549

# Region VI Employment Growth

	<b>Aug-13 Employment</b>	<b>Aug-14 Employment</b>	<b>ABS CHG</b>	<b>PCT of Region</b>	<b>PCT CHG</b>
Texas	11,228,200	11,623,400	395,200	82.3%	3.5%
Oklahoma	1,635,200	1,667,100	31,900	6.6%	2.0%
Louisiana	1,953,100	1,983,200	30,100	6.3%	1.5%
Arkansas	1,172,800	1,190,400	17,600	3.7%	1.5%
New Mexico	811,800	817,300	5,500	1.1%	0.7%
Region VI Total	<b>16,842,587</b>	<b>17,281,400</b>	<b>480,300</b>	<b>100.0%</b>	<b>2.9%</b>

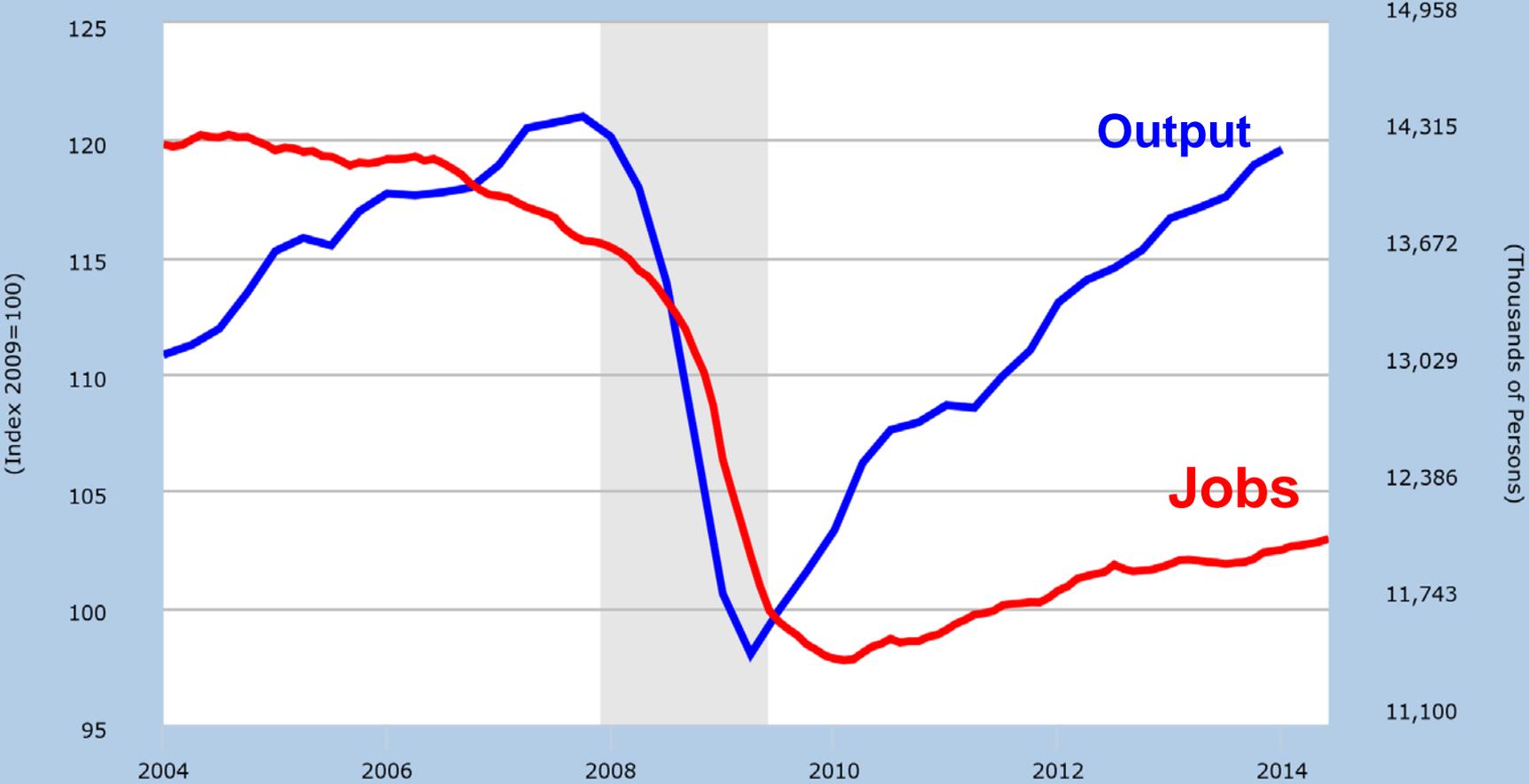
# Structural Changes affecting Job Growth and Skill Needs

- 1. Money economy and the labor market are decoupling**  
Who's making money vs. Who's creating jobs?
- 2. Technological obsolescence & Labor substitution**  
Technology replacing workers or changing skill needs
- 3. Emergence of new & blended occupations**  
New “hybrid” jobs that combine work activities from 2 or more traditional occupations into a single “new” job
- 4. Work Activity Off-loading** - passing off lower value-added work to assistants/technicians. See **Paralegals, Physicians Assistants, Physical Therapy Assistants**
- 5. Occupational crowding**  
Higher skilled workers taking lower skilled jobs, thus displacing lower skilled workers altogether

# Decoupling: Productivity Influences Job Creation



— Manufacturing Sector: Real Output (left)  
— All Employees: Manufacturing (right)



Shaded areas indicate US recessions - 2014 research.stlouisfed.org

**“Technology should be deployed wherever possible to free humans from drudgery and repetitive tasks”**

**“Unfortunately, there are a lot of people who earn honest livings from drudgery and repetitive tasks.”**

Larry Page, Google

“New technologies are encroaching into human skills in a way that is completely unprecedented.”

