

2018-
2019

Environmental Scanning Report



**Hagerstown
Community
College**

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INTRODUCTION

An environmental scan is the process of examining external trends, issues, and events in order to determine their impact upon an institution. Environmental scanning focuses on the identification of emerging issues, situations, and potential pitfalls that may affect the college's future.

Environmental scanning by the Planning and Institutional Effectiveness Division enables the College to look at emerging, up-to-date demographic trends in the service region, state and nation, global trends, economic/business data, social trends, and enrollment potential by student type/populations, course or program potential (credit and noncredit). Information from environmental scanning activities helps establish a link between strategic planning and projected trends, resulting in data-based decisions to improve and update programs and services. When administrators, faculty, and staff are informed of changes, they are better able to prepare for the changes by determining future strategic institutional directions.

This report has been divided into six broad categories: Demographics, Economy, Education, Workforce and Economic Development, Technology, Public Policy and Accountability. These trends, facts, findings, and implications could or will affect Hagerstown Community College. No one can predict the future, but by understanding and examining the trends, issues, and events that impact the life of the community college, we can begin to create a plan that looks to the possibilities for HCC's future and opportunities.

DEMOGRAPHICS

United States - National

According to the US Bureau of the Census, the resident population of the United States, on August 6, 2013 is 316,392,999. At such a fast growth rate, the US population will likely hit 400 million in 2039, four years earlier than previously projected, according to new population projections from the U.S. Census Bureau. (The population estimates are most likely undercounted with the number of illegal immigrants living in the US.)

According to the US Census Bureau, the following components affect our population:

- one birth every 8 seconds
 - one death every 12 seconds
 - one international migrant every 44 seconds
 - net gain of one person every 13 seconds
-
- Today, only 74% of women are active in the U.S. workforce, little changed in the last 25 years, and trailing far behind many other developed countries. As of last year, America ranked 27th out of 37 developed countries for women's labor force participation, according to the Organization of Economic Cooperation and Development.
 - Trulia recently released a survey showing that 44% of jobless 18 to 34 year-olds live with their parents, while nearly a quarter of those *with jobs* have yet to leave the nest.

Sixty-six percent of households in 2012 were family households, down from 81 percent in 1970.

Between 1970 and 2012, the share of households that were married couples with children under 18 halved from 40 percent to 20 percent.

The proportion of one-person households increased by 10 percentage points between 1970 and 2012, from 17 percent to 27 percent.

Between 1970 and 2012, the average number of people per household declined from 3.1 to 2.6.

- A growing proportion of U.S. adults is living without a partner or spouse, according to a new analysis by Pew Research, with the sharpest increase coming from the under-35 crowd. About 42% of Americans are “unpartnered” today, compared to 39% in 2007.

Affecting these numbers are the marriage rate, which has declined over the last several decades, and an increase in the rate of cohabiting relationships (29% over the last 10 years) — though the latter hasn’t been sizable enough to offset the former.

Changes in un-partnership varied by demographic: For adults under 35, the share increased from 56% to 61% over the decade; it only rose from 29% to 30% for those aged 35 to 54, and 29% to 32% for ages 55 to 64. For the 65-and-over group, the share of adults living sans spouse or partner dipped slightly from 43% to 41%.

This phenomenon could hit bank accounts: Adjusted median household income for married or cohabiting adults is \$86,000, per Pew, compared to \$61,000 for the unpartnered. Singles — even those in their mid-50s to early 60s — are also less likely than married people to have retirement savings, according to a 2016 Economic Policy Institute report. Sixty-five percent of married couples in 2013 boasted retirement account savings, in contrast to between 42% and 43% of single women and men, respectively.

- Homelessness has increased in other thriving West Coast cities that are destinations for young, well-educated workers, like San Francisco and Seattle, where the blame has also largely fallen on rapidly rising costs and evictions.

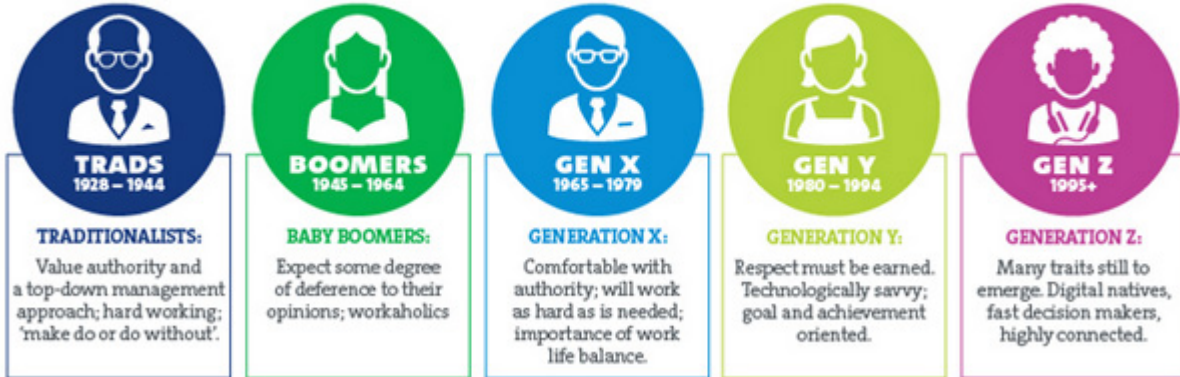
Exact numbers are always hard to come by but 553,742 people were homeless on a single night across the US in 2017, the Department of Housing and Urban Development said, the first rise in seven years. (The figure, however, was still 13% lower than in 2010.)

Declines in 30 states were overshadowed by big surges elsewhere, with California, Oregon and Washington among the five worst. Los Angeles, where the situation has been described as unprecedented, had more than 50,000 people without homes, behind only New York City, which had some 75,000.

Today's Generations

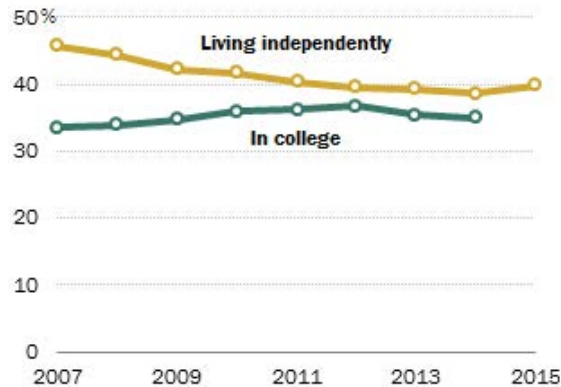
SO WHO ARE THE DIFFERENT GENERATIONS?

Here is how they are often grouped:



Independent Living Has Not Increased as College Enrollment Has Declined

18- to 24-year-olds

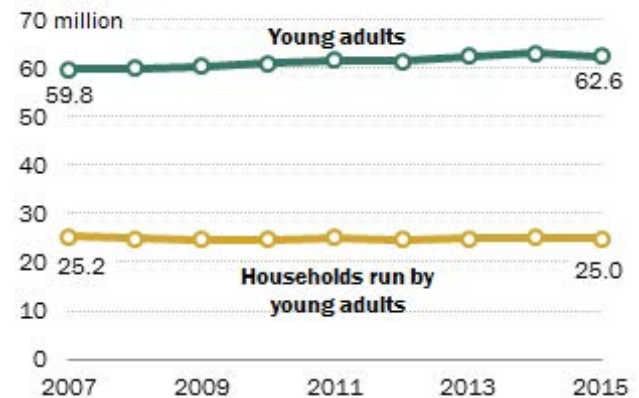


Note: "In college" includes both full- and part-time students. Living independently means heading one's own household or living in a household headed by a spouse, unmarried partner or other non-relative (analysis excludes full-time college students).

Source: Pew Research Center analysis of the Current Population Survey Merged Outgoing Rotation Group data files and 2015 basic monthly CPS files (Jan.-Apr.)

PEW RESEARCH CENTER

More Young Adults, but no More Young Adult Households Than Before the Recession



Note: Young adults are 18- to 34-year-olds; excludes 18- to 24-year-old college students enrolled full time.

Source: Pew Research Center analysis of the Current Population Survey Merged Outgoing Rotation Group data files and 2015 basic monthly CPS files (Jan.-Apr.)

PEW RESEARCH CENTER

In this year's survey, millennials' views of business's motivations and ethics, which had been trending up, took a sharp downward turn . . .

-15% ↓

Agree that business leaders are committed to helping improve society

+12% ↑

Believe that businesses have no ambition beyond wanting to make money

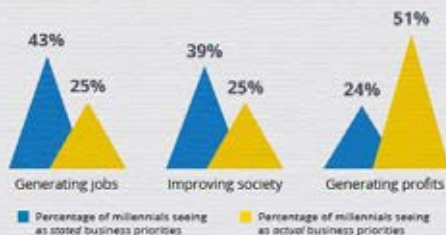
-17% ↓

Believe that businesses behave in an ethical manner

+16% ↑

Believe businesses focus on their own agendas rather than considering society in general

. . . partly because businesses are out of step with millennials' priorities.



So how can businesses attract and retain millennial talent in an uncertain future?

1 Consider what millennials report as top priorities when considering an employer.

Millennial survey respondents rated as very important:



2 Good pay and positive cultures attract millennials and Gen Z, but diversity/inclusion and flexibility are important keys to keeping them happy.

Percentage of millennials saying they will stay beyond five years:



55% of millennials who say their organizations are more flexible compared to three years ago plan to stay at least five years. Where they see less flexibility, only 17 percent plan to stay long-term.

3 In an Industry 4.0 workplace, younger employees see "soft" skills as increasingly necessary.

Top "essential skills" for long-term success, according to millennials:



Are employers—and their younger workers—prepared for an Industry 4.0 environment?

70% of millennials predict wide-scale change as a result of Industry 4.0

52% of millennials see Industry 4.0 technology augmenting their jobs, not threatening them

Yet only 36% of millennials believe they have the skills required for industry 4.0

Who do millennials think should be most responsible for preparing them to work with technologies such as robotics and artificial intelligence?



Based on Deloitte. Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL also referred to as "Deloitte Global" does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to some clients under the rules and regulations of public accounting. Please see www.deloitte.com/global to learn more about our global network of member firms. Copyright © 2018 Deloitte Development LLC. All rights reserved.

- **Perceptions of business have reversed.** Millennials' opinions about the motivations and ethics of the business sector, which had trended up the past two years, took a sharp turn downward. A stark mismatch persists between what millennials believe responsible companies should achieve and what they perceive businesses' actual priorities are.
- **Diversity and flexibility are key to loyalty.** Good pay and positive corporate cultures are most likely to attract both millennials and Gen Z, but the keys to keeping them happy are diversity, inclusion, and flexibility. Unfortunately, survey respondents believe that most business leaders, rhetoric notwithstanding, are not truly committed to creating inclusive cultures. Many respondents, especially in emerging markets, view the gig economy as an attractive alternative or adjunct to their jobs.
- **Young workers feel unprepared for Industry 4.0.** Millennials express admiration for corporations that are adapting to and advancing Industry 4.0¹ and developing their people to succeed in this evolving business environment. Lacking confidence that they can succeed in an Industry 4.0 environment, young workers are looking to businesses to help them develop the necessary skills, including the "soft" skills they believe will be more important as jobs evolve.

7 Demographic Trends shaping the U.S. and the world in 2018

Millennials are projected to outnumber Baby Boomers next year. Numbering 71 million in 2016, Millennials in the United States are approaching Baby Boomers (74 million) in population and are projected to surpass them as the nation's largest living adult generation in 2019. The Millennial generation, defined as Americans born from 1981 to 1996, corresponds to adults ages 22 to 37 in 2018.

A record number of Americans live in multigenerational households, part of a broader trend toward more shared living. In 2016, a record 64 million people, or 20% of the U.S. population, lived with multiple generations under one roof, even with improvements in the U.S. economy since the Great Recession.

The institution of marriage continues to change. Half today are married, a share that has remained relatively stable in recent years but is down significantly over previous decades. Cohabitation among unmarried partners is rising, including among a growing share of unmarried parents. The share of U.S. adults living *without* a spouse or partner has also increased, from 39% in 2007 to 42% in 2017.

There are more than 250 million migrants worldwide, according to the latest data from the United Nations on the number of people living outside their birth countries in 2017 (see this updated interactive graphic). Sub-Saharan African nations account for eight of the 10 fastest growing international migrant populations since 2010. The number of migrants from each of these sub-Saharan countries grew by 50% or more between 2010 and 2017, significantly more than the 17% worldwide average over the same period. At least a million sub-Saharan Africans have moved to Europe since 2010. (Read this new Pew Research Center report for more information about the educational backgrounds of sub-Saharan African immigrants in Europe and the U.S.)

After decades of decline, motherhood and family size are ticking up in the U.S. Among women at the end of their childbearing years (ages 40 to 44), 86% had ever given birth by 2016, an increase from 80% in 2006 and about the same share as in the early 1990s. Women also are having more children: On average, women in 2016 had 2.07 children during their lives – up from 1.86 in 2006, the lowest average on record.

New refugee arrivals are down in the U.S. and their religious composition has changed. The number of refugee arrivals in the U.S. declined after 2016, even as the global refugee population increased. This decline was also widespread across the U.S., with declines in 46 states during the beginning part of fiscal 2017 (which began in October 2016). Furthermore, since 2016, the share of refugees who are Christian has risen, while the share who are Muslim has declined, according to a Pew Research Center analysis of U.S. State Department data.

International arrivals to the U.S. have risen among some groups. New foreign student enrollment at U.S. colleges and universities doubled between 2008 and 2016, from 179,000 to 364,000, far outpacing growth in overall college enrollment. Growth has been stronger at public schools than private schools. Students from China, India and South Korea accounted for more than half (54%) of all new foreign students pursuing higher education degrees in the U.S. in 2016.

The 5 Generations on Campuses Today

Here's a look at the five generations now on campuses. While definitions and birth years for certain groups are debated, there is broad agreement about many of the generational distinctions.

Silent Generation (also known as traditionalists; named the "Greatest Generation" by Tom Brokaw): Born about 1925-46. Influences: Great Depression, World War II, the postwar boom, the GI Bill. Traits: job loyalty, share many values, cautious.

Baby Boomers: Born 1946 to 1964. Influences: television, assassination of President John F. Kennedy, rock 'n' roll, first moonwalk, antiwar protests, birth control, sexual revolution. Traits: dedication, face time, team spirit, strongly identify as a special generation.

Generation X (also called "the Slacker Generation" and "latchkey kids"): Born 1965 to about 1980. Influences: parental divorce, feminist movement, MTV, rise of home video games and personal computers, fall of the Soviet Union, birth of the internet. Traits: cynical about authority, self-reliant, value autonomy, do not strongly identify as a generation.

Millennials (also known as Generation Y): Born around 1980 through the late 1990s or later. Influences: internet era, September 11 terrorist attacks, cellphones, Facebook. Traits: value feedback, recognition, work-life balance, and teamwork ("trophies for everybody"); sometimes criticized as "entitled"; grew up with highly structured activities.

Generation Z: Born roughly in the late 1990s through about 2010, making them today's youngest college students. Influences: the recession, terrorism, smartphones, social media, multiculturalism, same-sex marriage, nation's first black president. Traits: multitasking, technology-addicted, sophisticated social-media users.

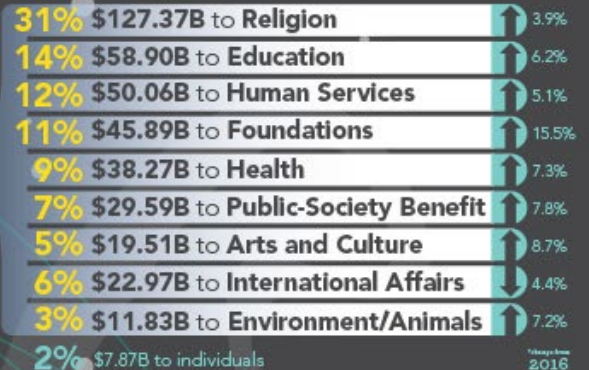
- One of the silver linings of the Great Recession was that it drove an increasing share of young adults toward higher education. Some enrolled in college to ride out the economic storm, while others went back to school to gain additional skills and make themselves more marketable. By 2012, 37% of 18- to 24-year-olds were enrolled in college, a substantial increase over the 34% enrolled in 2007. And as college enrollment rose, fewer 18- to 24-year-olds lived independently. By 2012, only 39% of 18- to 24-year-olds (not including full-time students) lived independently, down substantially from the 46% share living independently in 2007.

College-going peaked in 2012. By 2014, 35% of 18- to 24-year-olds were pursuing college, down 2 percentage points from the peak. But contrary to expectations, the college enrollment decline has not stimulated an increase in independent living. Today, most younger Millennials do not live independently of family. By the first third of 2015 only 40% of 18- to 24-year-olds were living apart from their families.

STELLAR

YEAR FOR PHILANTHROPY

Giving eclipses \$400 billion for the first time.



STILL GROWING

Donor-Advised Funds continue to grow at three times the rate of philanthropy overall. Gifts from DAFs go disproportionately to Education; Public-Society Benefit; and Arts, Culture, & Humanities.

BOOSTER FUEL

For the first time since the Great Recession, the % of households making new gifts to charities increased. First-time gifts declined by 16.1% from 2010 through 2016, then rose 10% in 2017. Gains were fueled largely by natural disasters and/or civic involvement.

BETTER TOGETHER

In a newer approach to stamp out poverty, more philanthropists are working collaboratively to focus giving within tightly defined boundaries, seeking to address the wicked problems that have kept generations of that area's residents from thriving.

A VANISHING TREND?

"Rage donations" emerged from the hyper-partisan 2016 elections. They've been described as a "middle-class citizen's form of protest—that actually works." In 2017, this phenomenon resulted in an unknown number of new or increased gifts. When the anger fades, will these gifts vanish?

BIENNIAL ORBIT

One impact of tax reform may see donors "bundling" their giving—taking the standardized deduction one year, and itemizing their charitable gifts the next year.

STUDIED ACCELERATION

Some donors rushed to make charitable contributions prior to the adoption of tax reform, resulting in a spike in year-end giving. But a study by Indiana University found that the longer-term impact could reduce charitable giving by as much as \$13 billion in future years.

DISASTER GIVING

American donors responded with generosity to an unusual number of disasters that affected North America including hurricanes Harvey, Irma and Maria; the earthquake in Mexico; and the most destructive wildfire season on record.

DIGITAL GIVING INCREASES

Online donations increased by 23% according to the M+R Report and mobile giving is up 9% from 2017 over 2016.

ACKNOWLEDGEMENTS

Please see www.benefactorgroup.com/GivingUSA2018 for a full list of sources cited in this document and an explanation of the updated methodology used to estimate giving for 2017.

At Benefactor Group, our insights are shaped by Giving USA and many other studies. Unless otherwise noted, all data is cited in current dollars.

- Despite attempts to lower child-care costs and expand choices, many children are left alone after school ends and before their parents come home from work. One in five children ages 6 to 12 are regularly left without adult supervision after school, according to a survey of working parents. Older children are more likely to spend their after-school hours home alone rather than in day care, activities at school or under the supervision of a relative or baby sitter, researchers at the nonpartisan Urban Institute reported today.

Top Ten Social Issues Teens Struggle With Today

1. Depression

2. Bullying

3. Sexual Activity

4. Drug Use

5. Alcohol Use

6. Obesity

7. Academic Problems

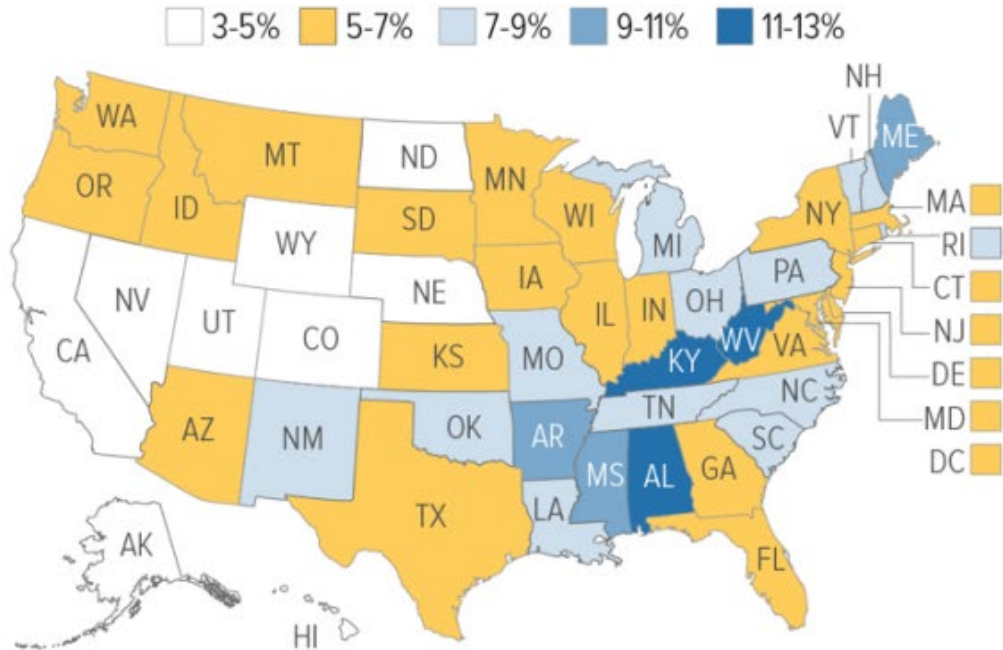
8. Peer Pressure

9. Social Media

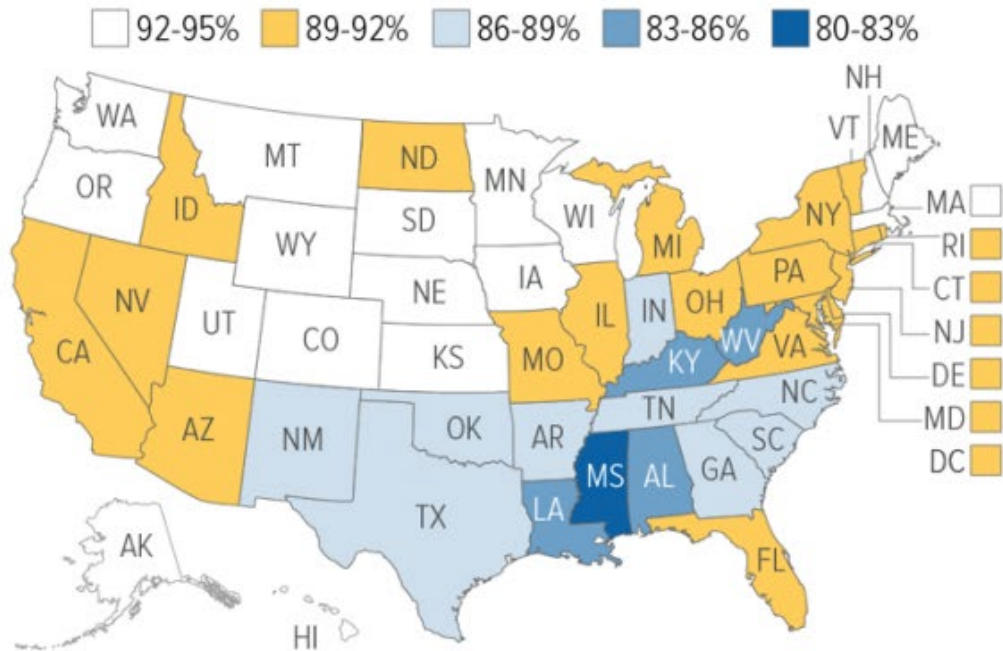
10. On Screen Violence

States with Low Educational Attainment Generally Have High Rates of Disability Receipt

Percent of Each State's Resident Population Age 18-64 That Receives Social Security Disability, SSI, or Both



Percent of Each State's Native-Born Population 25 and Over That Has Completed High School

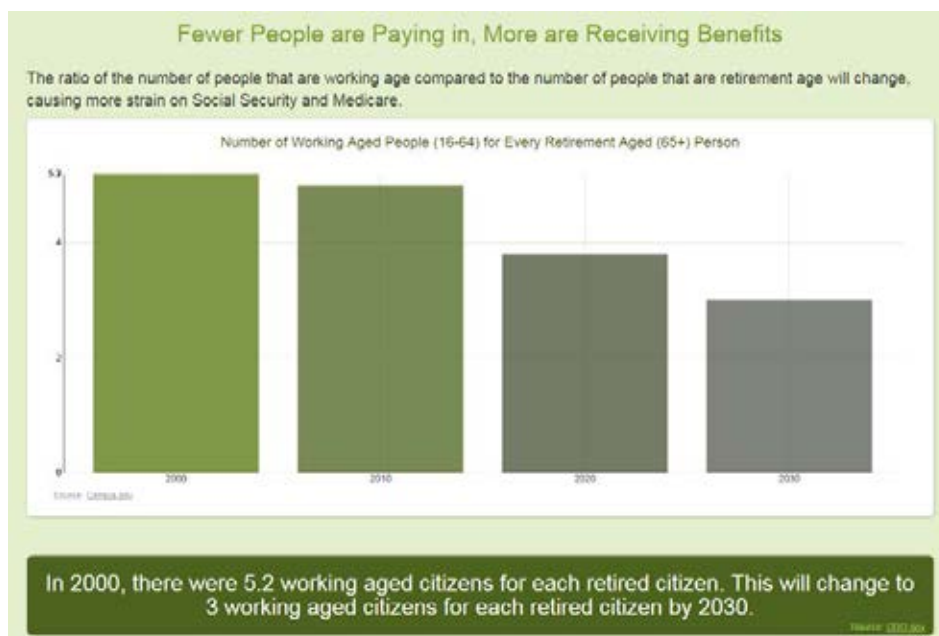
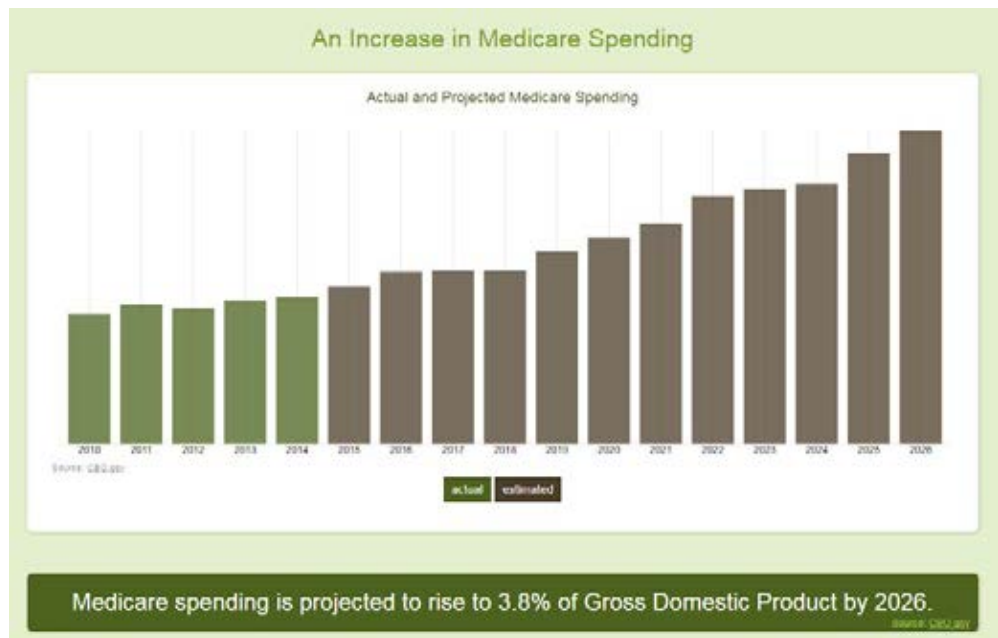


Source: Data for 2013, from Social Security Administration and Census Bureau

Age Groups

The U.S. has reached a new milestone - a population of over 50 million seniors for the first time in the history of the USA. A linear interpolation of the monthly population estimates published by the Census Bureau in 2015 estimates that we will see over 50 million people in the U.S. aged 65 and older some time during November 2016. Even older annual estimates published by the Census Bureau in 2005 show us crossing the threshold in the spring of 2017. Regardless of the estimation method, it is clear that this milestone is upon us. Continue reading to explore the causes and the effects of the rise in the senior population in the United States.

