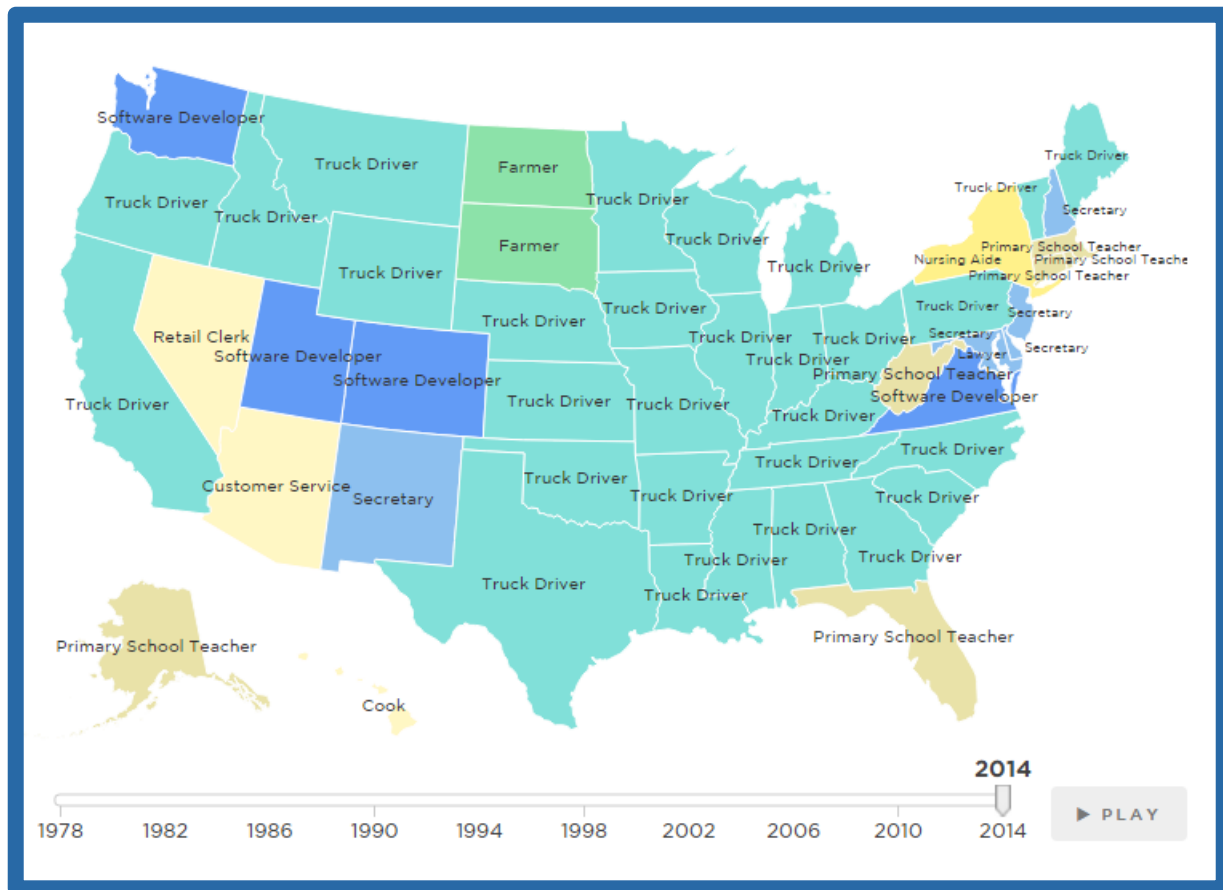


## 12th Grade Economics Labor Market Inquiry

# Does It Matter What I Want to Be When I Grow Up?



Quoctrung Bui, graphic depiction of the most common jobs in each state, 1978–2014, “Map: The Most Common Job in Every State,” National Public Radio, February 5, 2015. © 2015 National Public Radio, Inc. News “Map: The Most Common Job In Every State” by Quoctrung Bui was originally published on NPR.org on February 5, 2015, and is used with the permission of NPR. Any unauthorized duplication is strictly prohibited.

## Supporting Questions

1. What economic trends have influenced labor market demand?
2. How are producers affected by labor market supply?
3. How do market forces interact to create wage-price equilibrium?



## 12th Grade Economics Labor Market Inquiry

### Does It Matter What I Want to Be When I Grow Up?

<p><b>New York State Social Studies Framework Key Idea &amp; Practices</b></p>	<p><b>12.E2 INDIVIDUALS AND BUSINESSES IN THE PRODUCT AND FACTOR MARKETS:</b> Free enterprise is a pillar of the United States economy and is based on the principle that individuals and businesses are free to make their own economic choices as they participate in these markets. Individuals buy the goods and services that they desire from businesses in the product markets, and they contribute to producing these goods and services by supplying the resources they own to businesses in the factor markets.</p> <p>✔ <b>Gathering, Using, and Interpreting Evidence</b>    ✔ <b>Economics and Economic Systems</b></p>
<p><b>Staging the Question</b></p>	<p>Complete a job interest inventory and make a list of suitable and interesting career possibilities.</p>

Supporting Question 1	Supporting Question 2	Supporting Question 3	
<p>What economic trends have influenced labor market demand?</p>	<p>How are producers affected by labor market supply?</p>	<p>How do market forces interact to create wage-price equilibrium?</p>	
Formative Performance Task	Formative Performance Task	Formative Performance Task A [Guided Practice]	Formative Performance Task B [Independent Practice]
<p>List and explain five major trends that have influenced labor market demand in the past 20 years.</p>	<p>Write a paragraph that explains a possible skills gap in the US labor market and how the gap might affect labor market supply.</p>	<p>Construct and annotate a changing labor market demand-and-supply graph for the US truck-driving industry over a 10-year period.</p>	<p>Construct and annotate a changing labor market demand-and-supply graph for one of the job selections from Staging the Compelling Question.</p>
Featured Sources	Featured Sources	Featured Sources	Featured Sources
<p><b>Source A:</b> “The Most Common Job In Every State” map</p> <p><b>Source B:</b> “Fastest Growing Occupations, 2012 and projected 2022”</p> <p><b>Source C:</b> Excerpt from <i>The Polarization of Job Opportunities in the US Labor Market</i></p>	<p><b>Source A:</b> Excerpt from <i>Chasing the American Dream: Recent College Graduates and the Great Recession</i></p> <p><b>Source B:</b> “Jobs and Skills and Zombies”</p>	<p><b>Source A:</b> <i>The Labor Market—The Economic Lowdown Video Series</i>, Episode 4</p> <p><b>Source B:</b> “The Most Common Job in Every State” map</p> <p><b>Source C:</b> Excerpt from “Heavy and Tractor-Trailer Truck Drivers Job Outlook”</p>	<p><b>Source A:</b> Sources generated by students or teachers to support analysis</p>