Andrew McAfee, MIT Center for Digital Business

# Work Transformations through Technology



## Disruptive Technology

## What it is, why do I care?

**Advanced Oil & Gas Exploration**

Hydraulic fracking, creates \$4 trillion in new oil & gas

**Renewable Energy**

Wind & solar, new energy sources & declining prices

**Advanced Materials**

Nano particles

**3-D Printing**

Make plastic products with ink-jet printing techniques

**Energy Storage**

Batteries & capacitors

**Next Generation Genomics**

DNA sequencing, gene mapping

**Autonomous Cars**

Robot cars, sensors in roads

**Cloud Technology**

Server farms serving 2.7 billion Internet users

**Internet of Things**

Web linking devices, HIT

**Automation of Knowledge Work**

Work activity displacement, all occupations

**Mobile Internet**

Smart phone interconnections, 24/7 workers

# What is IT? Is this IT?



# What is the IT labor market?

- ✓ Can it be defined as an industry?
- ✓ Can it be defined by occupation?
- ✓ Can it be defined by college major?
- ✓ Is IT a ubiquitous operation or a cross-domain function?
- ✓ Should it be defined by skill set?

# The Argument for Skills over Occupational Titles: Job Titles That Didn't Exist Just 5 Years Ago

## Job Title

## Job Title

1. Videogame Tester

11. Cyber Security Specialist

2. Market Researcher Data Miner

12. Product Blogger

3. Bioinformatics Specialist

13. Social Media Manager

4. Healthcare Applications Analyst

14. Cyborg Anthropologist

5. Big Data Integration Engineer

15. Usability Engineer

6. Chief Listening Officer

16. Chief Sustainability Officer

7. Cloud Computing Operations Manager

17. User Experience Designer

8. E-commerce specialist

18. Mobile App Developer

9. Search Engine Optimization Manager

19. Online Reputation Manager

10. Behavioral Analytics Specialist

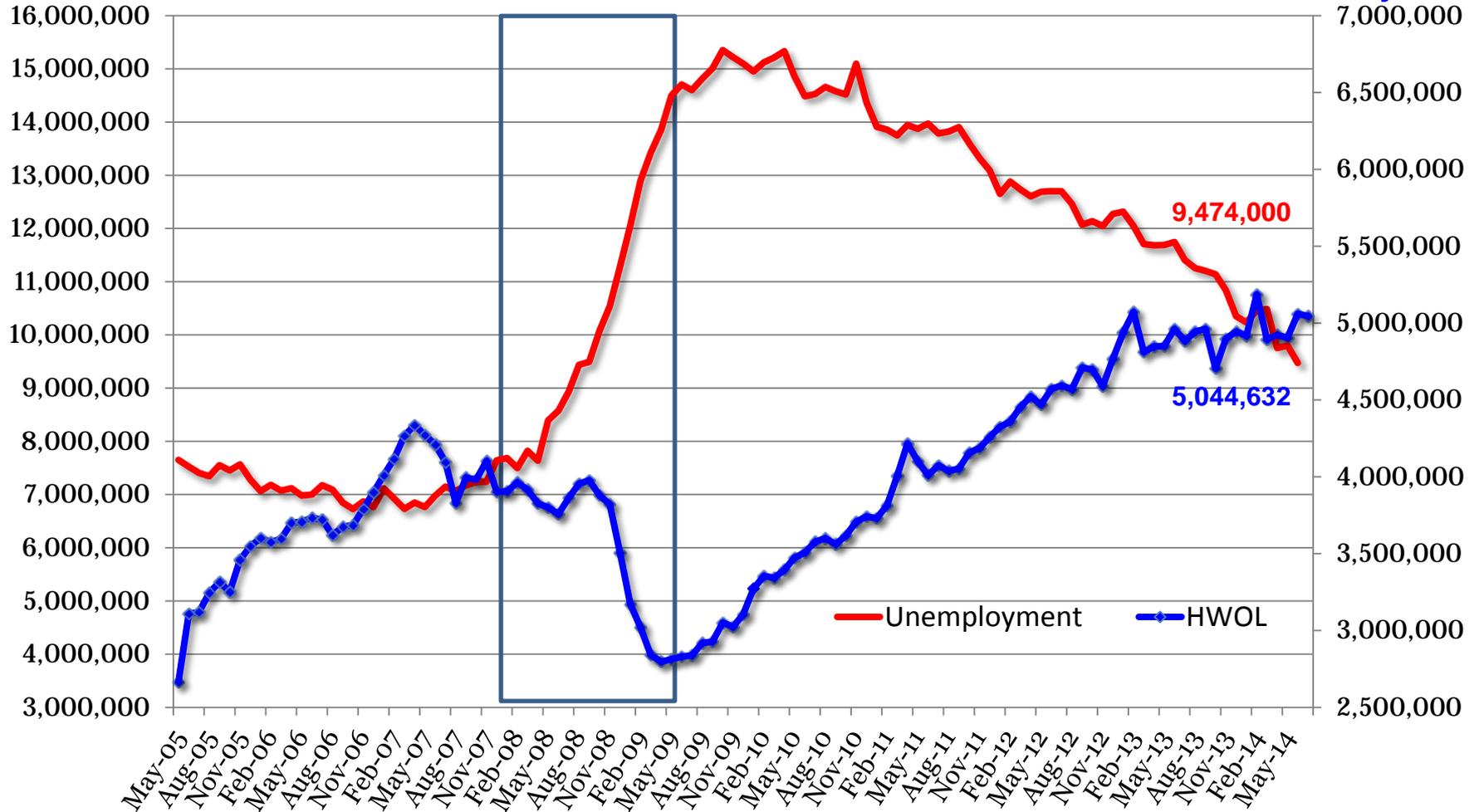
20. Electronic Health Records Tech

# U.S. Online Job Posting Activity

5.2 June 2009 -- 1.9 June 2014 (postings per unemployed person)

No. Unemployed

No. of Ads



# U.S. June 2014 Online Job Postings

<b>Occupational Category</b>	<b>Job Postings</b>	<b>S/D Rate</b>	<b>Hourly Wage</b>
<b>Sales &amp; Related Occupations</b>	<b>605,500</b>	<b>1.94</b>	<b>\$18.37</b>
<b>Office &amp; Administrative</b>	<b>568,600</b>	<b>2.00</b>	<b>\$16.78</b>
<b>Computer &amp; Mathematical Science</b>	<b>547,800</b>	<b>.22</b>	<b>\$39.43</b>
<b>Healthcare Practitioners</b>	<b>536,200</b>	<b>.30</b>	<b>\$35.93</b>
<b>Management</b>	<b>464,300</b>	<b>1.13</b>	<b>\$53.15</b>
<b>Transportation &amp; Material Moving</b>	<b>336,100</b>	<b>2.15</b>	<b>\$16.28</b>
<b>Business &amp; Financial Operations</b>	<b>302,000</b>	<b>.97</b>	<b>\$34.14</b>
<b>Installation, Maintenance &amp; Repair</b>	<b>223,600</b>	<b>.85</b>	<b>\$21.35</b>
<b>Food Prep &amp; Serving</b>	<b>198,200</b>	<b>3.83</b>	<b>\$10.38</b>
<b>Architecture &amp; Engineering</b>	<b>167,700</b>	<b>.46</b>	<b>\$38.51</b>

**S/D Rate = # of unemployed persons per job posting**

## Most Job Postings by MSA August 2014

<b>MSA</b>	<b>Aug 2014</b>	<b>Aug 2013</b>	<b>Change</b>