As a result of the baby boom that happened post-World War II and the fact that we are experiencing longer life expectancy, the United States is facing a surge in the aging population in every state in the country over the next few decades. This population surge will result in more Medicare beneficiaries and higher Medicare spending, while fewer citizens will be paying into the system. The changing population dynamic presents many challenges that must be addressed.



The nation as a whole grew older as the oldest baby boomers became seniors. The nation's 65-and-older population surged to 44.7 million in 2013, up 3.6 percent from 2012. By comparison, the population younger than 65 grew by only 0.3 percent.

The 85-and-older population grew by about 3 percent between 2012 and 2013 to 6 million. The number of people age 100 and over reached 67,000 in 2013.

The total number of children under age 5 was just under 20 million in 2013 or 6.3 percent of the population. The number of children age 5 to 13 was just over 37 million in 2013 (11.7 percent of the population).

The number of high school-age children (age 14 to 17) was 16.6 million or 5.3 percent of the population in 2013.

In 2013, there were about 198 million working-age adults (age 18 to 64), representing 62.6 percent of the total population.

In 2013, the median age of the minority population -- i.e., all people who were not in the non-Hispanic single-race white group -- was 30.5 years. The non-Hispanic white alone population was older, with a median age of 42.9 years in 2013.

The share of Americans living in multi-generational family households is the highest it has been since the 1950s, having increased significantly in the past five years. Adults ages 25 to 34 are among the most likely to be living in multi-generational households: In 2010, 21.6% lived in this type of household, up from 15.8% in 2000 (the vast majority were living with their parents). The share of 25- to 34-year-olds living in multi-generational households was at its lowest in 1980 (11%) and has risen steadily since then, spiking upward since the recession started in 2007.

In an AARP study, 9 out of 10 adults (ages 50 and over) said they wanted to actively seek out learning opportunities to keep current, grow personally, and enjoy the simple pleasure of mastering something new. Research continues to highlight the importance of lifelong learning as a prescription for a longer, healthier life – keeping minds active and people socially engaged.

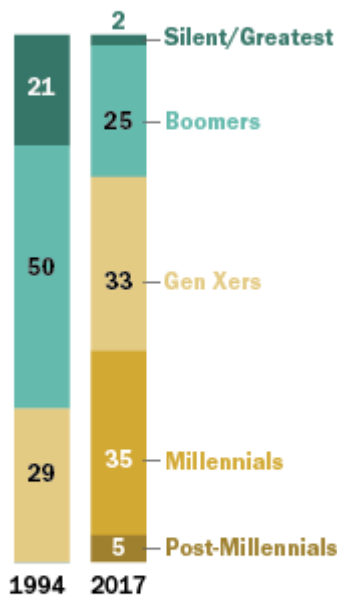
Millennials

9 ways College is Different For Millennials Than It Was for Previous Generations	
•	<i>More students are going to college</i>
•	<i>College is more competitive</i>
•	<i>College is more expensive</i>
•	<i>College textbooks are also pricier</i>
•	<i>College is more technologically advanced</i>
•	<i>More students are learning online</i>
•	<i>Student population is more diverse</i>
•	<i>Students aren't as religious as they used to be</i>
•	<i>Students are more stressed</i>

thisinsider.com

More than a third of the workforce are Millennials

% of the U.S. labor force



- Multiracial Americans are among the nation's youngest racial and ethnic populations, with a median age of only 19 as of 2015. Many of them have yet to form households, but among those who have, Millennials are now the most prevalent. Around 630,000 multiracial Millennials headed a household in 2016, compared with about 540,000 multiracial Gen Xers and a similar number of multiracial Boomers.

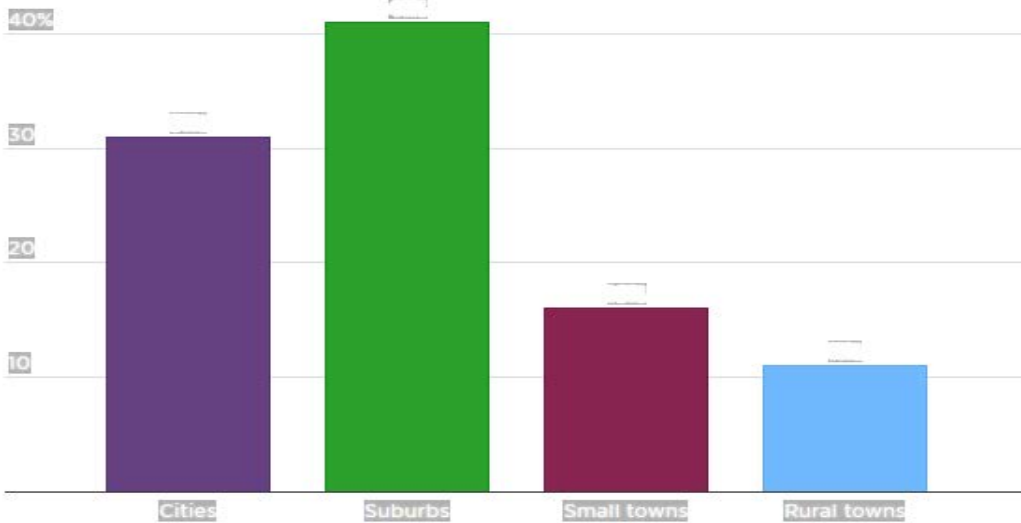
Note: Labor force includes those ages 16 and older who are working or looking for work. Annual averages shown.

Source: Pew Research Center analysis of monthly 1994 and 2017 Current Population Survey (IPUMS).

PEW RESEARCH CENTER

Where millennials own homes

Ernst & Young surveyed 1,200 millennial homeowners on where they live.



Source: [Ernst & Young's The Millennial Economy 2018](#)



Money is likely a significant factor. Home buyers can expect to pay 26.5 percent of their income to purchase a median-value home in a city, but only 20.2 percent of their income for a similar home in the suburbs, according to a recent report by Zillow.

Roughly two out of five millennials currently own a home, Ernst & Young finds, which is up 14 percentage points from two years ago. But millennials are still buying homes at a slightly lower rate than previous generations: Roughly 45 percent of Gen-Xers and Baby Boomers owned when they were between the ages of 25 and 34.

Student loan debt and higher real estate prices play help explain why. Over 80 percent of renters aged 22-35 with student loans say that debt has delayed home-ownership, or made it all but impossible.

Baby Boomers and Retirees

- There are 78 million Baby Boomers in the U.S. born between 1946 and 1964. They are the healthiest, wealthiest, most educated, and prosperous generation. The U.S. changed from a manufacturing economy to a knowledge economy because of the boomer's love of higher education.
- The five states with the largest number of baby boomers:
 - California
 - Texas
 - New York
 - Florida
 - Pennsylvania
- A newly released BLS report, based on census surveys, says the typical boomer household took home \$67,499 in income after taxes in 2016 — the most recent full-year information available — and shelled out \$61,204 for expenses ranging from housing to family pets.

The typical boomer household was slightly less flush than Gen-X families, which on average took in \$80,937 after taxes and spent \$68,532. Both were more affluent than millennials, who made \$56,618 and spent \$48,576.

The most expensive part of boomers' budgets was housing, which typically cost them \$18,917. The survey found that 76 percent of boomers owned their homes, and 40 percent still were making mortgage payments. Boomers typically paid \$2,877 in mortgage interest and \$2,481 in property taxes.

- The year 2030 marks an important demographic turning point in U.S. history according to the U.S. Census Bureau's 2017 National Population Projections. By 2030, all baby boomers will be older than age 65. This will expand the size of the older population so that 1 in every 5 residents will be retirement age.

"The aging of baby boomers means that within just a couple decades, older people are projected to outnumber children for the first time in U.S. history," said Jonathan Vespa, a demographer with the U.S. Census Bureau. "By 2035, there will be 78.0 million people 65 years and older compared to 76.7 million (previously 76.4 million) under the age of 18."

- 2.7 million grandparents are responsible for most of the basic needs of one or more grandchildren who lived with them in 2009. 1.6 million of these grandparents were still in the labor force.

- Three-quarters of U.S. adult workers believe they will continue working past retirement age, with 40% saying they will do so because they want to, and 35% because they will have to
- In Maryland, 58.0 percent of adults aged 25 years and older with at least a high school education report their health is very good or excellent compared to only 27.2 percent with less than a high school education, resulting in a gap of 30.8 percent.
- 43% of online traffic is generated by Boomers. 82% of adults aged 50+ using the internet research health and wellness online. Among internet users 50+ who are members of online communities, 58% log in to their online community daily or several times a day.



Map the Meal Gap 2018:

Overall Food Insecurity in Maryland by County in 2016¹



County	Population	Food insecurity rate	Estimated number food insecure individuals (rounded)	Likely Income Eligibility for Federal Nutrition Assistance ²	
				% below 200% poverty <small>SNAP, WIC, free school meals, CSFP, TEFAP</small>	% above 200% poverty <small>Charitable Response</small>
Allegany	73,060	12.5%	9,130	73%	27%
Anne Arundel	559,737	7.1%	39,830	55%	45%
Baltimore	825,666	11.2%	92,530	60%	40%
Calvert	90,527	6.6%	5,940	52%	48%
Caroline	32,653	11.3%	3,680	81%	19%
Carroll	167,535	5.4%	9,000	55%	45%
Cecil	102,175	8.8%	8,990	68%	32%
Charles	154,357	11.4%	17,540	49%	51%
Dorchester	32,451	14.5%	4,700	81%	19%
Frederick	243,465	6.4%	15,470	62%	38%
Garrett	29,677	9.2%	2,740	84%	16%
Harford	249,776	7.7%	19,220	59%	41%
Howard	308,447	6.6%	20,400	47%	53%
Kent	19,819	10.4%	2,060	70%	30%
Montgomery	1,026,371	5.9%	60,740	76%	25%
Prince George's	897,693	14.0%	125,420	65%	35%
Queen Anne's	48,712	6.2%	3,000	57%	43%
St. Mary's	110,675	8.2%	9,070	57%	43%
Somerset	25,899	19.3%	5,000	67%	33%
Talbot	37,668	9.0%	3,370	70%	30%
Washington	149,571	10.8%	16,150	70%	30%
Wicomico	101,527	14.1%	14,360	77%	24%
Worcester	51,441	11.6%	5,950	69%	31%
Baltimore city	621,000	22.2%	138,150	83%	17%
State Total⁶	6,016,447	11.1%	665,420	61.4%	38.6%

For additional data and maps by county, state, and congressional district, please visit map.feedingamerica.org.

More than a third of college students don't always have enough to eat and they lack stable housing, according to a survey by researchers at Temple University and the Wisconsin HOPE Lab.

Overall the study concluded 36 percent of college students say they are food insecure. Another 36 percent say they are housing insecure, while 9 percent report being homeless. The results are largely the same as last year's survey, which included fewer students.

The 2018 numbers are even higher when broken out to include only community college students. Forty-two percent indicated they struggled the most to get adequate food, as measured by the researchers' scale. Nine percent said they had gone at least one day during the last month without eating because they lacked the money. And 46 percent said they had difficulty paying for housing and utilities.

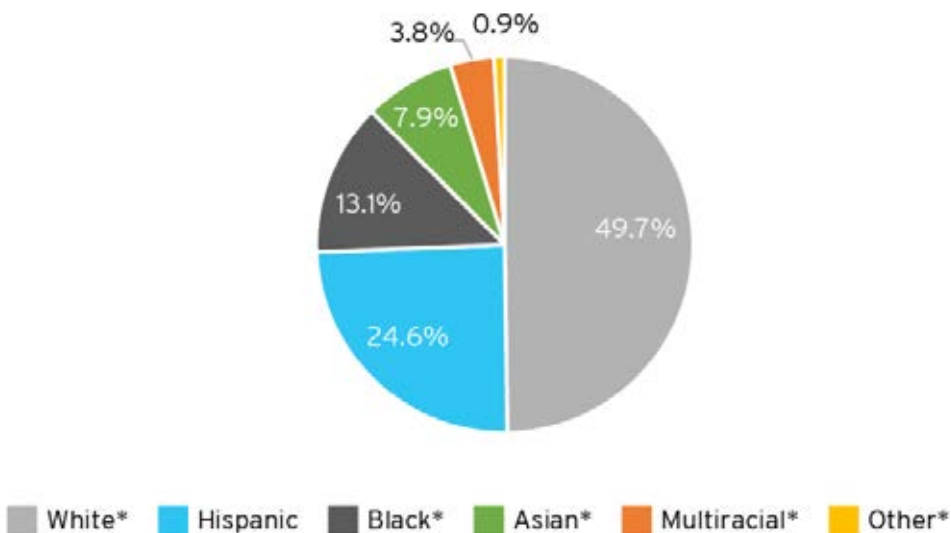
Minority Population

New census population projections confirm the importance of racial minorities as the primary demographic engine of the nation's future growth, countering an aging, slow-growing and soon to be declining white population. The new statistics project that the nation will become "minority white" in 2045. During that year, whites will comprise 49.7 percent of the population in contrast to 24.6 percent for Hispanics, 13.1 percent for blacks, 7.9 percent for Asians, and 3.8 percent for multiracial populations (see Figure 1).

The shift is the result of two trends. First, between 2018 and 2060, gains will continue in the combined racial minority populations, growing by 74 percent. Second, during this time frame, the aging white population will see a modest immediate gain through 2024, and then experience a long-term decline through 2060, a consequence of more deaths than births (see Figure 2).

FIGURE 1

Racial profile of U.S. population, 2045



* Non-Hispanic members of race

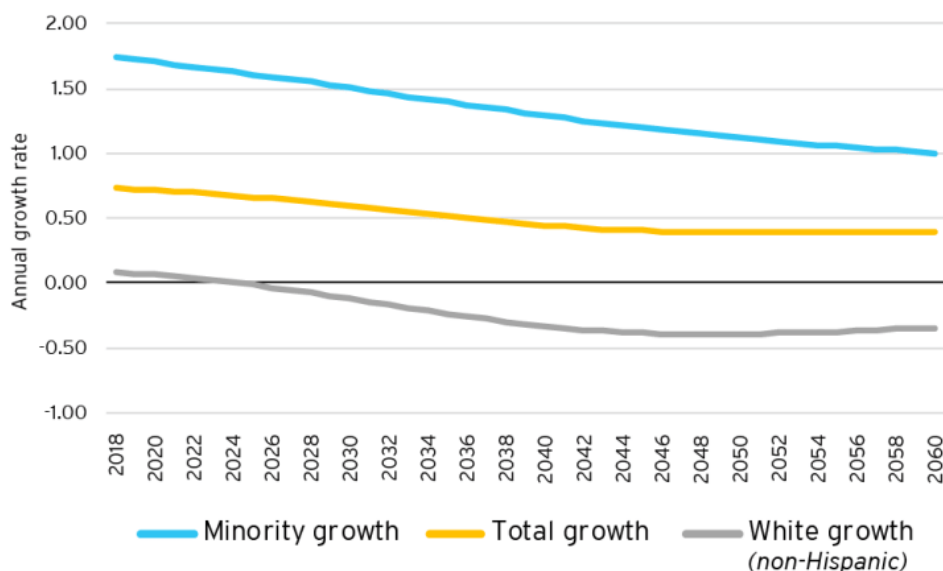
Source: William H Frey analysis of U.S. Census population projections released March 13, 2018 and revised September 6, 2018

B Metropolitan Policy Program
at BROOKINGS

FIGURE 2

Annual growth of total, minority, and white populations

2018 - 2060



Among the minority populations, the greatest growth is projected for multiracial populations, Asians and Hispanics with 2018–2060 growth rates of 176, 93, and 86 percent, respectively. The projected growth rate for blacks is 34 percent.* The demographic source of growth varies across groups. For example, immigration contributes to one-third of Hispanic growth over this time span, with the rest attributable to natural

Source: William H Frey analysis of U.S. Census population projections released March 13, 2018 and revised September 6, 2018



increase (the excess of births over deaths). Among Asians, immigration contributes to three quarters of the projected growth.

These new projections differ from those that the census previously released in 2014. Those projected a minority white tipping point in the year 2044 due to larger projected immigration and somewhat greater growth for several minority groups. The national growth was also somewhat larger in the 2014 projections. The U.S. was predicted to reach a population of 400 million in the year 2051 compared with 2058 in the new projections.

Youthful diversity as a counterweight to aging whites

Clearly it is the growth of the nation’s youthful minority population—attributable to a combination of past and present immigration and births among younger minority groups—that is keeping the nation from aging even faster than would otherwise be the case.

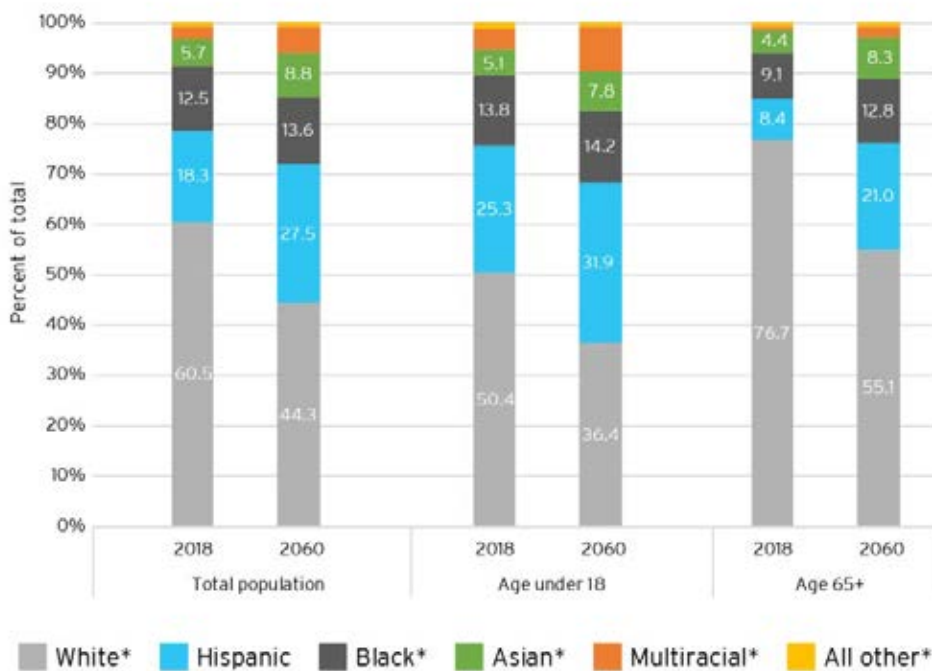
Figure 4 makes clear how important minority populations will become for the nation's youth even through 2060. At that point in time, the census projects whites will comprise only 36 percent of the under age 18 population, with Hispanics accounting for 32 percent. This contrasts sharply with the minority contribution to the nation's seniors, which will still be over half white.

Because racial minorities are projected to account for all of the nation's youthful population growth over the next 42 years, they will sharply decelerate national aging. Already in 2018, there will be more white seniors than children and more white deaths than births according to census projections. Yet, neither will be the case for the combined minority population for the projected 2018–2060 time frame.

Minorities will be the source of all of the growth in the nation's youth and working age population, most of the growth in its voters, and much of the growth in its consumers and tax base as far into the future as we can see. Hence, the more rapidly growing, largely white senior population will be increasingly dependent on their contributions to the economy and to government programs such as Medicare and Social Security. This suggests the necessity for continued investments in the nation's diverse youth and young adults as the population continues to age.

FIGURE 4

U.S. race-ethnic profiles, 2018 and 2060



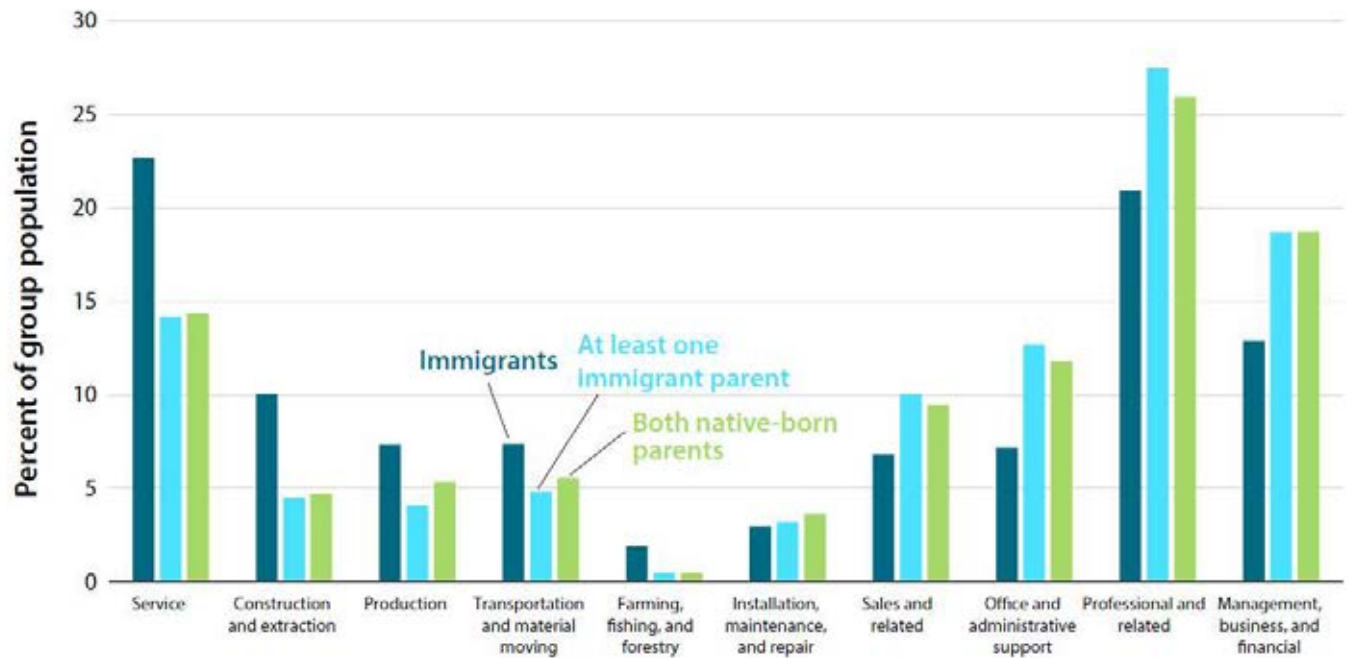
* Non-Hispanic members of race

Source: William H Frey analysis of U.S. Census population projections released March 13, 2018 and revised September 6, 2018

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FIGURE 6.