<p><b>Summative Performance Task</b></p>	<p><b>ARGUMENT</b> Does it matter what I want to be when I grow up? Construct an argument (e.g., detailed outline, poster, essay) that addresses the compelling question using specific claims and relevant evidence from contemporary sources while acknowledging competing views.</p> <p><b>EXTENSION</b> Debate the growing concerns about the rising cost of higher education and the extent to which college is worth the time, effort, and financial cost to students.</p>
<p><b>Taking Informed Action</b></p>	<p><b>UNDERSTAND</b> Research labor markets that students may wish to enter in the future.</p> <p><b>ASSESS</b> Look at the wages paid in the profession identified in the previous step and assess why the wage is what it is and why it may have fluctuated due to changes in the supply of, and demand for, labor.</p> <p><b>ACT</b> Invite a career or guidance counselor, business teacher, or professional from the community to speak to the class about local labor market conditions.</p>

## Overview

This inquiry explores some of the dynamic changes occurring in the US labor markets through the investigation of the compelling question “Does it matter what I want to be when I grow up?” The importance of understanding labor markets in this inquiry is twofold: (1) students should be able to understand some of the changes that exist and persist in today’s labor markets, especially labor demand (or derived demand), and (2) students will benefit from understanding fluctuations in supply and demand and how they affect wages. While progressing through the inquiry, students should analyze the structural changes occurring in the labor markets and affirm or perhaps refocus their own career goals and pathways. In doing so, students can cement their theoretical understandings of supply and demand and the impact of market forces on their own career choices.

In addition to the Key Idea listed earlier, this inquiry highlights the following Conceptual Understandings:

- (12.E2b) The choices of buyers and sellers in the marketplace determine supply and demand, market prices, allocation of scarce resources, and the goods and services that are produced. In a perfect world, consumers influence product availability and price through their purchasing power in the product market. Product market supply and demand determine product availability and pricing.
- (12.E2c) Businesses choose what to supply in the product market based on product market prices, available technology, and prices of factors of production. The prices of those factors are determined based on supply and demand in the factor market. The supply and demand of each factor market is directly related to employment. Debates surround various ways to minimize unemployment (frictional, structural, cyclical).

NOTE: This inquiry is expected to take three to five 40-minute class periods. The inquiry time frame could expand if teachers think their students need additional instructional experiences (i.e., supporting questions, formative performance tasks, and featured sources). Teachers are encouraged to adapt the inquiries in order to meet the needs and interests of their particular students. Resources can also be modified as necessary to meet individualized education programs (IEPs) or Section 504 Plans for students with disabilities.

## Structure of the Inquiry

In addressing the compelling question “Does it matter what I want to be when I grow up?” students work through a series of supporting questions, formative performance tasks, and featured sources in order to construct an argument with evidence from a variety of sources.

## Staging the Compelling Question

Stage the compelling question by having students fill out a job interest inventory and make a list of suitable and interesting career possibilities. There are many tools available for students to survey their interests and career matches, but one survey possibility is the Student Interest Survey for Career Clusters on the CTE website: <http://www.careertech.org/student-interest-survey>.



## Supporting Question 1

The first supporting question—“What economic trends have influenced labor market demand?”—calls on students to think about the workplace skills currently demanded in the United States. Equally important is a realization of what skills are in lower demand. Whether seniors are planning on college or a career after they graduate from high school, the supporting question and the featured sources should enlighten students about the current job markets locally and nationally. The formative performance task calls on students to list and explain five major trends that have influenced the United States labor market demand in the past 20 years. The featured sources include a map and data table detailing the most commonly held jobs in each state in 1978, 1996, and 2014; a series of 2013 data tables from the United States Bureau of Labor Statistics projecting the fastest-growing occupations within the decade; and an excerpt from a 2010 report by the Brookings Institute that argues there is a growing “polarization” in the US labor market.

## Supporting Question 2

The second supporting question—“How are producers affected by labor market supply?”—asks students to examine the skills shortage many politicians and economists believe exists. The formative performance task calls on students to write a paragraph that explains a possible skills gap in the United States labor market and how such a gap might affect labor market supply. The featured sources are a 2012 report from Rutgers University that describes the growing frustration of recent college graduates in not being prepared for the labor market juxtaposed against a 2014 *New York Times* article by Nobel Prize-winning economist Paul Krugman, who argues that the skills gap is a myth.

## Supporting Question 3

The last supporting question—“How do these market forces interact to create a wage-price equilibrium?”—provides students with an opportunity to practice graphing different scenarios using models of supply and demand. The formative performance task is divided into two parts. Part A is a guided learning experience in which students work with their teachers to understand changes in the labor market by collaboratively constructing and annotating a labor market demand-and-supply graph for the trucking industry over a 10-year period. It is important to note that these annotations could take the form of a claim for which students use the demand-supply model as a graphic tool. Featured Source A is a short video and transcript from the Federal Reserve Bank of St. Louis about labor market demand and how to graph the derived demand-and-supply curves. Featured Source B is the map and data table used earlier in this inquiry detailing the most commonly held jobs by state. Featured Source C conveys data from the Bureau of Labor Statistics charting the job outlook for heavy and tractor-trailer truck drivers. Part B asks students to work independently to construct and annotate a labor market demand-and-supply graph for one of their job selections identified during Staging the Compelling Question exercise using sources found by themselves or their teacher.



## Summative Assessment

At this point in the inquiry, students have examined the United States labor market and how laborers and suppliers are affected by economic trends. Additionally, students have had a chance to explore their own career possibilities and the ways in which larger economic trends have influenced the markets they plan to enter. Students should be able to demonstrate the breadth of their understandings and abilities to use evidence from multiple sources to support their distinct claims. In this task, students construct an evidence-based argument responding to the compelling question “Does it matter what I want to be when I grow up?” It is important to note that students’ arguments could take a variety of forms, including a detailed outline, poster, or essay.

Students’ arguments will likely vary, but could include any of the following:

- If I work hard and perfect my skills, trends in the labor market shouldn't matter.
- I may need to rethink what I want to be when I grow up based on trends in the United States labor market.
- Luckily, I want a job in one of the growing labor markets, so I am encouraged by the current economic trends.
- I plan to pursue my dream job, but I will definitely think about a backup occupation in case the labor demand continues to recede in my chosen profession.

Students could extend these arguments by debating the growing concerns about the rising cost of higher education and the extent to which college is worth the time, effort, and financial cost to students.

Students have the opportunity to Take Informed Action by drawing on their knowledge of the structure of labor markets. They demonstrate that they *understand* by further researching labor markets they may wish to enter in the future. They show their ability to *assess* by looking at the wages paid in their selected professions and trying to determine why the wage is what it is and why it may have fluctuated due to changes in the supply of and demand for labor. And they *act* by inviting a career or guidance counselor, business teacher, or professional from the community to speak to the class about local labor market conditions and by preparing questions to ask that speaker in order to better understand the local labor market.