New York-Northern New Jersey	578,897	656,051	-77,154
Los Angeles-Long Beach-Santa Ana	360,616	381,623	-21,007
Chicago-Joliet-Naperville	319,144	302,473	16,671
Washington-Arlington-Alexandria	286,959	284,474	2,485
San Francisco-Oakland-Fremont	246,842	241,321	5,521
Boston-Cambridge-Quincy	244,425	237,939	6,486
Dallas-Fort Worth-Arlington	238,240	240,182	-1,942
Philadelphia-Camden-Wilmington	197,452	190,710	6,742
Houston-Sugar Land-Baytown	194,269	183,828	10,441
Atlanta-Sandy Springs-Marietta	189,882	185,180	4,702
Seattle-Tacoma-Bellevue	171,167	176,672	-5,505
Minneapolis-St. Paul-Bloomington	163,736	149,951	13,785
Miami-Fort Lauderdale	154,034	149,416	4,618
Denver-Aurora-Broomfield	148,242	134,692	13,550
Detroit-Warren-Livonia	146,825	123,459	23,366

# Migration to the Suburbs: Most Job Postings by City August 2014

City	Aug 2014	Aug 2013	Change
New York, NY	246,761	263,047	-16,286
Houston, TX	139,650	137,469	2,181
Chicago, IL	133,898	140,054	-6,156
Los Angeles, CA	111,113	127,646	-16,533
Atlanta, GA	98,197	105,462	-7,265
San Francisco, CA	93,917	120,205	-26,288
Dallas, TX	89,608	106,989	-17,381
Washington, DC	88,008	96,421	-8,413
Seattle, WA	79,609	92,489	-12,880
Denver, CO	77,961	75,489	2,472
Boston, MA	74,134	87,131	-12,997
Phoenix, AZ	70,788	77,989	-7,201
Austin, TX	66,001	62,005	3,996
San Diego, CA	64,064	68,672	-4,608

## Most U.S. Job Postings by Occupation August 2014

Occupation	Aug 2014	Aug 2013	Change
Heavy Truck Drivers	417,007	323,378	93,629
Registered Nurses	365,076	327,289	37,787
Retail Salespersons	250,206	281,583	-31,377
Supervisors, Retail Sales Workers	226,336	212,011	14,325
Customer Service Representatives	221,108	213,424	7,684
Software Developers, Applications	152,734	159,079	-6,345
Supervisors, Office/Admin Support	152,244	141,159	11,085
Maintenance & Repair Workers	145,139	132,912	12,227
Computer User Support Specialists	142,239	135,302	6,937
Supervisors, Food Prep & Serving	140,460	138,066	2,394
Computer Systems Analysts	136,868	136,788	80
Web Developers	136,123	159,324	-23,201
Marketing Managers	124,998	129,145	-4,147
Executive Secretaries/ Admin Asst.	124,975	123,255	1,720

# U.S. Jobs Largest Increase August 2014 YOY

Occupation	Occupation
1. Heavy Truck Drivers	15. Stock Clerks, Stockroom/Warehouse
2. Registered Nurses	16. Informatics Nurse Specialists
3. Social and Human Service Assistants	17. Security Guards
4. Light Truck or Delivery Services Drivers	18. Hand Laborers/Material Movers
5. Supervisors, Retail Sales Workers	19. Customer Service Representatives
6. Maintenance and Repair Workers	20. Licensed Practical Vocational Nurses
7. Janitors and Cleaners, Ex, Maids	21. Demonstrators/Product Promoters
8. Fast food Prep and Serving	22. Elementary School Teachers
9. Management Analysts	23. Computer User Support Specialists
10. Supervisor, Office & Admin Support	24. Construction Laborers
11. Supervisors, Production Workers	25. Managers, All Other/Misc.
12. Tellers	26. Nursing Assistants
13. Supervisors, Transportation	27. Secondary School Teachers, ex. CTE
14. Helpers--Production Workers	28. Supervisors, Construction/Extraction

