

# Employment Outlook: 2010-20

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Economic Analysis and Information Division

West Region Office

U.S. Bureau of Labor Statistics



# Overview

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- Background information
- Projections
  - ▶ Population and labor force
  - ▶ Economic (GDP) growth
  - ▶ Industry growth
  - ▶ Occupational growth
- Resources for additional information

# Employment Projections Background

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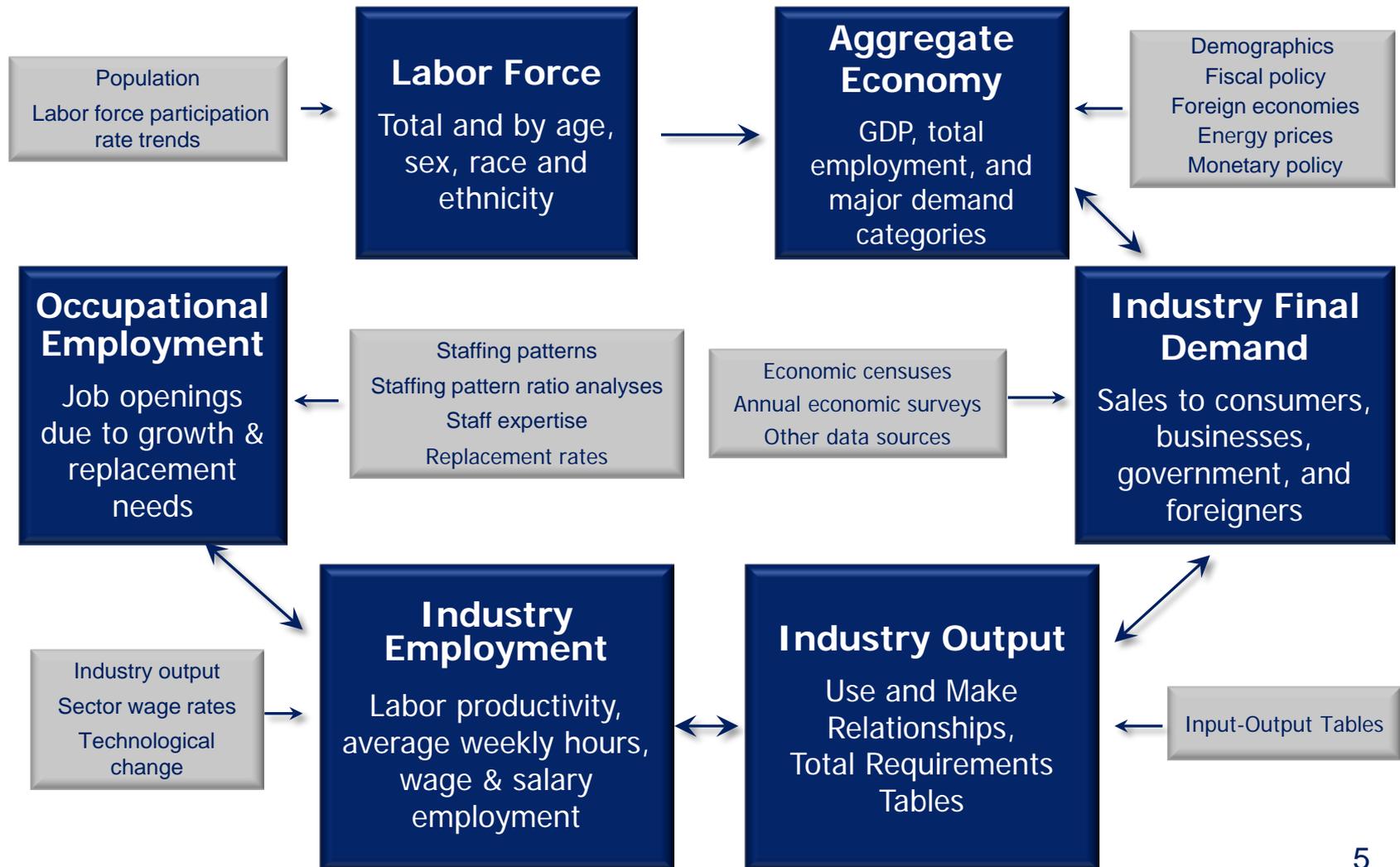
- 10-year projections made every 2 years
- 2010-20 projections cover over 700 occupations and 300 industries
- Projections are used to produce the *Occupational Outlook Handbook*—which has been published since 1949

# Other Uses of Employment Projections Data

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- Career counselors and students making career choice decisions
- Mid-career jobseekers looking to switch occupations
- Education and training officials to make decisions on policy, funding, and program offerings
- Researchers interested in how the economy is changing

# Employment Projections Process



# Recession's Impact on the Projections

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- Projections focus on long-term structural changes
- 2010-20 projections assume a full-employment economy in 2020
- 2010 employment for many industries had not recovered
  - ▶ some industries more affected than others
- Low employment and assumed return to full employment means faster growth rates

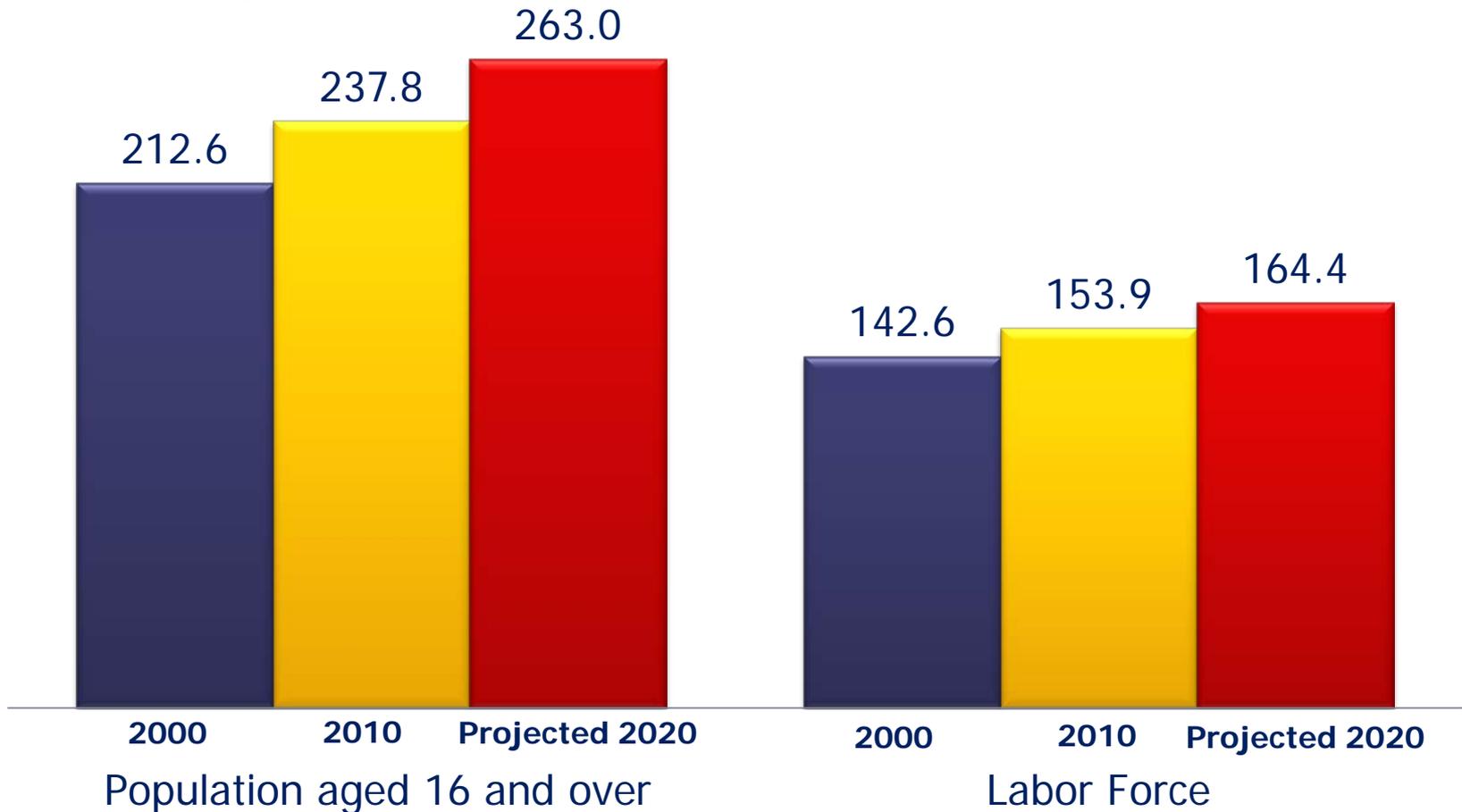
# Employment Outlook: 2010-20

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## Population and Labor Force Growth

# Population and Labor Force

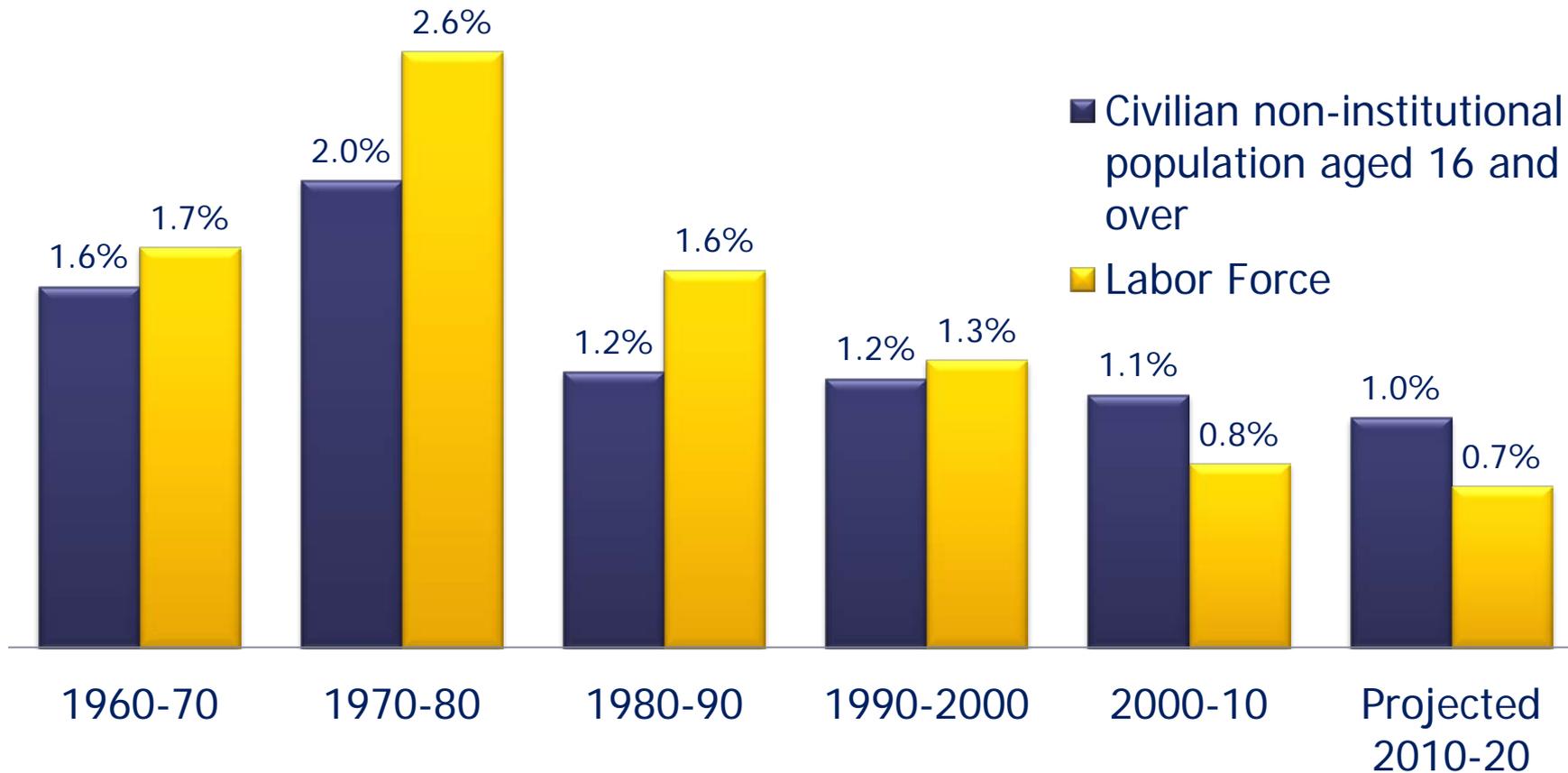
Millions of persons



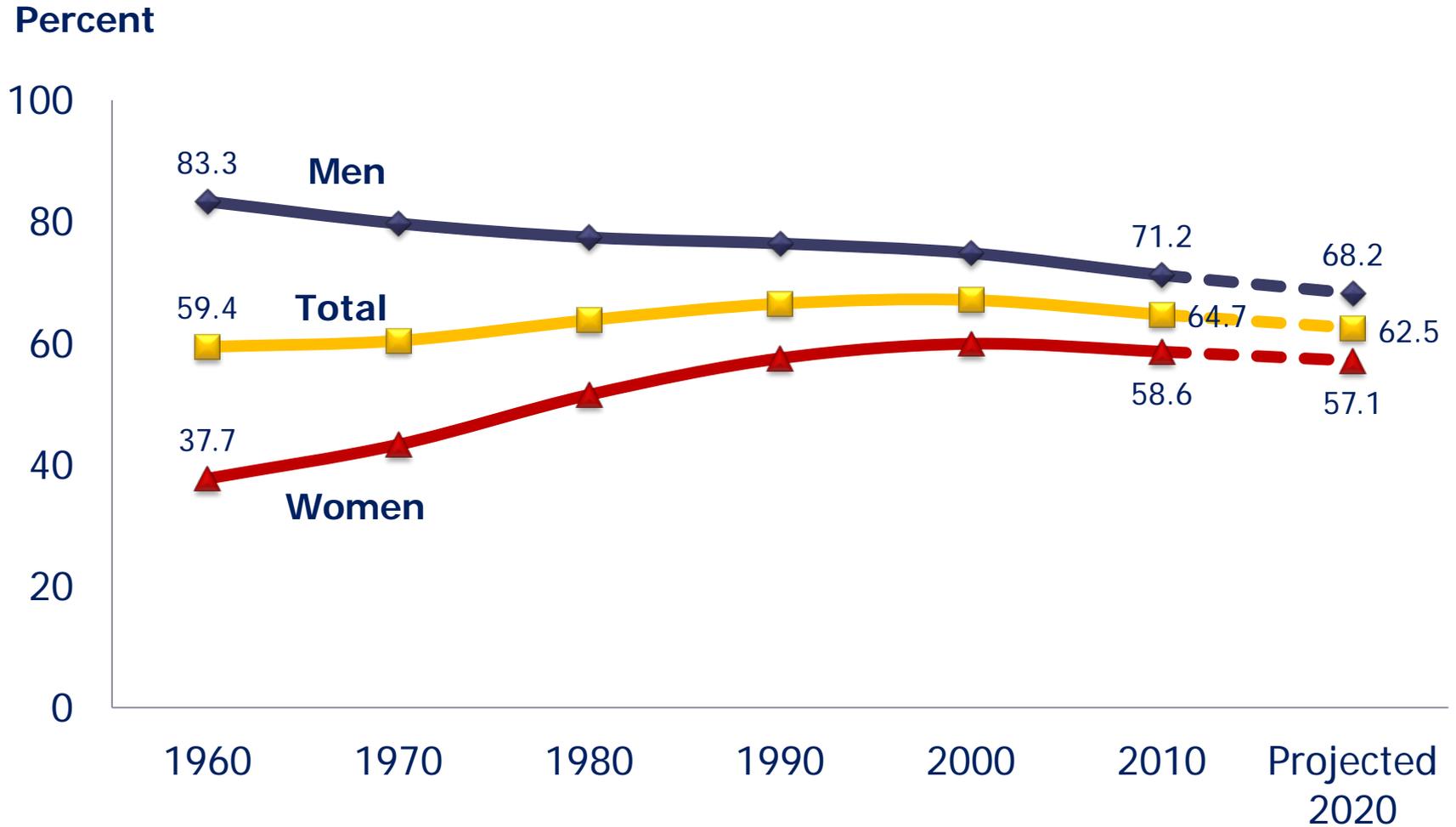
Population Data Source: U.S. Census Bureau