## Supporting Question 1

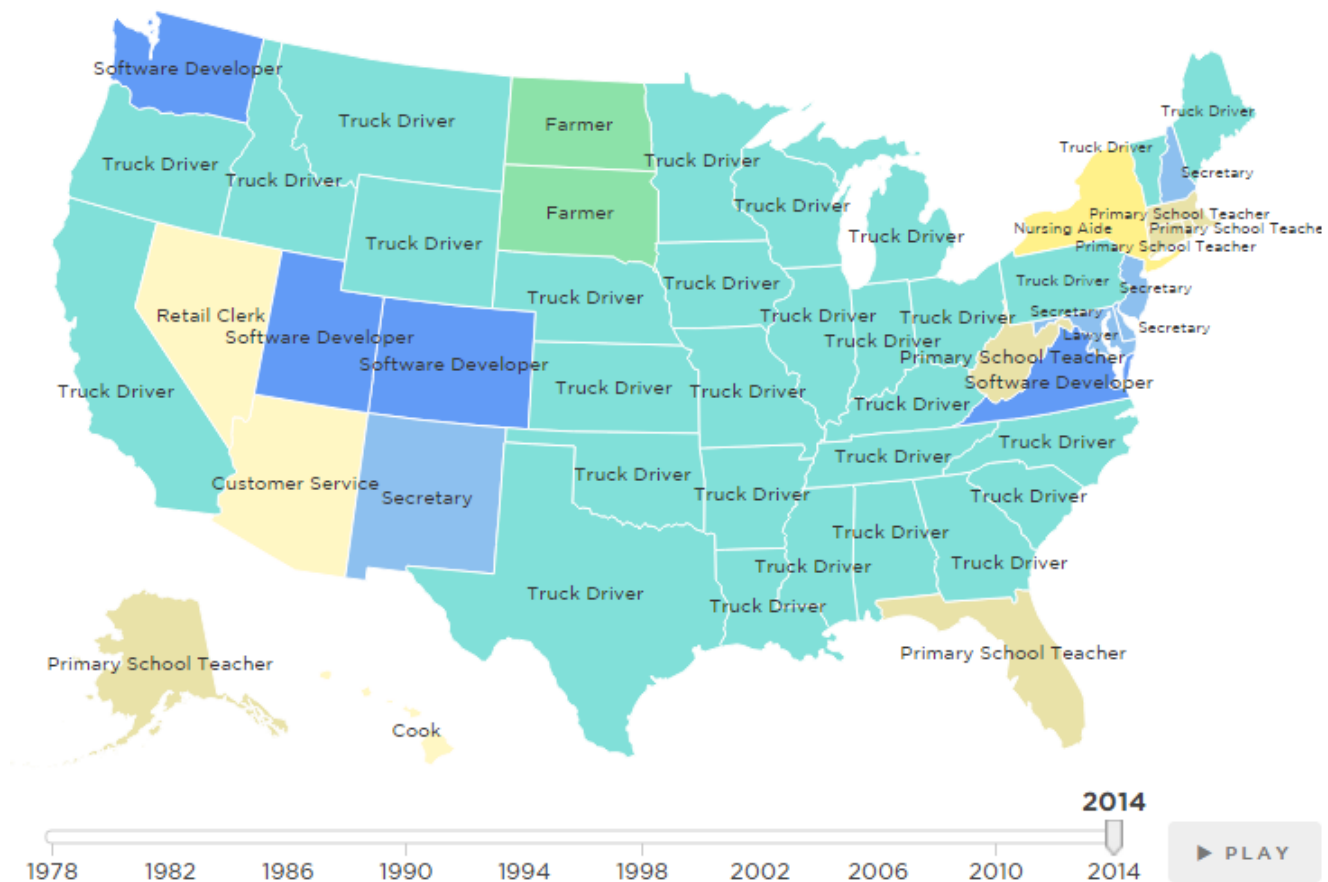
**Featured Source**

**Source A:** Quoctrun Bui, graphic depiction of the most common jobs in each state, 1978–2014, “Map: The Most Common Job in Every State,” National Public Radio, February 5, 2015

*Note: This article contains an interactive map that is best viewed online at <http://www.npr.org/sections/money/2015/02/05/382664837/map-the-most-common-job-in-every-state>.*

### Map: The Most Common\* Job In Every State

\*We used data from the Census Bureau, which has two catch-all categories: “managers not elsewhere classified” and “salespersons not elsewhere classified.” Because those categories are broad and vague to the point of meaninglessness, we excluded them from our map.





	1978	1996	2014
Alabama	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Alaska	Secretaries	Primary school teachers	Primary school teachers
Arizona	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Customer service reps, investigators and adjusters, except insurance
Arkansas	Farm workers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
California	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Colorado	Secretaries	Truck, delivery, and tractor drivers	Computer software developers
Connecticut	Secretaries	Truck, delivery, and tractor drivers	Primary school teachers
Delaware	Secretaries	Secretaries	Secretaries
District of Columbia	Secretaries	Janitors	Lawyers
Florida	Secretaries	Truck, delivery, and tractor drivers	Primary school teachers
Georgia	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Hawaii	Bookkeepers and accounting and auditing clerks	Truck, delivery, and tractor drivers	Cooks, variously defined
Idaho	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Illinois	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Indiana	Assemblers of electrical equipment	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Iowa	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Kansas	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Kentucky	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Louisiana	Secretaries	Secretaries	Truck, delivery, and tractor drivers
Maine	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Maryland	Secretaries	Secretaries	Secretaries
Massachusetts	Machine operators, n.e.c	Secretaries	Primary school teachers
Michigan	Machine operators, n.e.c	Assemblers of electrical equipment	Truck, delivery, and tractor drivers
Minnesota	Truck, delivery, and tractor drivers	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Mississippi	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Missouri	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers





Montana	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Nebraska	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Nevada	Recreation facility attendants	Recreation facility attendants	Retail sales clerks
New Hampshire	Machine operators, n.e.c	Primary school teachers	Secretaries
New Jersey	Machine operators, n.e.c	Secretaries	Secretaries
New Mexico	Secretaries	Secretaries	Secretaries
New York	Secretaries	Secretaries	Nursing aides, orderlies, and attendants
North Carolina	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
North Dakota	Farmers (owners and tenants)	Farmers (owners and tenants)	Farm managers, except for horticultural farms
Ohio	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Oklahoma	Secretaries	Secretaries	Truck, delivery, and tractor drivers
Oregon	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Pennsylvania	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Rhode Island	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Primary school teachers
South Carolina	Secretaries	Machine operators, n.e.c	Truck, delivery, and tractor drivers
South Dakota	Farmers (owners and tenants)	Farmers (owners and tenants)	Farm managers, except for horticultural farms
Tennessee	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Texas	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Utah	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Computer software developers
Vermont	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Virginia	Secretaries	Truck, delivery, and tractor drivers	Computer software developers
Washington	Secretaries	Truck, delivery, and tractor drivers	Computer software developers
West Virginia	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Primary school teachers
Wisconsin	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Wyoming	Farm workers	Farmers (owners and tenants)	Truck, delivery, and tractor drivers

Source: IPUMS-CPS/ University Of Minnesota  
 Credit: Quoc Trung Bui/NPR





**What's with all the truck drivers?** Truck drivers dominate the map for a few reasons.

- Driving a truck has been immune to two of the biggest trends affecting U.S. jobs: globalization and automation. A worker in China can't drive a truck in Ohio, and machines can't drive cars (yet).
- Regional specialization has declined. So jobs that are needed everywhere — like truck drivers and schoolteachers — have moved up the list of most-common jobs.
- The prominence of truck drivers is partly due to the way the government categorizes jobs. It lumps together all truck drivers and delivery people, creating a very large category. Other jobs are split more finely; for example, primary school teachers and secondary school teachers are in separate categories.