# Texas Help Wanted Job Listings: September 2014

<b>Occupation</b>	<b>Postings</b>	<b>Preferred education</b>
Registered Nurses	36,772	Bach/Associate's degree
Heavy Truck Drivers	33,632	Short term OJT
Retail Salespersons	18,582	Short term OJT
Supervisors, Retail Sales Workers	17,505	Related Work EXP
Customer Service Representatives	16,610	Moderate term OJT
Maintenance Repair Workers, General	13,188	Moderate term OJT
Supervisors, Office & Admin Support	12,328	Related Work EXP
Computer User Support Specialists	11,449	Associates degree
Computer Systems Analysts	11,439	Bachelors
Network Systems Administrators	10,310	Bachelors
Accountants	10,277	Bachelors
Web Developers	9,824	Associates degree
Software Developers, Apps	9,568	Bachelors
Non-technical Sales Reps, WH & Man	9,559	Related Work EXP
Supervisors, Food Prep and Serving	9,555	Related Work EXP

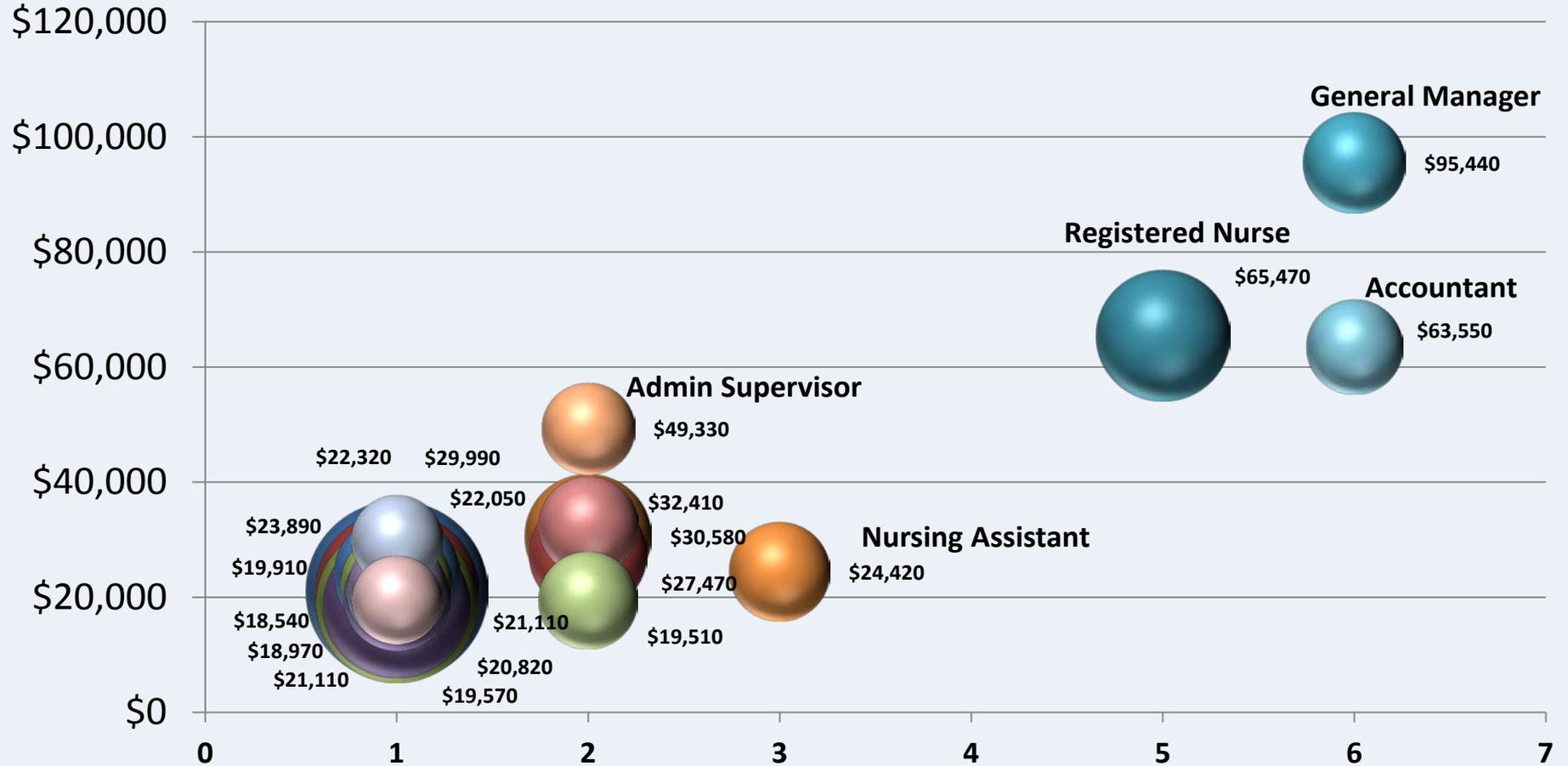
# Current HWOL Job Postings September 2014

Arkansas	Oklahoma
Heavy and Tractor-Trailer Truck Drivers	Heavy and Tractor-Trailer Truck Drivers
Supervisors of Retail Sales Workers	Registered Nurses
Registered Nurses	Retail Salespersons
Customer Service Representatives	Supervisors of Retail Sales Workers
Retail Salespersons	Customer Service Representatives
Maintenance and Repair Workers	Maintenance and Repair Workers
Computer User Support Specialists	Computer User Support Specialists
Supervisors, Office & Admin Support	Licensed Practical & Vocational Nurses
Insurance Sales Agents	Supervisors, Food Prep and Serving
Supervisors, Food Prep and Serving	Supervisors, Office and Admin Support
Non-technical Sales Reps, WH & Man	Supervisors, Production and Operating
Supervisors, Production and Operating	Non-technical Sales Reps, WH & Man
Marketing Managers	Light Truck or Delivery Services Drivers
Light Truck or Delivery Services Drivers	Accountants
Executive Secretaries/Admin Assistants	Insurance Sales Agents