# Population Growth Rate

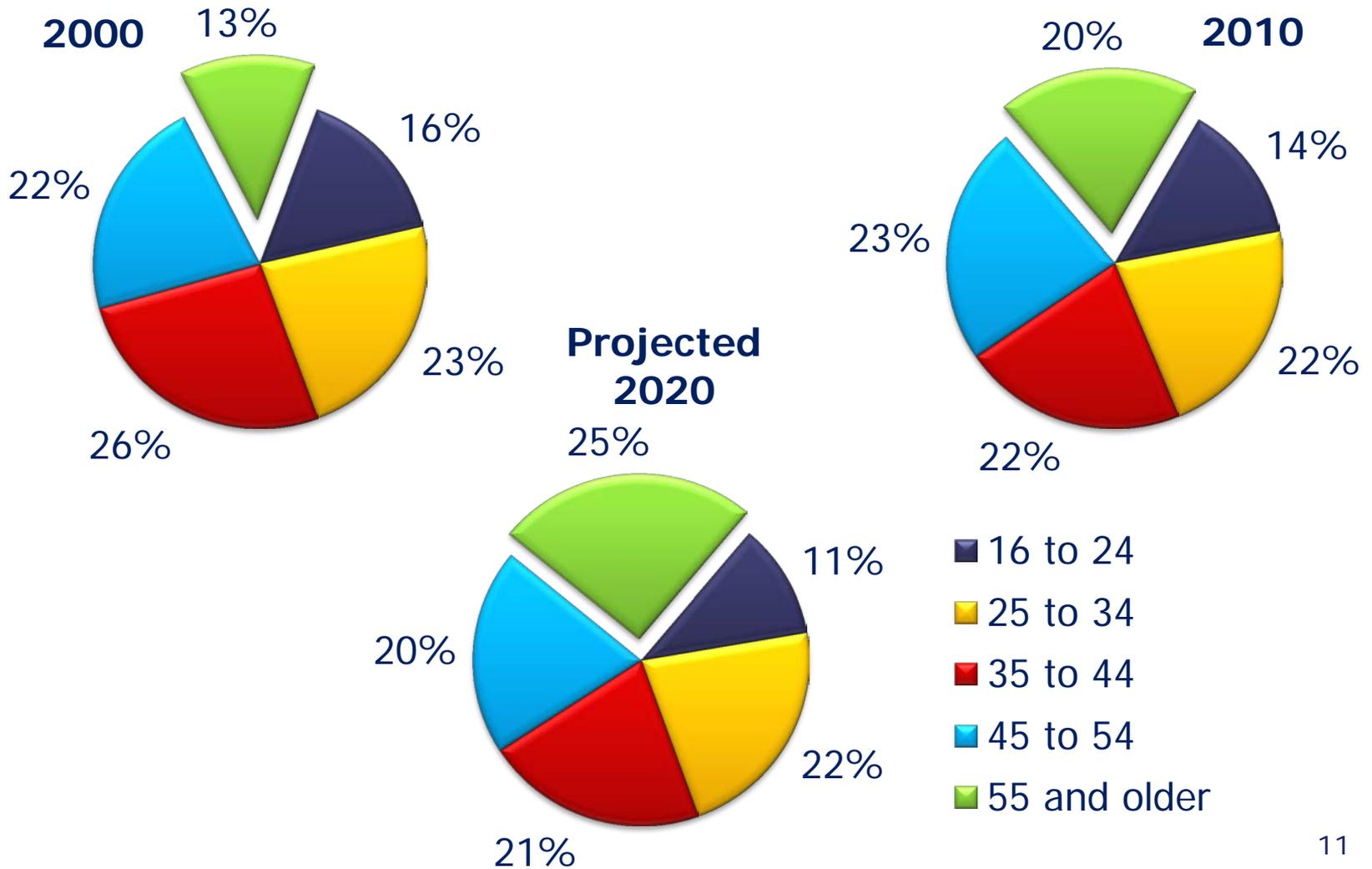
## Annual rates of change



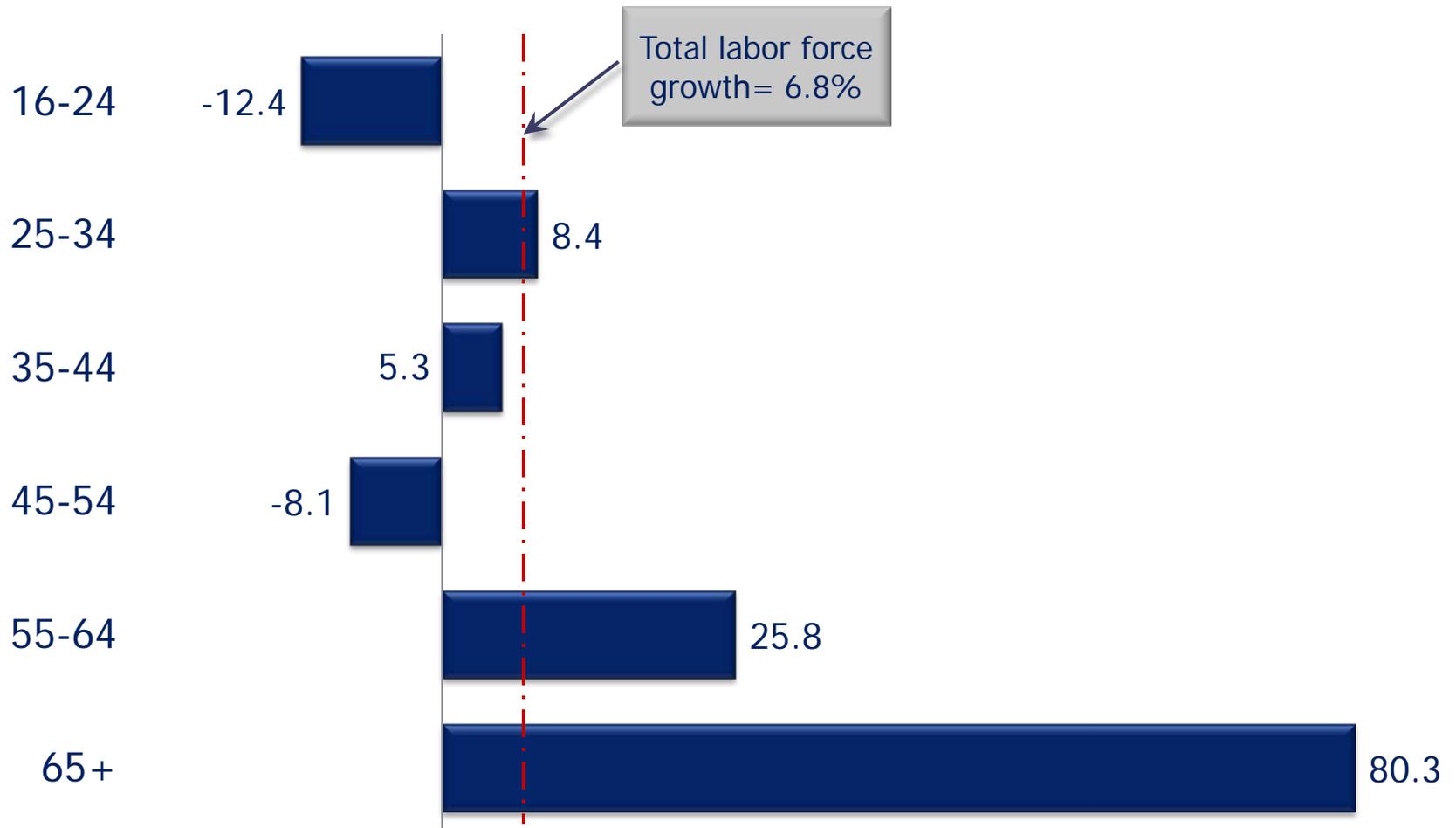
# Labor Force Participation Rates



# Labor Force Share by Age Group

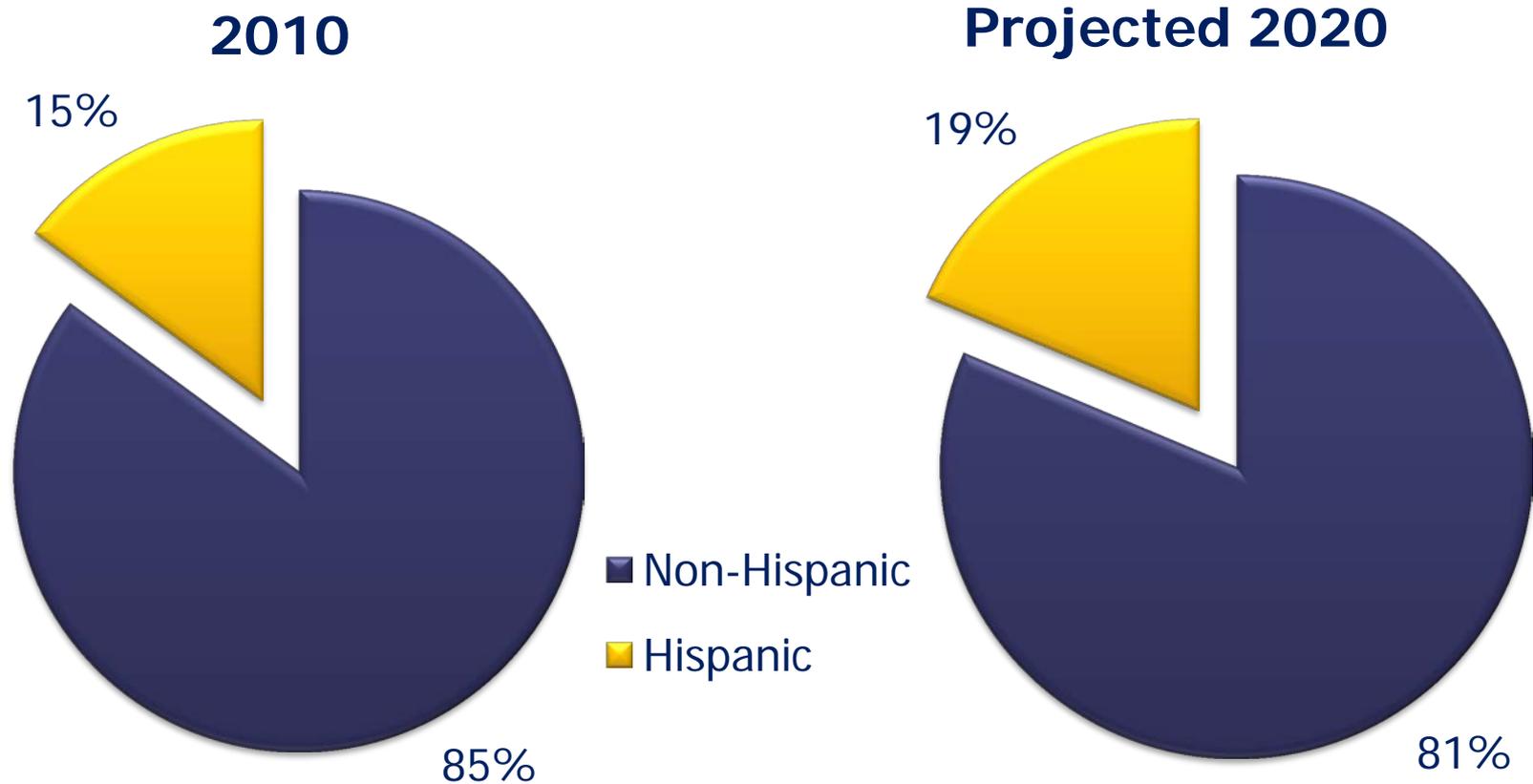


# Labor Force Percent Change by Age Group: Projected 2010-20



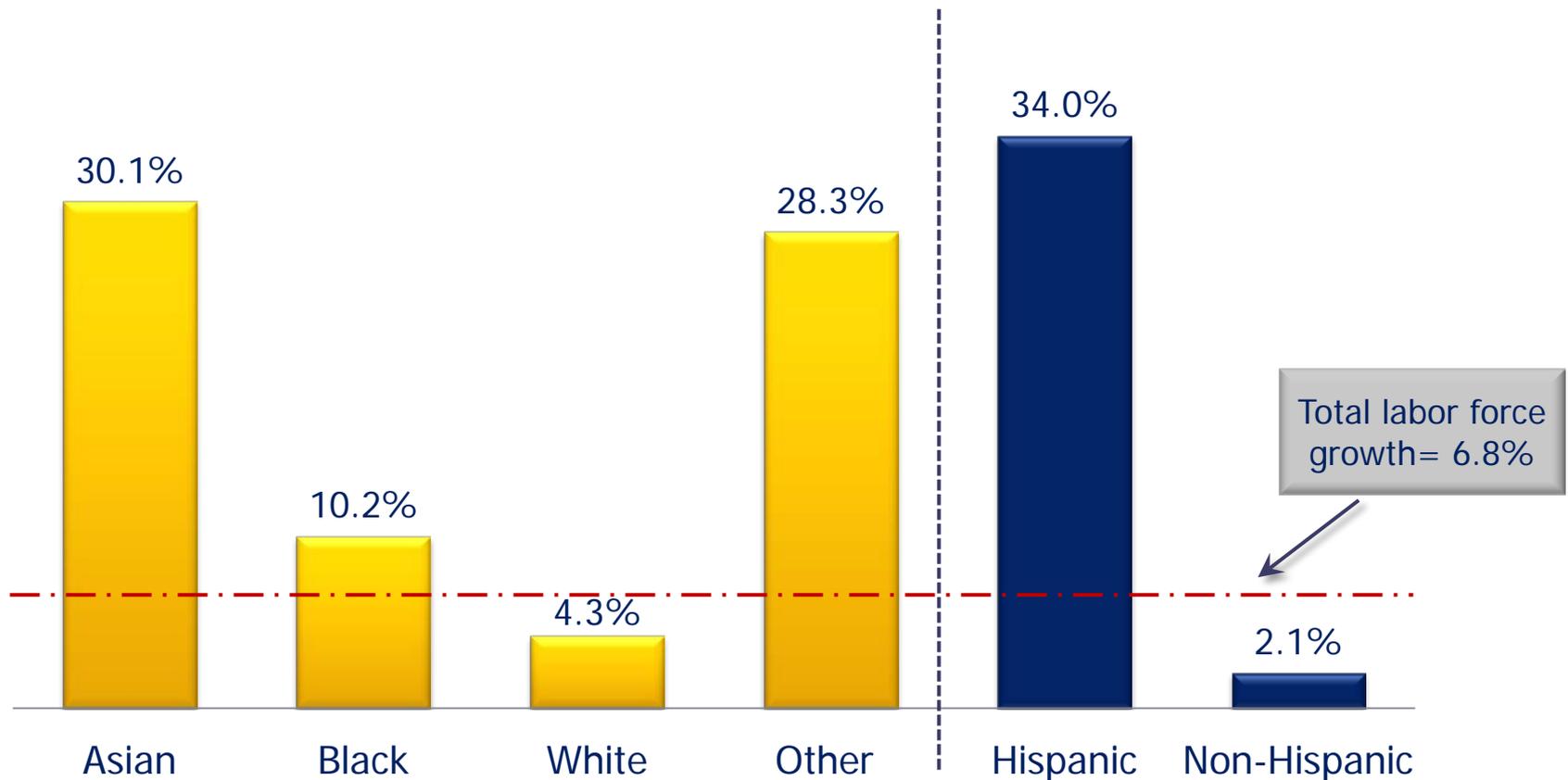
# Labor Force Share by Ethnicity

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# Labor Force Percent Change by Race and Ethnicity