**The rise and fall of secretaries:** Through much of the '80s, as the U.S. economy shifted away from factories that make goods and toward offices that provide services, secretary became the most common job in more and more states. But a second shift — the rise of the personal computer — reversed this trend, as machines did more and more secretarial work.

**Manufacturing jobs disappeared:** This story we knew already. Machine operators and factory workers had a dominant presence in the Midwest and parts of the South through the late '70s. Then a combination of globalization and technological change made many of those jobs disappear.

**Fewer and fewer farmers:** Our map shows the tail end of a century-long trend. Farming technology (everything from tiny seeds to giant harvesters) keeps getting better, which means fewer and fewer people can grow more and more food.

**Government:** The most common job in D.C. is lawyer. Heh. On a related note, Northern Virginia is full of federal contractors — many of whom work as software developers.

**Who knew Utah was a tech hub?** Over the past few years, tech companies have rejuvenated Utah's labor market. It's home to an NSA supercomputing facility and a growing number of tech firms.

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# Supporting Question 1

**Featured Source**

**Source B:** United States Bureau of Labor Statistics, data table describing employment trends, "Fastest Growing Occupations, 2012 and projected 2022," December 19, 2013

**Fastest growing occupations, 2012 and projected 2022  
(Numbers in thousands)**

2012 National Employment Matrix title and code	Employment		Change, 2012-22		Median annual wage, 2012 (1)	Total education needed for entry
	2012	2022	Number	Percent		
<b>Total, All Occupations.....</b>	145,355.8	160,983.7	15,628.0	10.8	\$34,750	N/A
Industrial-organizational psychologists.....	1.6	2.5	0.9	53.4	\$83,580	Master's degree
Personal care aides.....	1,190.6	1,771.4	580.8	48.8	\$19,910	Less than high school
Home health aides.....	875.1	1,299.3	424.2	48.5	\$20,820	Less than high school
Insulation workers, mechanical.....	28.9	42.4	13.5	46.7	\$39,170	High school diploma or equivalent
Interpreters and translators.....	63.6	92.9	29.3	46.1	\$45,430	Bachelor's degree
Diagnostic medical sonographers.....	58.8	85.9	27.0	46.0	\$65,860	Associate's degree
Helpers--brickmasons, blockmasons,..... stonemasons, and tile and marble setters	24.4	34.9	10.5	43.0	\$28,220	Less than high school
Occupational therapy assistants.....	30.3	43.2	12.9	42.6	\$53,240	Associate's degree
Genetic counselors.....	2.1	3.0	0.9	41.2	\$56,800	Master's degree
Physical therapist assistants.....	71.4	100.7	29.3	41.0	\$52,160	Associate's degree
Physical therapist aides.....	50.0	70.1	20.1	40.1	\$23,880	High school diploma or equivalent
Skincare specialists.....	44.4	62.0	17.7	39.8	\$28,640	Postsecondary non-degree award
Physician assistants.....	86.7	120.0	33.3	38.4	\$90,930	Master's degree
Segmental pavers.....	1.8	2.4	0.7	38.1	\$33,720	High school diploma or equivalent
Helpers--electricians.....	60.8	83.3	22.4	36.9	\$27,670	High school diploma or equivalent
Information security analysts.....	75.1	102.5	27.4	36.5	\$86,170	Bachelor's degree
Occupational therapy aides.....	8.4	11.4	3.0	36.2	\$26,850	High school diploma or equivalent
Health specialties teachers, postsecondary..	190.0	258.6	68.6	36.1	\$81,140	Doctoral or professional degree
Medical secretaries.....	525.6	714.9	189.2	36.0	\$31,350	High school diploma or equivalent
Physical therapists.....	204.2	277.7	73.5	36.0	\$79,860	Doctoral or professional degree
Orthotists and prosthetists.....	8.5	11.5	3.0	35.5	\$62,670	Master's degree
Brickmasons and blockmasons.....	71.0	96.2	25.2	35.5	\$46,440	High school diploma or equivalent
Nursing instructors and teachers,..... postsecondary	67.8	91.8	24.0	35.4	\$64,850	Master's degree
Nurse practitioners.....	110.2	147.3	37.1	33.7	\$89,960	Master's degree
Audiologists.....	13.0	17.3	4.3	33.6	\$69,720	Doctoral or professional degree
Dental hygienists.....	192.8	256.9	64.2	33.3	\$70,210	Associate's degree
Meeting, convention, and event planners.....	94.2	125.4	31.3	33.2	\$45,810	Bachelor's degree
Therapists, all other.....	28.8	37.9	9.1	31.7	\$53,210	Bachelor's degree
Market research analysts and marketing..... specialists	415.7	547.2	131.5	31.6	\$60,300	Bachelor's degree
Substance abuse and behavioral disorder..... counselors	89.6	117.7	28.2	31.4	\$38,520	High school diploma or equivalent

**Footnotes:**

(1) Data are from the Occupational Employment Statistics program, U.S. Department of Labor, U.S. Bureau of Labor Statistics.

Source: Employment Projections program, U.S. Department of Labor, U.S. Bureau of Labor Statistics

Public domain. United States Bureau of Labor Statistics.

## Supporting Question 1

### Featured Source

**Source C:** David Autor, report on the labor market, *The Polarization of Job Opportunities in the U.S. Labor Market: Implications for Employment and Earnings* (excerpt), Brookings Institute, April 2010

Between December 2007, when the U.S. housing and financial crises became the subject of daily news headlines, and March of 2010, the latest period for which data are available, the number of employed workers in the United States fell by 8.2 million, to 129.8 million from 138.0 million. In the same interval, the civilian unemployment rate nearly doubled, to 9.7 percent from 5.0 percent, while the employment-to-population ratio dropped to 58.6 percent from 62.7 percent—the lowest level seen in more than 25 years. Job losses of this magnitude cause enormous harm to workers, families, and communities.

A classic study by economists Lou Jacobson, Robert LaLonde, and Daniel Sullivan found that workers involuntarily displaced by plant downsizings in Pennsylvania during the severe recession of the early 1980s suffered annual earnings losses averaging 25 percent, even six years following displacement. The nonpecuniary consequences of job losses due to the Great Recession may be just as severe. Studying the same group of workers with the benefit of 15 more years of data, labor economists Daniel Sullivan and co-author Till Von Wachter show that involuntarily job displacement approximately doubled the short-term mortality rates of those displaced and reduced their life expectancy on average by one to one and a half years. Thus, long after the U.S. unemployment rate recedes into single digits, the costs of the Great Recession will endure.