# Current HWOL Job Postings September 2014

New Mexico	Louisiana
Registered Nurses	Heavy and Tractor-Trailer Truck Drivers
Heavy and Tractor-Trailer Truck Drivers	Registered Nurses
Supervisors of Retail Sales Workers	Supervisors of Retail Sales Workers
Customer Service Representatives	Retail Salespersons
Retail Salespersons	Maintenance and Repair Workers, General
Maintenance and Repair Workers	Customer Service Representatives
Supervisors, Office and Admin Support	Supervisors, Food Prep and Serving
Medical and Health Services Managers	Supervisors, Office and Admin Support
Computer User Support Specialists	Non-technical Sales Reps, WH & Man
Supervisors, Food Prep and Serving Workers	Insurance Sales Agents
Non-technical Sales Reps, WH & Man	Computer User Support Specialists
Social and Human Service Assistants	Licensed Practical & Vocational Nurses
Insurance Sales Agents	Supervisors, Mechanics, Installers, Repairers
Executive Secretaries and Admin Assistants	Light Truck or Delivery Services Drivers
Critical Care Nurses	Executive Secretaries/Admin Assistants

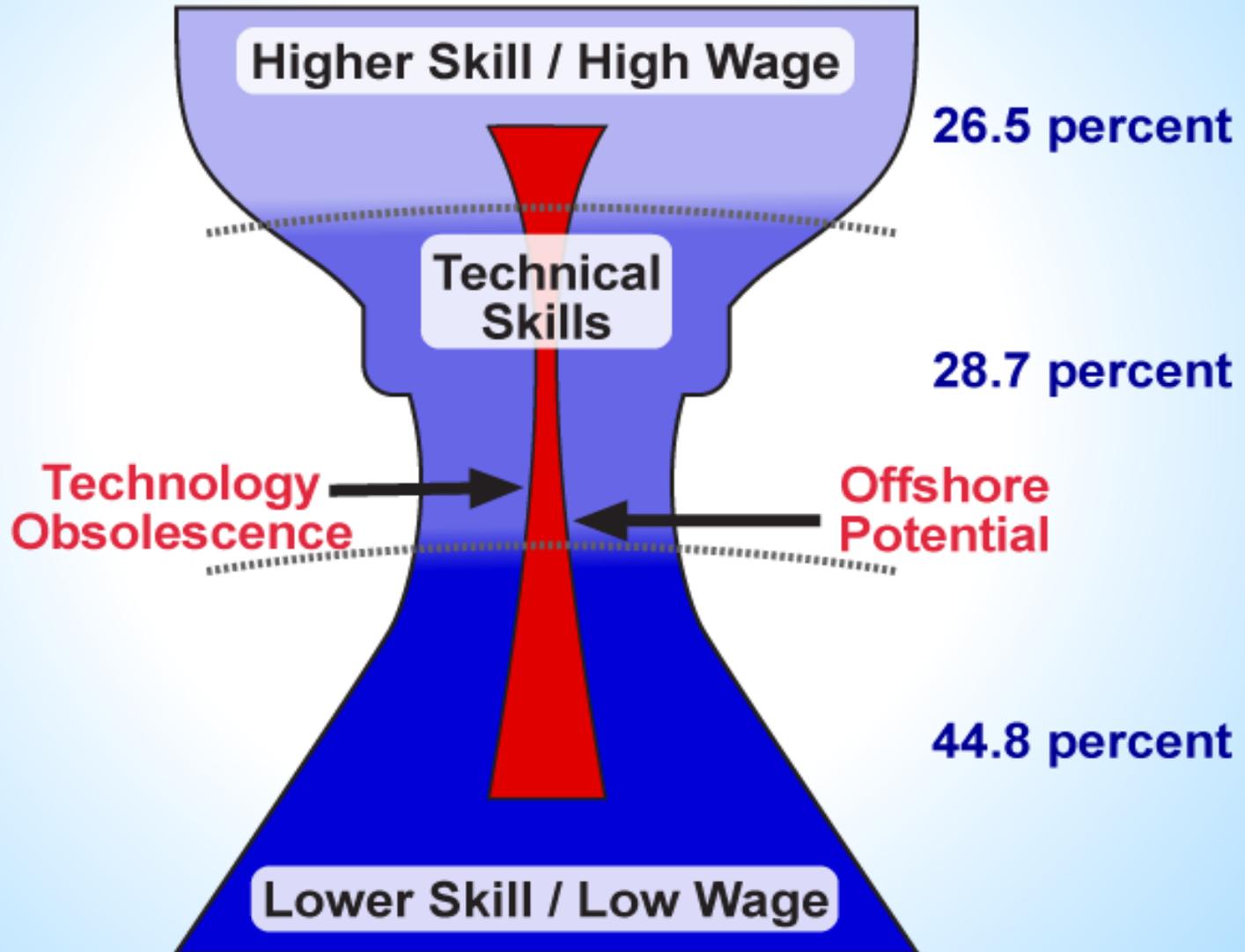
# Top 20 U.S. Occupations Most Projected Job Openings