Projected 2010-20



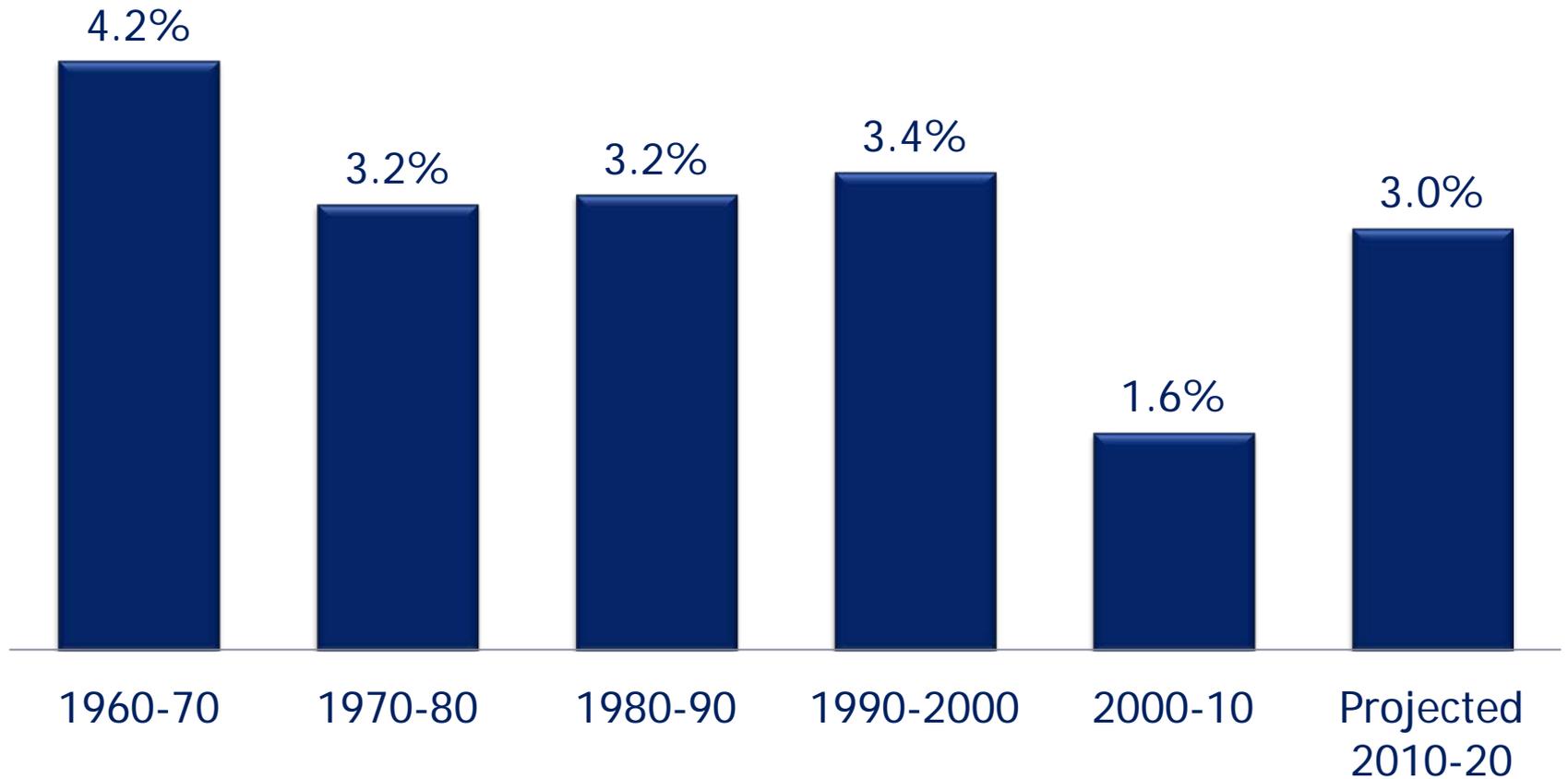
# Employment Outlook: 2010-20

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Economic Growth

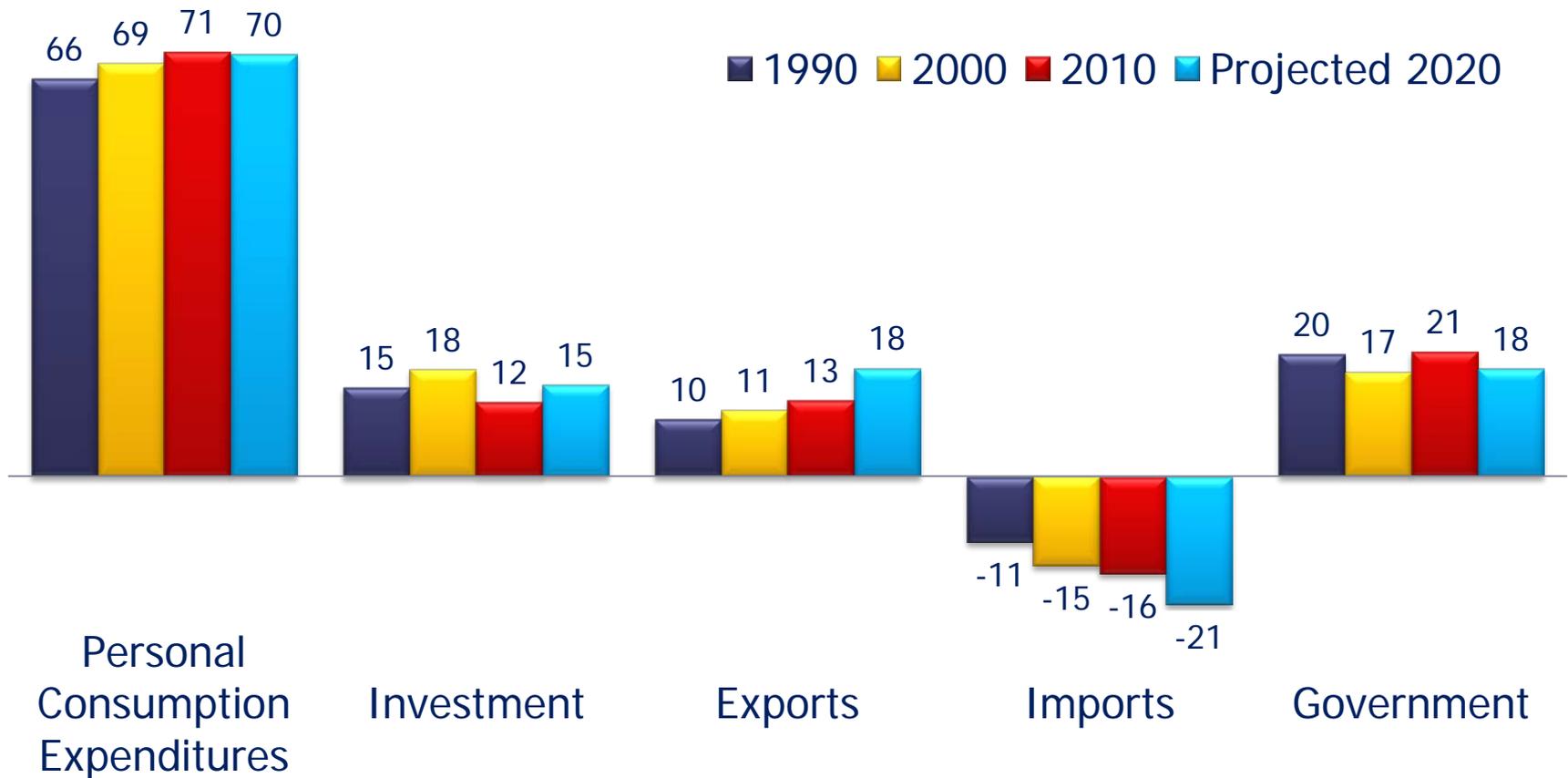
# Real Gross Domestic Product Growth

Annual rate of change

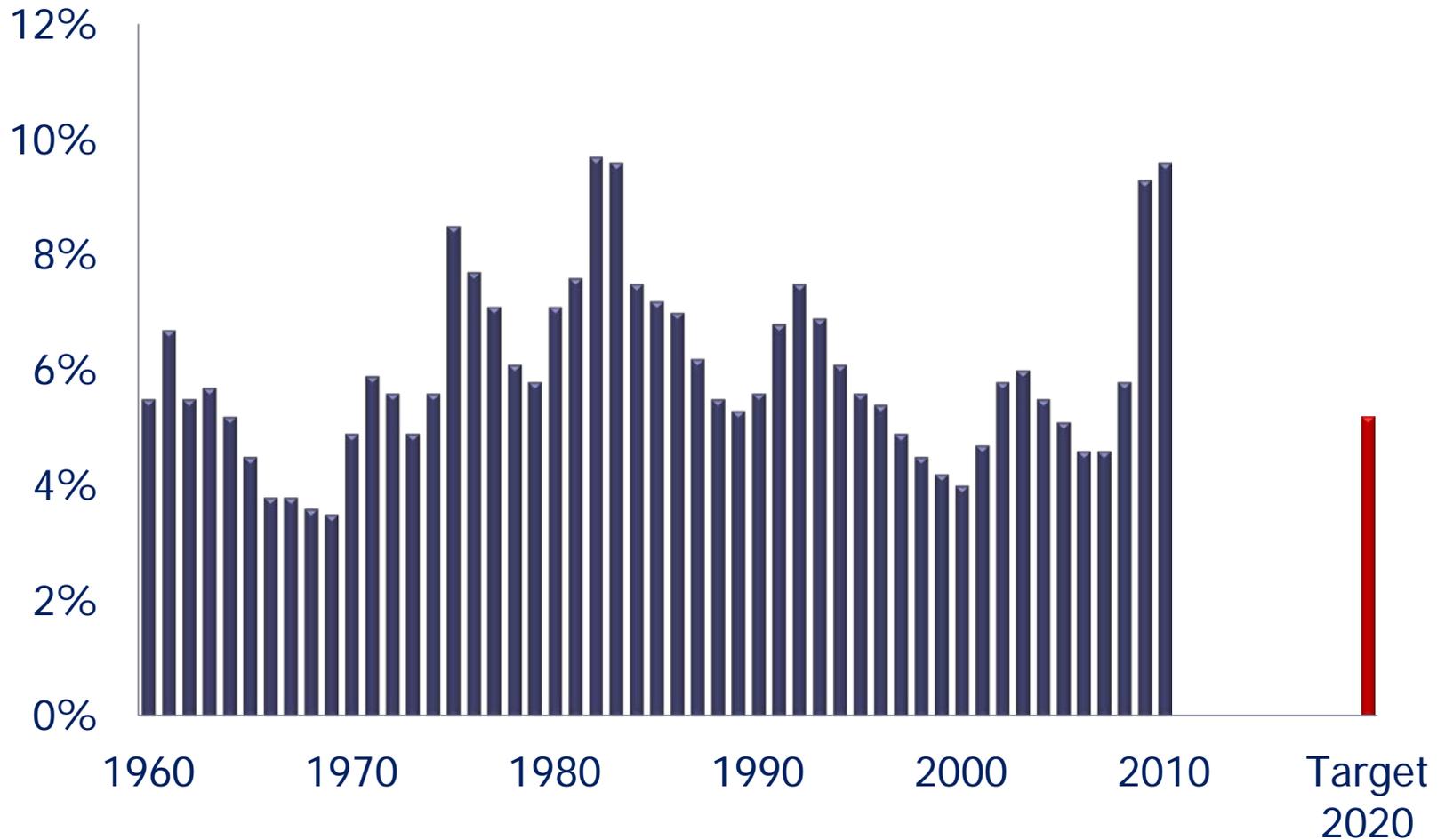


# Nominal GDP by Component

Percent of GDP

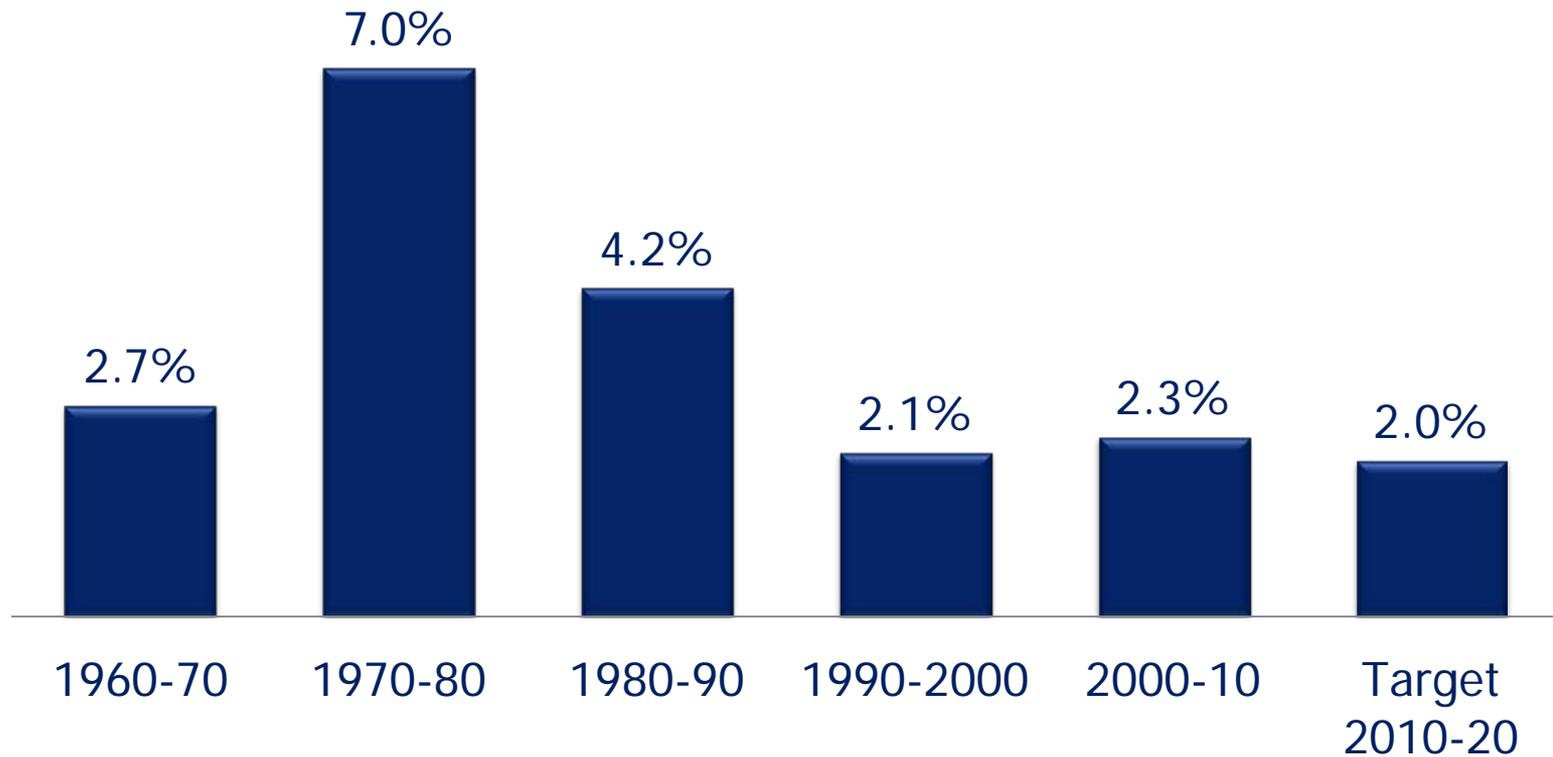


# Unemployment Rate



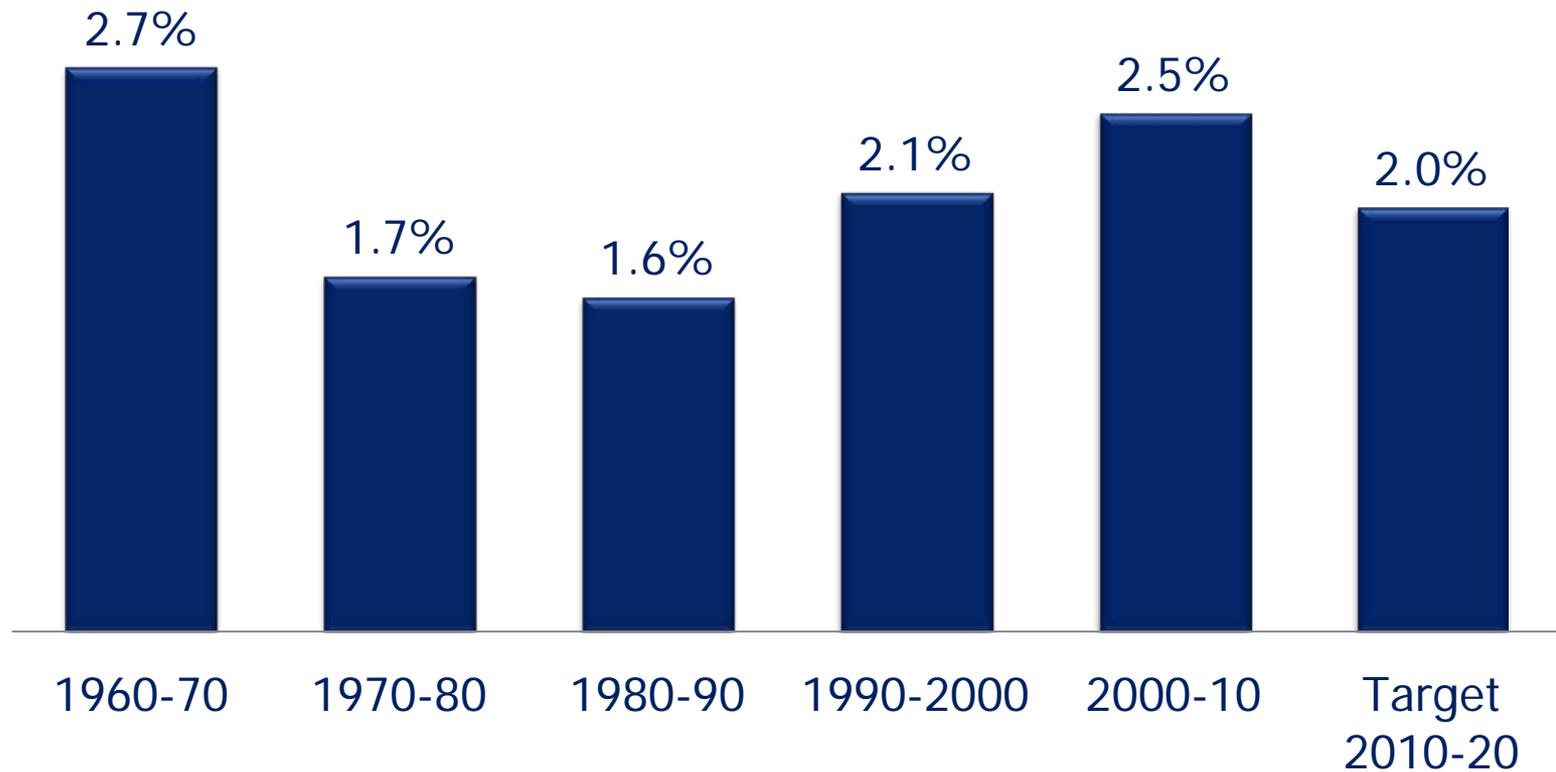
# Inflation Rate

Annual rate of change

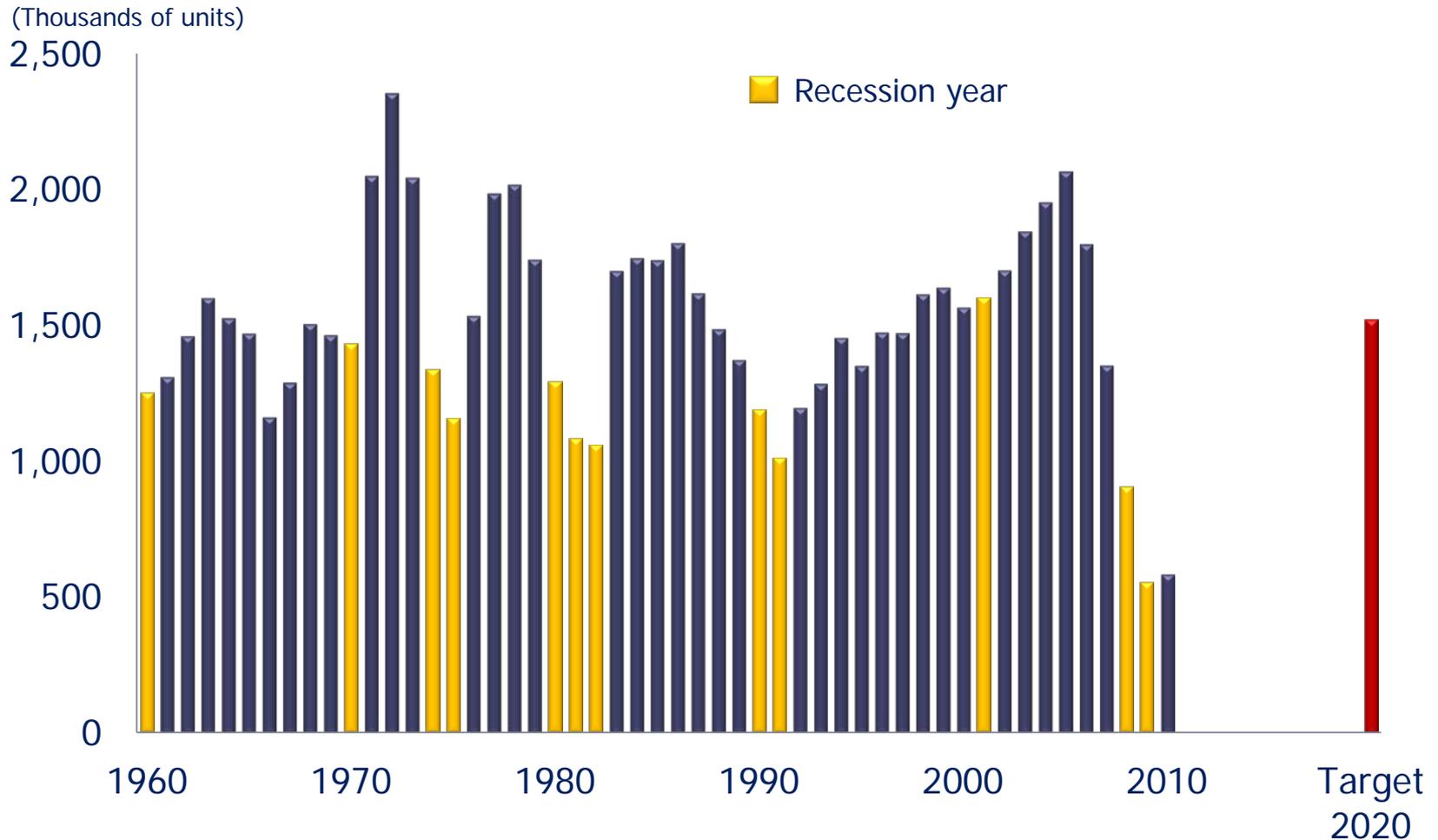


# Productivity Growth Rate

Annual rate of change



# Housing Starts: 1960 to 2010 and Projected 2020



Historic Data Source: U.S. Census Bureau

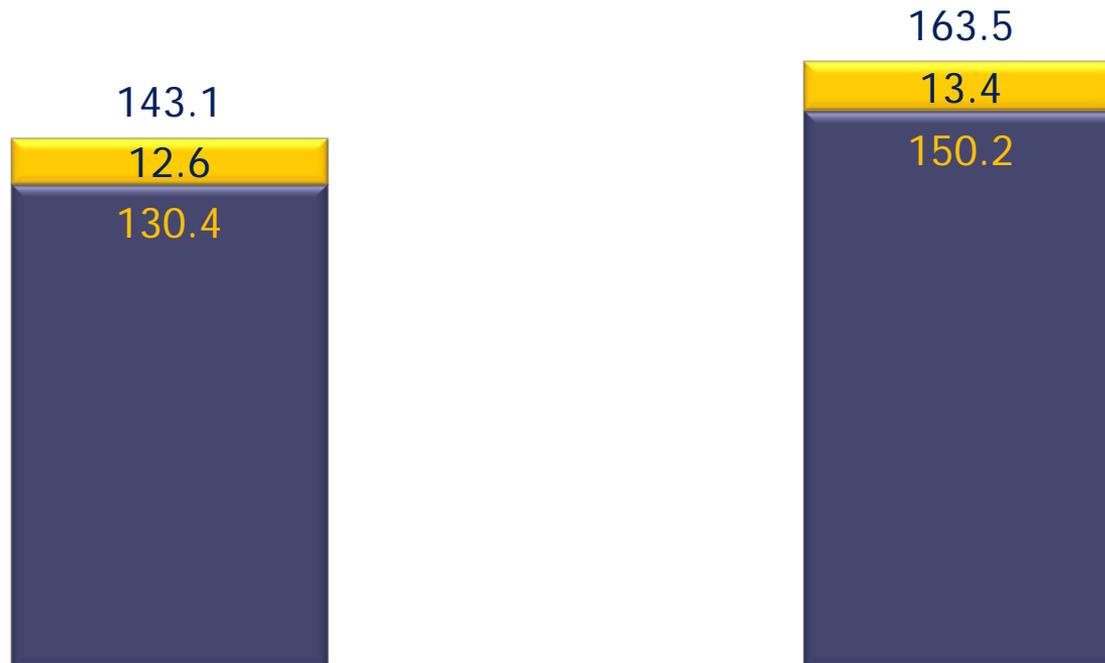
# Employment Outlook: 2010-20

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Industry Growth