Despite the extremely adverse U.S. employment situation in 2010, history suggests that employment will eventually return and unemployment will eventually subside. But the key challenges facing the U.S. labor market—almost all of which were evident prior to the Great Recession—will surely endure. These challenges are two-fold. The first is that for some decades now, the U.S. labor market has experienced increased demand for skilled workers. During times like the 1950s and 1960s, a rising level of educational attainment kept up with this rising demand for skill. But since the late 1970s and early 1980s, the rise in U.S. education levels has not kept up with the rising demand for skilled workers, and the slowdown in educational attainment has been particularly severe for males. The result has been a sharp rise in the inequality of wages.

A second, equally significant challenge is that the structure of job opportunities in the United States has sharply polarized over the past two decades, with expanding job opportunities in both high-skill, high-wage occupations and low-skill, low wage occupations, coupled with contracting opportunities in middle-wage, middle-skill white-collar and blue-collar jobs. Concretely, employment and earnings are rising in both high education professional, technical, and managerial occupations and, since the late 1980s, in low-education food service, personal care, and protective service occupations. Conversely, job opportunities are declining in both middle-skill, white collar clerical, administrative, and sales occupations and in middle-skill, blue-collar production, craft, and operative occupations. The decline in middle-skill jobs has been detrimental to the earnings and labor force participation rates of workers without a four-year college education, and differentially so for males, who are increasingly concentrated in low paying service occupations.

This paper analyzes the state of the U.S. labor market over the past three decades to inform policymaking on two fronts. The first is to rigorously document and place in historical and international context the trajectory of the U.S. labor market, focusing on the evolving earnings, employment rates, and labor market opportunities for workers with low, moderate, and high levels of education. The second is to illuminate the key forces shaping this trajectory, including:

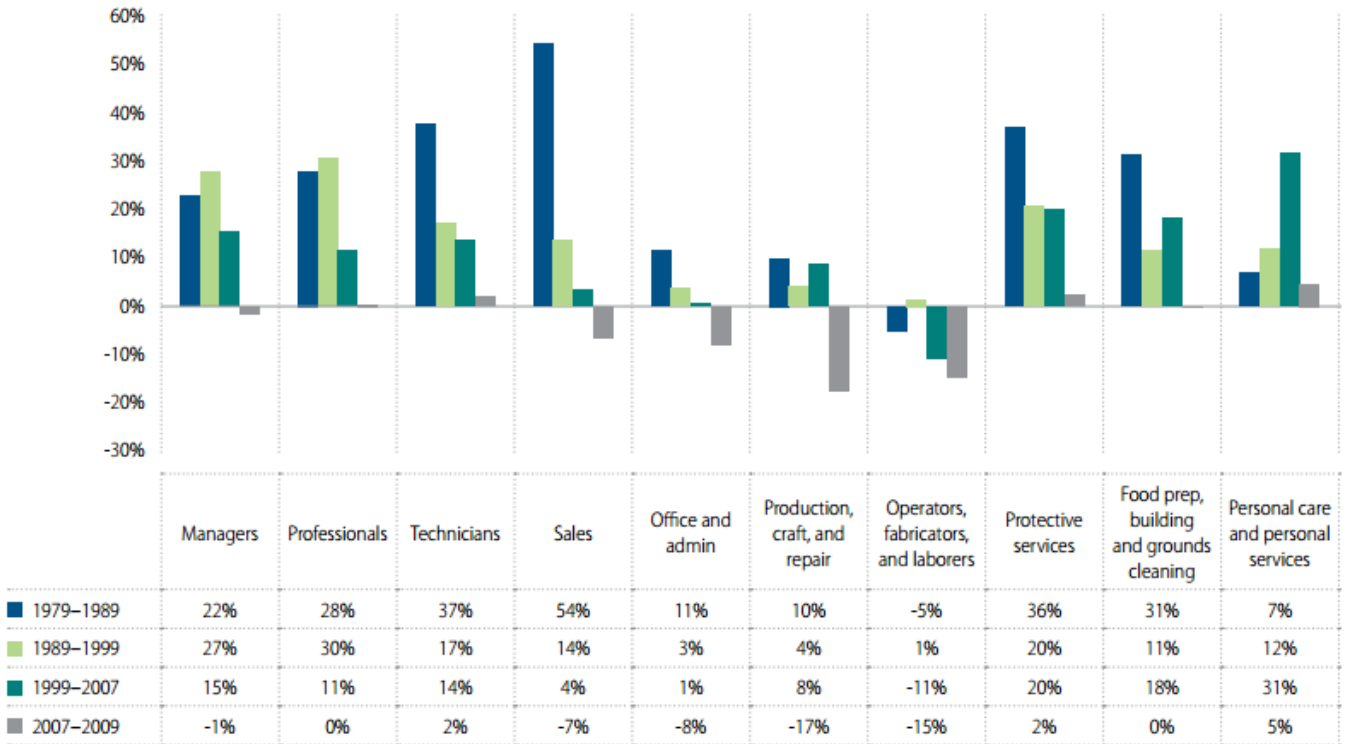
- The slowing rate of four-year college degree attainment among young adults, particularly males
- Shifts in the gender and racial composition of the workforce
- Changes in technology, international trade, and the international offshoring of jobs, which affect job opportunities and skill demands
- Changes in U.S. labor market institutions affecting wage setting, including labor unions and minimum wage legislation

The causes and consequences of these trends in U.S. employment patterns are explored in detail below, but the main conclusions can be summarized as follows:

- Employment growth is polarizing, with job opportunities concentrated in relatively high-skill, high-wage jobs and low-skill, low-wage jobs.
- This employment polarization is widespread across industrialized economies; it is not a uniquely American phenomenon.
- The key contributors to job polarization are the automation of routine work and, to a smaller extent, the international integration of labor markets through trade and, more recently, offshoring.
- The Great Recession has quantitatively but not qualitatively changed the trend toward employment polarization in the U.S. labor market. Employment losses during the recession have been far more severe in middle-skilled white- and blue-collar jobs than in either high-skill, white-collar jobs or in low-skill service occupations.
- As is well known, the earnings of college-educated workers relative to high school-educated workers have risen steadily for almost three decades.
- Less widely discussed is that the rise in the relative earnings of college graduates are due both to rising real earnings for college workers and falling real earnings for noncollege workers—particularly noncollege males.
- Gains in educational attainment have not generally kept pace with rising educational returns, particularly for males. And the slowing pace of educational attainment has contributed to the rising college versus high school earnings gap.

Graph within report:

Percentage change in employment



Source: May/ORG CPS data for earnings years 1979-2009. The data include all persons ages 16-64 who reported having worked last year, excluding those employed by the military and in agricultural occupations. Occupations are first converted from their respective scheme into 328 occupation groups consistent over the given time period. From these groups, occupations are then consolidated into the 10 broad categories presented in the figure. The occupation share is the percentage of all workers employed in that occupation.

© The Brookings Institution. Used with permission. The full report can be found at [http://www.brookings.edu/~media/research/files/papers/2010/4/jobs-autor/04\\_jobs\\_autor.pdf](http://www.brookings.edu/~media/research/files/papers/2010/4/jobs-autor/04_jobs_autor.pdf).