Education Level

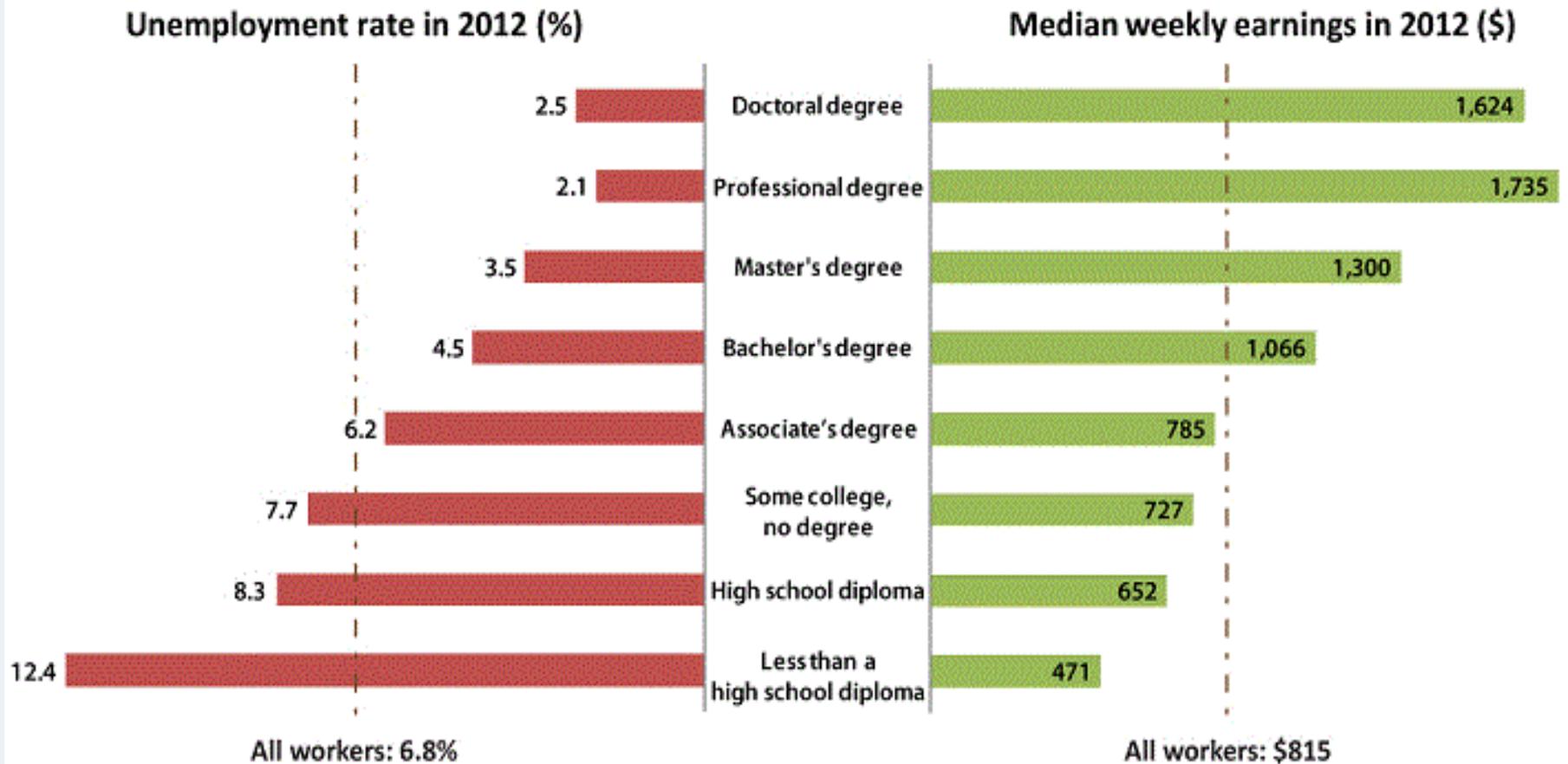
- Retail Salesperson
- Registered nurses
- Janitors and Cleaners
- Home health aides
- Accountants and auditors
- Fast Food Prep Workers
- Customer service representatives
- Personal care aides
- Secretary/Admin Asst.
- Administrative Supervisor
- Cashiers
- Manual Freight Laborers
- General and operations managers
- Childcare workers
- Construction laborers
- Waiters and waitresses
- General Office Clerks
- Nursing assistants
- Stock clerks and order fillers
- Maids and housekeeping cleaners