# Employment

- All other employment
- Nonagricultural wage and salary employment

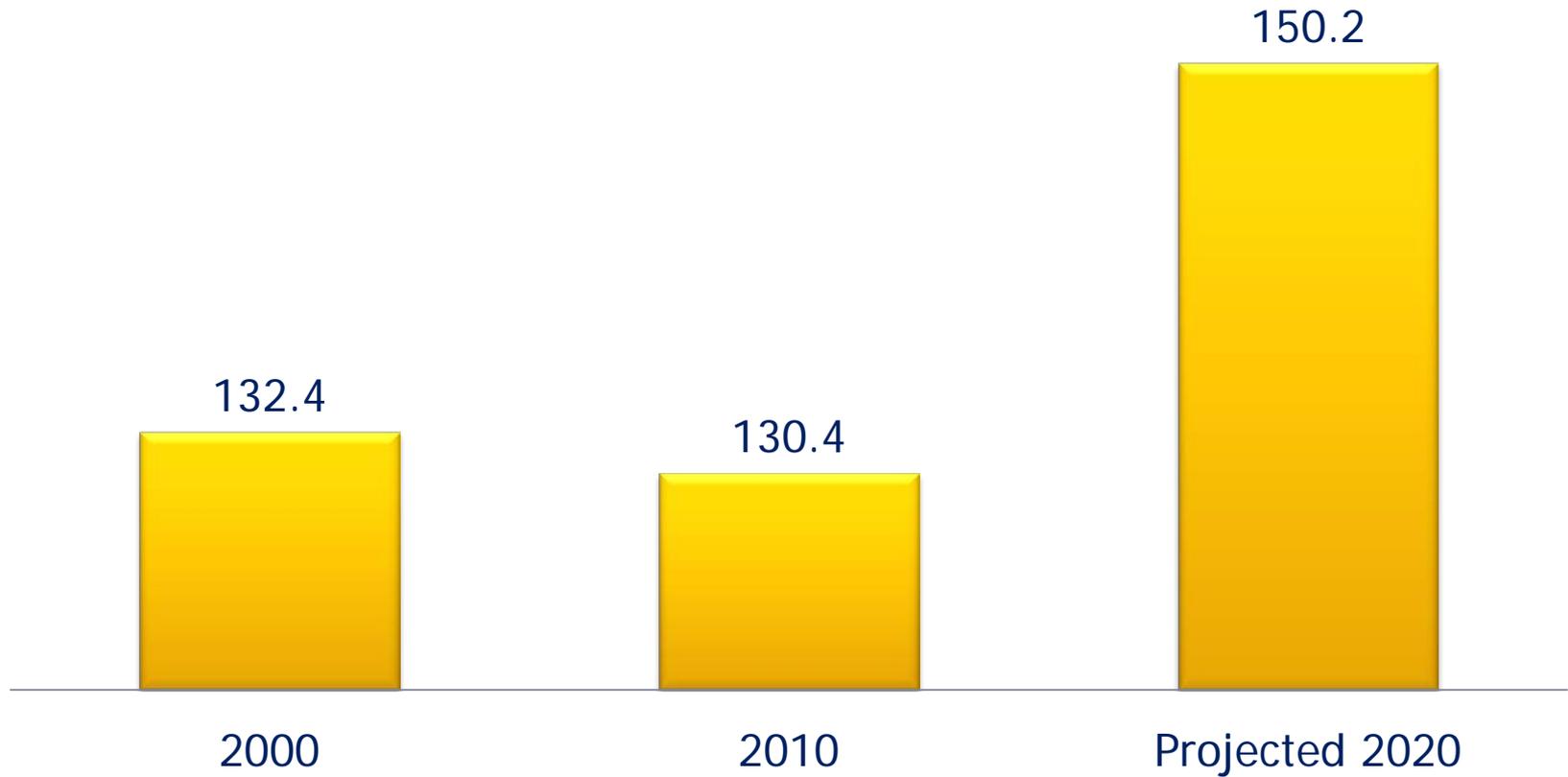


2010

Projected 2020

# Employment

Millions of jobs



Nonagricultural Wage and Salary Employment

# The “Lost” Decade

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- In 2000, total of 132.4 million jobs
- 2000-2010 Projection: 152 million total jobs in 2010
- 2000-2010 Actual: 130.4 million jobs in 2010
- 2020 Projected Employment: 150.2 million

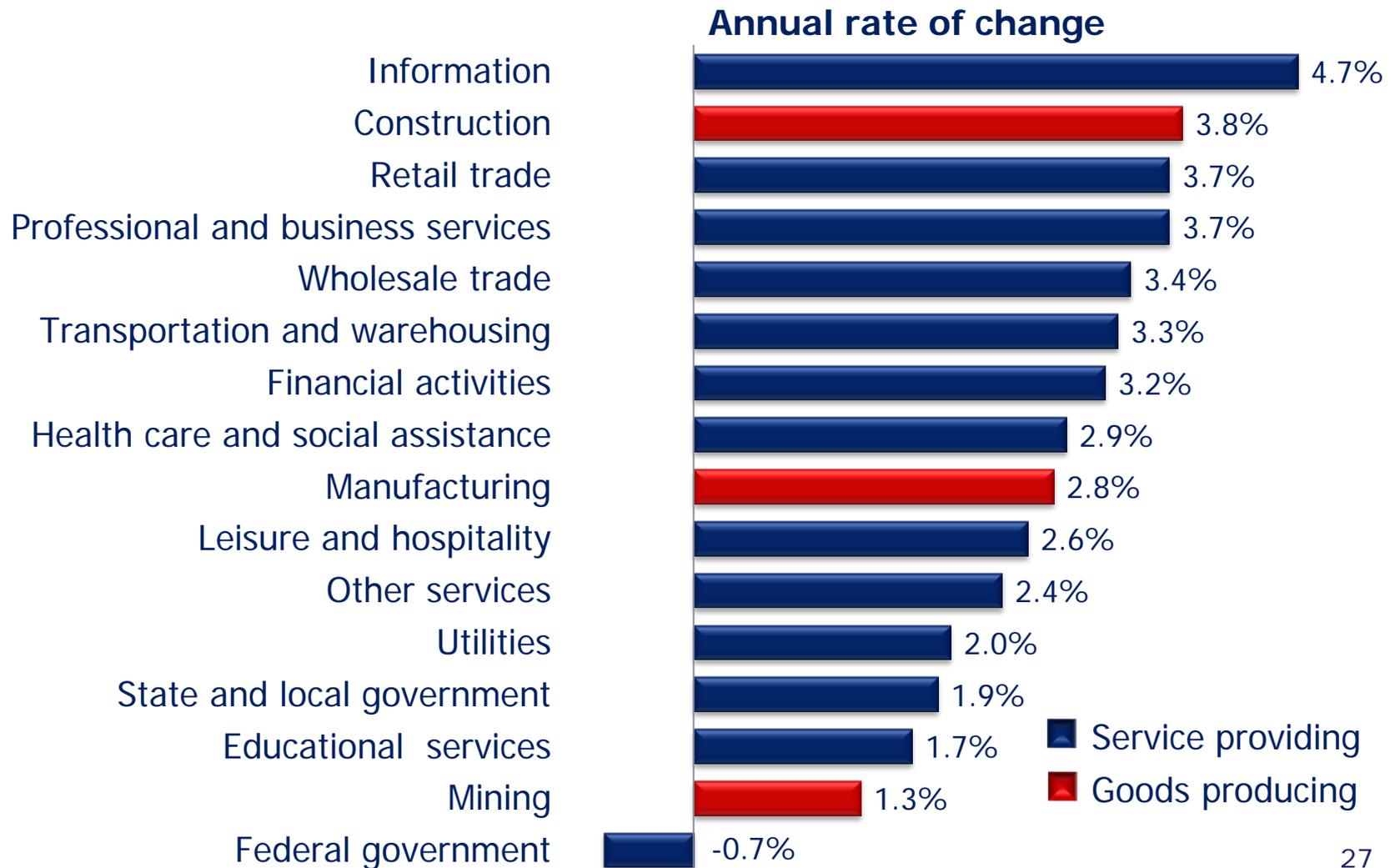
# Total Nonfarm Payroll Employment

In millions



NOTE: BLS does not project specific data for years to 2020. The interim years between 2010 and the 2020 projection point are expressed by a straight dashed line only.