## Supporting Question 2

### Featured Source

**Source A:** Charley Stone, Carl Van Horn, and Cliff Zukin, summary of report on college attendance and labor, *Chasing the American Dream: Recent College Graduates and the Great Recession* (excerpt), Rutgers University, May 2012

A new national survey by The John J. Heldrich Center for Workforce Development at Rutgers University found that a large percentage of recent college graduates are far from a secure career path with a full time job and benefits.

*Young college graduates are insecure about their preparation for a competitive workforce. Half of them feel they are likely less well prepared for the world of work than was the generation before them.*

The report, *Chasing the American Dream: Recent College Graduates and the Great Recession*, reflects the results of interviews with 444 graduates of four-year colleges and universities from the classes of 2006 through 2011.

The report documents the difficulties young people encountered as they entered a labor market that eventually plunged into a deep recession in 2008. Three in four were able to find at least one full-time job since graduation. But at the time of the survey in April, only 51 percent were working full time, 20 percent were attending graduate or professional school and 12 percent were either unemployed or employed part time and looking for full-time work.

“Students who graduated during the past several years are facing historic obstacles in achieving the foundations of the American dream and express low expectations for their future prosperity,” said Carl Van Horn, Professor and Director of the Heldrich Center and a co-author of the study. “The resilience of this year’s and recent college graduates are being tested as they struggle with student debt, a slow job market that offers few toe-holds in their chosen careers, and nagging fears about a lack of preparation for global labor market competition.”

College graduates who obtained their first job during the recession in 2009-2011 earned 10 percent less in their starting salaries compared to those who entered the workforce in 2006 and 2007 — \$27,000 versus \$30,000. Men earned an average of \$30,000 compared with \$28,000 for women graduates.

The report offered some good news for students who completed internships during college. Those graduates earned nearly 15 percent more on average than those who did not. Graduates who completed internships also felt better prepared in certain skills areas, such as leadership, written and verbal communications, and quantitative skills.

Among those who are now employed, the median salary for jobs that require a four-year degree is \$37,750 compared to \$32,000 for jobs that do not require a four-year degree.

Given their experiences—with 4 in 10 working in jobs that did not require a four-year degree—it is understandable that almost two-thirds either think they will need more education or have already gone back to school.

Young college graduates are also insecure about their preparation for a competitive workforce. Half of them feel they are likely less well prepared for the world of work than was the generation before them.

The graduates' employment struggles and modest earnings are also affecting both their ability to pay off the debts they incurred to finance their college education—a median of \$18,690 at public colleges and \$24,460 at private colleges—and influence their personal choices.

More than one in four are living with their parents or family members to save money and significant numbers of recent college graduates are delaying major purchases, putting off their graduate education, taking extra jobs to supplement their income, and even delaying marriage. Many recent graduates who move out from their parents' homes continue to receive family support for housing, food, healthcare, college loan repayments, and car payments, the survey found.

“The cream of the crop of America’s youth, graduates of four-year colleges and universities, believe the American dream of upward mobility may have stopped with them,” commented Cliff Zukin, professor and co-author of the study. “Young, well-educated people, who are typically optimistic about their futures, are expressing doubt in another cornerstone of the American dream—that each generation can enjoy more prosperity than the one that came before it.”

John J. Heldrich Center for Workforce Development, Edward J. Bloustein School of Planning and Public Policy at Rutgers University. Used with permission. The full report can be found at [http://www.heldrich.rutgers.edu/sites/default/files/products/uploads/Chasing\\_American\\_Dream\\_Report.pdf](http://www.heldrich.rutgers.edu/sites/default/files/products/uploads/Chasing_American_Dream_Report.pdf).



## Supporting Question 2

### Featured Source

**Source B:** Paul Krugman, editorial on the labor market, “Jobs and Skills and Zombies,” *New York Times*, March 30, 2014

A few months ago, Jamie Dimon, the chief executive of JPMorgan Chase, and Marlene Seltzer, the chief executive of Jobs for the Future, published an article in Politico titled “Closing the Skills Gap.” They began portentously: “Today, nearly 11 million Americans are unemployed. Yet, at the same time, 4 million jobs sit unfilled” — supposedly demonstrating “the gulf between the skills job seekers currently have and the skills employers need.”

Actually, in an ever-changing economy there are always some positions unfilled even while some workers are unemployed, and the current ratio of vacancies to unemployed workers is far below normal. Meanwhile, multiple careful studies have found no support for claims that inadequate worker skills explain high unemployment.

But the belief that America suffers from a severe “skills gap” is one of those things that everyone important knows must be true, because everyone they know says it’s true. It’s a prime example of a zombie idea — an idea that should have been killed by evidence, but refuses to die.

And it does a lot of harm. Before we get there, however, what do we actually know about skills and jobs?

Think about what we would expect to find if there really were a skills shortage. Above all, we should see workers with the right skills doing well, while only those without those skills are doing badly. We don’t.

Yes, workers with a lot of formal education have lower unemployment than those with less, but that’s always true, in good times and bad. The crucial point is that unemployment remains much higher among workers at all education levels than it was before the financial crisis. The same is true across occupations: workers in every major category are doing worse than they were in 2007.

Some employers do complain that they’re finding it hard to find workers with the skills they need. But show us the money: If employers are really crying out for certain skills, they should be willing to offer higher wages to attract workers with those skills. In reality, however, it’s very hard to find groups of workers getting big wage increases, and the cases you can find don’t fit the conventional wisdom at all. It’s good, for example, that workers who know how to operate a sewing machine are seeing significant raises in wages, but I very much doubt that these are the skills people who make a lot of noise about the alleged gap have in mind.

And it’s not just the evidence on unemployment and wages that refutes the skills-gap story. Careful surveys of employers — like those recently conducted by researchers at both M.I.T. and the Boston Consulting Group — similarly find, as the consulting group declared, that “worries of a skills gap crisis are overblown.”

The one piece of evidence you might cite in favor of the skills-gap story is the sharp rise in long-term unemployment, which could be evidence that many workers don’t have what employers want. But it isn’t. At this point, we know a lot about the long-term unemployed, and they’re pretty much indistinguishable in skills from laid-off workers who quickly find new jobs. So what’s their problem? It’s the very fact of being out of work, which makes employers unwilling even to look at their qualifications.

So how does the myth of a skills shortage not only persist, but remain part of what “everyone knows”? Well, there was a nice illustration of the process last fall, when some news media reported that 92 percent of top executives said that there was, indeed, a skills gap. The basis for this claim? A telephone survey in which executives were asked, “Which of the following do you feel best describes the ‘gap’ in the U.S. workforce skills gap?” followed by a

list of alternatives. Given the loaded question, it's actually amazing that 8 percent of the respondents were willing to declare that there was no gap.

Unfortunately, the skills myth — like the myth of a looming debt crisis — is having dire effects on real-world policy. Instead of focusing on the way disastrously wrongheaded fiscal policy and inadequate action by the Federal Reserve have crippled the economy and demanding action, important people piously wring their hands about the failings of American workers.

Moreover, by blaming workers for their own plight, the skills myth shifts attention away from the spectacle of soaring profits and bonuses even as employment and wages stagnate. Of course, that may be another reason corporate executives like the myth so much.

So we need to kill this zombie, if we can, and stop making excuses for an economy that punishes workers.