Occupations of Immigrants, Children of Immigrants, and Children of Natives



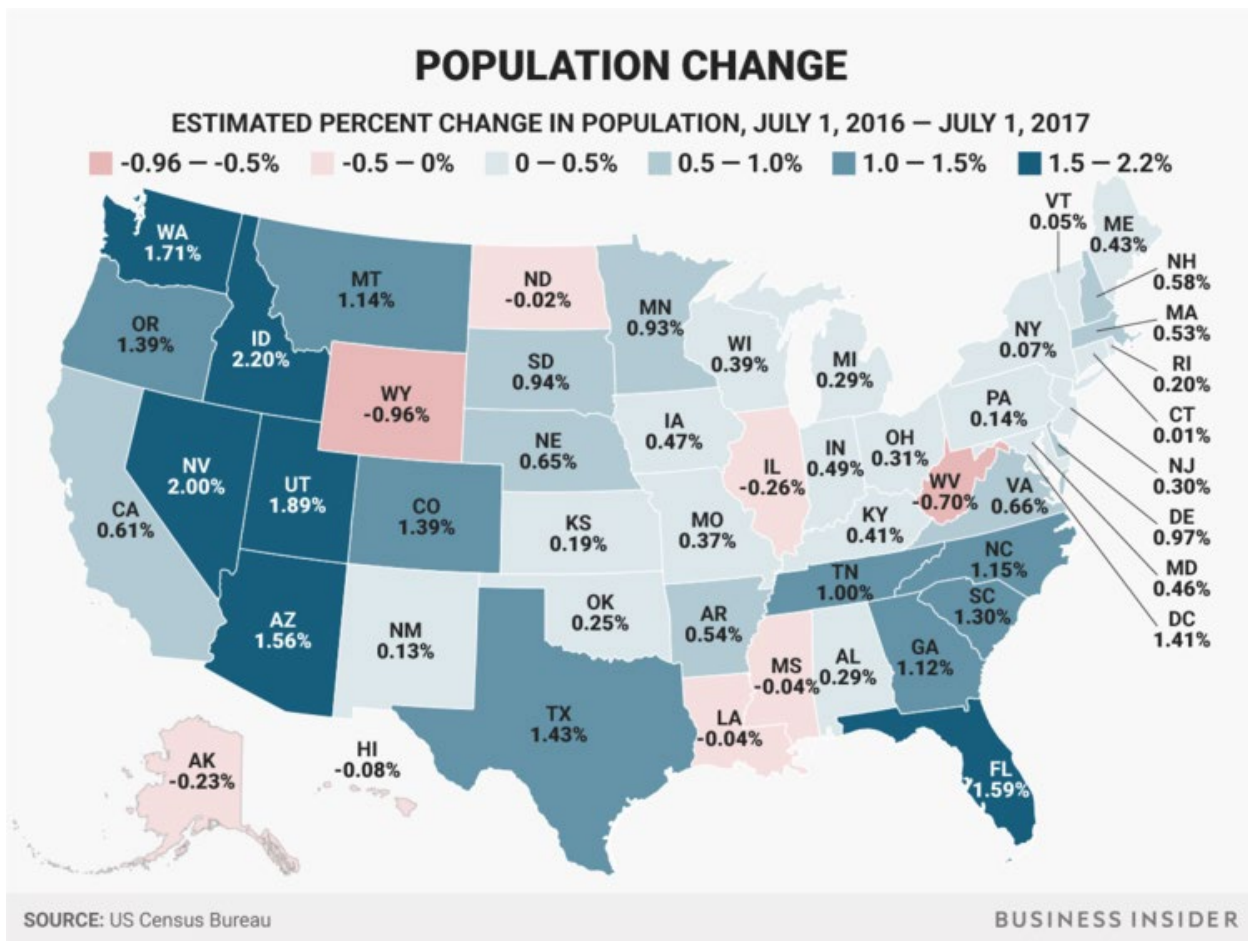
Source: Current Population Survey (CPS; Bureau of Labor Statistics [BLS] 2017); authors' calculations.

Note: Sample is restricted to employed civilian workers between the ages of 25 and 54. Each bar shows the share of a group (e.g., immigrants) employed in a particular occupational category. "Immigrants" refers to prime-age people living in the United States who were not U.S. citizens at birth. "At least one immigrant parent" refers to prime-age native-born children of at least one immigrant parent. "Both native-born parents" refers to prime-age children of two native-born parents. U.S. citizens born abroad and residents of U.S. territories are considered native-born.

- The US Census Bureau recently released its estimates of the populations of each of the 50 US states and Washington, DC, including how their populations changed over a year.

Between July 1, 2016 and July 1, 2017, Idaho grew 2.2%, more than any other state. Eight states saw declines in their populations, with Wyoming coming in last with a 0.96% loss in population.

Here's the percent change in total population in each state and the District of Columbia between July 1, 2016 and July 1, 2017:





Maryland Adult Education Fact Sheet 2017



Need for Adult Education in Maryland According to the U. S. Census Bureau!

- Over **500,000** adults in Maryland lack even a high school diploma.
- **13%** of Marylanders speak a language other than English at home.
- **5%** of the population of Maryland speaks English less than "very well."
- Estimated number of adults in Maryland needing Adult Education and Literacy Services = **750,000 – 810,000.**



What Maryland Adult Education Services Have Accomplished!

- Approximately **1,452** high school diplomas earned in FY 2016 including GED® Test and National External Diploma Program
- **53%** have increased literacy skills on standardized pretest and posttests in FY 2016



Economic Impact of Adult Education

- According to the Bureau of Labor Statistics, median weekly wages increase from **\$493** for a non-high school graduate to **\$678** for a graduate!
- According to the Longitudinal Study of Adult Learning (LSAL) conducted by Dr. Stephen Reder, adults who attended an average of more than 100 hours of instruction averaged **\$10,000** more in annual income. See <https://www.proliteracy.org/Resources/Need-for-Literacy-Research>.



About Maryland Adult Ed Learners!

- **34,862** total adult learners in FY 2016
- Adults waiting for services reached **3,389** in FY 2016
- **85%** minority - African American, Hispanic, American Indian, Native Hawaiian, or Asian
- **29%** aged 16 to 24
- **34%** employed and **21%** unemployed
- **17%** in correctional education programming



Maryland Adult Learners' Skill Levels at Time of Enrollment

- **39%** Adult Basic Education (from preliterate to 8th GLE)
- **10%** Adult Secondary Education (from 9th to 11th GLE)
- **51%** English Language Learners



Maryland Adult Education Professionals

- Approximately **93%** of Teachers are part-time
- Approximately **65%** of Administrative/Principals/Supervisory/Professional Development personnel are part-time
- Over **89** volunteers



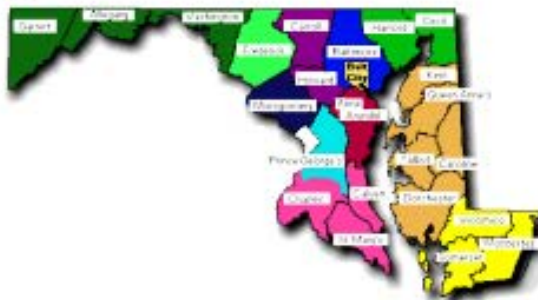
Our Funding Sources

- **\$9.0 M** - Federal WIOA Title II (Compared to 17.5 M in PA and 12.5 in VA)
- **\$8.0 M** - State

Programs Across Maryland

26 state grantees, including

- *community colleges*
- *local public school systems*
- *community based organizations*
- *government agencies*



See <https://www.dlr.state.md.us/gedmd/programs.shtml> to find programs throughout Maryland

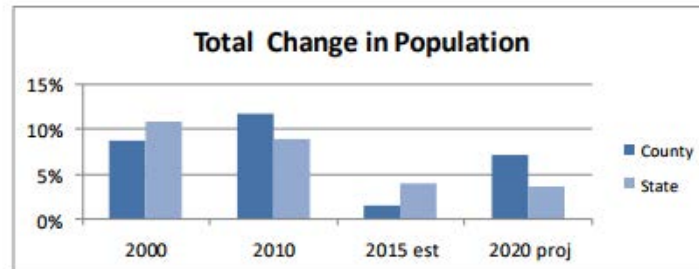
For more information, please visit www.MAAACCEmd.org

Updated March 2017

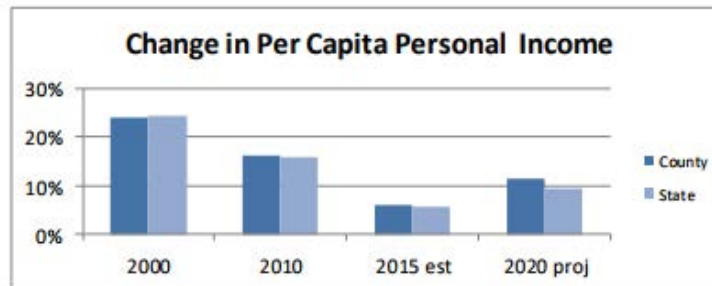
Data represent state grant-funded programs only for FY 2016

Washington County, MD

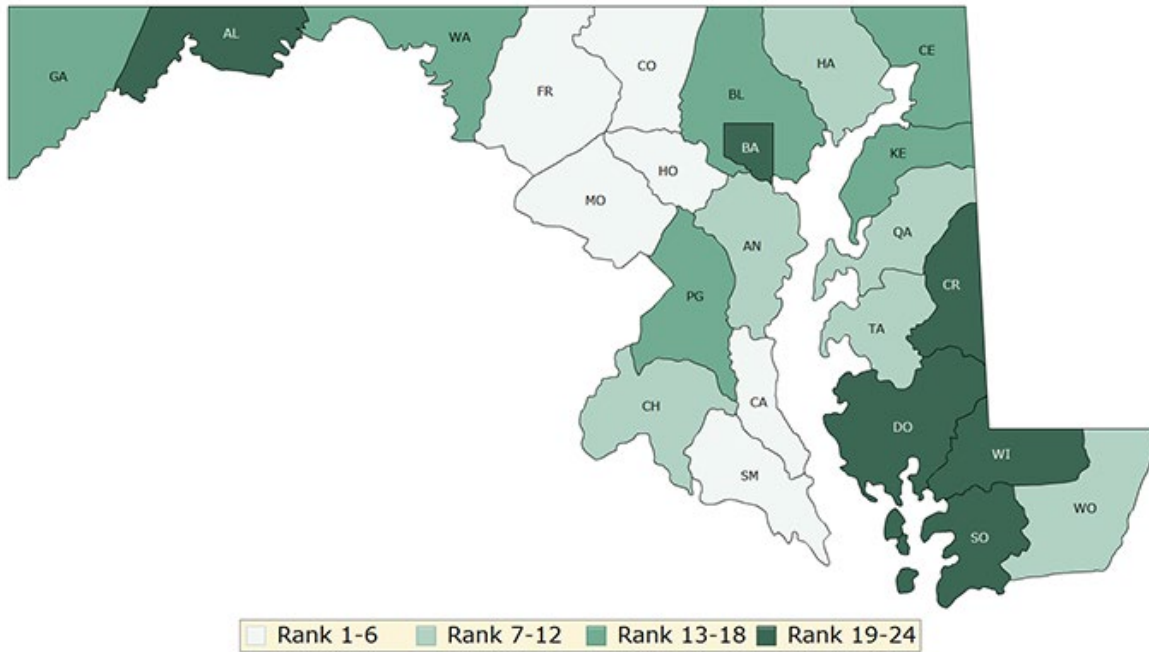
Washington County is home to an estimated 150,300 residents and currently ranked 11th in population and 13th in population growth in the State of Maryland. Between 2000 and 2015, Washington County grew in total by 13.4% or by an annual average of 0.9% per year compared to the State of Maryland also at 13.4% or an annual average of 0.9% per year.



Between 2000 and 2015, Per Capita Personal Income for Washington County residents has increased by 23% or by an annual average of 1.5% per year. The Per Capita Personal Income is projected to increase by 2.06% annually through 2020. The State of Maryland increased 22% from 2000 through 2015 or an annual average of 1.5% per year.



Health outcomes in the County Health Rankings represent measures of how long people live and how healthy people feel. Length of life is measured by premature death (years of potential life lost before age 75) and quality of life is measured by self-reported health status (% of people reporting poor or fair health and the number of physically and mentally unhealthy days within the last 30 days) and the % of low birth weight newborns.



The green map above shows the distribution of Maryland's **health outcomes**, based on an equal weighting of length and quality of life. The map is divided into four quartiles with less color intensity indicating better performance in the respective summary rankings. Specific county ranks can be found in your county's Snapshot.

County Health Rankings 2018

2018 County Health Rankings for the 24 Ranked Counties in Maryland

County	Health Outcomes	Health Factors
Allegany	20	18
Anne Arundel	7	9
Baltimore	13	11
Baltimore City	24	24
Calvert	4	5
Caroline	22	21
Carroll	3	3
Cecil	17	20
Charles	11	12
Dorchester	21	22
Frederick	5	4
Garrett	15	14
Harford	8	8
Howard	2	1
Kent	16	13
Montgomery	1	2
Prince George's	14	16
Queen Anne's	9	6
Somerset	23	23
St. Mary's	6	10
Talbot	10	7
Washington	18	17
Wicomico	19	19
Worcester	12	15

Hagerstown and Washington County, Maryland, offer a rare combination of business advantages:

- A major crossroads location that is convenient to the entire East Coast
At the intersection of I-81 and I-70
- A ready workforce of over 400,000
With strengths in manufacturing and technology
- One of the top-ranked education systems in the nation
4 high schools named by U.S. News & World Report as America's Best
- An affordable cost of doing business—and living
Close to the Washington, D.C./Baltimore regions, but with much lower costs
- Plenty of facilities and land slated for development
Over 1.8 million s.f. of available industrial/commercial space

Career opportunities, plentiful shopping, and a state-of-the-art health system with a brand-new hospital attract people from 3 states (Maryland, West Virginia, and Pennsylvania) to Washington County. Our location has become a choice location for manufacturers, financial services, and distribution companies.

Of Over 3,500 Businesses...

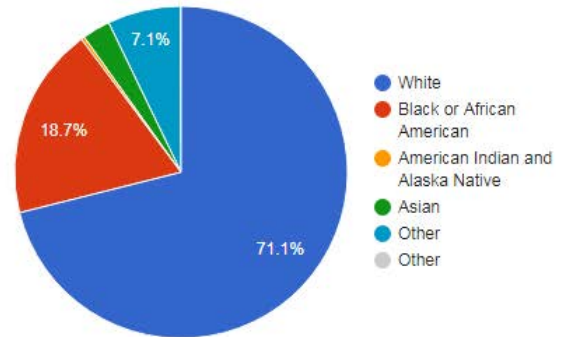
- 25% in trade, transportation and utilities
- 14% in education and health services
- 12% in manufacturing
- 10% in financial activities

Government, business, and community organizations partner to help diversify the local economy. As a result, aero-defense, engineering, and advanced technology sectors are becoming a larger part of our industrial mix.

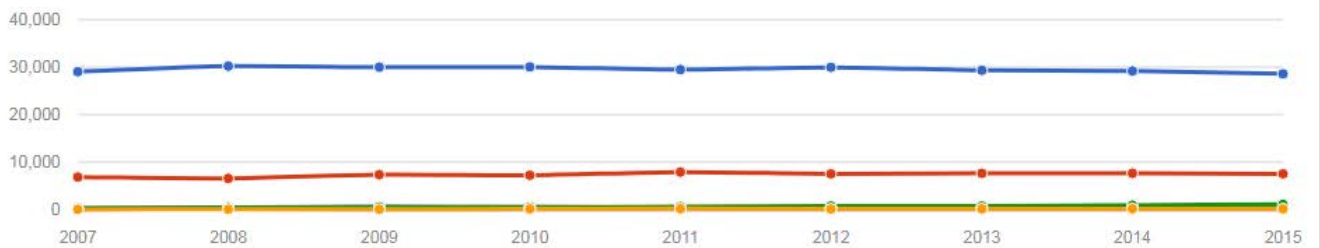
Wash Co Dept of Business Development

Hagerstown, MD Race Breakdown

Race	Number	Percent	National Avg
One Race	37,745	93.9%	96.9
White	28,579	71.1%	73.1
Black or African American	7,524	18.7%	12.7
American Indian and Alaska Native	134	0.3%	0.8
Asian	1,093	2.7%	5.4
Asian Indian	69	0.2%	1.2
Chinese	308	0.8%	1.3
Filipino	225	0.6%	0.9
Japanese	14	0.0%	0.2
Korean	160	0.4%	0.5
Vietnamese	38	0.1%	0.5
Other Asian	279	0.7%	0.8
Native Hawaiian and Other Pacific Islander	25	0.1%	0.2
Native Hawaiian	11	0.0%	0.1
Guamanian or Chamorro	0	0.0%	0.0
Samoan	8	0.0%	0.0
Other Pacific Islander	6	0.0%	0.1
Some Other Race	390	1.0%	4.8
Two or More Races	2,465	6.1%	3.1



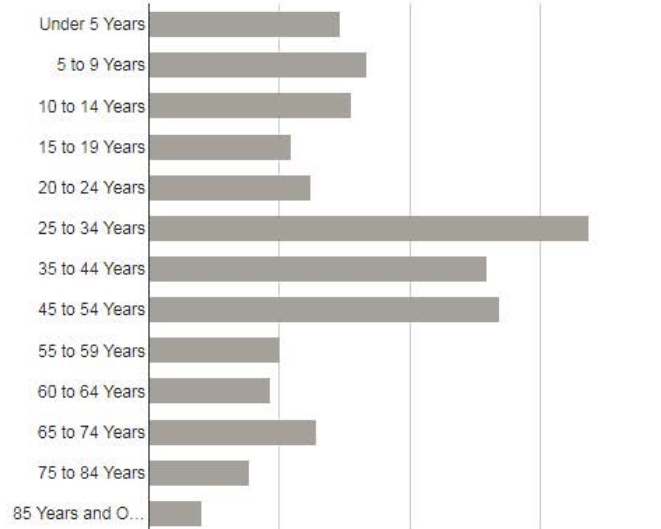
Hispanic Statistics	Number	Percent	National Avg
Hispanic or Latino (of any race)	2,431	6.0%	17.6
Mexican	331	0.8%	11.1
Puerto Rican	556	1.4%	1.7
Cuban	29	0.1%	0.7
Other Hispanic or Latino	1,515	3.8%	4.1
Not Hispanic or Latino	37,779	94.0%	82.4



homefacts.com

Hagerstown, MD Age Breakdown

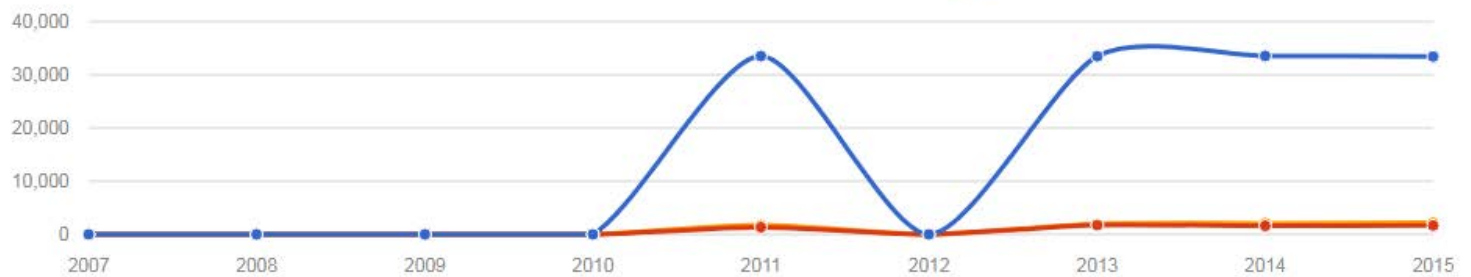
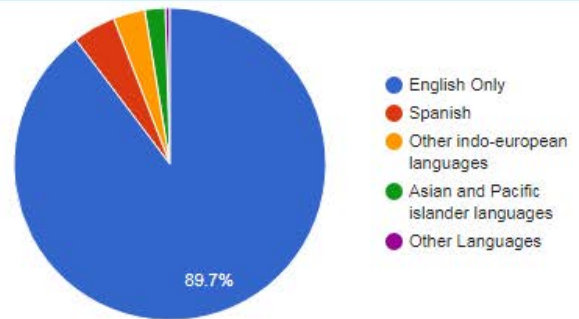
Age Group	Number	Percent	National Avg
Under 5 Years	2,933	7.3%	6.2
5 to 9 Years	3,337	8.3%	6.4
10 to 14 Years	3,116	7.7%	6.4
15 to 19 Years	2,183	5.4%	6.7
20 to 24 Years	2,487	6.2%	7.0
25 to 34 Years	6,765	16.8%	13.7
35 to 44 Years	5,186	12.9%	12.7
45 to 54 Years	5,381	13.4%	13.4
55 to 59 Years	2,008	5.0%	6.7
60 to 64 Years	1,875	4.7%	6.0
65 to 74 Years	2,575	6.4%	8.6
75 to 84 Years	1,554	3.9%	4.4
85 Years and Over	810	2.0%	1.9



Age Statistics	Number	Percent	National Avg
18 Years and over	29,395	73.1%	77.1
Female	15,664	53.3%	51.4
Male	13,731	46.7%	48.6
21 Years and over	27,971	69.6%	72.9
62 Years and over	5,958	14.8%	18.3
65 Years and over	4,939	12.3%	14.9
Female	2,894	58.6%	55.9
Male	2,045	41.4%	44.1
Median Age (years)	34	NR	NR

Hagerstown, MD Language Spoken at Home

Language	Number	Percent	National Avg
English Only	33,428	89.7%	78.5%
Languages other than english	3,849	10.3%	21.5%
Spanish	1,657	4.4%	13.3%
Other indo-european languages	1,224	3.3%	3.7%
Asian and Pacific islander languages	791	2.1%	3.5%
Other Languages	177	0.5%	1.0%



Commuting Patterns: Western Maryland Workforce Region

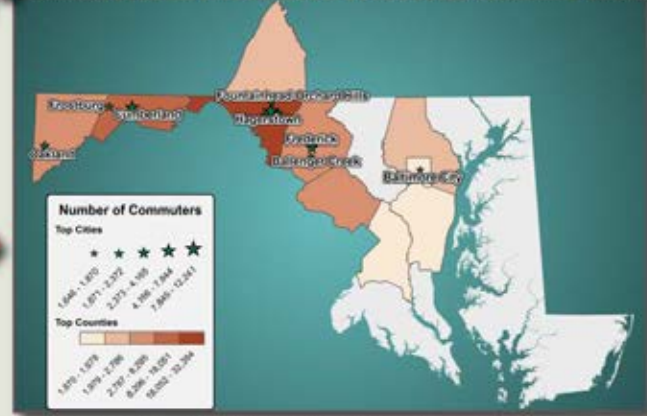


Office of Workforce Information and Performance
Division of Workforce Development and Adult Learning • Department of Labor, Licensing and Regulation



Revised February, 2018

People Living in Western Maryland Region Work



Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap (2015). Note: Based on primary job counts

Cities Western Maryland Residents are Employed

Hagerstown	12,241	12.5%
Cumberland	7,844	8%
Frederick	4,165	4.3%
Oakland	2,372	2.4%
Robinwood	2,281	2.3%

Counties Western Maryland Residents are Employed

Washington	32,384	33.1%
Allegany	18,051	18.4%
Frederick	8,295	8.5%
Garrett	7,666	7.8%
Montgomery	4,960	5.1%

States of Western Maryland Residents are Employed

Maryland	83,860	85.7%
West Virginia	5,283	5.4%
Pennsylvania	4,700	4.8%
Virginia	2,379	2.4%
District of Columbia	720	0.7%

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Commuting Patterns: Western Maryland Workforce Region



Office of Workforce Information and Performance
Division of Workforce Development and Adult Learning • Department of Labor, Licensing and Regulation



People Working in Western Maryland Region Live



Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap (2015). Note: Based on primary job counts

Cities Workers in Western Maryland Live

Hagerstown	9,372	9.4%
Cumberland	5,223	5.3%
Halfway	2,828	2.8%
Frostburg	1,915	1.9%
Robinwood	1,407	1.4%

Counties Workers in Western Maryland Live

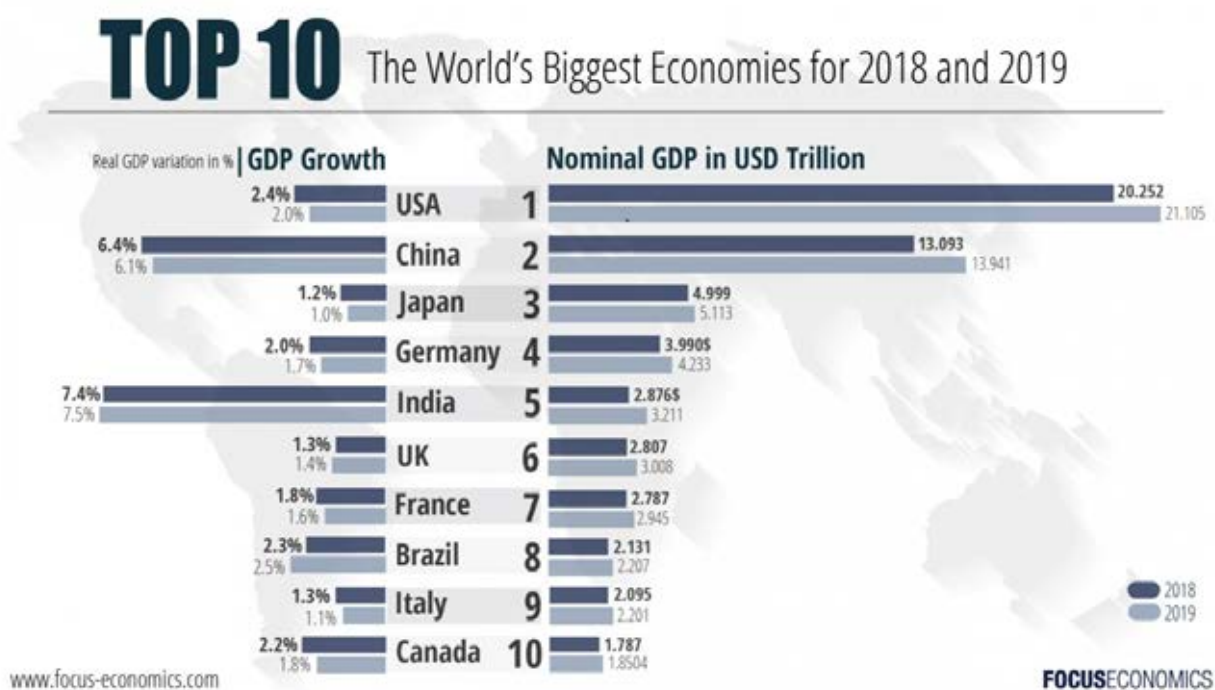
Washington	31,672	31.9%
Allegany	17,931	18%
Garrett	8,498	8.6%
Franklin	8,066	8.1%
Berkeley	5,125	5.2%

States Workers in Western Maryland Live

Maryland	71,240	71.7%
Pennsylvania	13,844	13.9%
West Virginia	11,805	11.9%
Virginia	1,400	1.4%
District of Columbia	165	0.2%

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World's Largest Economies



Despite facing challenges at the domestic level along with a rapidly transforming global landscape, the U.S. economy is still the largest in the world with a nominal GDP forecast to exceed USD 20 trillion in 2018. The U.S. economy represents about 20% of total global output, and is still larger than that of China. The U.S. economy features a highly-developed and technologically-advanced services sector, which accounts for about 80% of its output. The U.S. economy is dominated by services-oriented companies in areas such as technology, financial services, healthcare and retail. Large U.S. corporations also play a major role on the global stage, with more than a fifth of companies on the Fortune Global 500 coming from the United States.