# Real Output Growth by Industry Sector: Projected 2010-20



# Employment by Industry Sector: 2010



# Employment Change by Industry Sector: Projected 2010-20

Thousands of wage and salary jobs



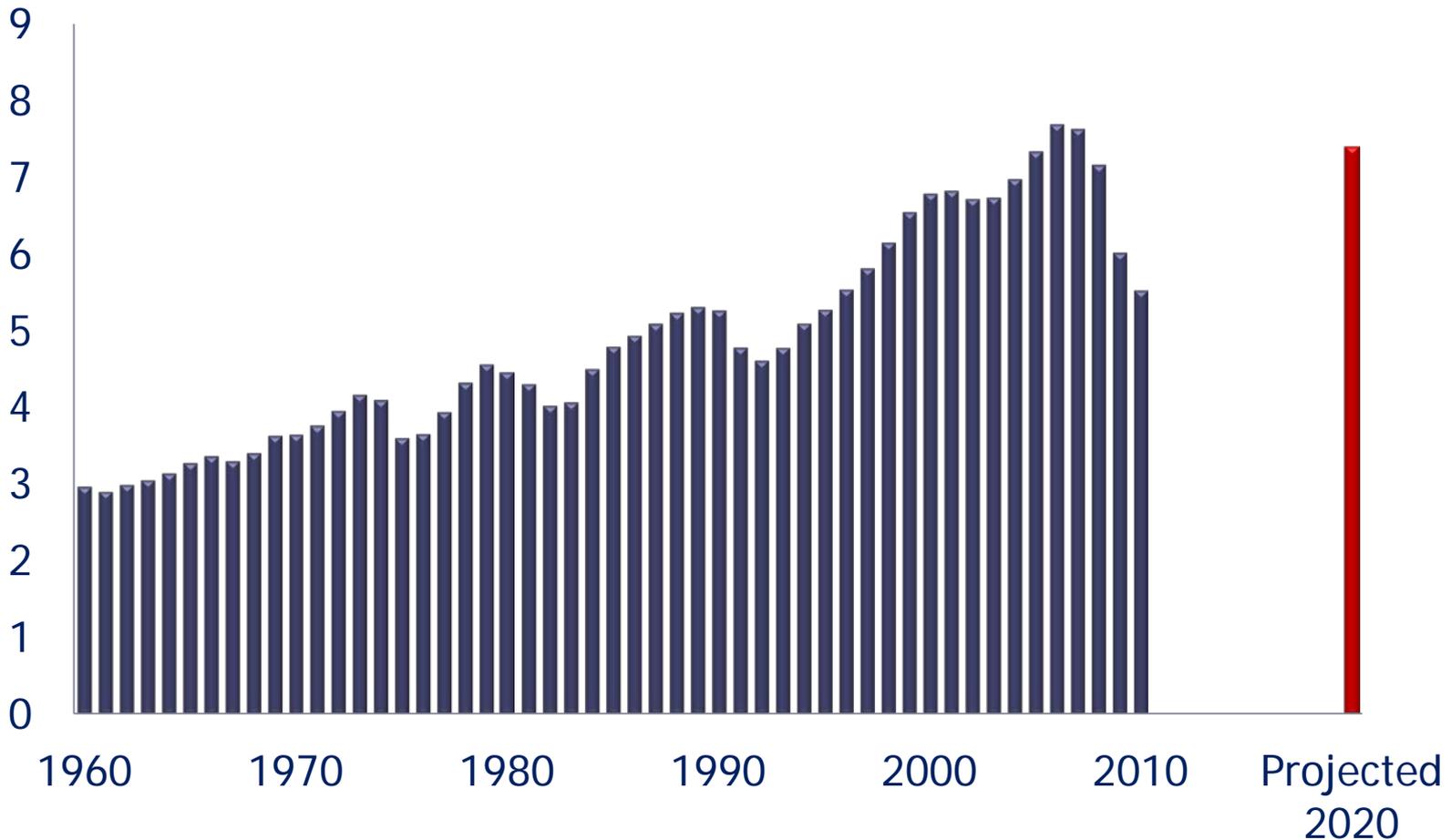
# Percent Change in Employment by Industry Sector: Projected 2010-20

Annual rate of change for wage and salary employment



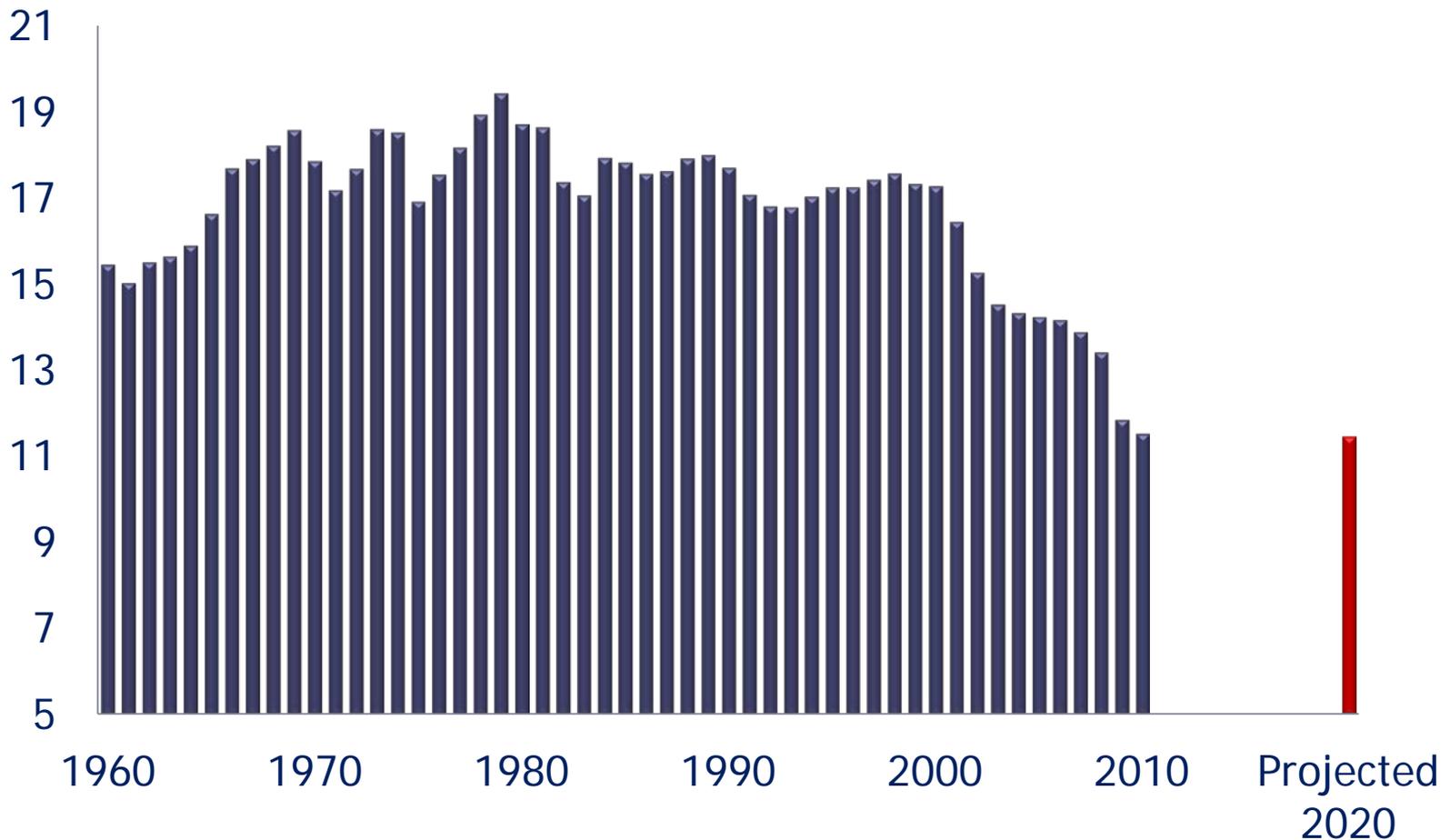
# Construction Wage and Salary Employment

Millions of jobs



# Manufacturing Wage and Salary Employment

Millions of jobs



# Employment Outlook: 2010-20

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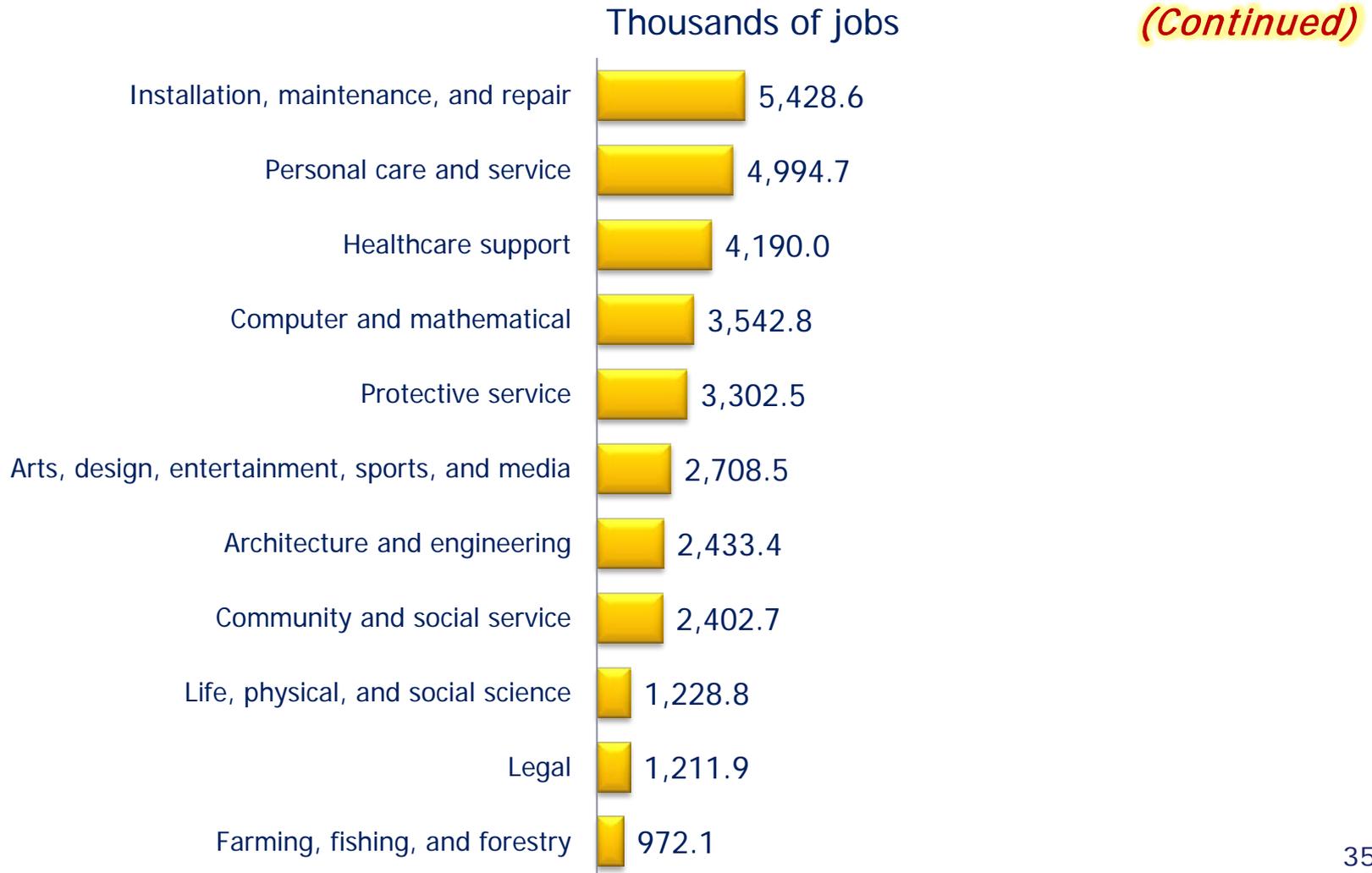
## Occupational Growth

# Employment by Major Occupational Group: 2010



*(Continued on  
next slide)*

# Employment by Major Occupational Group: 2010



# Percent Change in Employment by Major Occupational Group

Projected 2010-20



*(Continued on next slide)*

# Percent Change in Employment by Major Occupational Group

Projected 2010-20

*(Continued)*



# Employment Change by Major Occupational Group

Thousands of jobs, projected 2010-20



*(Continued on next slide)*

# Employment Change by Major Occupational Group

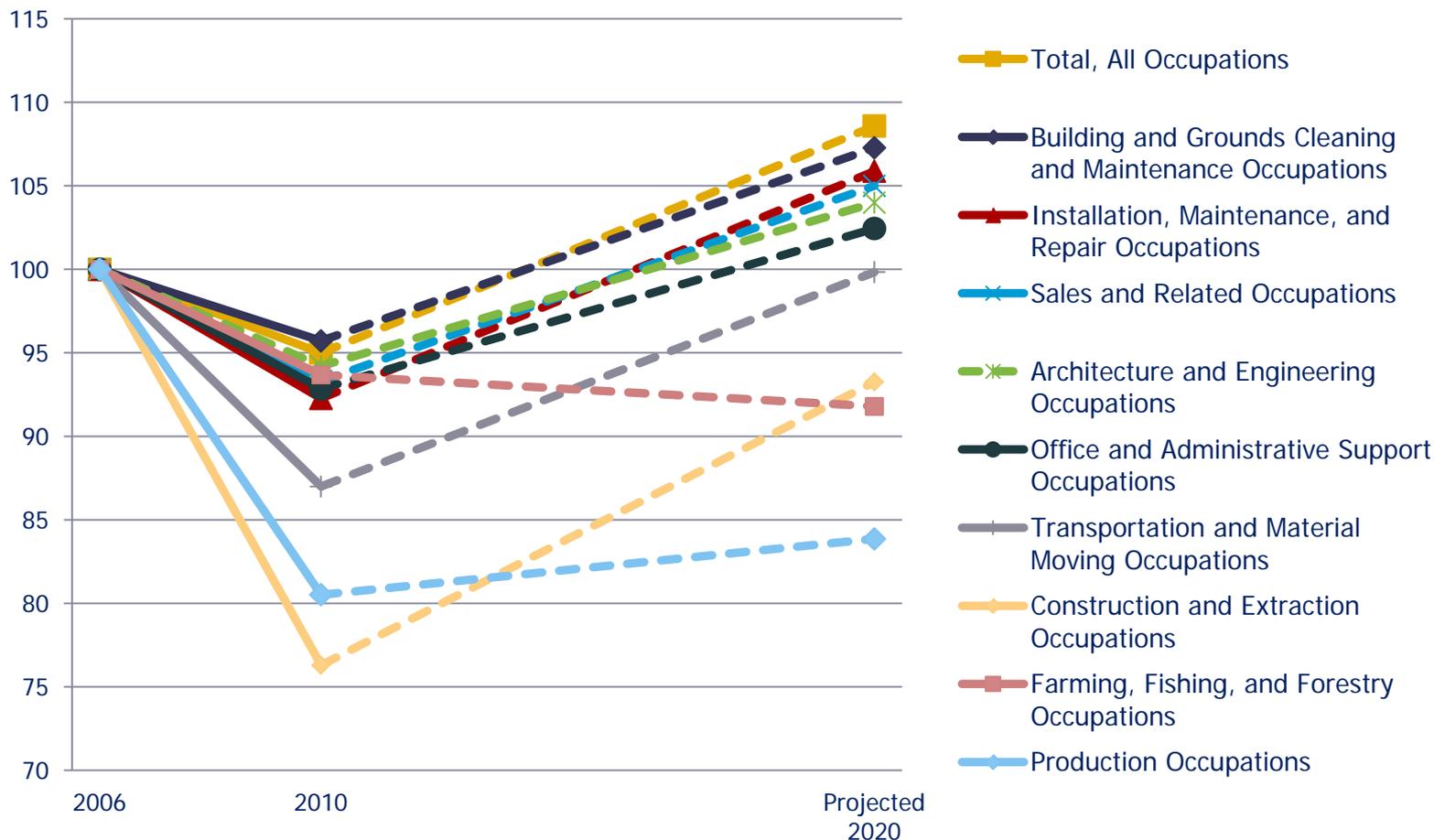
Thousands of jobs, projected 2010-20 *(Continued)*



# Employment Trends for Occupational Groups whose Employment Declined 2006-10

## 2006-10

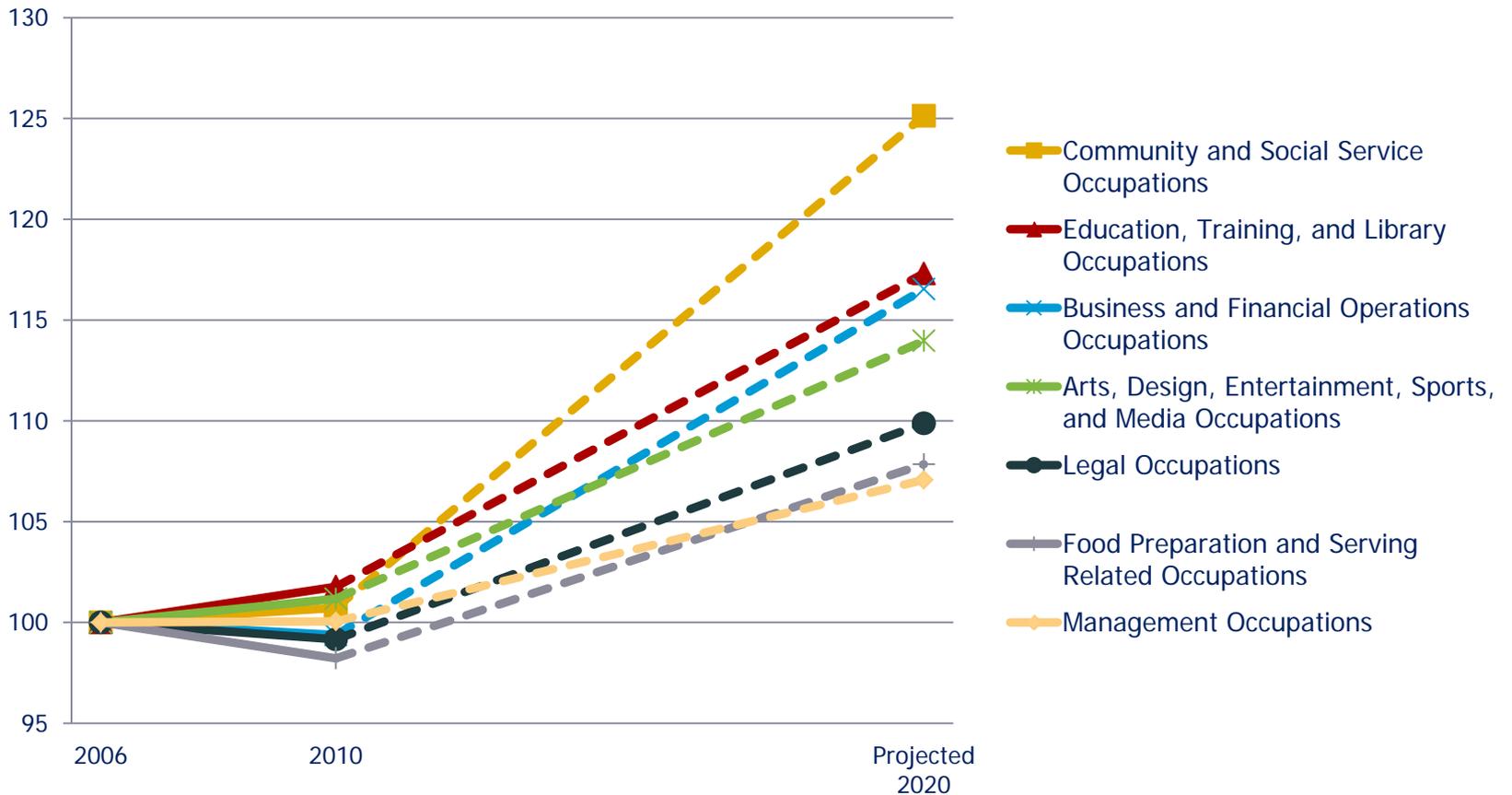
Percent of 2006 employment



NOTE: BLS does not project specific data for years to 2020. The interim years between 2010 and the 2020 projection point are expressed by a straight dashed line only.