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## Supporting Question 3

### Featured Source

**Source A:** Federal Reserve Bank of St. Louis, instructive video on labor market demand and supply, *The Labor Market—The Economic Lowdown Video Series*, Episode 4, no date



In the fourth episode of the Economic Lowdown Video Series, economic education specialist Scott Wolla explains the basics of the labor market. Viewers will learn how the laws of supply and demand determine the wage and quantity of labor employed in various labor markets.

To provide students with online questions following this video, register your class through the Instructor Management Panel.



Listen to the [audio](#) version of this podcast.

Transcript follows:

Hi, I'm Scott Wolla.

Have you looked for a job recently?

If so, you've been an active participant in the labor market.

The labor market works much like other markets.

There are buyers and sellers and they interact to determine a price.

In this case, the "good" being bought and sold is labor and the "price" for that good is a wage.

In many of the markets we encounter, individuals such as you and I demand goods and services, and firms supply those goods and services.

Although the labor market works in a similar way, the roles reverse. In the labor market, firms demand labor, and individuals such as you and I supply that labor.

Employers demand labor because workers are an important part of the production process.

Workers use tools and equipment to turn inputs into output.

Without workers, employers couldn't produce goods and services and earn profits. When graphed, the demand for labor looks much like the demand for other goods and services—it has a downward slope.

This indicates that a greater quantity of labor is demanded at lower prices than at higher prices. That is, in the labor market, employers are willing to buy more hours of labor at lower wages than at a higher wages.

Although the employers who demand labor prefer lower wages, the workers who supply that labor prefer higher wages.

Workers are willing to supply labor because the wages they earn enable them to buy the goods and services they want.

When graphed, the supply of labor looks much like the supply of other goods and services—it has an upward slope.

This indicates that workers are willing to supply a greater quantity of labor hours—that is, they are willing to work more—at higher wages than at lower wages.

Here's an example: Acme Company is hiring a new employee to help with the production of widgets. I'm interviewing these potential employees to find out what motivates them.

How many hours would you be willing to work for \$2 an hour? Probably not many.

When you think of other ways you could spend your time, a \$2 wage probably isn't enough to lure you away from the other alternatives, such as an afternoon at the beach. Or, put differently, the opportunity cost is too high.

But, what if you were offered \$10 an hour?

Now, you'd probably be willing to give up other opportunities and work a few, or more than a few, hours.

But what if you were offered \$50 an hour? Now, you'd probably be willing to forgo other alternatives and work as many hours as you could.

Like most people, you are far more likely to work more hours at a higher wage than at the lower wage.

This is called the substitution effect and explains why the labor supply curve is upward sloping: workers are willing to work a greater quantity of hours at higher wages than at lower wages.

Again, like other markets, the demand for labor and the supply of labor interact and result in an equilibrium price. In this case, the price is called a wage.

And, like other markets, the demand for labor and the supply of labor shift, which can cause wages to increase and decrease.

What causes the demand for labor to shift? The demand for labor is derived from or determined by the demand for goods and services produced. For example, the demand for nurses is determined by the demand for health-care services.

If the demand for health-care services increased dramatically, the demand for nurses to provide those services would also increase. In such a case, the demand curve would shift to the right and wages for nurses would increase.

On the other hand, if the demand for health-care services were to decrease, the demand for nurses would decrease as well. The demand curve would shift to the left, and wages for nurses would stagnate—or even decline—over time.

The supply of labor in the labor market is determined by the number of workers who are willing to provide that labor.

One factor that affects the number of workers in given professions is the comparative attractiveness of jobs.

For example, if higher wages or better working conditions make nursing more attractive than other jobs, more people may be willing to work in nursing, which would shift the supply curve for nursing to the right.

This rightward shift would decrease wages for nurses. Likewise, if nursing were to become a less attractive occupation, some nurses would leave for other professions. This decrease in supply would result in higher wages for the nurses who remain.

So, do you want to earn higher wages? If so, find a profession with high demand but a relatively small supply of qualified providers.

Obtain the appropriate education and training for that profession.

Then, continue your education and training so that you increase your productivity and, as a result, also increase the demand for your services.

© Federal Reserve Bank of St. Louis. Licensed under Creative Commons. <https://www.stlouisfed.org/education/economic-lowdown-video-series/episode-4-the-labor-market>.

## Supporting Question 3

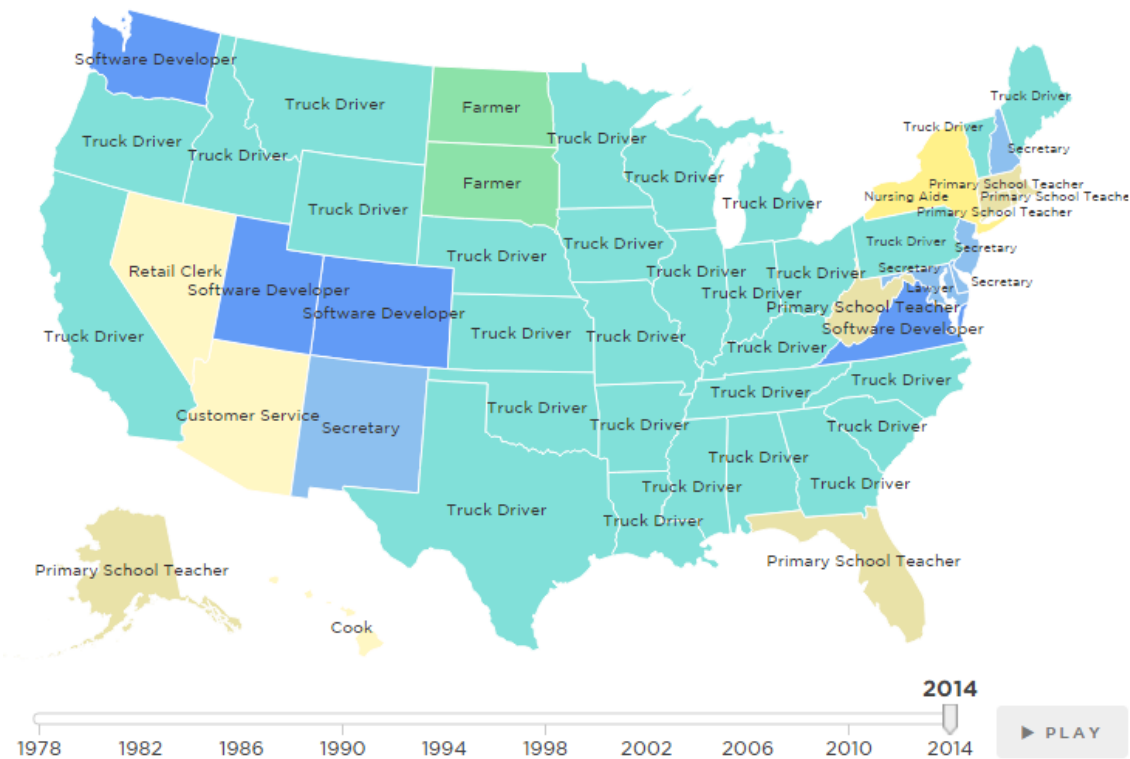
**Featured Source**

**Source B:** Quoctrung Bui, graphic depiction of the most common jobs in each state, 1978–2014, “Map: The Most Common Job in Every State,” National Public Radio, February 5, 2015

*NOTE: This source is the same as that in Supporting Question 1A. It contains an interactive map that is best viewed online at <http://www.npr.org/sections/money/2015/02/05/382664837/map-the-most-common-job-in-every-state>.*

### Map: The Most Common\* Job In Every State

\*We used data from the Census Bureau, which has two catch-all categories: “managers not elsewhere classified” and “salespersons not elsewhere classified.” Because those categories are broad and vague to the point of meaninglessness, we excluded them from our map.