# Labor Market Structure 2016



# More education, better labor market outcomes

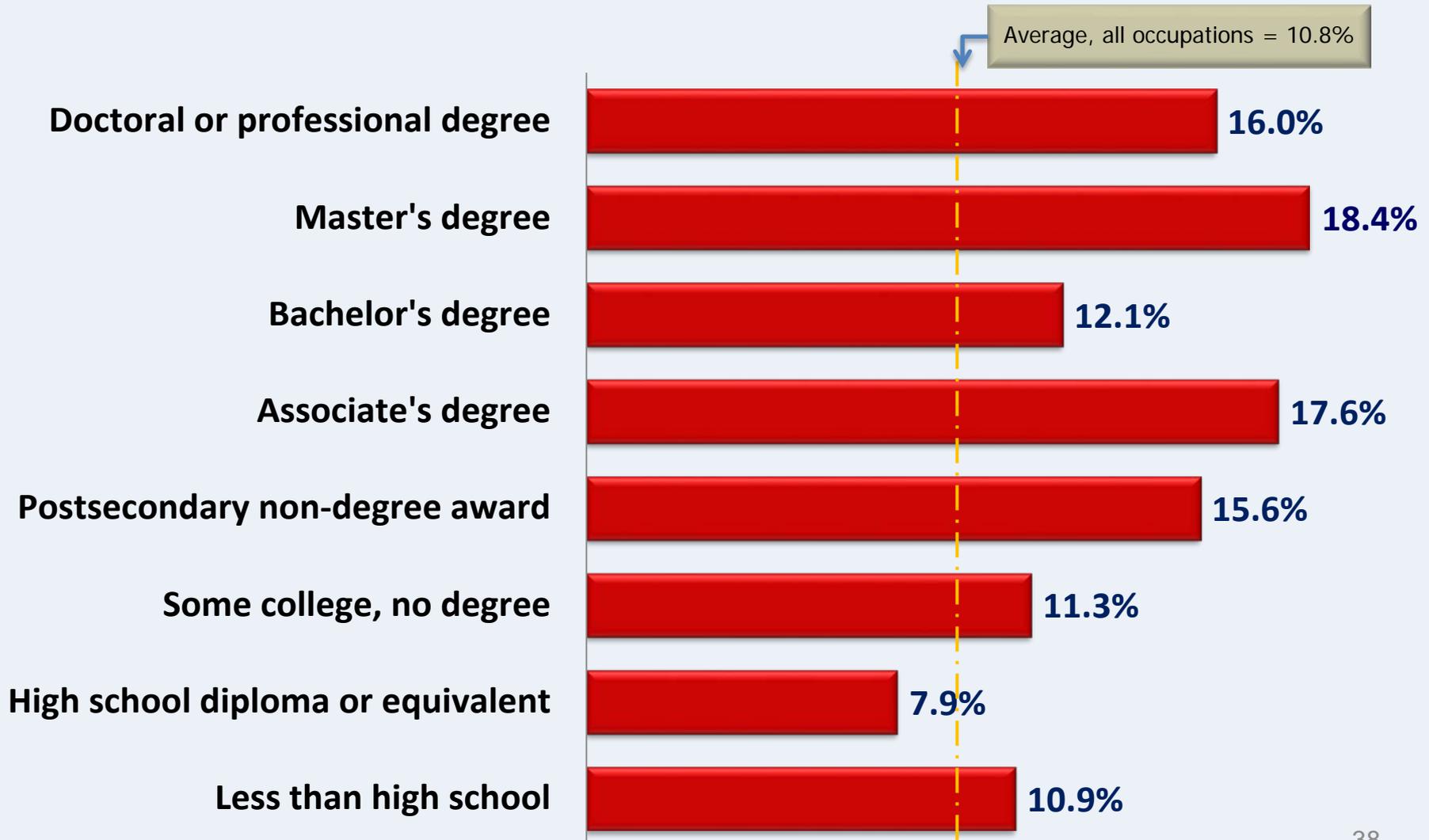
## Earnings and unemployment rates by educational attainment



Source: Bureau of Labor Statistics, Current Population Survey

# U.S. Percent Change in Employment by Education Level

Percent change, projected 2012-22



# Reality is Relative

2011 Charles Schwab Teens & Money Survey  
Poll of Americans ages 13-18

U.S. teenagers were asked:

1. **What is your average expected starting salary?**
2. **What will be your salary once established in a career?**

# Reality is Relative

2011 Charles Schwab Teens & Money Survey  
Poll of Americans ages 13-18

**Starting your career:** Average answer:

**\$73,000 a year**

Boys answered: \$79,700 a year

Girls answered: \$66,200 a year

Source: Charles Schwab and Boys & Girls Club of America survey conducted with Harris Interactive

For real fun, check out: <http://www.lmci.state.tx.us/realitycheck/>

# Reality is Relative

2011 Charles Schwab Teens & Money Survey  
Poll of Americans ages 13-18

Established in your career: Average answer:

**\$150,000 a year**

Boys answered: \$162,300 a year

Girls answered: \$126,500 a year

Source: Charles Schwab and Boys & Girls Club of America survey conducted with Harris Interactive

For real fun, check out: <http://www.lmci.state.tx.us/realitycheck/>

# Welcome to Reality Check 2011!

<http://www.texasrealitycheck.com>



## Texas Reality Check

Don't know how much money you will need to earn in the future? Don't know which occupation to choose? No problem! Below are three options to help you select the right career for your spending needs.



### 1 Reality Check

Get a Reality Check. You will buy "stuff" for a sample month. We total it up for a year. Then we help you find careers that pay what you need. Let's start.



### 2 Future Salary

Already know how much money you want to earn? Great! Enter the amount below and get information on which occupations pay that much.



### 3 Occupation Direct

Already know which occupation you want to pursue? Click here to find how much you can buy with your chosen occupation.



If you need assistance, click the Help button.



Brought to you by the Texas Workforce Commission & the Texas Education Agency



# Regional employers say they want...

## 1. **Good communications skills: Can you.....**

- Explain what you're doing (to co-worker or customer)?
- Explain what you need (from a co-worker or customer)?
- Ability to listen to instructions?

## 2. **Technical knowledge** (degrees needed for half of all job openings)

## 4. **Can you work with people who are of a different age, race, gender and education level than you?**

## 5. **Can-do attitude / pleasant attitude** (workers who are "engaged" in their work)

## 6. **Critical thinking skills** (if given a sequence of events, can you determine what will probably happen next)

# Getting a Job is a Balance between Skill & Will

**Workplace  
Skills**

**Will**

**Skills**

**Distill**

**Workplace  
Skills**

**Will**

**Skills**

**Strong academics**

**High School diploma**

**Post secondary schooling**

**Appropriate technical skills**

**Distill**

**Workplace**

**Basic Skills**

Getting along with others

Critical thinking

**Consciousness**

**Will**

**Skills**

**Distill**

**“There’s not one specific thing or skill people have to have to work for us. But I can tell you why we fire people: soft skills. We hire for hard skills. We fire for soft skills. The ability to interact and communicate with others or behave ethically and take responsibility for things tends to be where people tend to break down.”**