The U.S. economy is projected to grow 2.4% in 2018 and 2.0% in 2019.

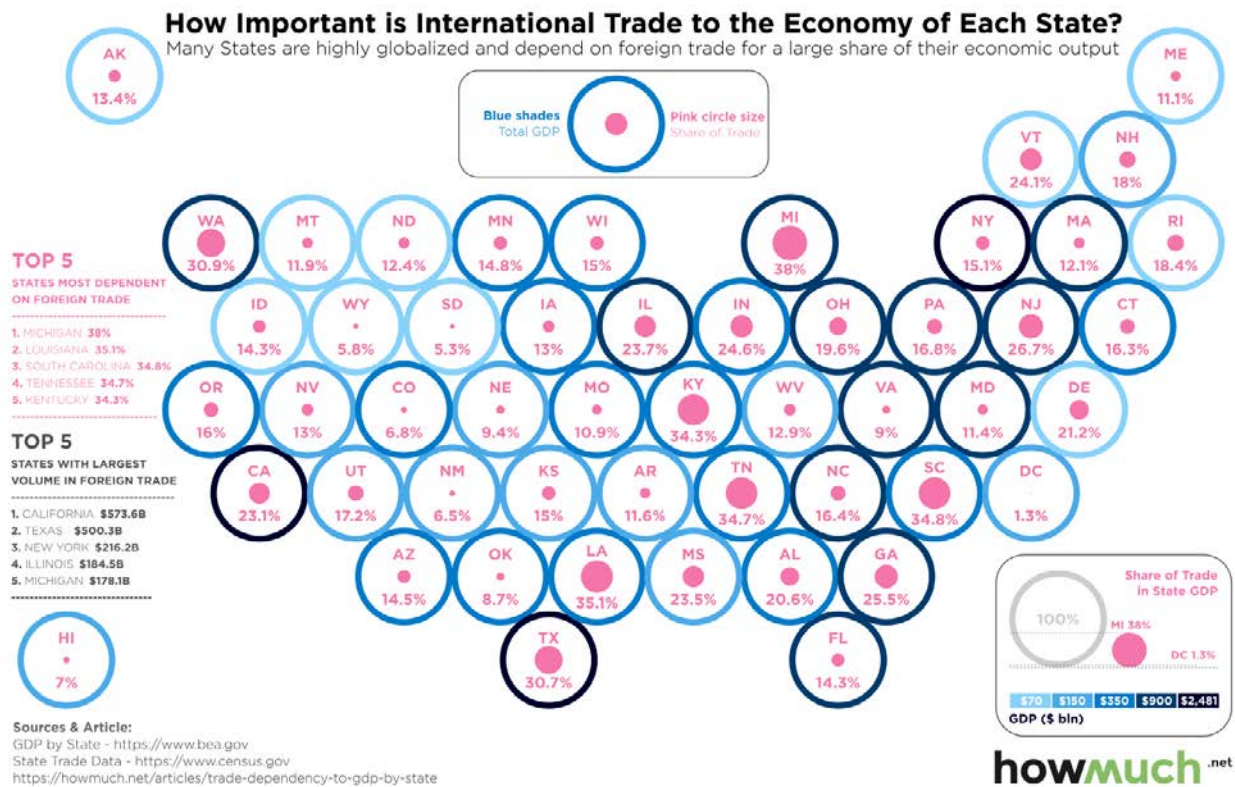
United States – National

- The percentage of U.S. residents who own their homes is at the lowest point it has been for more than 20 years, according to a report from the U.S. Census Bureau. In the first quarter of 2015, 63.8% of people owned their housing units, down from 64.8% at the start of 2014 (these figures are seasonally adjusted). While the U.S. economy has improved since the Great Recession ended five years ago, part-time and "contract" workers are filling many of the new jobs. Contract workers made up less than half of one percent of all U.S. employment in the 1980s but now account for 2.3%. Economists predict contract workers will play a larger role in the years ahead.
- More than a third of adults say they have not started saving for retirement yet, according to a national poll accompanying Bankrate's monthly Financial Security Index.
- The USDA projects that, in 2015 dollars, a middle class married couple will spend between about \$12,400 and \$14,000 annually, or \$234,000 from birth to age 17. Those calculations don't include pregnancy- or college-related costs. In 2014, the estimate was about \$245,000. According to the report, for middle-class married couples, those costs consist of housing (29 percent), food (18 percent), followed by child care and education (16 percent), transportation (15 percent), health care (9 percent), miscellaneous expenses (7 percent) and clothing (6 percent).
- The average cost for a regular gallon of fuel is expected to spike to \$2.49, up from \$2.13 in 2016, according to data from GasBuddy.com. Those would be the highest gas prices motorists have paid since 2014. The increase of prices at the pump also coincides with some states instituting gas taxes at the start of 2017. In Pennsylvania, taxes at the pump jumped by 7.9 cents per gallon, while in Michigan, drivers will pay 7.3 cents more.

Americans now owe more than \$1.3 trillion in student loan debt, based on the most current figures available to Comet. That money is not only owed by young people fresh out of college, but also by borrowers who have been out of school for a decade or more. The standard repayment timetable for federal loans is 10 years, but research suggests it actually takes four-year degree holders an average of 19.7 years to pay off their loans.

Top statistics of the student loan debt landscape in 2018:

- Current U.S. Student Loan Debt = est. \$1.4 Trillion
- 1 in 4 Americans have student loan debt: An est. 44 Million people
- Average student loan debt amount = \$37,172
- Average student loan payment = \$393/month

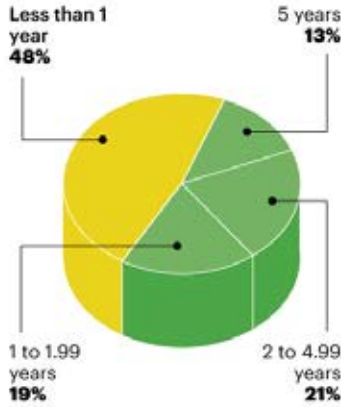


The chart above shows each state by Gross Domestic Product (GDP) and trade shares as a percentage of GDP. Each state is represented by a circle. Inside each state's circle is a smaller, pink circle that shows each state's proportional reliance on foreign trade, as a share of GDP. Trade shares as a percentage of GDP is measured by adding the value of both the state's imports and exports and dividing by the state's GDP. The data were collected from the Bureau of Economic Analysis in conjunction with the Census Bureau.

The Unpredictability of Long-Term Care

HOW LONG ...

The duration of paid care among 65-year-olds who will need it someday varies widely, but for many it is under one year.



PERCENTAGES EXCEED 100% BECAUSE OF ROUNDING. SOURCE: DEPARTMENT OF HEALTH AND HUMAN SERVICES

HOW MUCH ...

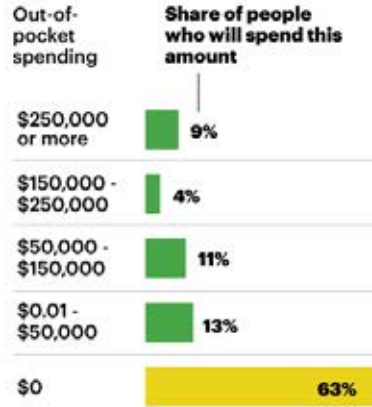
The median annual cost of nursing home care depends on your state.



PRICES ARE FOR A SEMIPRIVATE ROOM. THE MEDIAN ANNUAL COST IN ALASKA IS \$292,000. SOURCE: GENWORTH

YOUR COSTS

One in four people now age 65 will face over \$50,000 in lifetime out-of-pocket long-term care expenditures.



SOURCE: DEPARTMENT OF HEALTH AND HUMAN SERVICES

Association for Long Term Care Planning

Average Cost of Long Term Care 2018	
Long Term Care Service	Average Annual Rate
Nursing Home Care (Private Room)	\$100,379
Nursing Home Care (Semi-private Room)	\$88,348
Assisted Living Facility	\$46,350
Adult Day Health Care	\$18,746
Homemaker Services	\$49,372
Homemaker Health Aide	\$50,668

Self-Employed Statistics	Data
Total number of people who are self-employed in the U.S.	14,600,000
Number of people who work for someone who is self-employed	29,400,000
Total percent of jobs held by the self-employed and the workers they hire	30 %
Average annual income of someone who is self-employed	\$43,003
Percent of self-employed who are male	63 %
Percent of self-employed between ages 45-54	28 %
Percent of self-employed workers who are 55 or older	31 %
Largest Self-Employed Occupations	Total Number
Child Care	556,523
Carpenters	459,116
Maids & Housekeeping Cleaners	441,551
Farmers and Ranchers	437,999
Construction Laborers	380,226

2017 - Statisticbrain.com

- American workers still need help from the government to make ends meet.

According to a new study from researchers at the University of California-Berkeley, the government spends \$152.8 billion a year to support working families. In a research brief released Monday, Ken Jacobs, Ian Perry, and Jenifer MacGillvary find that 73% of enrollees in public support programs - such as food stamps - are members of working families, which the study defines as families with at least one member working 27 or more weeks per year and 10 hours or more per week.

The researchers blame low wages for this need, writing: "Real hourly wages of the median American worker were just 5% higher in 2013 than they were in 1979, while the wages of the bottom decile of earners were 5% lower in 2013 than in 1979. Trends since the early 2000s are even more pronounced. Inflation-adjusted wage growth from 2003 to 2013 was either flat or negative for the entire bottom 70% of the wage distribution."

- The number of women in computing has taken a nosedive, according to the American Association of University Women. In 1990, 35 percent of people in the field were women. Today, it's 26 percent. Female representation in engineering went from 9 percent to only 12 percent in the same period, although women have made big gains in other STEM areas, like biology and chemistry.
- CareerBuilder split the fastest-growing temp jobs into two divisions, ones that pay \$15/hr or more, and ones that pay less than \$15/hr.

For jobs that pay less than \$15/hr, home health aides have the most predicted growth, from 17,822 temp jobs in 2014 to an expected 20,420 temp jobs in 2019. Home health aides are followed by childcare workers, gaming dealers, restaurant cooks, substitute teachers, demonstrators and product promoters, retail salespersons, and landscape/grounds keeping workers. All are predicted to have 14 percent growth over the next five years.

As for the fastest-growing temp jobs that pay \$15/hr or more, computer system analysts come in first, with 11,802 temp jobs in 2014, and a predicted 14,024 temp jobs in 2019. Computer system analysts make a median hourly earning of \$39.15, almost \$40/hr. They are followed by accountants and auditors, management analysts, computer user support specialists, application software developers, customer service representatives, heavy and tractor-trailer truck drivers, registered nurses, and maintenance/repair workers. All are predicted to experience 14 percent growth over the next five years.

- In 2016, an estimated 5.3 million of the nearly 17 million U.S. households living in poverty were headed by a Millennial, compared with 4.2 million headed by a Gen Xer and 5.0 million headed by a Baby Boomer. The relatively high number of Millennial households in poverty partly reflects the fact that the poverty rate among households headed by a young adult has been rising over the past half century while dramatically declining among households headed by those 65 and older. In addition, Millennials are more racially and ethnically diverse than the other adult generations, and a greater share of Millennial households are headed by minorities, who tend to have higher poverty rates. Millennial heads of households are also more likely to be unmarried, which is associated with higher poverty.

- Tens of thousands of students from foreign countries are enrolling in U.S. high schools, in most cases as a first step toward applying to U.S. colleges and universities, a study out Tuesday says. Most are from China. Last year, more than 73,000 international students enrolled in U.S. high schools, federal data show. About two thirds, nearly 49,000, received visas enabling them to pursue a U.S. high school diploma. That's more than triple the number since 2004, when just under 16,000 foreign students held such visas, says the study by the Institute of International Education, a non-profit organization. About a third, 25,387, received visas for shorter-term high school exchange programs. That's up 15% over the same period, the report says.
- The Bureau of Labor Statistics estimates that the healthcare sector will add the most new jobs between 2012 and 2022. Even before the Affordable Care Act was passed, the healthcare sector represented nearly 19 percent of all spending in the nation's economy and 13 percent of all jobs. Community colleges are the pipeline for training and certifying more than half of all healthcare workers.

With more Americans getting healthcare coverage through the ACA, and with baby boomers getting older and inevitably experiencing more issues with their health, there is an increased need for RNs, LPNs, medical assistants, dental hygienists, EMTs, paramedics and pharmacy technicians. These jobs require either an associate degree or certification.

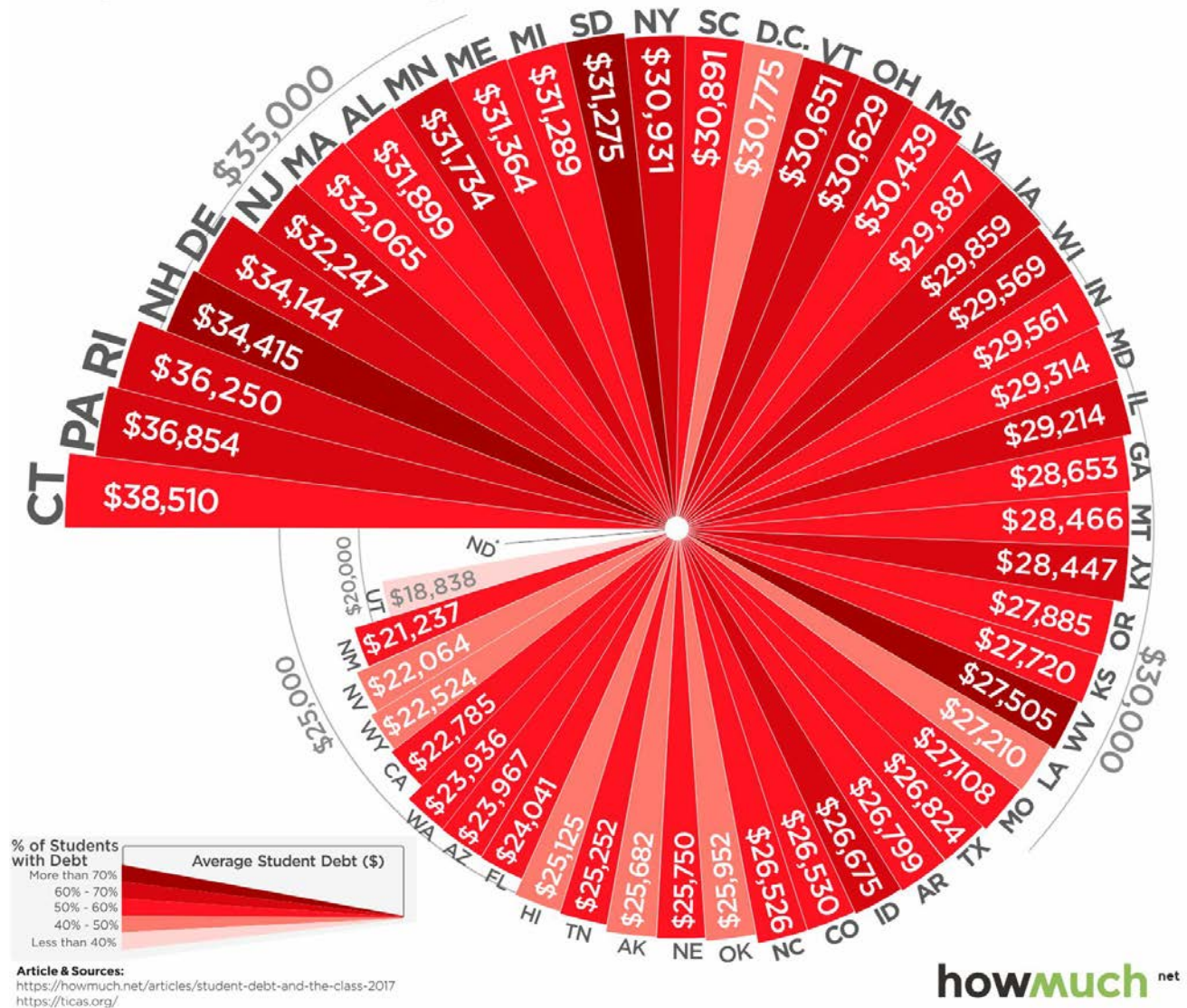
In a 2011 report, "Creating Opportunities in Health Care: The Community College Role in Workforce Partnership," the authors point out that community colleges can "provide training and credentialing for incumbent workers in healthcare and ... prepare new workers to succeed and meet the workforce demands for this sector - expanding individual opportunity and economic vitality."

Educating nurses is one of the most important contributions community colleges make to society. But programs that lead to an RN are expensive to run, and finding qualified instructors with a master's degree in nursing is challenging as these nurses can typically earn more money working in direct care. However, it is estimated that there will be 1.2 million job openings for RNs in the U.S. economy by 2020.

When it comes to paying for higher education, it turns out that the amount of student debt you're saddled with has a lot to do with which state you went to college in.

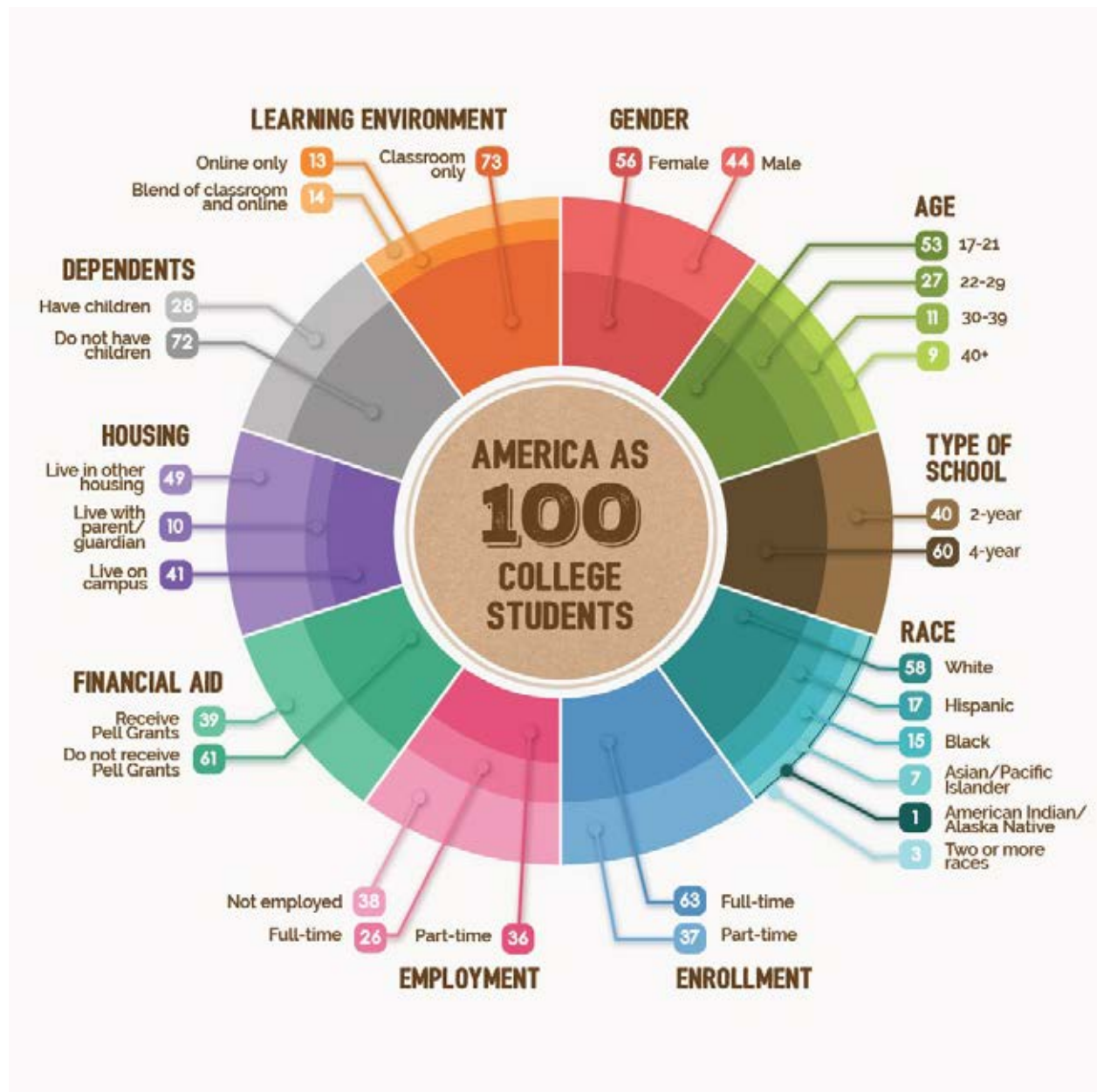
Using data from The Institute for College Access & Success (TICAS), personal finance site HowMuch put together a chart revealing which states in the US have the highest average student debt for the class of 2017 (among students who graduated with debt):

The State of Student Debt in The United States of America Average Debt and Percentage of Graduates with Debt - Class of 2017



America's postsecondary student population is more diverse than ever. Many students attend school while working part- or even full-time. Some are raising children while in school. And, in many cases, they're financially independent. There's no one-size-fits-all path to (or through) college – and we need to plan our education policies accordingly.

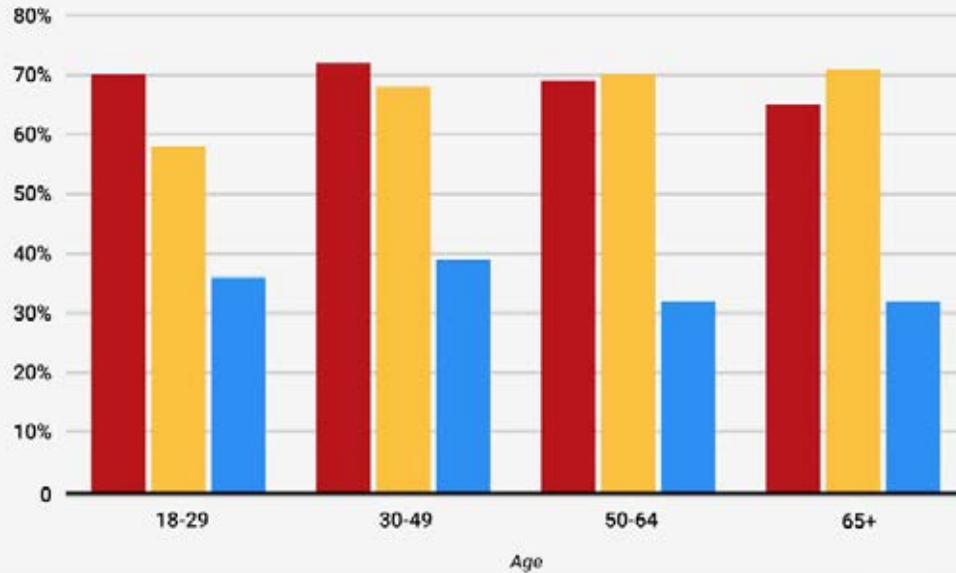
What would America look like as 100 college students?