# Employment Trends for Occupational Groups with Little Employment Change 2006-10

Percent of 2006 employment

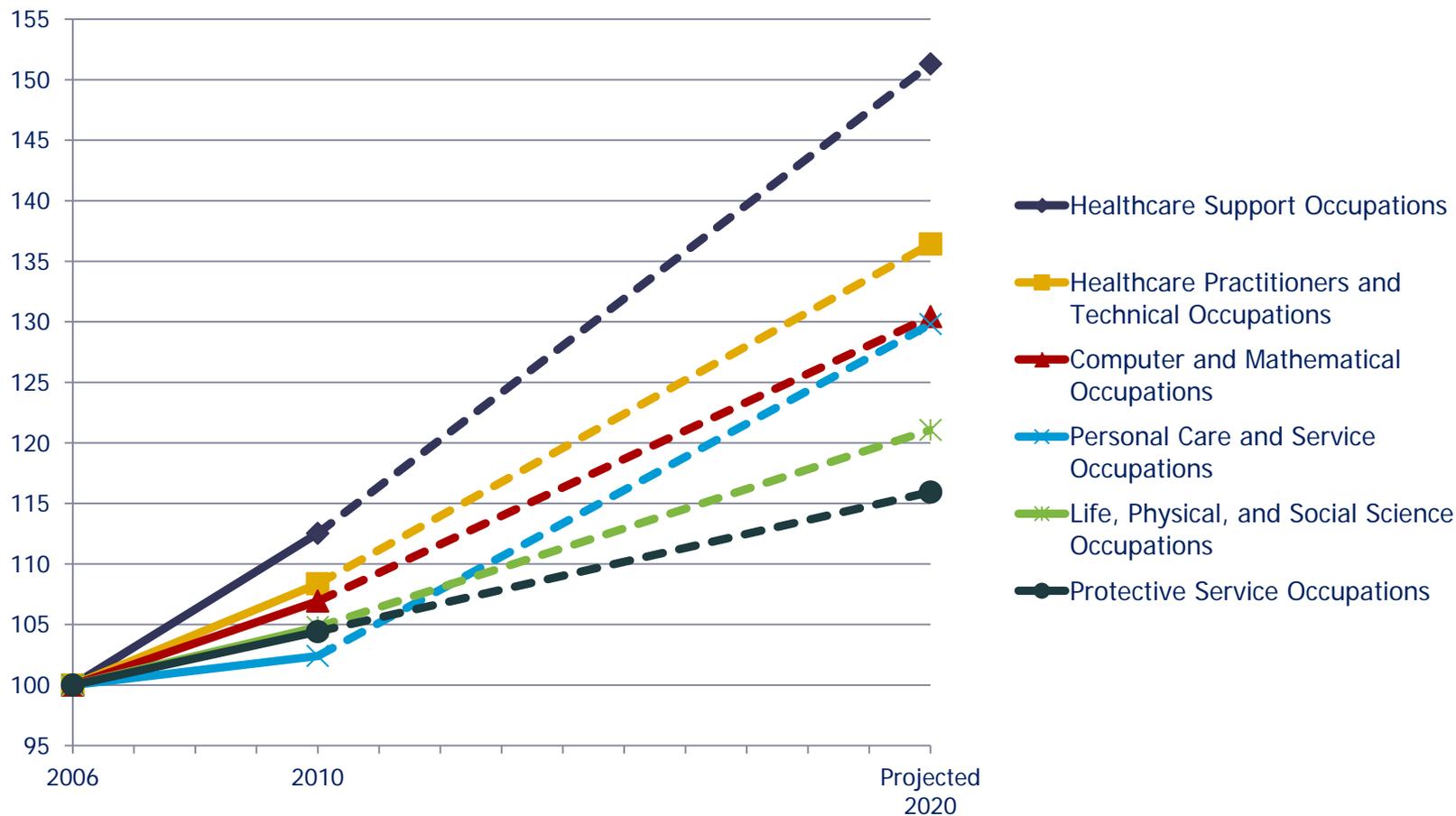


NOTE: BLS does not project specific data for years to 2020. The interim years between 2010 and the 2020 projection point are expressed by a straight dashed line only.



# Employment Trends for Occupational Groups whose Employment Increased 2006-10

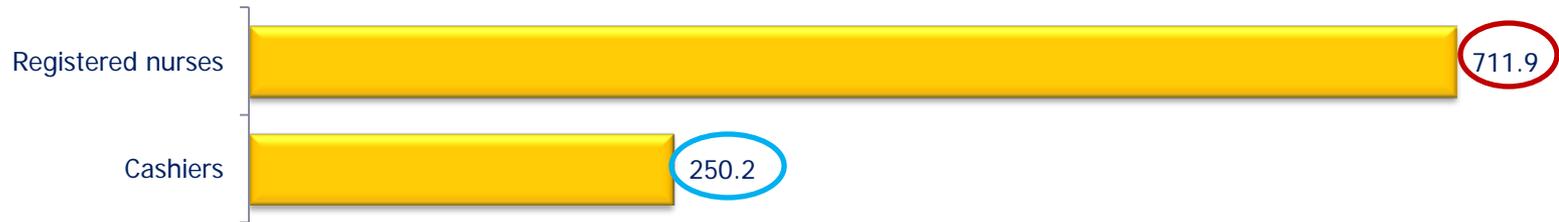
Percent of 2006 employment



NOTE: BLS does not project specific data for years to 2020. The interim years between 2010 and the 2020 projection point are expressed by a straight dashed line only.

# Job Openings = Growth + Replacement needs

Numeric employment growth in two occupations, projected 2010-20, in thousands



Job openings for two occupations, projected 2010-20, in thousands



# Job Openings by Major Occupational Group

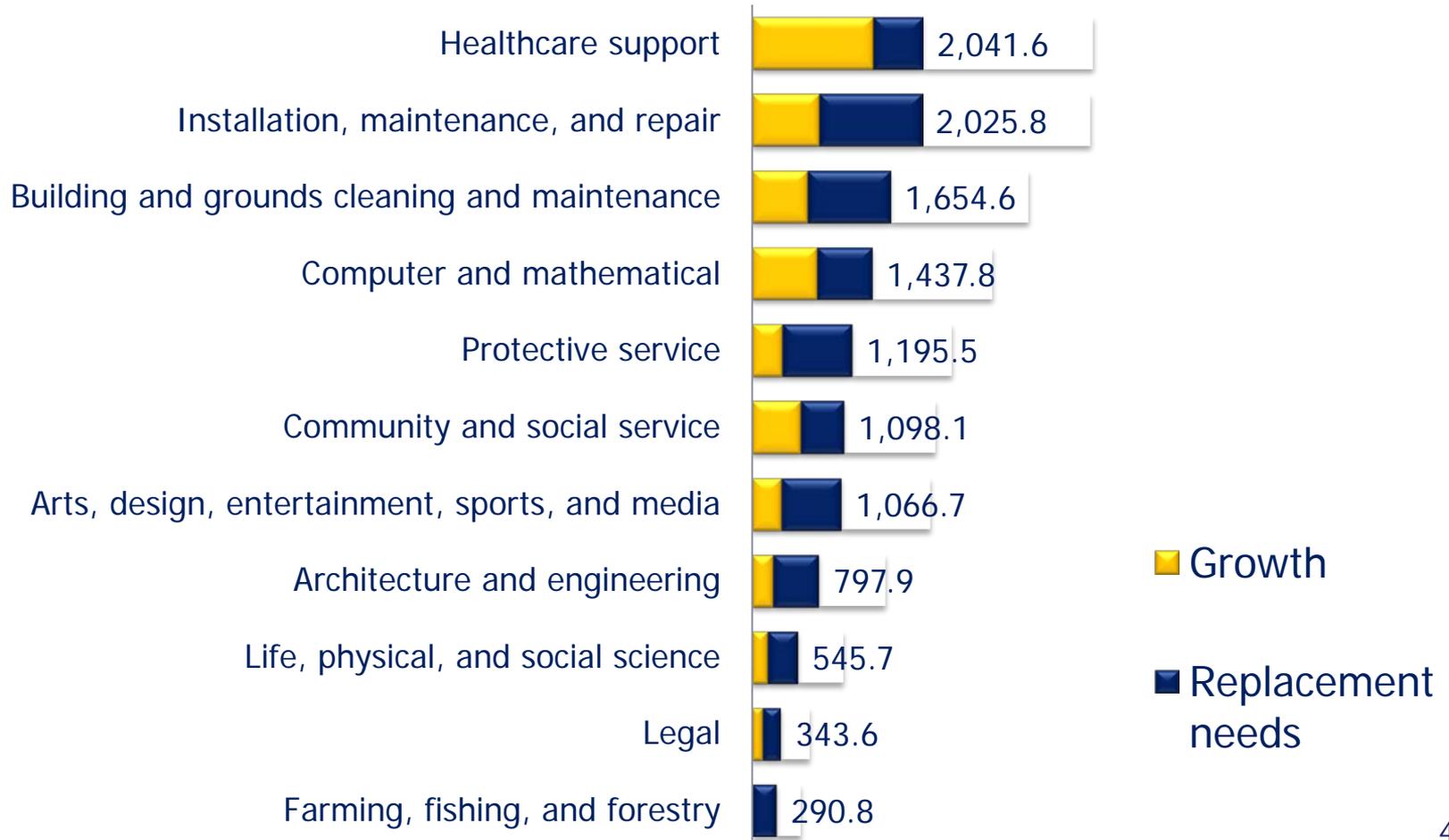
Thousands of job openings, projected 2010-20



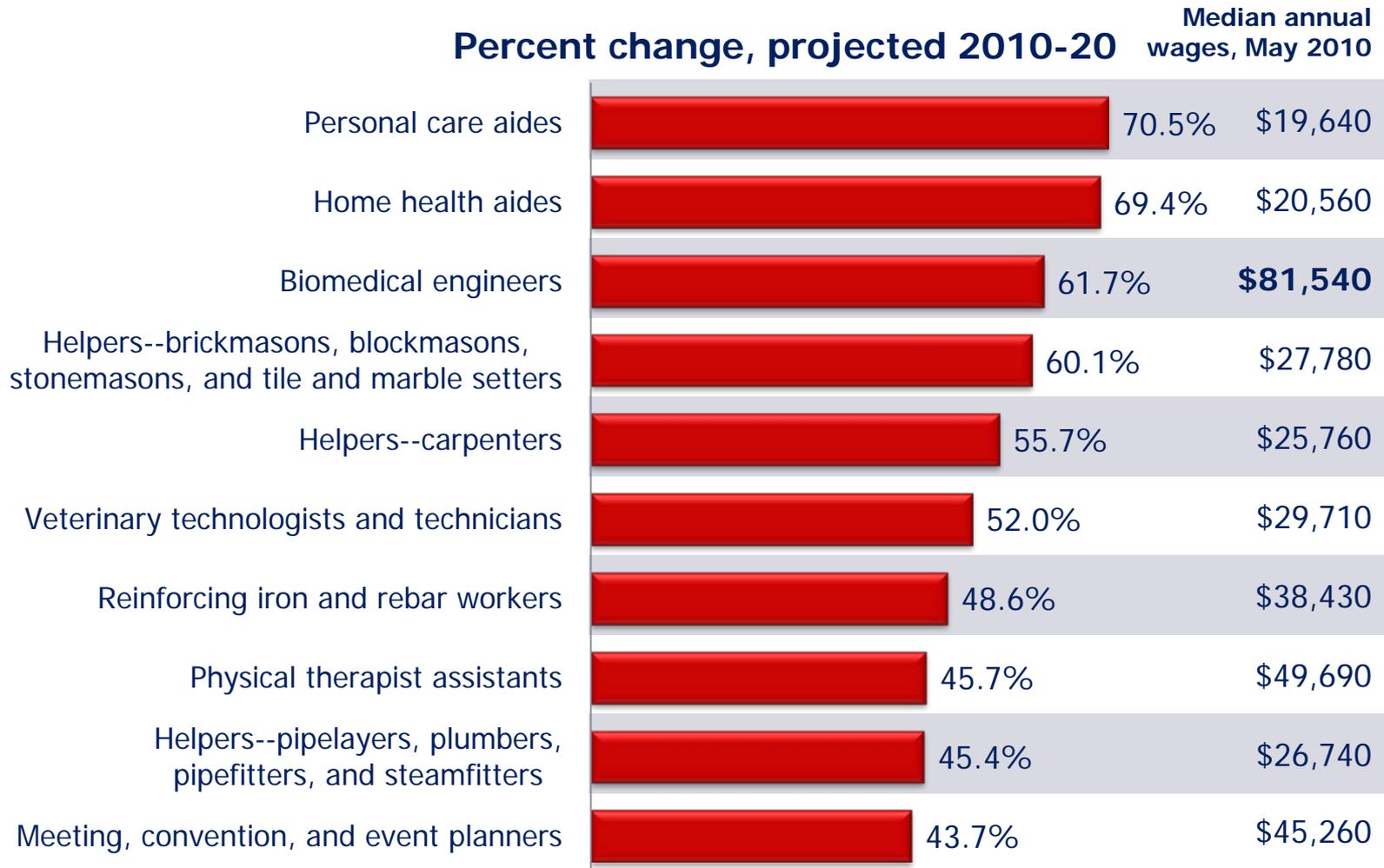
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# Job Openings by Major Occupational Group

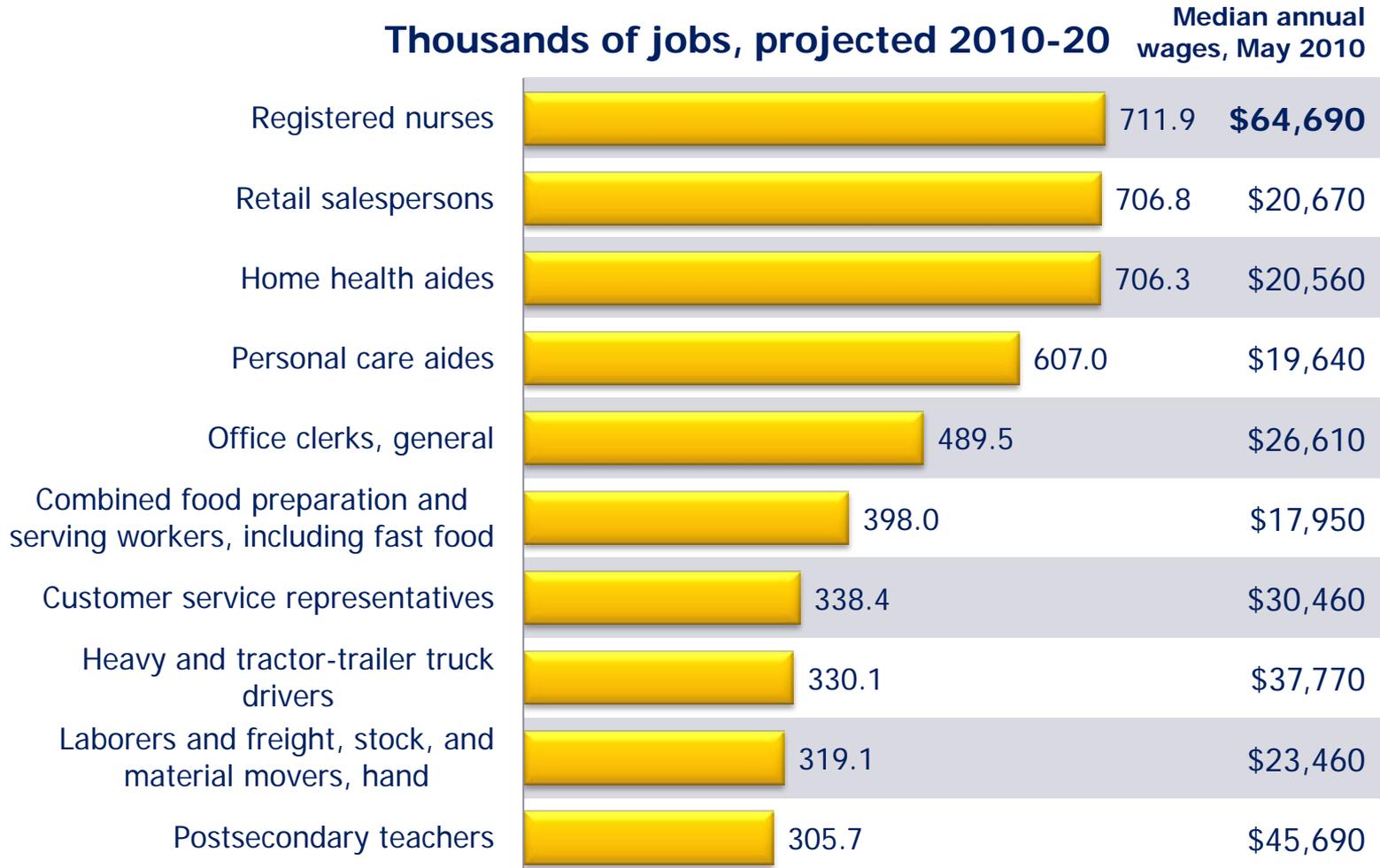
Thousands of job openings, projected 2010-20 *(Continued)*