	1978	1996	2014
Alabama	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Alaska	Secretaries	Primary school teachers	Primary school teachers
Arizona	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Customer service reps, investigators and adjusters, except insurance
Arkansas	Farm workers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
California	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Colorado	Secretaries	Truck, delivery, and tractor drivers	Computer software developers
Connecticut	Secretaries	Truck, delivery, and tractor drivers	Primary school teachers
Delaware	Secretaries	Secretaries	Secretaries
District of Columbia	Secretaries	Janitors	Lawyers
Florida	Secretaries	Truck, delivery, and tractor drivers	Primary school teachers
Georgia	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Hawaii	Bookkeepers and accounting and auditing clerks	Truck, delivery, and tractor drivers	Cooks, variously defined
Idaho	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Illinois	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Indiana	Assemblers of electrical equipment	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Iowa	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Kansas	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Kentucky	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Louisiana	Secretaries	Secretaries	Truck, delivery, and tractor drivers
Maine	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Maryland	Secretaries	Secretaries	Secretaries
Massachusetts	Machine operators, n.e.c	Secretaries	Primary school teachers
Michigan	Machine operators, n.e.c	Assemblers of electrical equipment	Truck, delivery, and tractor drivers
Minnesota	Truck, delivery, and tractor drivers	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Mississippi	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Missouri	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers



Montana	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Nebraska	Farmers (owners and tenants)	Farmers (owners and tenants)	Truck, delivery, and tractor drivers
Nevada	Recreation facility attendants	Recreation facility attendants	Retail sales clerks
New Hampshire	Machine operators, n.e.c	Primary school teachers	Secretaries
New Jersey	Machine operators, n.e.c	Secretaries	Secretaries
New Mexico	Secretaries	Secretaries	Secretaries
New York	Secretaries	Secretaries	Nursing aides, orderlies, and attendants
North Carolina	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
North Dakota	Farmers (owners and tenants)	Farmers (owners and tenants)	Farm managers, except for horticultural farms
Ohio	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Oklahoma	Secretaries	Secretaries	Truck, delivery, and tractor drivers
Oregon	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Pennsylvania	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Rhode Island	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Primary school teachers
South Carolina	Secretaries	Machine operators, n.e.c	Truck, delivery, and tractor drivers
South Dakota	Farmers (owners and tenants)	Farmers (owners and tenants)	Farm managers, except for horticultural farms
Tennessee	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Texas	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Utah	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Computer software developers
Vermont	Secretaries	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Virginia	Secretaries	Truck, delivery, and tractor drivers	Computer software developers
Washington	Secretaries	Truck, delivery, and tractor drivers	Computer software developers
West Virginia	Machine operators, n.e.c	Truck, delivery, and tractor drivers	Primary school teachers
Wisconsin	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers	Truck, delivery, and tractor drivers
Wyoming	Farm workers	Farmers (owners and tenants)	Truck, delivery, and tractor drivers

Source: IPUMS-CPS/ University Of Minnesota  
 Credit: Quoctrung Bui/NPR

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## Supporting Question 3

**Featured Source**

**Source C:** United States Bureau of Labor Statistics, summary report on jobs outlook, “Heavy and Tractor-trailer Truck Drivers Job Outlook” (excerpt), *Occupational Outlook Handbook, 2014–15 Edition*, January 8, 2014

Transportation and Material Moving >

### Heavy and Tractor-trailer Truck Drivers

EN ESPAÑOL [PRINTER-FRIENDLY](#)

- Summary
- What They Do
- Work Environment
- How to Become One
- Pay
- Job Outlook**
- Similar Occupations
- More Info

#### Job Outlook

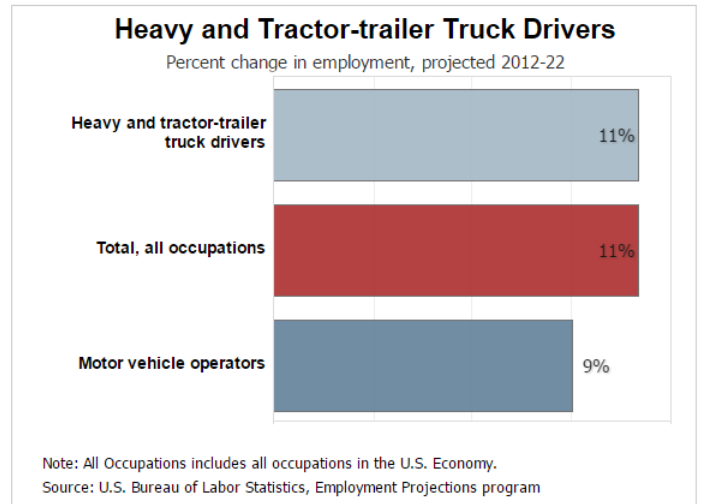
About this section ?

Employment of heavy and tractor-trailer truck drivers is projected to grow 11 percent from 2012 to 2022, about as fast as the average of all occupations.

As the economy grows, the demand for goods will increase, and more truck drivers will be needed to keep supply chains moving. Trucks transport most of the freight in the United States, so as households and businesses increase their spending, the trucking industry will grow.

As fuel prices rise, some companies may switch their shipping to rail to lower costs. However, rail is unlikely to take much market share away from trucks, because even with high diesel prices for truck fuel, trucks are more efficient for short distances. Additionally, many products need to be delivered within the short time frame that only trucks can operate in.

Demand for truck drivers is expected to increase in oil and gas industries as more drivers become needed to transport materials to and from mining sites.



#### Job Prospects

Job prospects for heavy and tractor-trailer truck drivers with the proper training are projected to be favorable. Because of truck drivers’ difficult lifestyle and time spent away from home, many companies have trouble finding and retaining qualified long-haul drivers.

#### Employment projections data for heavy and tractor-trailer truck drivers, 2012-22

Occupational Title	SOC Code	Employment, 2012	Projected Employment, 2022	Change, 2012-22		Employment by Industry
				Percent	Numeric	
Heavy and tractor-trailer truck drivers	53-3032	1,701,500	1,894,100	11	192,600	<a href="#">[XLS]</a>

SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program

<- Pay

Similar Occupations ->

Bureau of Labor Statistics, United States Department of Labor. <http://www.bls.gov/ooh/transportation-and-material-moving/heavy-and-tractor-trailer-truck-drivers.htm#tab-6>.