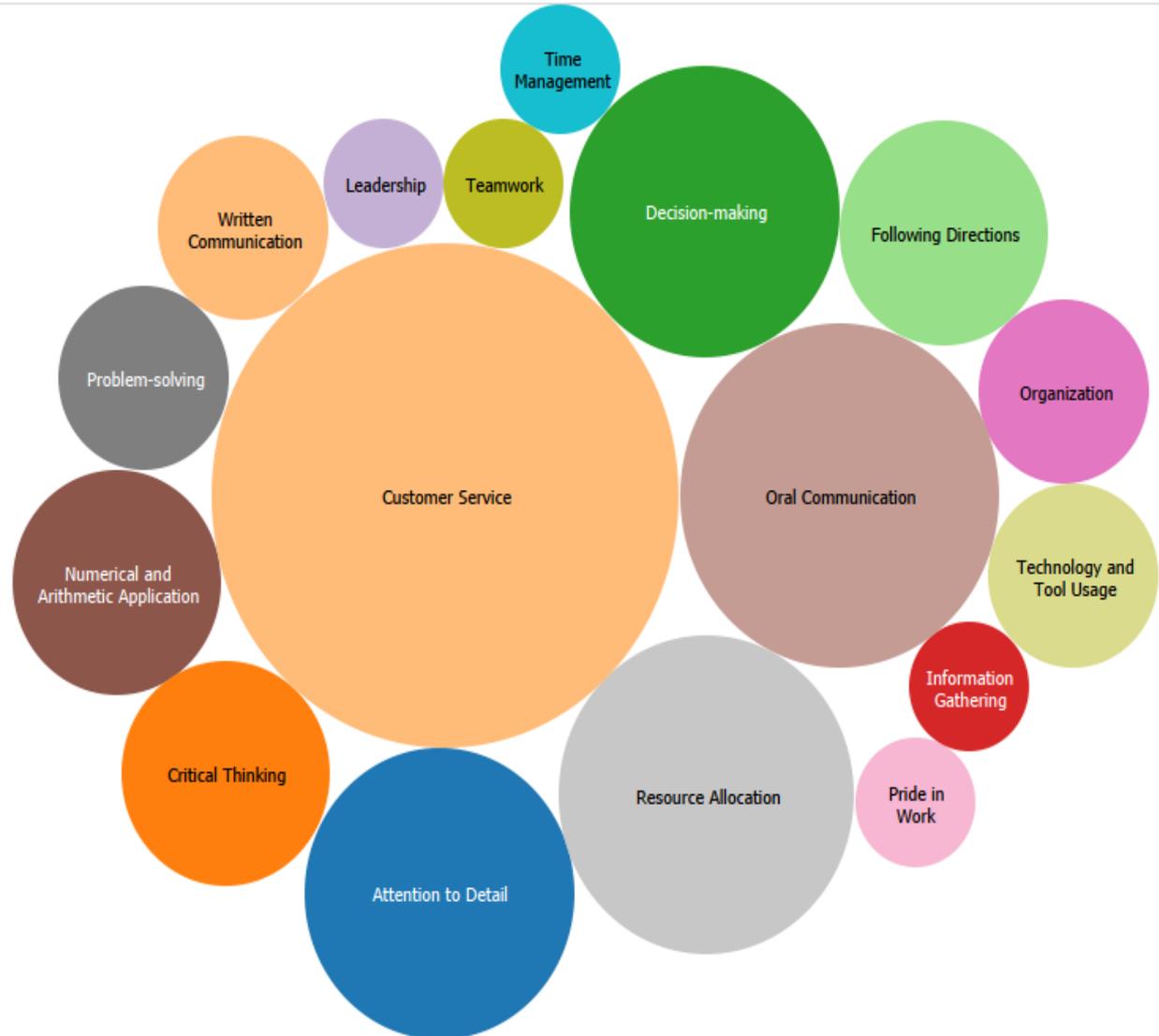
**Rick Stephens, senior vice president of HR,  
The Boeing Corporation**

# Sample: Workplace Basic Skills Profile for Waiters and Waitresses

## Workplace Basics Profile: Waiters and Waitresses

### Preliminary WBS

- Customer Service
- Oral Communication
- Resource Allocation
- Attention to Detail
- Decision-making
- Critical Thinking
- Following Directions
- Numerical and Arithmetic Application
- Organization
- Problem-solving
- Technology and Tool Usage
- Written Communication
- Information Gathering
- Leadership
- Pride in Work
- Teamwork
- Time Management



# Sample: Workplace Basic Skills Profile for Economist

## Workplace Basics Profile: Economists

### Preliminary WBS

- Information Gathering
- Numerical and Arithmetic Application
- Oral Communication
- Critical Thinking
- Written Communication
- Decision-making
- Technology and Tool Usage
- Leadership
- Problem-solving
- Teamwork
- Creativity
- Following Directions
- Intellectual Risk-taking
- Organization



**Workplace  
Skills**

**Will**

**Skills**

**Distill**

**Stackable Credentials  
Informal education  
On the Job Learning**

**Climbing Wall**



## **The Climbing Wall concept of Career Development:**

**Everyone is trying to  
get comfortable on  
the wall, but each  
finds themselves at  
a different place,  
moving at a  
different pace and  
with a unique  
support system**

# Workplace Skills

## Will

**Willing to take a job:**

- ✓ At lower level, lesser wage
- ✓ In a different locale
- ✓ Show flexibility & initiative

# Skills

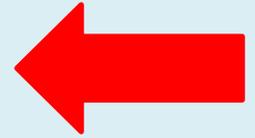
# Distill

# Workplace Skills

## Workplace Basics!

Communication skills  
Getting along with others  
Critical thinking

# Will



## Willing to take a job:

- ✓ At lower level, lesser wage
- ✓ In a different locale
- ✓ Show flexibility & initiative

# Skills

Strong academics

High School diploma

Post secondary schooling  
Appropriate technical skills

# Distill

Stackable Credentials  
Informal education  
On the Job Learning

Climbing Wall

**There is much more story to  
tell, but this version is over**

***Thank you!***

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