# Fastest Growing Occupations



# Occupations with the Largest Job Growth



# Occupations with the Most Job Openings

Thousands of job openings, projected 2010-20

Median annual Wages, May 2010

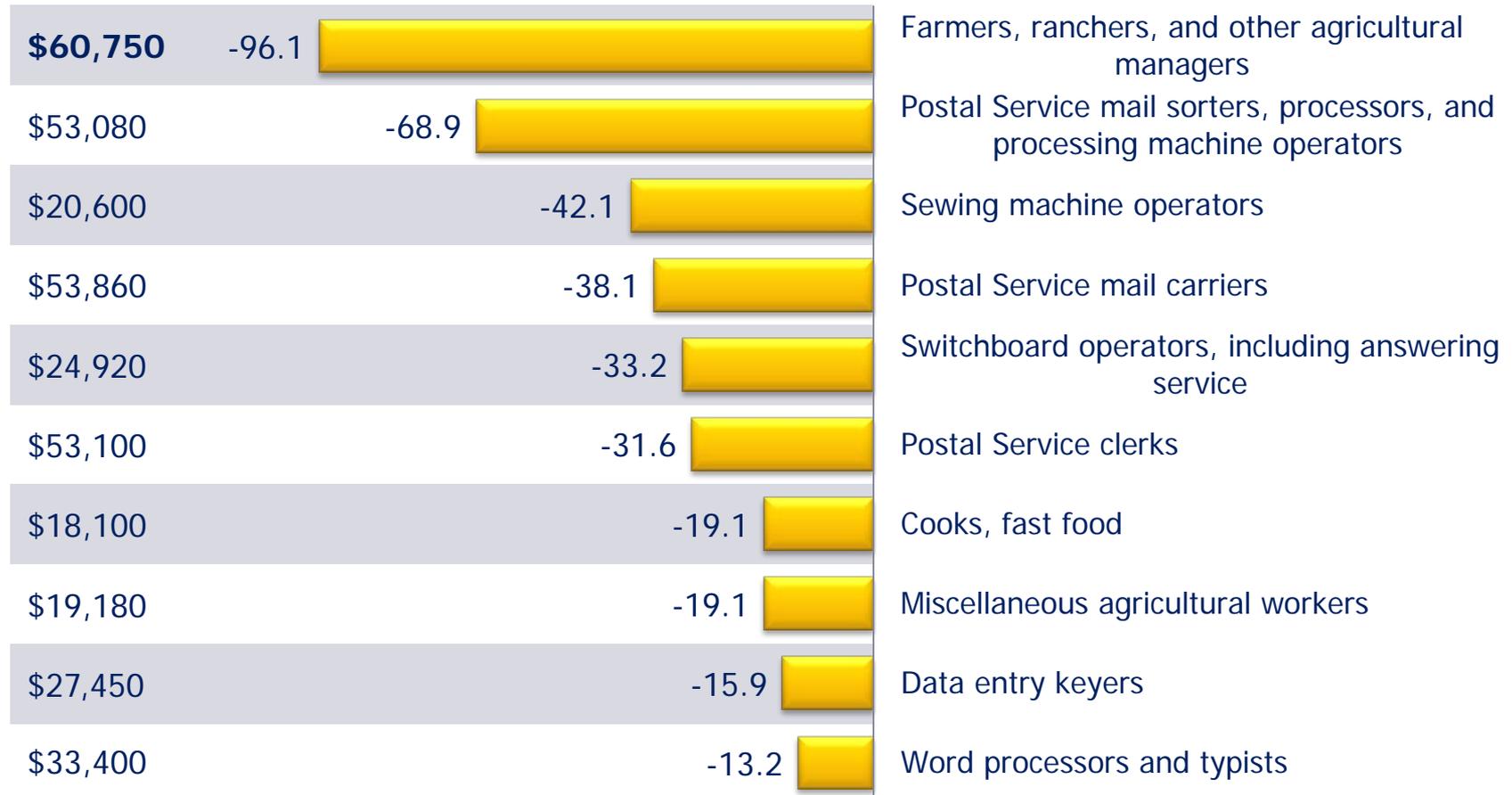


# Fastest Declining Occupations

Median annual wages, May 2010	Percent change, projected 2010-20	
\$26,280	-53.4%	Shoe machine operators and tenders
\$53,080	-48.5%	Postal Service mail sorters, processors, and processing machine operators
\$53,100	-48.2%	Postal Service clerks
\$38,970	-35.6%	Fabric and apparel patternmakers
<b>\$60,300</b>	-27.8%	Postmasters and mail superintendents
\$20,600	-25.8%	Sewing machine operators
\$24,920	-23.3%	Switchboard operators, including answering service
\$23,490	-21.8%	Textile cutting machine setters, operators, and tenders
\$25,870	-18.2%	Textile knitting and weaving machine setters, operators, and tenders
\$33,130	-17.9%	Semiconductor processors

# Occupations with the Largest Employment Declines

Median annual wages, May 2010      Thousands of jobs, projected 2010-20



# Education and Training Classification

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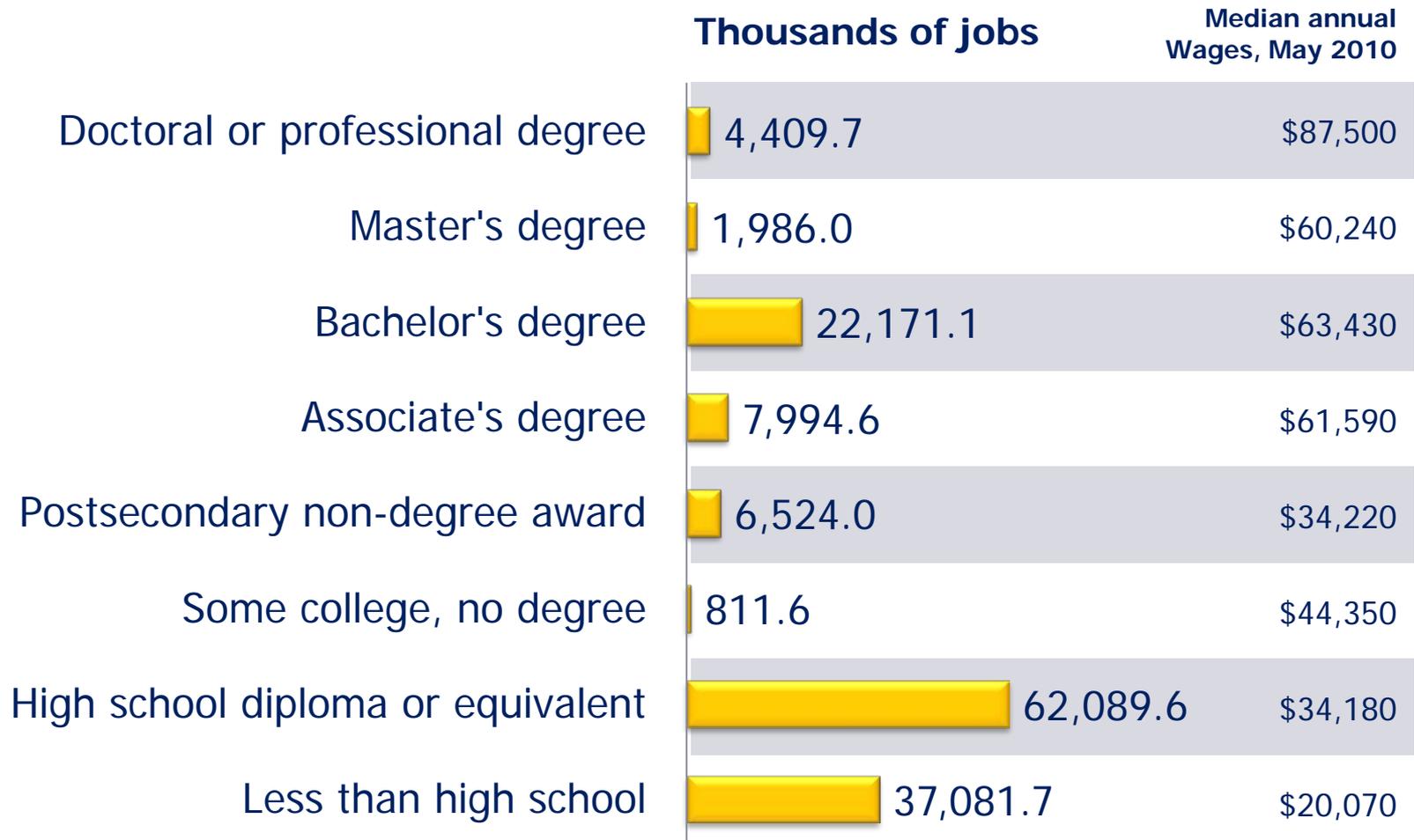
- New classification system introduced with 2010-20 projections
- Consists of three categories of information for each occupation:
  - ▶ Typical education needed for entry
  - ▶ Work experience in a related occupation
  - ▶ Typical on-the-job training needed to attain competency in the occupation

# Education and Training Classification

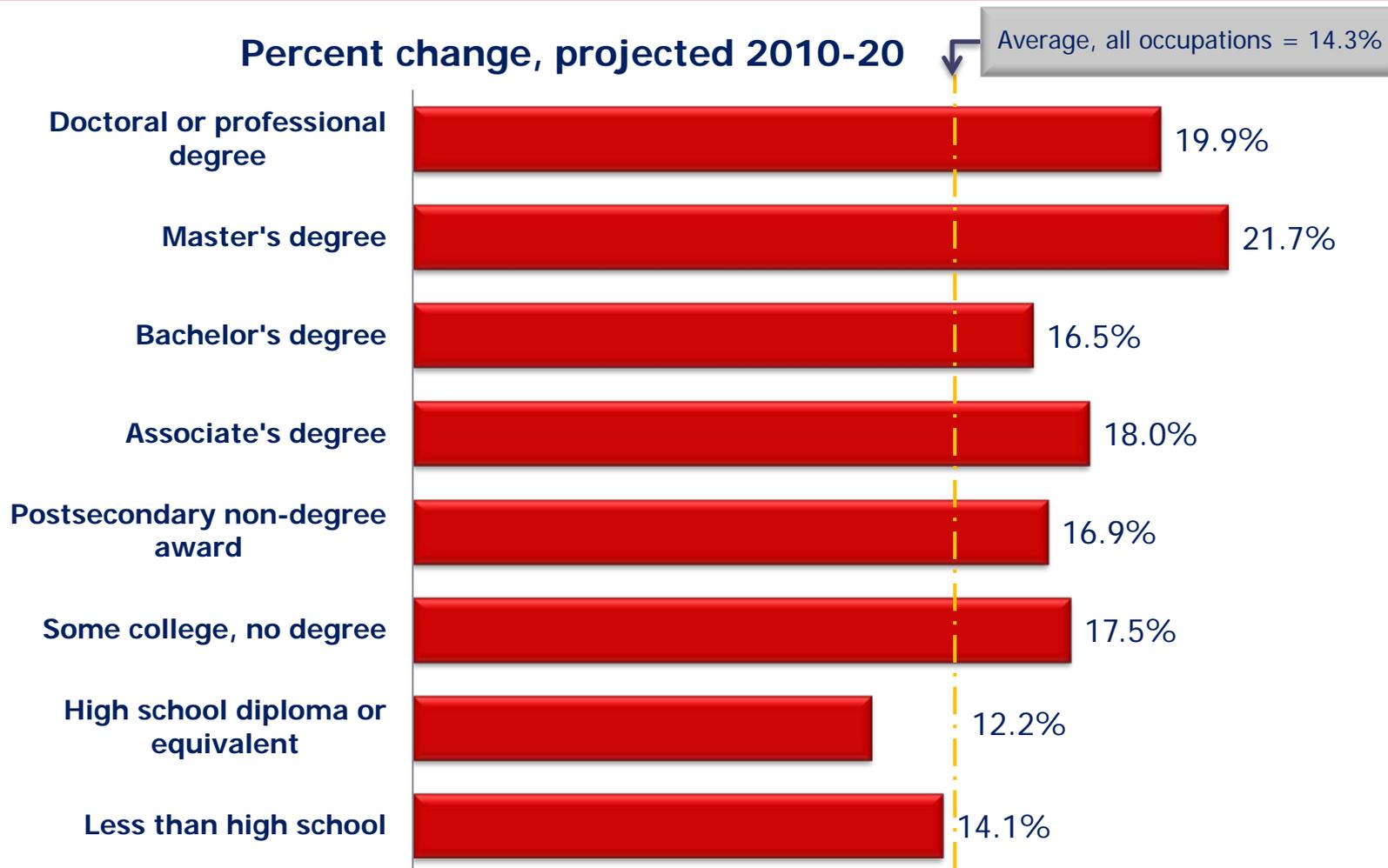
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- Assignments to each category based on analysis by BLS analysts
- Quantitative research
  - ▶ American Community Survey (ACS) data
  - ▶ O\*NET data
- Qualitative research
  - ▶ Interviews with occupational experts

# Employment by Typical Entry-level Education Category: 2010

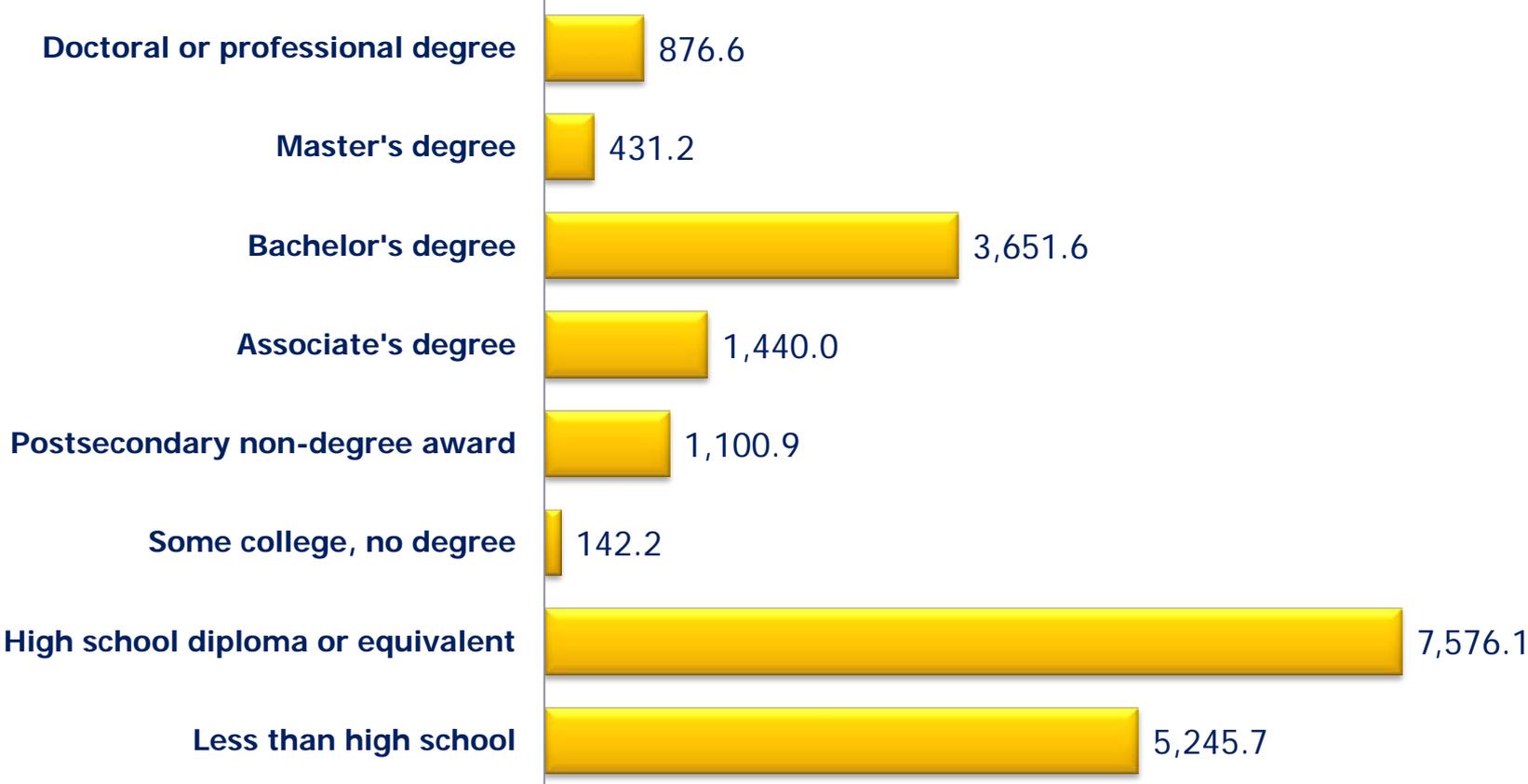


# Percent Change in Employment by Typical Entry-level Education Category



# Employment Change by Typical Entry-level Education Category

Thousands of jobs, projected 2010-20



# Graduate Degree Occupations with the Largest Job Growth

W	T	Thousands of jobs, projected 2010-20	Median annual wages, May 2010
N	N	Postsecondary teachers	305.7 \$62,050
N	I/R	Physicians and surgeons	168.3 <b>≥\$166,400</b>
N	N	Physical therapists	77.4 \$76,310
N	N	Lawyers	73.6 \$112,760
N	N	Pharmacists	69.7 \$111,570
N	N	Educational, guidance, school, and vocational counselors	53.4 \$53,380
N	N	Healthcare social workers	51.2 \$47,230
N	I/R	Mental health counselors	43.6 \$38,150
N	N	Rehabilitation counselors	36.6 \$32,350
N	N	Occupational therapists	36.4 \$72,320