HOW AMERICANS VIEW COLLEGE QUALITY, BY AGE

■ Four-year colleges and universities
 ■ Community colleges
 ■ Internet-based college programs

Percent viewed as "excellent or good"



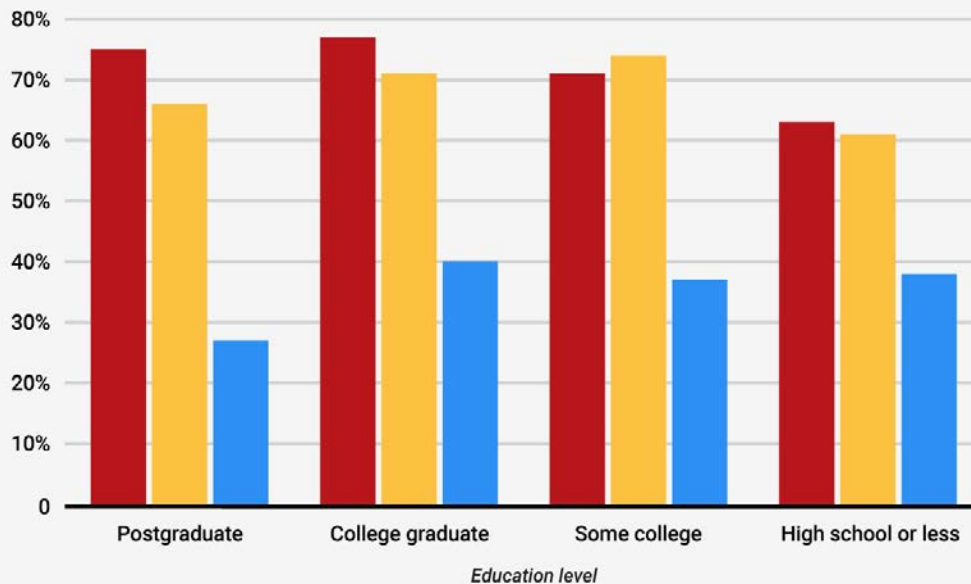
SOURCE: Gallup

BUSINESS INSIDER

HOW AMERICANS VIEW COLLEGE QUALITY, BY EDUCATION LEVEL

■ Four-year colleges and universities
 ■ Community colleges
 ■ Internet-based college programs

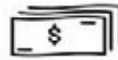
Percent viewed as "excellent or good"



SOURCE: Gallup

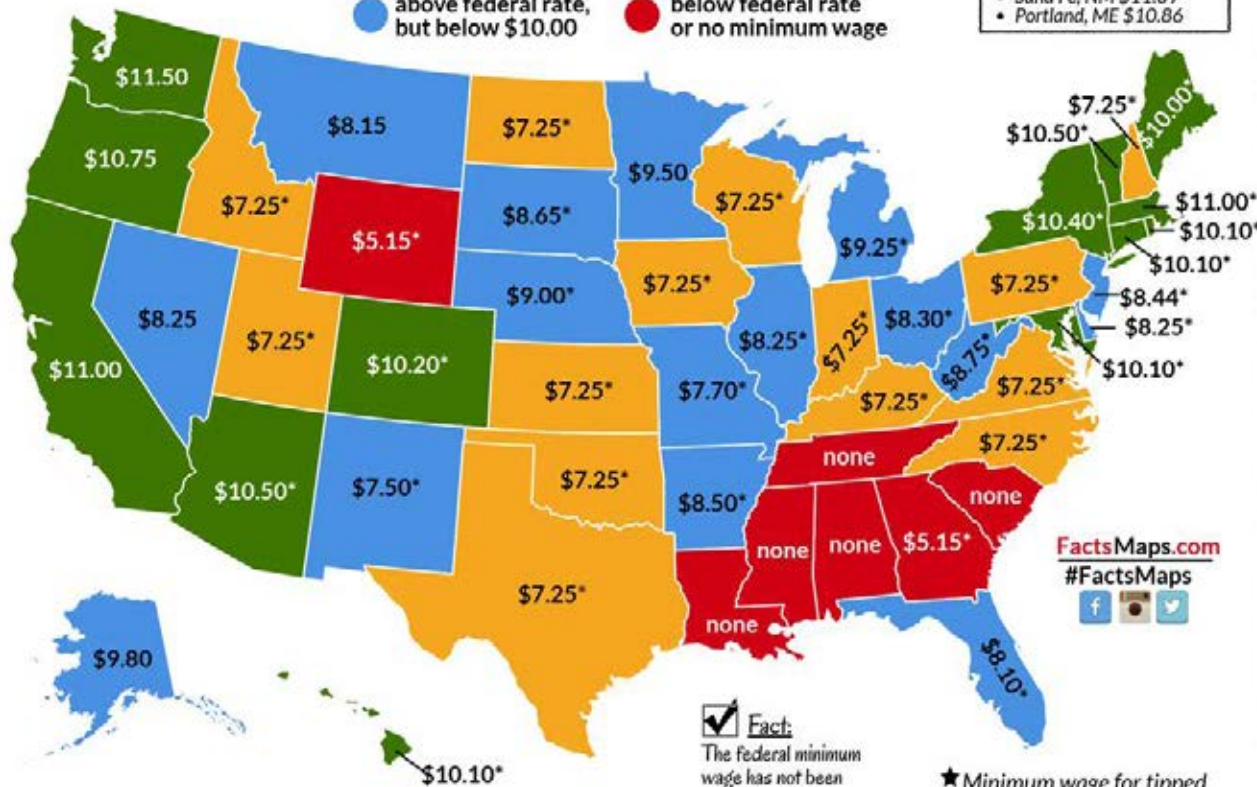
BUSINESS INSIDER

Minimum Wage by U.S. State as of July 1, 2018



- above \$10.00
- above federal rate, but below \$10.00
- federal rate
- below federal rate or no minimum wage

- Some local minimum wage rates:**
- San Francisco, CA \$15.00
 - Berkeley, CA \$15.00
 - Los Angeles, CA \$15.00
 - Washington, DC \$13.25
 - New York City, NY \$13.00*
 - Oakland, CA \$12.86
 - San Jose, CA \$12.00
 - Portland, OR \$12.00
 - Santa Fe, NM \$11.09
 - Portland, ME \$10.86



- Washington 11.50
- California 11.00
- Massachusetts 11.00*
- Oregon 10.75
- Arizona 10.50*
- Vermont 10.50*
- New York 10.40*
- Colorado 10.20*
- Maryland 10.10*
- Connecticut 10.10*
- Hawaii 10.10*
- Rhode Island 10.10*
- Maine 10.00*
- Alaska 9.80
- Minnesota 9.50
- Michigan 9.25*
- Nebraska 9.00*
- West Virginia 8.75*
- South Dakota 8.65*
- Arkansas 8.50*
- New Jersey 8.44*
- Ohio 8.30*
- Delaware 8.25*
- Illinois 8.25*
- Nevada 8.25
- Montana 8.15
- Florida 8.10*
- Missouri 7.70*
- New Mexico 7.50*
- Idaho 7.25*
- Indiana 7.25*
- Iowa 7.25*
- Kansas 7.25*
- Kentucky 7.25*
- New Hampshire 7.25*
- North Carolina 7.25*
- North Dakota 7.25*
- Oklahoma 7.25*
- Pennsylvania 7.25*
- Texas 7.25*
- Utah 7.25*
- Virginia 7.25*
- Wisconsin 7.25*
- Georgia 5.15*
- Wyoming 5.15*
- Alabama none
- Louisiana none
- Mississippi none
- South Carolina none
- Tennessee none

FactsMaps.com
#FactsMaps

Fact:
The federal minimum wage has not been changed since July, 2009

★ Minimum wage for tipped professions and/or small businesses is less

Source: United States Department of Labor, state & local web sites

By 2024, BLS projects that the labor force will grow to about 164 million people. That number includes about 41 million people who will be ages 55 and older—of whom about 13 million are expected to be ages 65 and older.

And, although they make up a smaller number of workers overall, the 65- to 74-year-old and 75-and-older age

groups are projected to have faster rates of labor force growth annually than any other age groups. (See chart 2.) Over the entire 2014–24 decade, the labor force growth rate of the 65- to 74-year-old age group is expected to be about 55, and the labor force growth rate of the 75-and-older age group is expected to be about 86 percent, compared with a 5-percent increase for the labor force as a whole.

Chart 2. Annual growth rate in labor force by age, projected 2014–24 (percent)

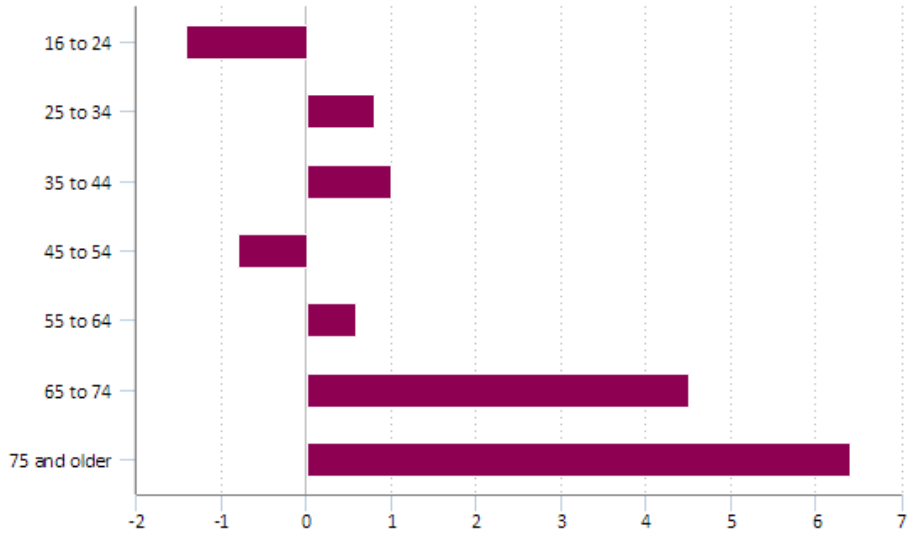
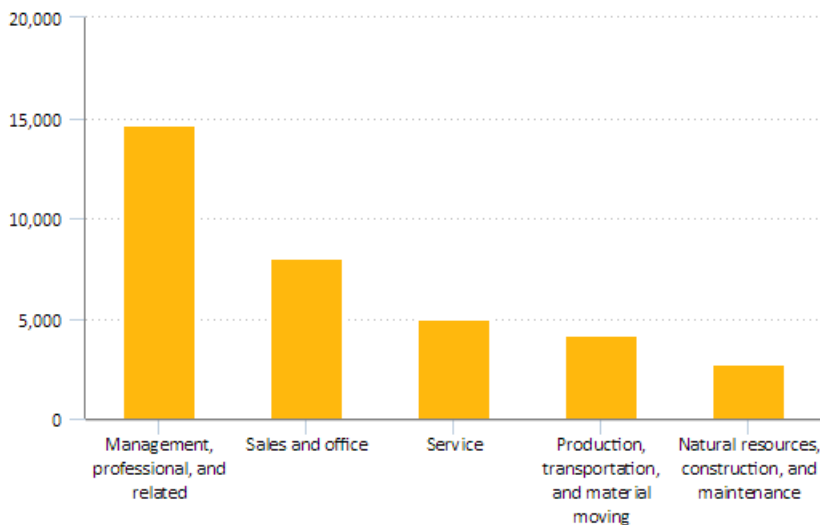


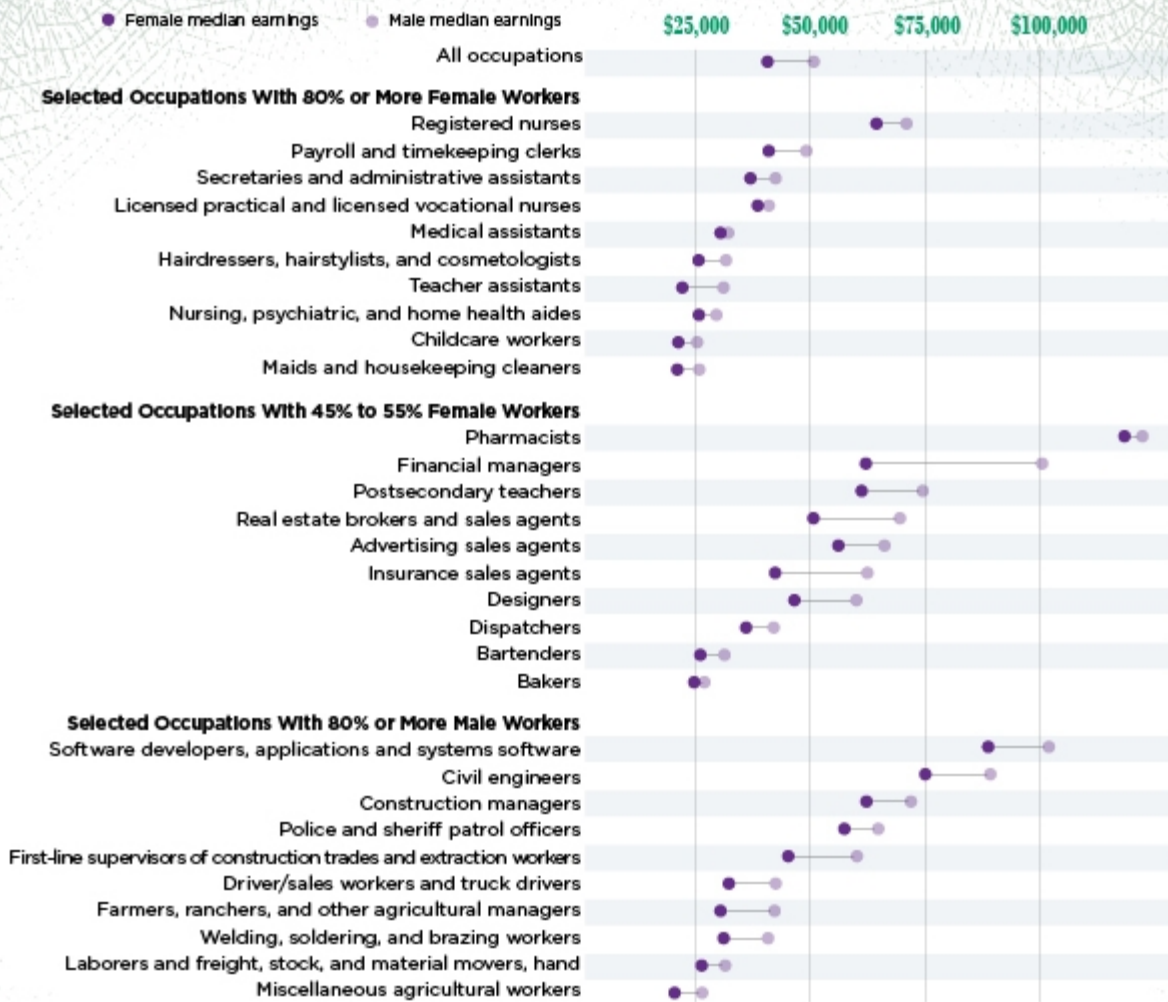
Chart 3. Employment of workers ages 55 and older, by occupation group, 2016 (thousands)



Workers ages 55 and older were employed across many types of occupations in 2016, according to BLS. (See chart 3.) More than 42 percent of these workers were in management, professional, and related occupations, a somewhat higher proportion than that for all workers.

Women's Earnings by Occupation

Median Earnings of Full-Time, Year-Round Workers in the Past 12 Months by Sex and Occupation



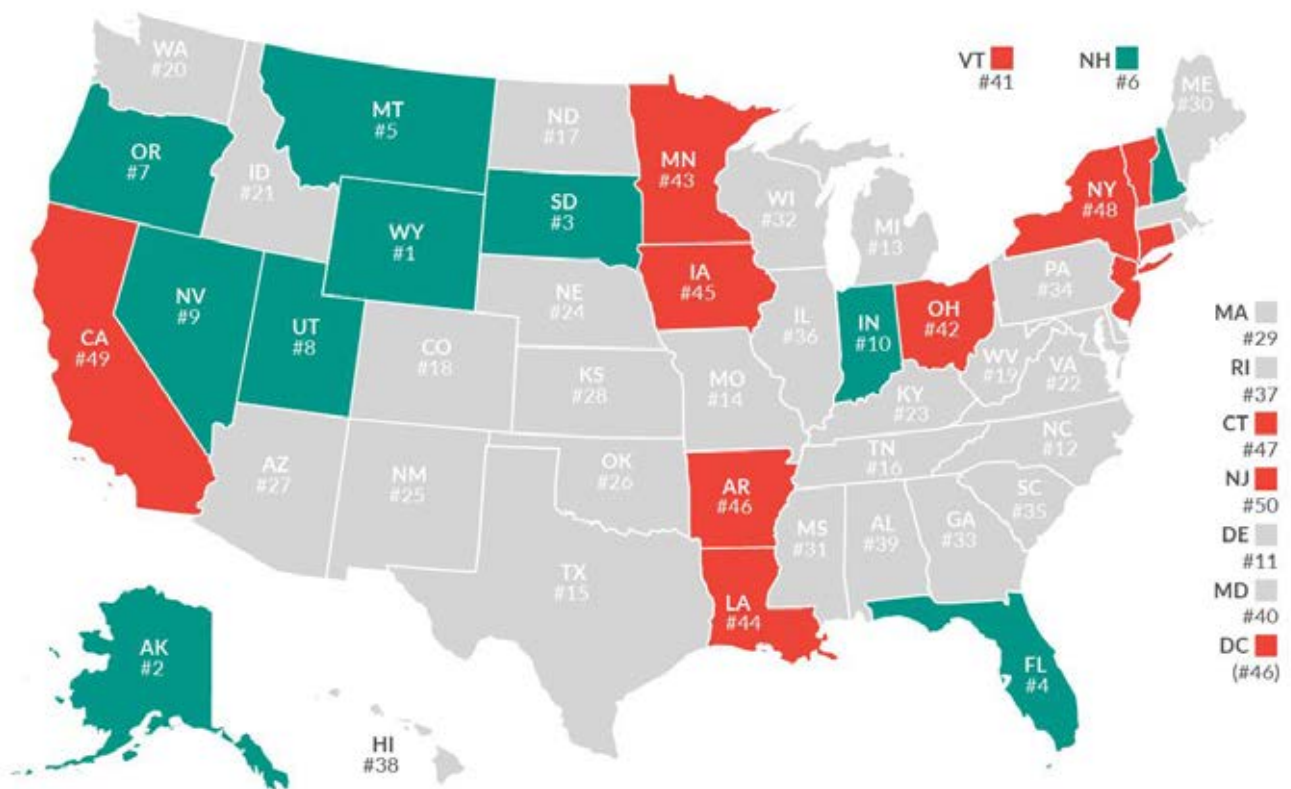
United States
Census
Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Source: 2016 American Community Survey
www.census.gov/topics/employment/industry-occupation/data/tables.html

The most recent research shows women in the United States make \$0.80 on the dollar compared to their male counterparts, according to the Institute for Women's Policy and Research. That gap is wider for black and Hispanic women, who earn 62.5% and 54.4%, respectively, of the paychecks their male colleagues receive. Every year, advocates talk about closing the gender wage gap on Equal Pay Day — which falls on April 10 this year — and pull out these numbers to show the scope of the issue. But that strategy is getting exhausting and at this rate, pay parity won't be achieved until 2059.

2019 State Business Tax Climate Index

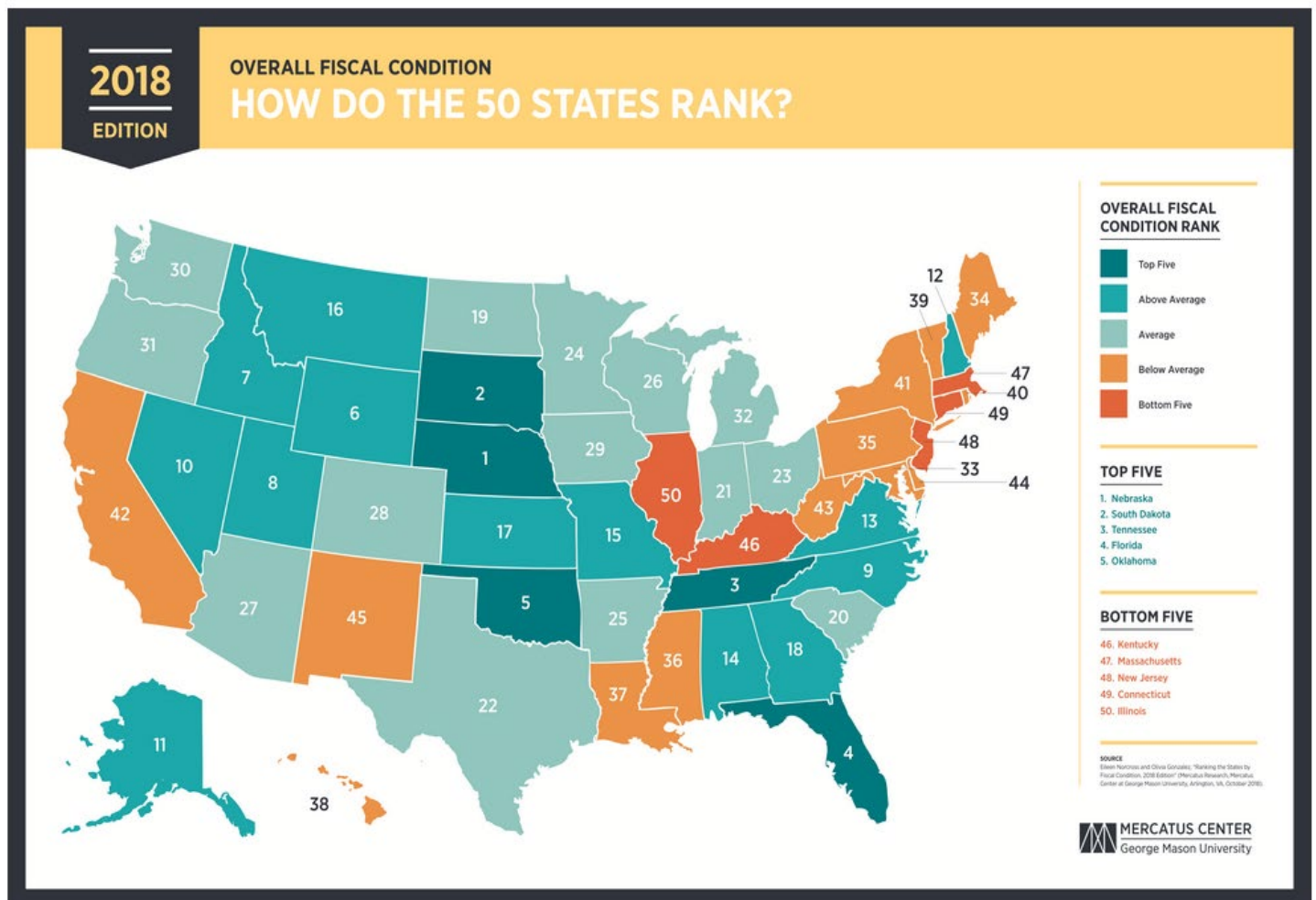


Note: A rank of 1 is best, 50 is worst. Rankings do not average to the total. States without a tax rank equally as 1. D.C.'s score and rank do not affect other states. The report shows tax systems as of July 1, 2018 (the beginning of Fiscal Year 2019).
Source: Tax Foundation.

- 10 Best Business Tax Climates
- 10 Worst Business Tax Climates

For the fifth and final year, a new study from the Mercatus Center at George Mason University ranks the 50 states according to their financial condition. Each edition has provided a snapshot of each state's fiscal health by providing information from audited state financial reports in an easily accessible format. In "Ranking the States by Fiscal Condition, 2018 Edition," Eileen Norcross and Olivia Gonzalez calculate this year's rankings from each state's fiscal year 2016 reports and then apply trend analysis to reports for each year from 2006 until 2016.

The study measures how well states can meet short-term and long-term bills by examining their financial statements. Most states are in a stable condition, with the exception of the size of unfunded pension liabilities (a large portion of most state government obligations). Some states also have consistently low levels of cash, which indicate the potential for budget shortfalls during a recession.



States with the Most Debt				
Rank of US States	State	Median Individual Income	Overall Debt per Capita	Debt-to-Income Ratio
3	Virginia	\$31,557	\$69,520	1.981
6	District of Columbia	\$41,724	\$79,700	1.910
10	Maryland	\$36,316	\$67,020	1.845
34	Pennsylvania	\$27,846	\$39,340	1.413
51	West Virginia	\$22,771	\$27,520	1.209

Aol Finance 2017

According to msn.com, pockets of poverty exist in Maryland, but the state is home to a large number of industries that pay well, and legions of high-earning federal employees. This abundance of big-salary positions translates to a bumper average household income of \$100,071 per year.

Median Household Income for 2018	
State	Percent
Maryland	\$100,071
Virginia	\$90,881
Pennsylvania	\$75,235
West Virginia	\$57,779

The average U.S. household pays more than \$5,700 in federal income taxes, according to the Bureau of Labor Statistics.

Tax Rates by State - 2018		
Rank of US States	State	Percent
36	Maryland	11.96%
27	Virginia	10.87%
41	Pennsylvania	12.45%
21	West Virginia	10.39%

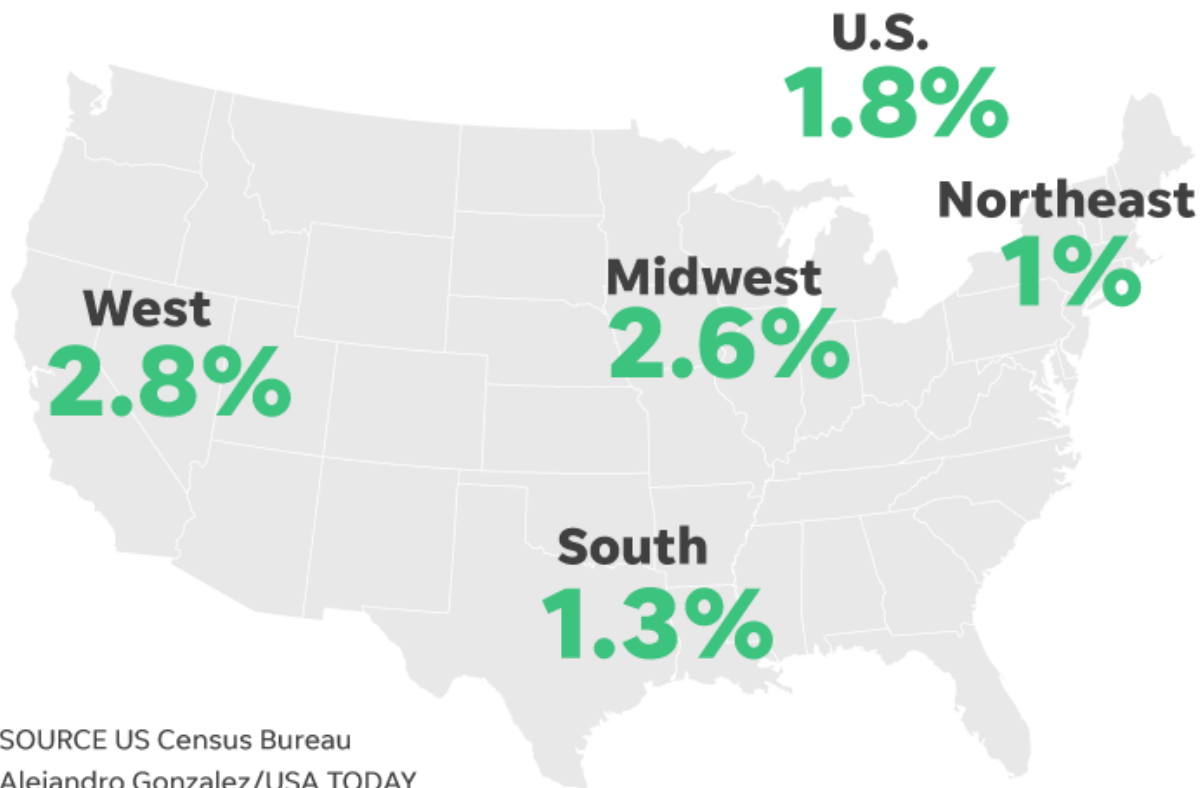
wallethub.com

The price of all food has risen 26.8 percent over the past 10 years, outpacing the 21.9 percent inflation rate over the same period.

Several key factors generally affect food prices in the long run. High oil prices increase the cost of shipping; droughts and floods cause shortages of certain key products; and a growing appetite for more expensive food from an increasingly affluent world population drives up the overall demand — and price — of food. Price increases include:

Flour – 26%, Eggs – 26.4%, Cheese – 26.7%, Canned Vegetables – 26.9%, Frozen Fish – 28.7%, Other Poultry – 30.2%, Cakes/Cookies – 30.5%, Bread – 31.8%, Rice/Pasta – 32.4%, Fresh Bread – 33%, Fats/Oils – 34.9%, Fresh Chicken – 35.1%, Salt/Spices – 36.5%, Beef Steaks – 41%, Shelf Stable Fish – 41.4%, Bacon 41.6%, Prescription Drugs – 43.9%, Butter – 54.9%, Tobacco – 92.2%

Household income gains in 2017



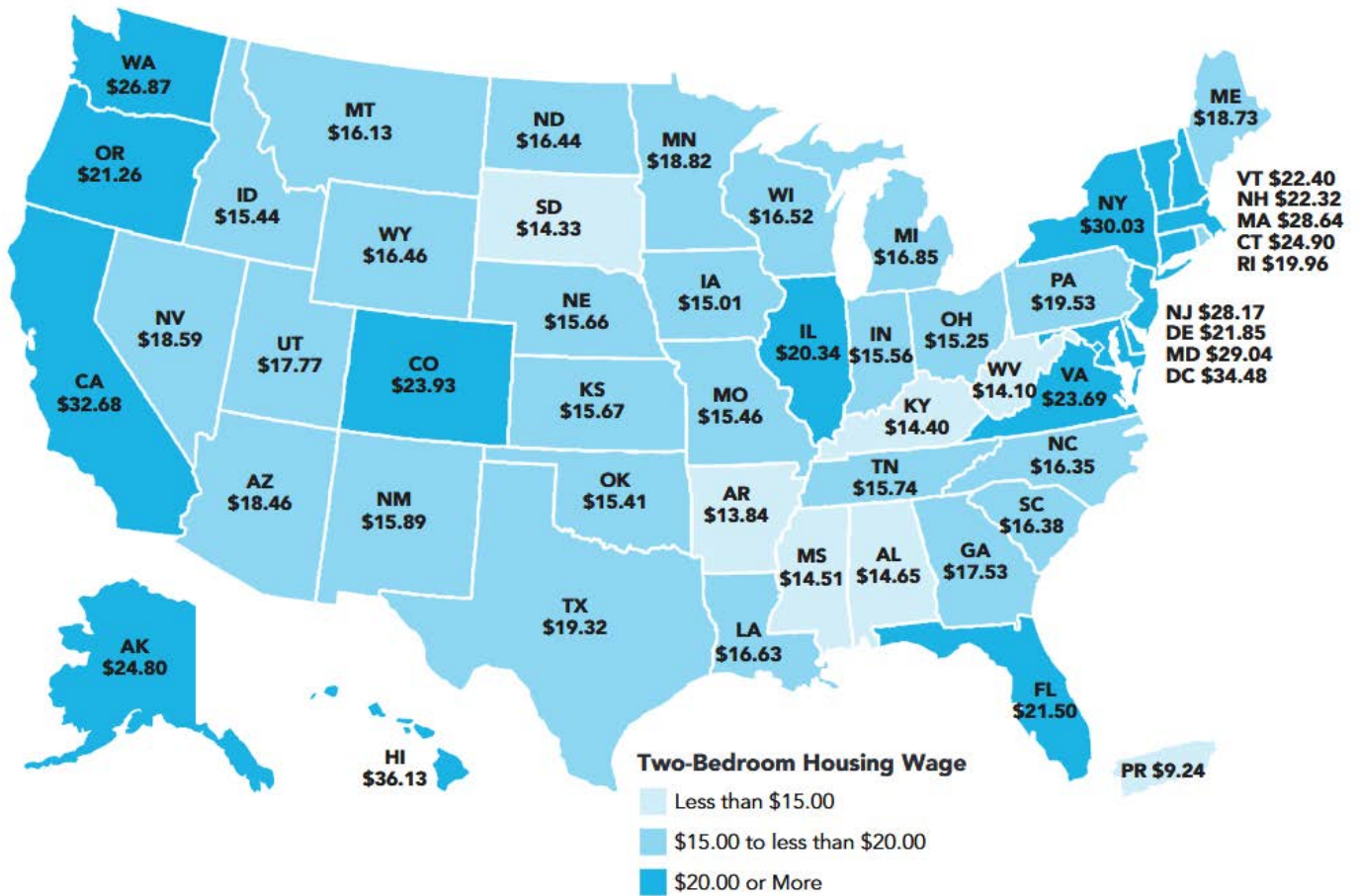
In its first large-scale study of household finances, the U.S. central bank uncovered lingering effects of the sharpest economic downturn since the Great Depression, with 42 percent of respondents saying they had delayed major purchases and 18 percent saying they put off a major life decision, including buying a home or getting married, due to the crisis. Thirty-six percent said they now planned to retire later, according to the online survey.

According to Business Insider, wages and salaries are going up, at least for most Americans.
The national average wage growth is 3.1%.

Wage Growth - 2017		
Rank of US States	State	Percentage of Wage Growth
19	West Virginia	3.1%
23	Virginia	3.0%
26	Maryland	2.9%
27	Pennsylvania	2.8%

2018 TWO-BEDROOM RENTAL HOUSING WAGES

Represents the hourly wage that a household must earn (working 40 hours a week, 52 weeks a year) in order to afford the Fair Market Rent for a **TWO-BEDROOM RENTAL HOME**, without paying more than 30% of their income.



So how long do full-time U.S. employees really work every week?

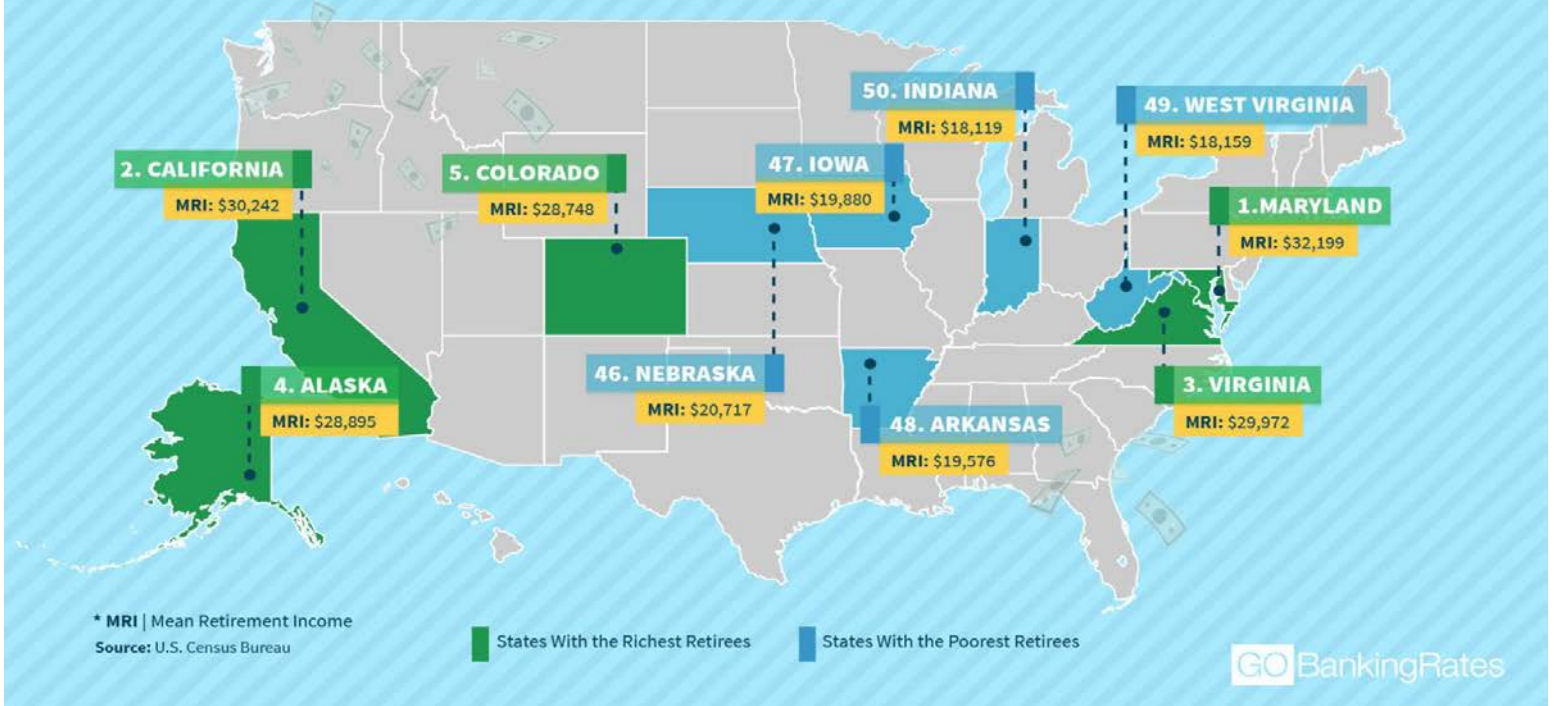
Americans put in an average of around 1,783 hours per year at their job according to the World Economic Forum. That's about 300 hours more per year than Germans work. Many Americans even take work with them while on vacation and up to 52 percent of Americans didn't use all their available vacation days in 2017.

State of Maryland

The index is a state-by-state analysis of how state economies are transforming from an industrial economic model based on “smokestack chasing.” In this model, economic development success is measured by the number of large company relocations rather than the creation and retention of high-value added, high-wage jobs. Maryland ranked sixth according to The 2017 State New Economy Index, behind Delaware and Virginia. Maryland’s high rankings are primarily due to high concentrations of knowledge workers, many employed with the federal government or related contractors in the suburbs of Washington, D.C. The ranking of Maryland and its neighbors follows.

The 2017 State New Economy Index Overall Rank		
Rank of US States	State	Score
6	Maryland	78.9%
5	Delaware	80.4%
4	Virginia	81.7%
23	Pennsylvania	64.4%
48	West Virginia	44.1%

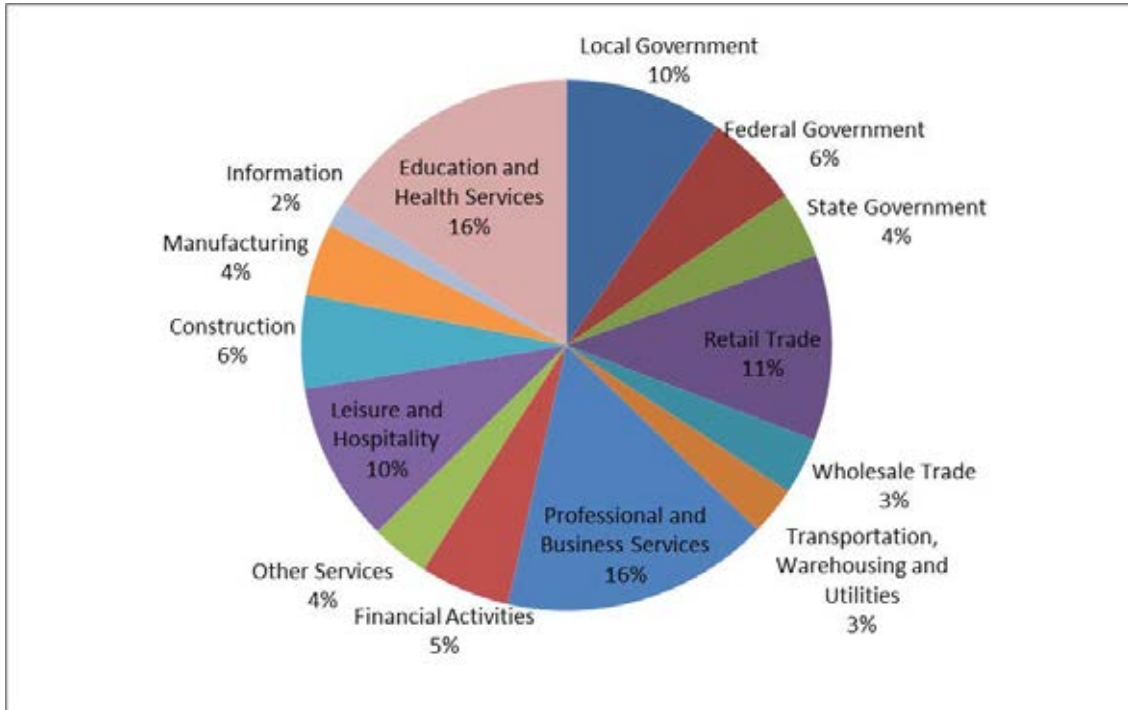
STATES WITH THE RICHEST AND POOREST RETIREES



Maryland holds the No 1 spot as the state where retirees have the highest mean retirement income: \$32,199 a study has found.

ATTOM Data Solutions, curator of the nation's largest multi-sourced property database, today released its 2018 Rental Affordability Report, which shows that buying a median-priced home is more affordable than renting a three-bedroom property in 240 of 447 U.S. counties analyzed for the report — 54 percent.

The analysis incorporated recently released fair market rent data for 2018 from the U.S. Department of Housing and Urban Development, wage data from the Bureau of Labor Statistics along with public record sales deed data from ATTOM Data Solutions in 447 U.S. counties with sufficient home sales data



As per the latest data by the Census officials, state of Maryland is the richest state in United States of America in 2013. Covering a land area of 9,707 square miles, it is the 42nd largest state in USA in terms of land area and in terms of water area it ranks #18. It is home to Port of Baltimore which is one of the largest in the country. Its Howard County frequently finds a place in the richest counties of US and currently in the list it ranks #6. Poverty rate of Maryland is the lowest among all the states of America. Majority of its employed population is in private sector which accounts for 80% of these employed while the government sector (federal, State, county and municipal governments) employs remaining 20%. High-end occupations and good income and a vibrant income make Maryland the richest state in USA. Health care and educational sector employ significant proportion of population.



States with the Most Amount of Debt

To assess each state's economic standing and debt burden, GOBankingRates looked at each state's total liabilities, total assets and the debt ratio between the two. We also determined each state's total net position — total assets minus total liabilities — to provide the fullest picture possible. A debt ratio of more than 100 percent means a state owes more in liabilities than it has in assets.



Maryland ranks 6th

- **Total liabilities:** \$51.57 billion
- **Total assets:** \$44.5 billion
- **Debt ratio:** 104.9 percent

Maryland suffers from the highest state debt ratio in the South Atlantic division. It's also one of only seven states to report greater total liabilities than assets for the fiscal year 2017. At 36.6 percent, rising healthcare costs contributed the highest percentage of governmental expenses.

West Virginia ranks 20th with \$12.2 billion in total liabilities, \$18.02 billion in total assets with a debt ratio of 64%

Pennsylvania ranks 10th with \$56.72 billion in total liabilities, \$67.13 billion in total assets with a debt ratio of 81.4%

- In Maryland, Johns Hopkins Institutions is the single largest employer, according to a new report by the financial news and opinion site 24/7 Wall St.
- Maryland’s economy finished 2018 off strong, adding thousands of positions and lowering the unemployment rate, a new federal jobs report shows. Maryland added 4,900 jobs in December and about 50,900 in 2018, according to the latest report released Friday by the U.S. Labor Department’s Bureau of Labor Statistics. Though only a gain of 1.9 percent, that’s the state’s best yearly job growth showing since 2000. Maryland is one of the states most heavily dependent on the federal government, which employs up to 245,000 people directly, according to a state report from the Bureau of Revenue Estimates.

MARYLAND AGRICULTURE BY THE NUMBERS



Source: [NASS](#) (National Agricultural Statistics Service), [USDA](#)

- Agriculture is Maryland’s largest commercial industry, contributing more than \$17 billion in revenue each year. More than 12,000 farms produce a variety of commodities on approximately 2 million acres. As the state’s largest industry, agriculture puts many Marylanders to work – about 350,000 of them.

A testament to the state’s nickname, Little America, Maryland agricultural commodity production is as diverse as the nation itself, and includes poultry, nursery and turf, seafood, dairy, corn, soybeans, and racing and pleasure horses. Maryland farmers work to protect one of their most vital resources – the land. With research, they have implemented best management practices to protect land while at the same time providing food and fiber.

Washington County, MD

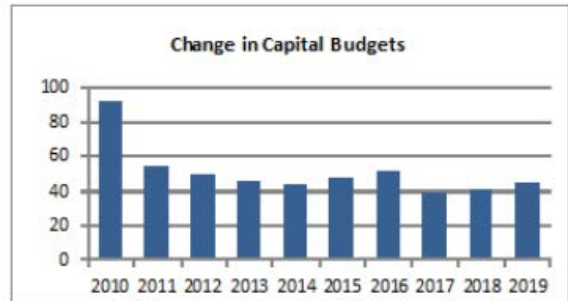
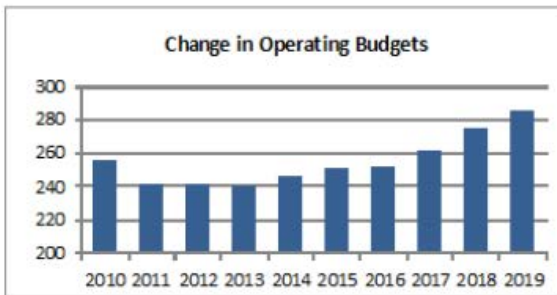
- Washington County ranks as the 17th most developed retail market (per person) in the nation by the National Research Bureau. Total 2011 retail sales were \$2,724,238 for Washington County and \$3,956.113 for the Hagerstown metropolitan area. Effective buying Income (EBI) for the county totaled \$2,765.723.

The following are home-sale statistics for January for selected Maryland jurisdictions, noting the number sold and average prices, with percentage changes for each:

- Allegany County: 39 (5.4 percent); \$83,026 (minus 7.8 percent)
- Carroll County: 120 (minus 4.8 percent); \$342,920 (15 percent)
- Frederick County: 238 (minus 10.9 percent); \$331,044 (5.3 percent)
- Garrett County: 26 (minus 3.7 percent); \$294,717 (minus 20.4 percent)
- Washington County: 117 (12.5 percent); \$201,721 (19.3 percent)
- Statewide: 4,721 (minus 0.7 percent); \$306,296 (1.5 percent)

Source: *Maryland Realtors*

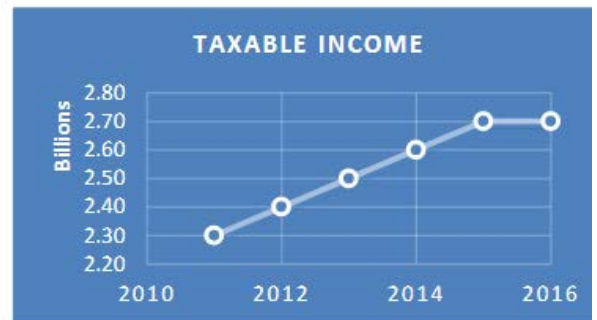
Washington County's history over the past several years for operating and capital budgets are shown in the tables below in millions. Operating budgets have increased by 11.5% or \$29.4 million over 2010. Capital Budgets vary from year-to-year due to the level of major construction activity, mandated funding requirements, and the initiation of new funds or service responsibilities.



Highlights of the General Fund Budget:

Revenue:

The General Fund budget totals \$229.6 million, a \$7.9 million increase or 3.58% over FY2018. The General Fund operating budget derives 95% of its revenue from taxes. Property tax increased by \$2.8 million or 2.3% based on estimates provided by the State Department of Assessments and Taxation. Income tax increased \$2.0 million or 2.4% based on recent trends. The County took a conservative approach to income tax given the recent Federal tax changes. It is the County's strategy to estimate according to prior year actuals along with employment and wage growth projections. Based on State predictions, the County could realize an increase in income tax in the coming years, however it is too early to predict how much and in which year the County may see that revenue. Both real estate and income tax rates have been held constant for 19 years. The graphs below highlight County decreases in the unemployment rate and increases in taxable income over the available time period.



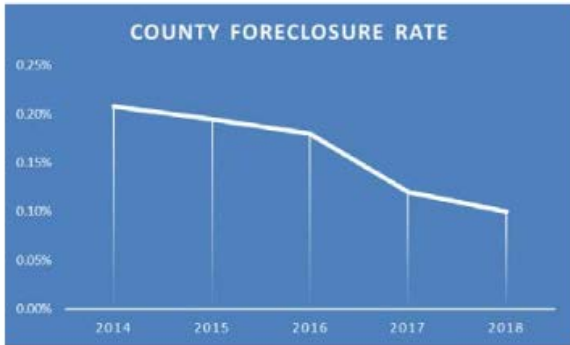
www2.washco-md.net

Rating agencies are companies that assign credit ratings to institutions, including local governments that issue debt obligations. Credit ratings are the rating agencies' assessment of the County's ability and willingness to repay debt on a timely basis. Debt management is an important factor in evaluating and assigning credit ratings. Credit ratings are an important indicator in the bond market and can influence the County's long-term interest rates that it must pay.

The County's current credit ratings are AA+ by Standard & Poor's, AA+ by Fitch and an Aa1 by Moody's Investors Service. The County's credit ratings reflect strong financial management, continued economic development and diversification, strong financial position, strong financial policies, manageable capital needs, low debt, and strong reserves.

Washington County’s property tax base for 2019 reflected an assessable base increase. Estimates are based on information received from the State Department of Assessments and Taxation. Assessments are stable and have been rising over the past several years. The County has experienced steady growth in real estate tax since 2016, including an increase of 2.87% in 2018.