# Bachelor's Degree Occupations with the Largest Job Growth

W	T	Thousands of jobs, projected 2010-20	Median annual wages, May 2010
N	I/R	Elementary school teachers, except special education	248.8 \$51,660
N	N	Accountants and auditors	190.7 \$61,690
1-5	N	Management analysts	157.2 \$78,160
N	N	Software developers, applications	143.8 \$87,790
N	N	Software developers, systems software	127.2 <b>\$94,180</b>
N	N	Computer systems analysts	120.4 \$77,740
N	N	Market research analysts and marketing specialists	116.6 \$60,570
N	I/R	Middle school teachers, except special and career/technical education	108.3 \$51,960
N	N	Network and computer systems administrators	96.6 \$69,160
N	I/R	Secondary school teachers, except special and career/technical education	71.9 \$53,230

# Associate's Degree or Postsecondary Non-degree Award Occupations with the Largest Job Growth

W	T	Thousands of jobs, projected 2010-20	Median annual wages, May 2010
N	N	Registered nurses	711.9 \$64,690
N	N	Nursing aides, orderlies, and attendants	302.0 \$24,010
N	N	Licensed practical and licensed vocational nurses	168.5 \$40,380
N	N	Preschool teachers, except special education	113.6 \$25,700
N	N	Hairdressers, hairstylists, and cosmetologists	98.4 \$22,760
N	N	Dental assistants	91.6 \$33,470
N	L	Heating, air conditioning, and refrigeration mechanics and installers	90.3 \$42,530
5+	N	Construction managers	86.6 \$83,860
1-5	N	General and operations managers	81.6 <b>\$94,400</b>
N	N	Emergency medical technicians and paramedics	75.4 \$30,360

# High School Diploma Occupations with the Largest Job Growth

W	T	Thousands of jobs, projected 2010-20	Median annual wages, May 2010
N	S	Office clerks, general	489.5 \$26,610
N	S	Customer service representatives	338.4 \$30,460
1-5	S	Heavy and tractor-trailer truck drivers	330.1 \$37,770
N	S	Childcare workers	262.0 \$19,300
N	M	Bookkeeping, accounting, and auditing clerks	259.0 \$34,030
N	S	Receptionists and information clerks	248.5 \$25,240
N	M	Sales representatives, wholesale and manufacturing, except technical and scientific products	223.4 <b>\$52,440</b>
N	M	Medical secretaries	210.2 \$30,530
1-5	N	First-line supervisors of office and administrative support workers	203.4 \$47,460
N	A	Carpenters	196.0 \$39,530

# Less Than High School Occupations with the Largest Job Growth

W	T	Thousands of jobs, projected 2010-20	Median annual wages, May 2010
N	S	Retail salespersons	706.8 \$20,670
N	S	Home health aides	706.3 \$20,560
N	S	Personal care aides	607.0 \$19,640
N	S	Combined food preparation and serving workers, including fast food	398.0 \$17,950
N	S	Laborers and freight, stock, and material movers, hand	319.1 \$23,460
N	S	Cashiers	250.2 \$18,500
N	S	Janitors and cleaners, except maids and housekeeping cleaners	246.4 \$22,210
N	S	Landscaping and groundskeeping workers	240.8 \$23,400
N	S	Construction laborers	212.4 <b>\$29,280</b>
N	S	Waiters and waitresses	195.9 \$18,330

# Employment Outlook: 2010-20

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Resources for Additional  
Information

# Occupational Outlook Handbook

www.bls.gov/ooh

The screenshot shows the Occupational Outlook Handbook website. At the top, there is a navigation bar for the United States Department of Labor and Bureau of Labor Statistics, including links for 'A to Z Index', 'FAQs', 'About BLS', 'Contact Us', and a search box for 'Search BLS.gov'. Below this is a secondary navigation bar with 'Home', 'Subject Areas', 'Databases & Tools', 'Publications', 'Economic Releases', and 'Beta'. The main content area features a large 'OCCUPATIONAL OUTLOOK HANDBOOK' header with a search box. Below the header, there is a 'Home' section with a welcome message and a 'NEW' announcement about Spanish language content. The page is divided into three main columns: 'OCCUPATION GROUPS' on the left with a list of categories like 'Architecture and Engineering' and 'Education'; 'SELECT OCCUPATIONS BY' in the middle with filters for '2010 Median Pay', 'Education Level', 'Training', 'Number of New Jobs (Projected)', and 'Growth Rate (Projected)'; and 'FEATURED OCCUPATION' at the bottom with 'BROWSE' links for 'Highest Paying', 'Fastest Growing (Projected)', and 'Most New Jobs (Projected)'. There is also an 'A-Z INDEX' and an 'ADDITIONAL INFORMATION' section.



# Occupational Outlook Quarterly

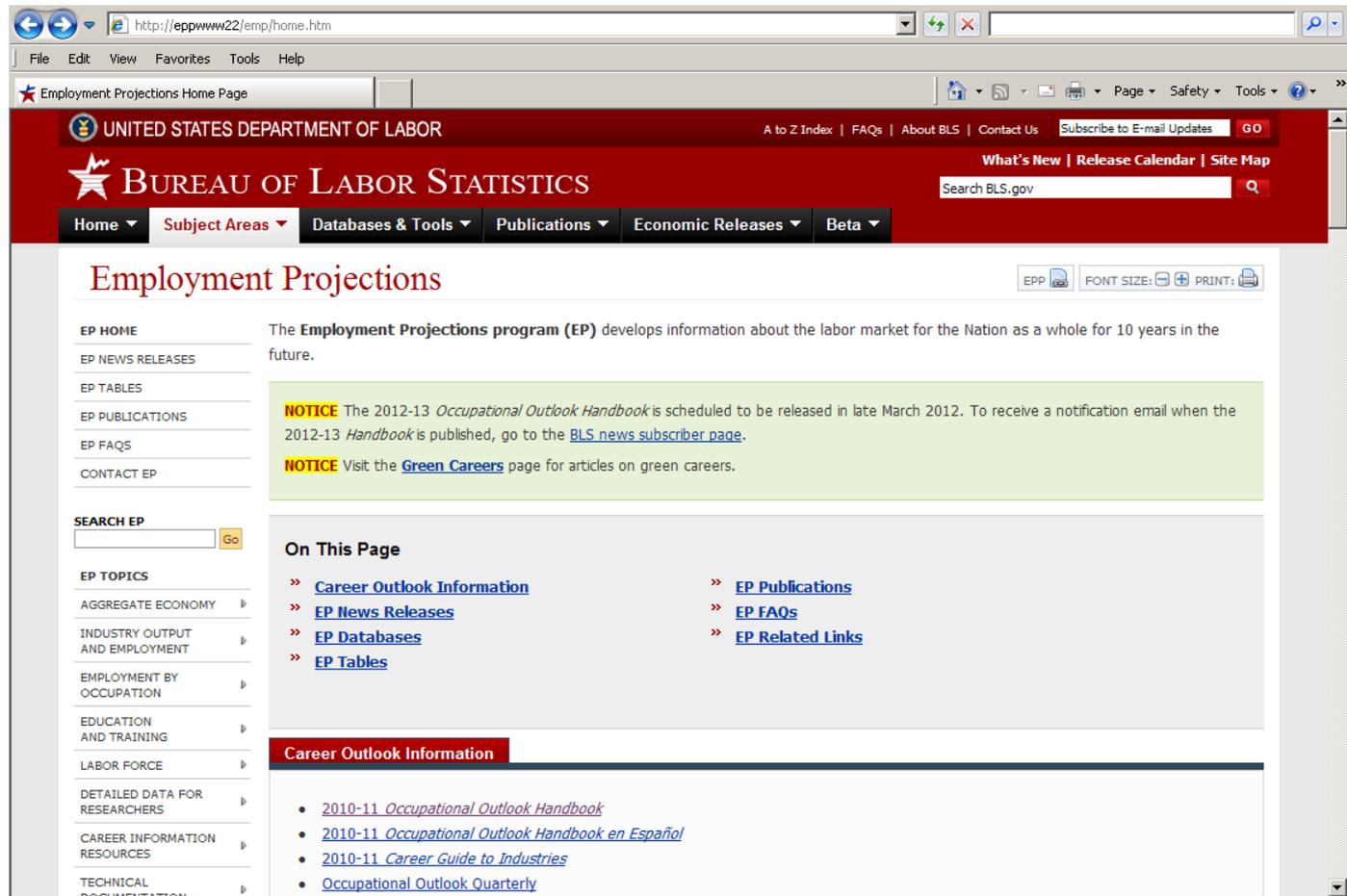
www.bls.gov/ooq

The screenshot shows a web browser window displaying the Occupational Outlook Quarterly online website. The browser's address bar shows the URL <http://www.bls.gov/opub/ooq/>. The website features a navigation menu on the left with buttons for 'OOQ Home', 'Grab Bag', 'You're a what?', 'OOChart', 'About OOQ Online', 'Index', 'Archives', 'Subscriptions', 'Feedback', 'Occupational Outlook Handbook', 'Career Guide to Industries', 'Employment Projections', 'The Editor's Desk', 'OES Occupational Profiles', and 'BLS Homepage'. The main content area includes the 'Occupational Outlook Quarterly online' logo, a search bar with the text 'Search OOQ:', and a list of articles. The first article is 'Work for play: Careers in video game development' by Drew Liming and Dennis Vilorio, with links for 'Nutshell', 'Snippet', and 'PDF (1.19M)'. The second article is 'Paving the occupational path: A new system for assigning education and training' by Elka Maria Torpey, with links for 'Nutshell', 'Snippet', and 'PDF (1.11M)'. The third article is 'Helping those in need: Human service workers' by Colleen Teixeira Moffat, with links for 'Nutshell', 'Snippet', and 'PDF (813K)'. A thumbnail image of the Fall 2011 issue cover is also visible, with a link to 'Entire Fall 2011 issue in one PDF file (6.43M)'. The browser's status bar at the bottom indicates 'OOQ Online, Fall 2011'.

To subscribe: <http://www.bls.gov/opub/ooq/subscrib.htm>

# Employment Projections Program

www.bls.gov/emp



The screenshot shows the Employment Projections Program website. The browser address bar displays "http://eppwww22/emp/home.htm". The page header includes the "UNITED STATES DEPARTMENT OF LABOR" and "BUREAU OF LABOR STATISTICS" logos. Navigation menus for "Home", "Subject Areas", "Databases & Tools", "Publications", "Economic Releases", and "Beta" are visible. The main content area is titled "Employment Projections" and includes a description of the program, a search bar, and a sidebar with various navigation options. A "On This Page" section lists links to "Career Outlook Information", "EP Publications", "EP News Releases", "EP FAQs", "EP Databases", "EP Tables", and "EP Related Links". A "Career Outlook Information" section lists links to the "2010-11 Occupational Outlook Handbook", "2010-11 Occupational Outlook Handbook en Español", "2010-11 Career Guide to Industries", and "Occupational Outlook Quarterly".

Employment Projections Home Page

UNITED STATES DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

Home Subject Areas Databases & Tools Publications Economic Releases Beta

## Employment Projections

The **Employment Projections program (EP)** develops information about the labor market for the Nation as a whole for 10 years in the future.

**NOTICE** The 2012-13 *Occupational Outlook Handbook* is scheduled to be released in late March 2012. To receive a notification email when the 2012-13 *Handbook* is published, go to the [BLS news subscriber page](#).

**NOTICE** Visit the [Green Careers](#) page for articles on green careers.

SEARCH EP

EP TOPICS

- AGGREGATE ECONOMY
- INDUSTRY OUTPUT AND EMPLOYMENT
- EMPLOYMENT BY OCCUPATION
- EDUCATION AND TRAINING
- LABOR FORCE
- DETAILED DATA FOR RESEARCHERS
- CAREER INFORMATION RESOURCES
- TECHNICAL DOCUMENTATION

On This Page

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- » [EP News Releases](#)
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- » [EP Tables](#)
- » [EP Publications](#)
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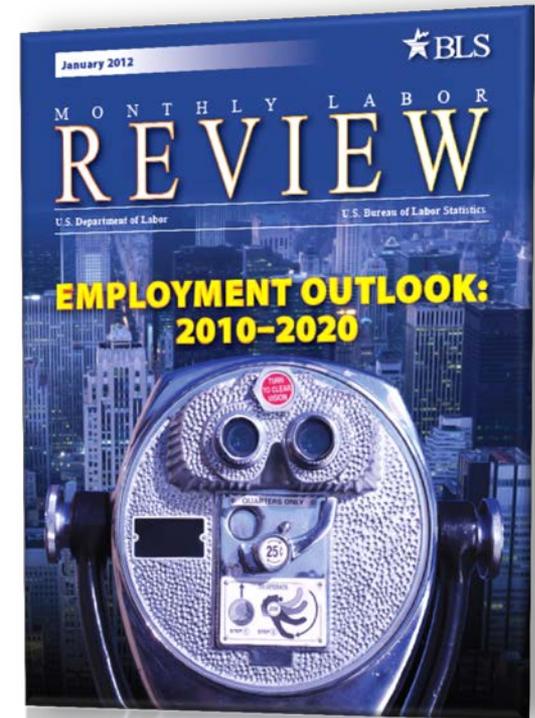
Career Outlook Information

- [2010-11 Occupational Outlook Handbook](#)
- [2010-11 Occupational Outlook Handbook en Español](#)
- [2010-11 Career Guide to Industries](#)
- [Occupational Outlook Quarterly](#)

# January 2012

## *Monthly Labor Review*

- Overview of projections to 2020
- The U.S. economy to 2020: recovery in uncertain times
- Labor force projections to 2020: a more slowly growing workforce
- Industry employment and output projections to 2020
- Occupational employment projections to 2020



# Useful Employment Projections Sites

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- Technical documentation of Employment Projections Program methods and data
  - ▶ [http://www.bls.gov/emp/ep\\_tech\\_documentation.htm](http://www.bls.gov/emp/ep_tech_documentation.htm)
- Other Employment Projections Program publications, including five *Monthly Labor Review* articles
  - ▶ <http://www.bls.gov/emp/publications.htm>
- Frequently asked questions
  - ▶ [http://www.bls.gov/emp/ep\\_faq\\_001.htm](http://www.bls.gov/emp/ep_faq_001.htm)

# State and Local Area Projections

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- BLS prepares projections only for the nation as a whole
- Projections of industry and occupational employment are prepared by each state, using input from the BLS national projections
- State projections data, and links to each state's projections site, are available
  - ▶ <http://www.projectionscentral.com/>

# Projections Evaluation

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- Last performed for 1996-2006 projections
- Comparisons were difficult due to classification changes
- BLS projections outperformed naïve models
- Direction of employment change was generally correct

# Contact Information

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## Employment Projections

[www.bls.gov/emp](http://www.bls.gov/emp)

202-691-5700

[ep-info@bls.gov](mailto:ep-info@bls.gov)



[www.bls.gov](http://www.bls.gov)