In line with the assessable base increases, housing trends look favorable as inventory is moving faster and prices are rising. Over FY2017, active inventory is 13.9% less and the number of units sold is 4.7% more, representing an increase of 77 units. The average foreclosure rate has reduced 13.7% and average home sales have increased by 8% reaching \$200K, a \$15K increase over the prior year. The County’s economy shows positive signs of modest recovery.

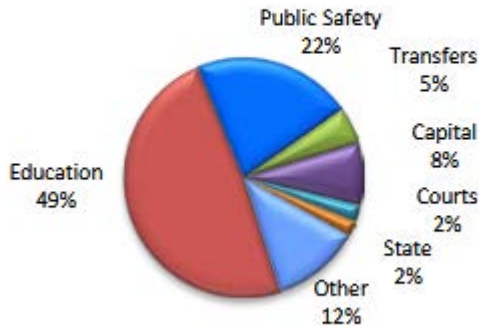


Revenues increased by \$7.9 million or 3.58%:

- Property Tax revenue increased by \$2.8 million or 2.3%. This increase is due to an increase in assessable base and level corporate investment; however the 2018 assessable base is still below the 2010 assessments.
- Local revenues increased by \$2.5 million or 2.82% due to an increase in income tax based on recent trends and wage growth projections.
- Other revenues increased by a net of \$2.6 million mainly due to speed camera revenue and interest from investments.

washco-md.net

Allocation of General Fund Expenditures



Expenditures:

The General Fund allocates 49% of the budget towards education, which amounts to \$111.7 million of which \$98.5 million is allocated to the Board of Education (BOE), \$10 million to Hagerstown Community College (HCC) and \$3.2 million to libraries. 22% of the budget provides for Public Safety, which amounts to \$49.7 million, \$31.7 million of which is allocated to law enforcement and \$16.6 million allocated to emergency services. Capital costs represents 8% or \$19.4 million. This includes costs for debt source as well as appropriation to the CIP fund. Transfers to other funds represent 5% or \$11.5 million of which \$8.9 million is a transfer to the highway fund. State and court functions represented 4% or \$9.9 million and the remaining 12% funds all other County departments.

Agency Function:

Hagerstown Community College (HCC) strives to be a learner-centered, accessible, life-long learning institution dedicated to student and community success. The College maintains a wide spectrum of college programs and services, with a special emphasis on teaching excellence as measured by verifiable student academic achievement. HCC is committed to staff success through planning and learning, shared campus governance, the promotion of internal and external partnerships and making the necessary strategic changes that will assure that the College successfully addresses its mission.

Goals for Fiscal Year 2019

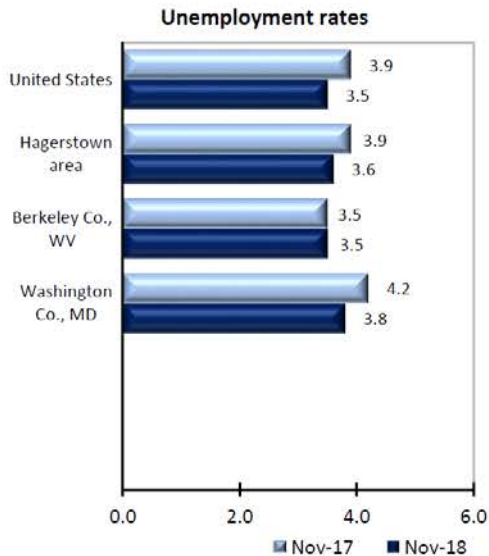
- ✓ Continue the Multi-Year Academic and Student Services Enrollment Initiative.
- ✓ In FY19, a substantial effort will be made to increase student retention based largely upon expanded academic advising and tracking.
- ✓ Continue to refine sustainable plans and budgets for all programs/services, and study major revenue sources and projected expenditures.
- ✓ Significantly increase the number of Promise Pathway Program students and expand need-based scholarship fundraising.
- ✓ Rework curriculum models and the master course schedule designs in Business, Public Service, Engineering, and various technology fields of study to increase the number of student cohort programs.
- ✓ Continue the projects underway to revitalize the College's full-range of business and technology programs; community and university partnerships; spanning credit and non-credit courses, programs, and services.
- ✓ Begin the design work to convert the Technology Innovation Center into a Center for Business and Entrepreneurial Studies. Finish the remaining construction on the Smart House Project and the new parking lot for the Student Center.
- ✓ Further improve the grants management process to better administer funded activities and increase efforts to search and find grants for student counseling and other programs.

Hagerstown Area Economic Summary

Updated January 08, 2019

This summary presents a sampling of economic information for the area; supplemental data are provided for regions and the nation. Subjects include **unemployment, employment, wages, prices, spending, and benefits**. All data are not seasonally adjusted and some may be subject to revision. Area definitions may differ by subject. For more area summaries and geographic definitions, see www.bls.gov/regions/economic-summaries.htm.

Unemployment rates for the Hagerstown area, selected area counties, and the nation



Source: U.S. BLS, Local Area Unemployment Statistics.

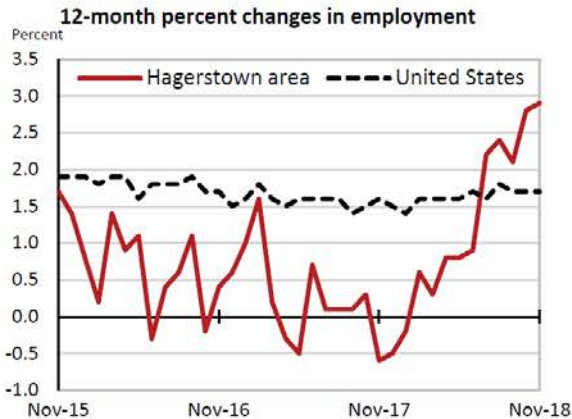
Average weekly wages for all industries by county

Hagerstown area, 2nd quarter 2018
(U.S. = \$1,055; Area = \$825)



Source: U.S. BLS, Quarterly Census of Employment and Wages.

Over-the-year changes in employment on nonfarm payrolls and employment by major industry sector



Source: U.S. BLS, Current Employment Statistics.

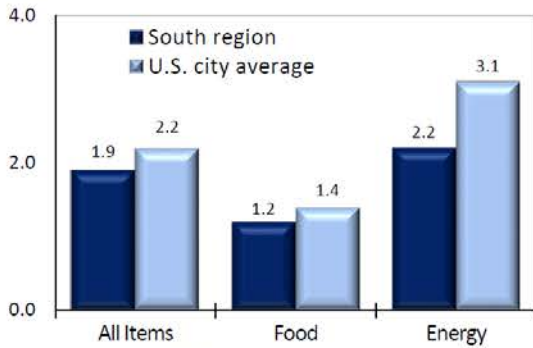
Hagerstown area employment (numbers in thousands)	Nov. 2018	Change from Nov. 2017 to Nov. 2018	
		Number	Percent
Total nonfarm	111.2	3.1	2.9
Mining, logging, and construction	4.1	-0.1	-2.4
Manufacturing	8.2	0.1	1.2
Trade, transportation, and utilities	30.1	0.4	1.3
Information	1.8	-0.2	-10.0
Financial activities	6.5	-0.4	-5.8
Professional and business services	10.2	0.5	5.2
Education and health services	17.0	1.0	6.3
Leisure and hospitality	10.3	0.4	4.0
Other services	3.6	0.1	2.9
Government	19.4	1.3	7.2

Source: U.S. BLS, Current Employment Statistics.



Over-the-year change in the prices paid by urban consumers for selected categories

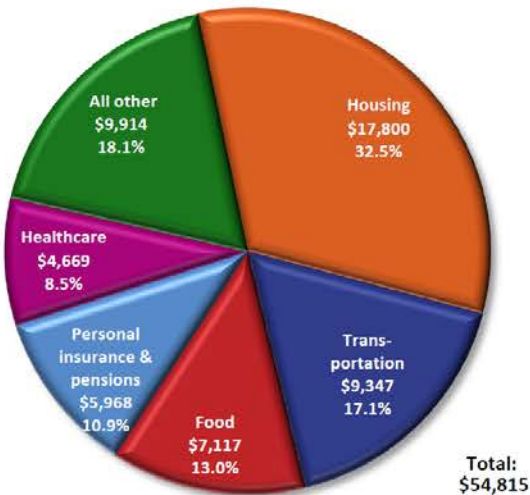
12-month percent change in CPI-U, November 2018



Source: U.S. BLS, Consumer Price Index.

Average annual spending and percent distribution for selected categories

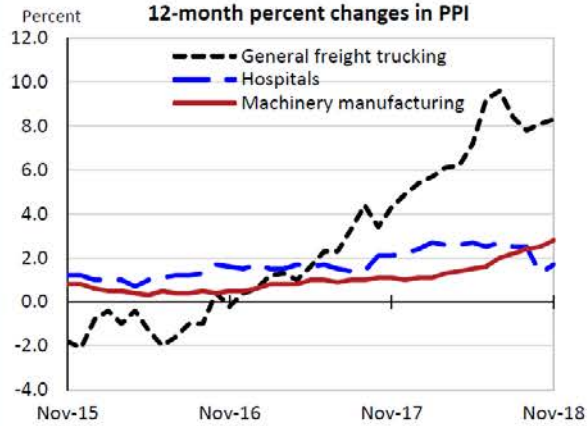
South Region average annual expenditures 2017



Source: U.S. BLS, Consumer Expenditure Survey.

Over-the-year changes in the selling prices received by producers for selected industries nationwide

12-month percent changes in PPI



Source: U.S. BLS, Producer Price Index.

Average hourly wages for selected occupations

Occupation	Hagerstown area	United States
Total, all occupations	\$22.08	\$24.34
Computer systems analysts	36.79	44.59
Registered nurses	32.91	35.36
Accountants and auditors	31.85	37.46
Paralegals and legal assistants	26.63	25.92
Customer service representatives	14.95	17.14
Tellers	14.89	13.89
Office clerks, general	14.86	16.30
Construction laborers	14.67	18.70
Retail salespersons	12.93	13.20
Childcare workers	10.74	11.42
Cashiers	10.48	10.64
Cooks, fast food	10.47	10.39

Source: U.S. BLS, Occupational Employment Statistics, May 2017.

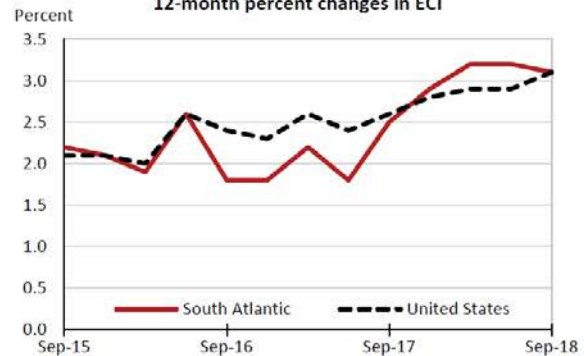
Employer costs per hour worked for wages and selected employee benefits by geographic division

Private industry, September 2018	South Atlantic (1)	United States
Total compensation	\$31.27	\$34.53
Wages and salaries	22.18	24.06
Total benefits	9.09	10.48
Paid leave	2.17	2.41
Vacation	1.12	1.25
Supplemental pay	0.94	1.32
Insurance	2.42	2.74
Retirement and savings	1.24	1.35
Legally required benefits	2.32	2.66

(1) South Atlantic includes DC, DE, FL, GA, MD, NC, SC, VA, and WV.
Source: U.S. BLS, Employer Costs for Employee Compensation.

Over-the-year changes in wages and salaries

12-month percent changes in ECI



Source: U.S. BLS, Employment Cost Index.



The statistics in this section are gathered from the LAUS Program. This program provides estimates of labor force (employment and unemployment) and the unemployment rate, by place of residence.

Unemployment Rate by County	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018
Maryland	4.6	4.5	3.9	3.9	4.5	4.5
Allegany County	6.8	6.6	5.7	5.2	6.1	6.2
Anne Arundel County	3.9	3.9	3.2	3.4	3.9	3.9
Baltimore city	6.4	6.4	5.7	5.5	6.3	6.5
Baltimore County	4.7	4.6	4.0	4.0	4.6	4.6
Calvert County	4.1	4.0	3.5	3.5	4.1	4.3
Caroline County	5.1	4.7	3.7	3.8	4.3	4.3
Carroll County	3.9	3.7	3.1	3.1	3.7	3.8
Cecil County	5.4	5.2	4.3	4.2	4.8	5.1
Charles County	4.4	4.4	3.8	3.8	4.4	4.7
Dorchester County	6.7	6.4	5.3	5.1	5.5	5.6
Frederick County	4.2	4.0	3.3	3.5	4.1	3.9
Garrett County	6.8	6.4	5.4	4.5	4.9	5.0
Harford County	4.3	4.2	3.6	3.6	4.1	4.3
Howard County	3.5	3.5	2.9	3.0	3.6	3.6
Kent County	6.3	5.3	4.2	4.2	4.8	4.7
Montgomery County	3.6	3.6	3.0	3.2	3.8	3.6
Prince George's County	4.6	4.6	4.0	4.1	4.7	4.6
Queen Anne's County	4.2	4.0	3.3	3.3	3.9	3.9
Somerset County	8.6	8.2	6.8	6.5	7.7	7.2
St. Mary's County	4.5	4.4	3.7	3.7	4.4	4.8
Talbot County	5.0	4.8	3.6	3.7	4.1	4.1
Washington County	5.5	5.3	4.4	4.3	4.7	4.6
Wicomico County	7.1	6.4	5.3	4.9	5.4	5.4
Worcester County	12.4	10.9	8.5	6.8	6.4	5.8

Note: Not Seasonally Adjusted data

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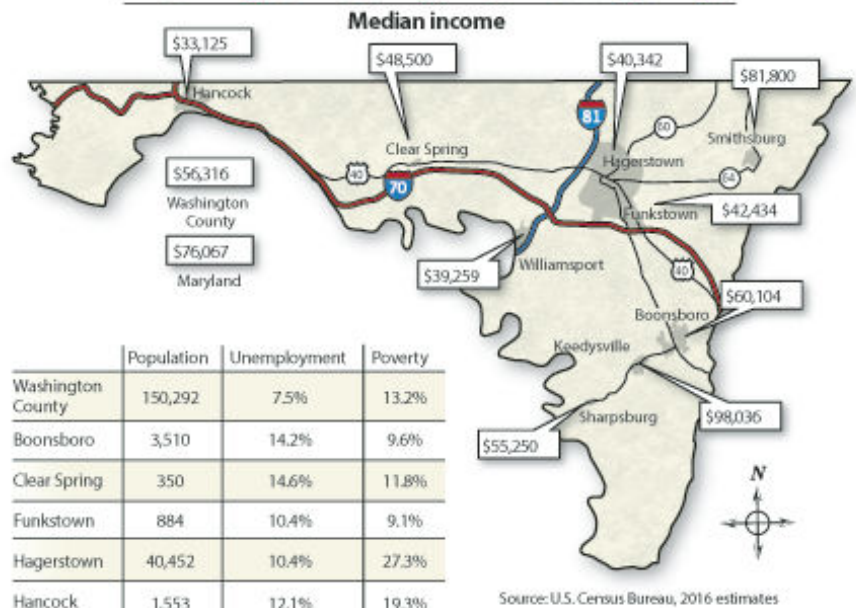
Washington County income disparity

Compared to Washington County, with a population of 150,000, its eastern neighbor Frederick County is home to roughly 100,000 more residents and median incomes nearly \$30,000 higher, with lower unemployment and poverty rates.

In the Tri-State area, Washington County compares well with Franklin County, Pa. to the north and Berkeley County, W.Va. to the south, each with comparable median income levels, unemployment and poverty rates.

The City of Hagerstown with 40,000 residents, owns one of the highest poverty rates in the Tri-State area, 27.3 percent, with roughly one in every four residents living below the federal poverty line. According to a recent United Way study, roughly 58 percent of Hagerstown residents fall into a category known as ALICE, an acronym for Asset Limited, Income Constrained, Employed.

Less than one-square-mile in size, Washington County's top-earning community is one of its smallest, according to 2016 Census estimates. With just over 1,100 residents, the town of Keedysville boasts a median household income of \$98,036, nearly \$17,000 more than the second highest-income town, Smithsburg, with \$81,800 per household. Smithsburg, along with Boonsboro, has annexed property in recent decades, leading to more residential development in the eastern Washington County towns. On the other end of the spectrum, Hancock, the county's western-most municipality, has the lowest median household income of \$33,125.



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- 41% of Washington County households live paycheck to paycheck, according to a new report from United Way of Maryland. Based on 2016 data, 28 percent of Washington County’s 55,824 households fall into the ALICE range (Asset Limited, Income Constrained, Employed). That means they are above the federal poverty level of \$24,300 but below an annual “survival” budget amount of \$63,060 for a four person household. The county ranks 7th highest in the state.

Major Employers in Washington County

Employer Name	Industry	# of Employees
Meritus Medical Ctr	Health Care and Social Assistance	1000+
First Data	Information	1000+
Volvo Powertrain North America	Manufacturing	1000+
Maryland Ribbon Co	Manufacturing	500 - 749
Walmart	Manufacturing	500 - 749
Staples	Retail Trade	500 - 749
Weis Markets	Retail Trade	500 - 749
DM Bowmen Trucking	Transportation and Warehousing	500 - 749
Antietam Health Svc Pharmacy	Health Care and Social Assistance	750 - 999
Arc	Health Care and Social Assistance	750 - 999

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EDUCATION

United States – National

- Workers in middle-skills positions, which require more than a high school education but less than a four-year degree, now account for about a quarter of "good" jobs in the U.S., according to a new report by Georgetown University's Center on Education and the Workforce. The nonprofit research institute defines a good job as paying at least \$35,000 for workers between ages 25 and 44 and \$45,000 for those between ages 45 and 64.

Those with associate degrees have reaped the most from job growth in middle-skills positions. Between 1991 and 2016, good middle-skills jobs for workers with associate degrees jumped by 83%, or 3.2 million positions.

Although there has been strong growth in middle-skills jobs, workers with bachelor's degrees still nab the largest share of good jobs (56%), while those with only a high school diploma take the lowest number (20%), according to the report.

- Low-income students are disproportionately asked to verify their family's income during the financial aid application process, and colleges are finding that many never complete the process as a result, Inside Higher Ed reported.

The phenomenon, known as verification melt, prevents low-income students from receiving grants and scholarships that facilitate access to higher education. According to the National College Access Network, 50% of low-income students are selected for the verification process and 22% of that share — about 90,000 students — won't finish applying for aid as a result. Other data show around 30% of students overall are asked to verify.

Financial aid experts are seeking more transparency in the application process to make the form easier to complete and the results more accurate. The Education Department is implementing a new verification system for the 2019-20 financial aid year that is expected to better pinpoint students.

- The Nation's Report Card says America's high school seniors lack critical math and reading skills for an increasingly competitive global economy.

Only about one-quarter are performing proficiently or better in math and just 4 in 10 in reading. And they're not improving, the report says, reinforcing concerns that large numbers of today's students are unprepared for either college or the workplace.

Scores on the 2013 exam in both subjects were little changed from 2009, when the National Assessment of Educational Progress was last given to 12th-graders. The new results, released Wednesday, come from a representative sample of 92,000 public and private school students.

- A growing number of community colleges over the years have started using alternatives to a single, standardized placement test to determine if students can do college-level work. Now a new study supports that such alternative measures are indeed more accurate in gauging students' math and English skills in deciding whether they need remediation.

According to early results from a study of 13,000 students at seven State University of New York community colleges, colleges using a broader set of measures to place students can boost enrollment in college-level courses — and students have shown that they can keep up.

Researchers from the Center for the Analysis of Postsecondary Readiness (CAPR) found that when colleges used multiple measures to place students, assignment to college-level courses jumped by 5 percentage points in math and more than 30 percentage points in English. Students placed using multiple measures were more likely to pass a college-level English or math course in their first term than comparison students.

Career Technical Education Facts

- 91% of parents of students in CTE believe their child is getting a leg up on their career
- 82% of CTE students are satisfied with their ability to learn real work skills in school
- 80% of parents of students in CTE are satisfied with their ability to participate in internships
- 70% of CTE students are satisfied with their ability to engage with employers
- 77% of CTE students are satisfied with their ability to earn credits towards a certification
- 86% of parents and students want real-world, hands-on opportunities as part of their high school experience.



Each year, the National Center for Education Statistics (NCES) compiles some back-to-school facts and figures that give a snapshot of our schools and colleges for the coming year.

50.7 million

The number of students expected to attend public elementary and secondary schools this year—slightly more than in the 2017–18 school year (50.6 million). The racial and ethnic profile of these students includes 24.1 million White students, 7.8 million Black students, 14.0 million Hispanic students, 2.6 million Asian students, 0.2 million Pacific Islander students, 0.5 million American Indian/Alaska Native students, and 1.6 million students of Two or more races.

About 5.9 million students are expected to attend private schools this year.

16.0

The expected number of public school students per teacher in fall 2018. This ratio has remained consistent at around 16.0 since 2010. However, the pupil/teacher ratio is lower in private schools (12.3) and has fallen since 2010, when it was 13.0.

\$12,910

This is the projected per-student expenditure in public elementary and secondary schools in 2018–19. Total expenditures for public elementary and secondary schools are projected to be \$654 billion for the 2018–19 school year.

3.6 million

The number of students expected to graduate from high school this academic year, including about 3.3 million from public schools and nearly 0.4 million from private schools.

19.9 million

This is the number of students expected to attend American colleges and universities this fall—higher than the fall 2000 enrollment of 15.3 million but lower than the peak of 21.0 million in 2010. About 13.3 million students will attend four-year institutions and 6.7 million will attend two-year institutions.

56.5%

The projected percentage of female postsecondary students in fall 2018, for a total of about 11.2 million female students, compared with 8.7 million male students.



- Data from the National Student Clearinghouse Research Center show that in the fall of 2010, 15% of U.S. community college entrants were high school dual-enrollment students. The figure comes from the research group's 2017 report on how students taking such courses fare after secondary school, tracking more than 200,000 high school students from 2010 to 2016.

The report found that only 12% of those dually enrolled high school students didn't go on to enroll in some form of college by the age of 20, with 41% of dually enrolled students going on to a four-year college. Of the other 47% of students who first matriculated in community college between the ages of 18 and 20, 84 percent went to the institution where they were taking the dual enrollment courses.

- Dual-enrollment programs, in which high school students receive credit for college-level courses, have been growing rapidly.

But a recent accreditor clarification about the required credentials for instructors who teach early-college-credit programs has highlighted problems relating to equity, insufficient data and the pipeline of instructors for some colleges and states.

In 2015, the country's largest regional accreditor, the Higher Learning Commission, issued a policy clarification stating that high school teachers of dual-credit courses, along with instructional college faculty members, are required to have a master's degree in the specialty they're teaching, or at least 18 graduate-level credit hours within that specialty.

- Today, the U.S. spends more on college than almost any other country, according to the 2018 Education at a Glance report, released this week by the Organization for Economic Cooperation and Development (OECD).

All told, including the contributions of individual families and the government (in the form of student loans, grants, and other assistance), Americans spend about \$30,000 per student a year—nearly twice as much as the average developed country.

Federal IPEDS data show that community college enrollment spiked along with the unemployment rate during the recession 10 years ago, said Kent Phillippe, associate vice president for research and student success at AACC. Over the last six years, however, enrollment has been declining at a consistent rate, he said.

Among other trends cited by Phillippe:

- Enrollment of full-time students is declining at a faster rate than part-time students.
- Enrollment of white students is declining, while that of other demographic groups is rising.
- Hispanic enrollment has seen the greatest gains, which are due, in part, to IPEDS adding a “more than one race” category in 2008.
- The percent of white students enrolling for the first time in a community college is declining.
- The percentage of community college students younger than 18 is up significantly, most likely due to the increase in dual enrollment.
- Community college students ages 18-21 is the only group where there are more full-time than part-time students, but the number of full-time students in this group is significantly declining – and that is cause for concern.
- The number of high school graduates is increasing, but a growing number of them are enrolling in four-year institutions.

9 trends share by innovative community colleges

1. 34% of surveyed community colleges have a strategy in place for the use of mobile devices
2. 51% are piloting the use of mobile devices in classroom but lack a formal strategy
3. 44% of colleges offer professional development for teachers on how to use mobile apps for instruction
4. 20% of colleges offer professional development for teachers or provide specific policies regarding how to protect student privacy when using apps.
5. 74% of colleges use standardized classroom implementations to cope with limited budgets
6. 77% of colleges report they currently use technology tools for the classroom such as interactive whiteboards, document cameras, display equipment, assessment tools
7. 13% of colleges will be modernizing, expanding or replacing their classroom technology tools in the next 12-24 months
8. 69% of colleges employ full-time employee(s) specifically to assist in designing online or multi-modal content and courses for use by college staff/faculty
9. 58% of colleges report that many of their instructors are using hybrid or online teaching models.

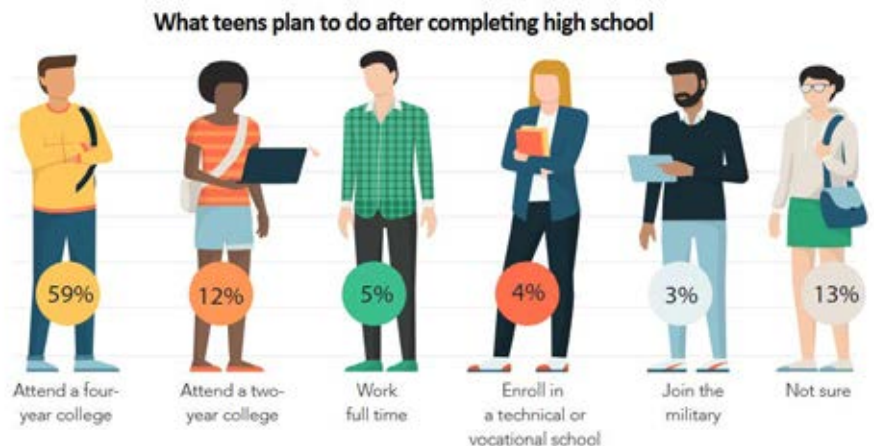
- Two-year colleges have been coping with declining enrollments since around 2010, when the Great Recession ended and the national unemployment rate began falling from about 10 percent to around 5 percent today. When researchers project demographic information to 2025, the declines become sharper.

The Western Interstate Commission for Higher Education projects the number of high school graduates to remain flat from now until 2023, with a slight increase, followed by dramatic decrease, after 2025 from about 3.5 million graduates per year to about three million.

There are essentially two trends community colleges should consider:

1. The trend of adult learners aged 25 and older enrolling in college, which is a largely countercyclical trend.
2. Projections show that the population of traditional-age college students (18 to 22 years old) will be much smaller beginning in 2025 because birth rates were lower during the recession.

- 60 percent of polled U.S. teens ages 13 to 17 plan to attend a four-year college, with another 12 percent indicating they plan to attend a two-year college, according to a recent Pew Research Center survey. Others plan to work full time, join the military or attend a



technical/vocational school, but 13 percent said they weren't sure what they would do after completing high school. A higher percentage of girls (68 percent) said they plan to attend a four-year college, compared to boys (51 percent). Researchers found little difference between genders among surveyed teens who plan to attend a two-year college, technical/vocational school, work full time or join the military after high school. Nearly two-thirds (65 percent) of teens who said they planned to go to a four-year college expressed some concern over being able to afford it, particularly among students (76 percent) from households with incomes below \$75,000. The research indicates that many U.S. families still may not realize that community colleges are a viable option to attain a postsecondary credential and an affordable pathway to a baccalaureate.

The U.S. Department of Education Office of Vocational and Adult Education has identified sixteen broad career clusters that reflect a new direction for education. The clusters were created to assist educators in preparing students for a changing workplace. The intent is for secondary and postsecondary educators, employers, and industry group representatives to work together to formulate cluster standards. The careers in each cluster range from entry level through professional/technical management in a broad industry field. Each cluster includes both the academic and technical skills and knowledge needed for careers and postsecondary education. These clusters provide a way for schools to organize course offerings so students can learn about the whole cluster of occupations in a career field. It is an excellent tool to assist students in identifying their interests and goals for the future. The sixteen career clusters are:

- Agriculture and Natural Resources
- Architecture and Construction
- Arts, Audiovisual Technology, and Communications
- Business and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law and Public Safety
- Manufacturing
- Retail/Wholesale Sales and Services
- Scientific Research/Engineering
- Transportation, Distribution, and Logistics

Teacher shortages across the country are getting so dire that they're forcing some school districts to live stream lessons, replacing educators in many classrooms.

According to The Wall Street Journal, tens of thousands of high school students nationwide are now getting lessons taught by a remote teacher to occupy many hard-to-fill positions in areas like science, math and special education.

All 50 states and Washington D.C. have reported teacher shortages over the last few years. The U.S. Department of Education said the number of people completing teacher programs has dropped from 217,506 in 2011 to 159,598 in 2016.

- Performance-based funding (PBF) is becoming increasingly popular as an accountability tool to reward higher education institutions for specific outcomes believed to enhance student progress and completion. A recent report indicates that 35 states have either implemented, or are currently developing, PBF policies for higher education.

Despite its popularity, however, there is a substantial body of empirical evidence that shows PBF can have troubling and unintended impacts.

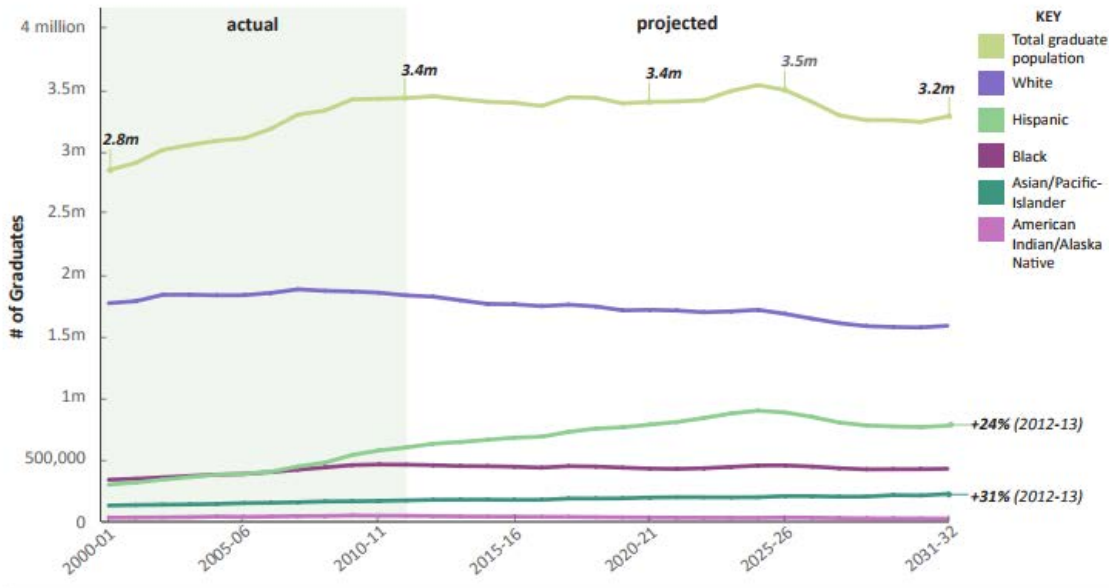
One of the most commonly cited unintended consequences of PBF is that resource-dependent colleges may have an incentive to “cream” admissions by enrolling students who are more likely to graduate, while curtailing admission of disadvantaged groups that are less likely to complete. Moreover, there are concerns that PBF could disproportionately penalize colleges that predominately serve students from disadvantaged backgrounds.

- Technology is everywhere in education: Public schools in the United States now provide at least one computer for every five students. They spend more than \$3 billion per year on digital content. Led by the federal government, the country is in the midst of a massive effort to make affordable high-speed Internet and free online teaching resources available to even the most rural and remote schools. And in 2015-16, for the first time, more state standardized tests for the elementary and middle grades will be administered via technology than by paper and pencil.

High school projections

While the number of high school graduates is expected to remain relatively stable, the percentage of minorities among them is expected to increase, and the rate of white graduates is predicted to drop.

Total U.S. high school graduates (actual and projected) for 2000 to 2032 by race/ethnicity



Source: Western Interstate Commission for Higher Education, "Knocking at the College Door: Projections of High School Graduates," December 2016.



The number of high school graduates in the U.S. has increased steadily from approximately 2.9 million in 2000-01 to about 3.5 million in 2012-13, the highest ever reported. Projections suggest that the number of high school graduates will remain relatively stable for the next 10 years, and then increase again in 2023-24 and on. The most notable trends culled from the data are a consistent decrease in the number of white graduates and increases in the number of Hispanic and Asian Pacific Islander graduates. Hispanic graduates are expected to grow by 24 percent, and Asian Pacific Islanders will increase by 31 percent between 2012-13 and 2031-32. The trend in community college athletics is moving toward more, rather than less, intercollegiate athletics. Placed in its best light, intercollegiate competition that encourages personal development is an integral part of a student's overall educational experience. Sports programs may also attract more students to a community college and enhance pride in the college both on campus and within the community.

- The National Association of Student Financial Aid Administrators is out with recommendations for how to simplify the Free Application for Federal Student Aid, known as the FAFSA. Making the application less cumbersome is a popular cause, supported by the Bill & Melinda Gates Foundation, the College Board, and the chairman of the U.S. Senate's education committee, Lamar Alexander, among others.

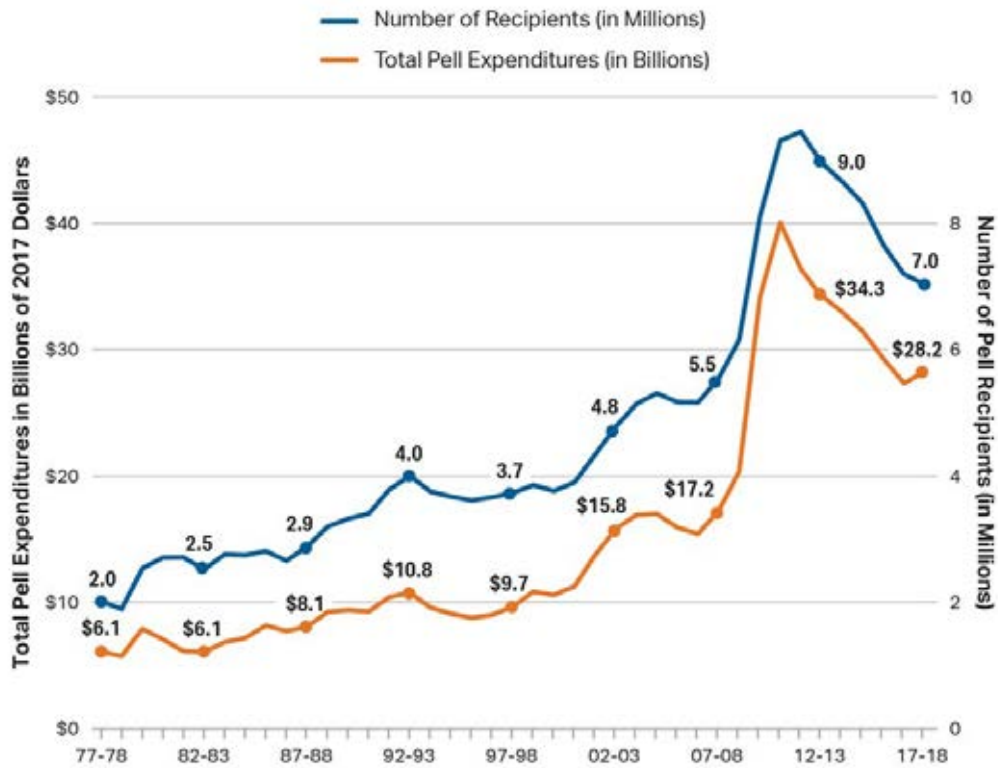
In a report released on Thursday, the student-aid administrators' group recommended that the FAFSA be made into a three-tiered process that would, in effect, require low-income students to answer fewer questions than wealthier ones. Among other recommendations, the group said that:

The FAFSA should use prior-prior year income data to determine a student's aid eligibility.

The amount of data retrieved automatically from the Internal Revenue Service for an individual's application should be expanded.

http://www.nasfaa.org/uploads/documents/fafsa_report_1.pdf

Total Pell Grant expenditures increased from \$6.1 billion (in 2017 dollars) in 1977-78 to \$9.7 billion in 1997-98 and to \$28.2 billion in 2017-18. Over the decade from 2007-08 to 2017-18, expenditures spiked from \$17.2 billion in 2007-08 to \$40.1 billion in 2010-11, before falling back to \$28.2 billion in 2017-18.



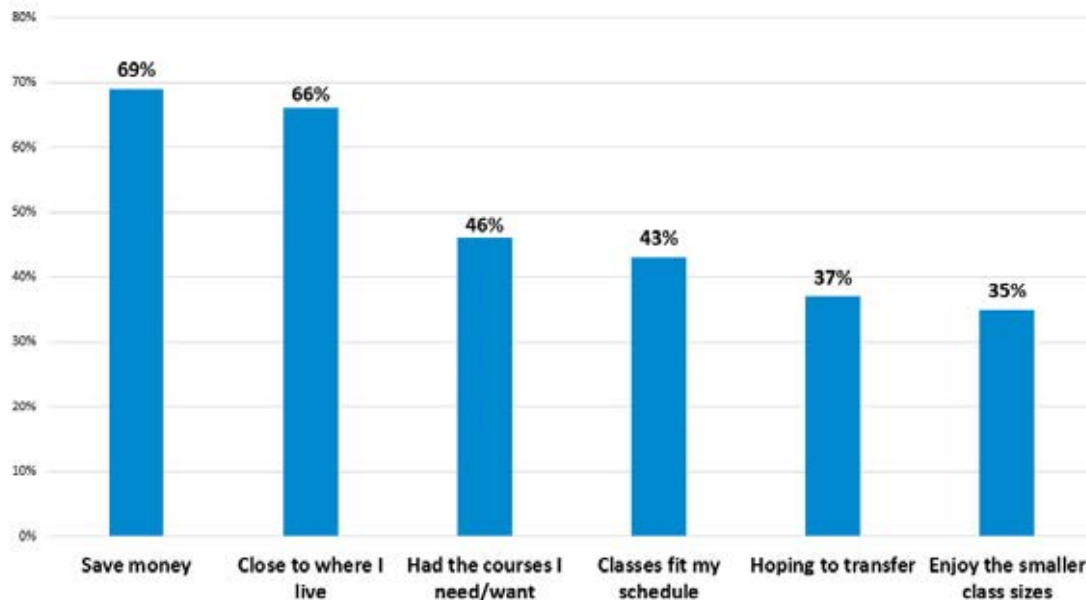
- Since student bodies turn over every few years, while faculty tend to keep their jobs for decades, it's not surprising that progress on making faculty more diverse has been slow. Nevertheless, targeted efforts have shown what can happen when diversifying faculty becomes a priority. And with nonwhite Americans expected to become a majority within 30 years, pressure to remake faculty more like the nation will only increase.
- Faculty employment to become a high-growth area two forces drive the demand for new faculty: enrollment growth and faculty attrition. According to projections by the National Center for Education Statistics, four-year colleges and universities are expected to experience an 11 percent enrollment growth, and two-year institutions a 15 percent increase, from 2013 to 2024. And they will need to replace a large proportion of “baby boomer” faculty members who will reach retirement age during this period. As a result, the U.S. Bureau of Labor Statistics forecasts that the nation will need 17 percent more college faculty (both full- and part-time) by 2022 than in 2012. That’s one of the highest U.S. job growth rates — and it means the nation will need 58,000 more faculty on average per year, when growth and replacement needs are factored in. The overall U.S. job growth rate is projected to be 11 percent over the period.
- Close to 45 percent of all non-tenure-track faculty members were both part time and held less-than-annual contracts. Non-tenure-track faculty members at two-year and four-year for-profit institutions and at two-year private nonprofit colleges were more likely than those in other sectors to have multiyear contracts.

The Perkins Act is the primary federal funding source for high school, college and university CTE programs that are critical for preparing youth and adults, including immigrants, for jobs in local and regional economies. Congress passed the latest version of the Perkins Act, the Strengthening Career and Technical Education for the 21st Century Act, in July 2018.

The Perkins Act provides funds under three main programs:

Nearly 2,700 students who are currently attending community college, or who have already transferred, responded to the question: *Why did you opt to attend a community college?* Below, we take a look at what they had to say, and summarize some of the trends we observed.

Top Reasons Students Choose to Attend Community College



CENGAGE Learning

10 Reasons to Attend a Community College

Two-year colleges offer many benefits to students, including affordability and convenience.

- Money
- Academic Flexibility
- Financial Aid
- School Life Balance
- STEM Education Opportunities
- Transfer Agreements
- Elements of Traditional Colleges
- Personalized Attention
- Professional Certificates
- Online Class Options

- Professional development is more important than ever for adjunct professors at community colleges, according to speakers here at the annual meeting of the League for Innovation in the Community College.

Part-time instructors teach more than half of all classes and students at community colleges but often feel only a flimsy connection to their institutions, where they're often hired at the last minute and offered little or no job security beyond that semester.

Connecting with students is particularly hard for adjuncts who are on the campus only one night or two days a week. One strategy the college might use to help them is to set up a separate Facebook page or blog to encourage communication.

Steps that can help adjuncts feel more engaged include making sure they're represented in faculty governance, textbook, and hiring committees.

- Part-time nontenure-track faculty comprise 47% of the U.S. academic work force, and two-thirds of them are "adjuncts." (The rest have additional employment outside higher education or have retired from a tenured position.) Adjuncts thus make up roughly one third of all faculty. This report leverages data from the 2018 Adjunct Faculty Survey to examine the characteristics and experiences of adjuncts, including their demographics, employment experience, position preferences and career satisfaction.

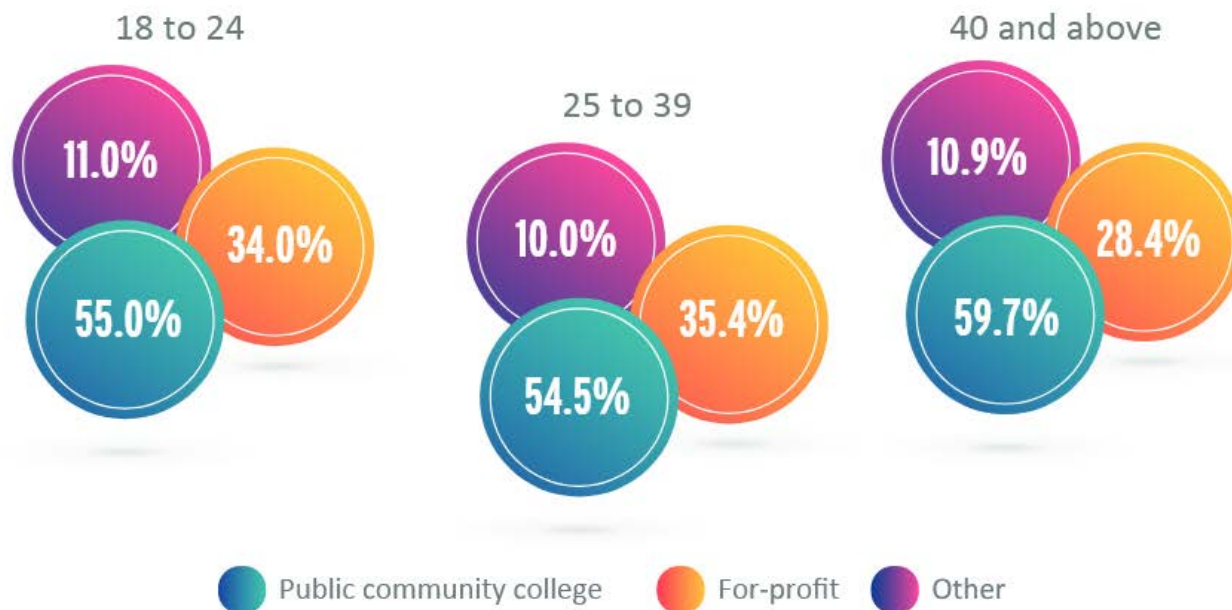
About 70% of adjuncts are over age 40, and 52% are women. Most (56%) earned a master's as their highest degree attained; one third have a Ph.D.

About half teach one or two courses at a single institution; 22% teach three or more classes at two or more institutions. * Adjuncts are paid an average of \$3,000 per course, but almost 60% receive less.

While half would prefer to have a tenure-track position, two-thirds of all adjuncts report being satisfied overall with their academic careers. * Adjuncts under age 40 are more likely to be dissatisfied with their career, as are those with a Ph.D.

Older students are more likely to earn certificates at community colleges than traditional-age students.

Distribution of less-than-two-year certificate earners by age and institution type, 2016-17



Source: AACC analysis of Integrated Postsecondary Education Data System (IPEDS) 2016-17 Completions Data File, U.S. Department of Education, National Center for Education Statistics, August 2018.



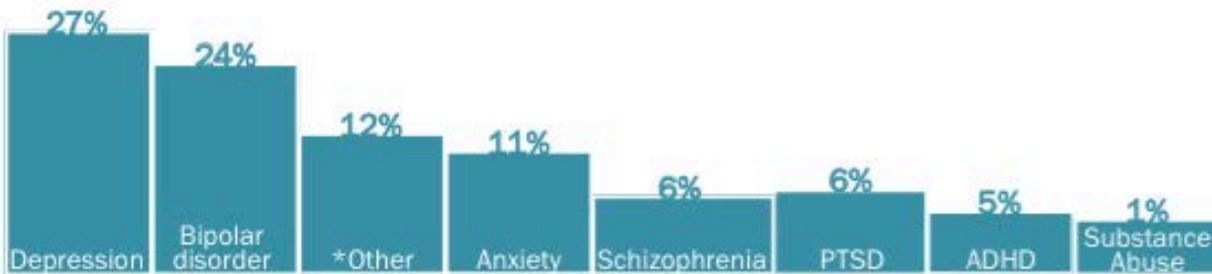
Well over half of students who earned a certificate in the 2016-17 academic year received their credential from a public community college, according to federal data. Roughly one-third of certificate earners received their credential from a for-profit college, with students ages 25 to 39 more likely than those in other age groups to have earned their certificate from a for-profit college. Students ages 40 and above were more likely to have earned their certificate at a community college than students 18 to 39. While only 1.5 percent of students who earned a certificate were under 18, 79 percent of them earned their certificate from a community college. Slightly more than one in 10 certificate earners received their credential from another type of postsecondary institution.

The National Alliance of Mental Illness surveyed college students diagnosed with a mental health condition within the last five years, with 19% of the surveyed individuals being community colleges. Depression and bipolar disorder constituted more than 50% of the respondents' diagnoses. The results across the spectrum were:

Information About Survey Respondents

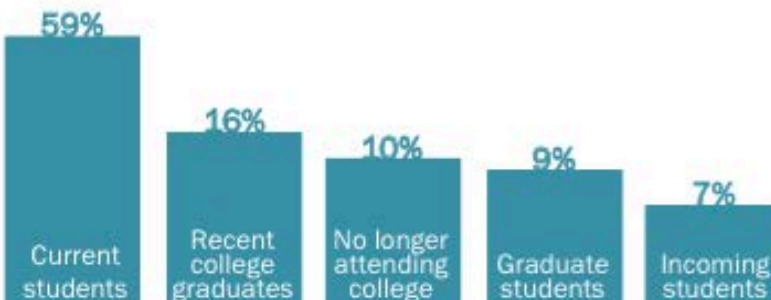
Survey respondents shared information about their primary diagnoses, their status as students, the type of college they attend, their living arrangements while attending college and their years in college.

Type of illness

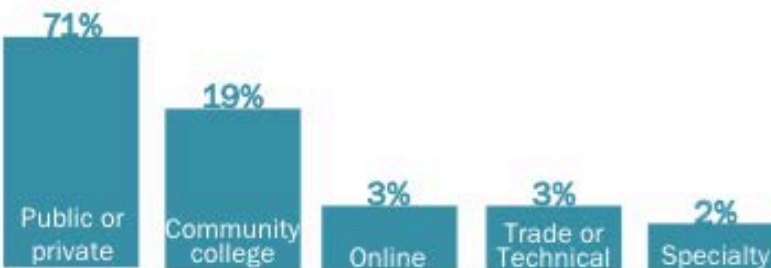


*Other diagnoses include borderline personality disorder, dysthymia, eating disorders, obsessive-compulsive disorder, schizoaffective disorder and autism spectrum disorder.

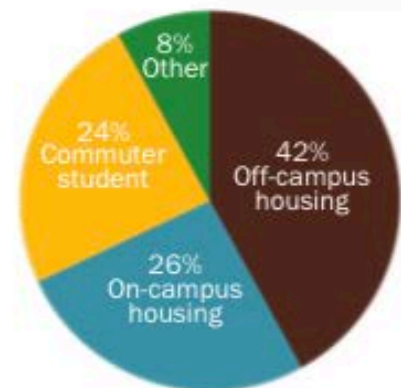
Student status



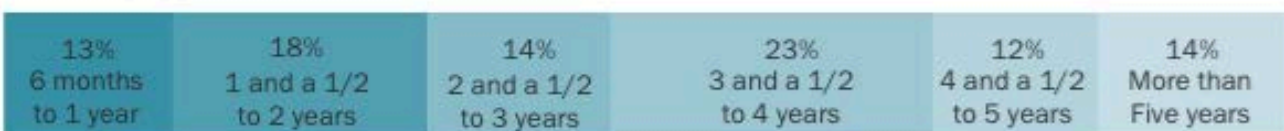
Type of college



Living Arrangements



Years in school



10 Ways to Make the Most of Academic Advising Appointments

1. Understand their role
2. Advisors will expect you to initiate contact, and it is best do so early
3. Take responsibility for your course schedule
4. Be honest
5. Explore your career Options
6. Do your research and be prepared
7. Become familiar with your degree audit report
8. Create a plan of study with your advisor
9. Follow through
10. Stay in touch

5 Student Resources Students should use more often

1. Organizations
2. Academic Advising and Career Resource Center
3. Intramural Sports
4. The Student Union
5. Other Students and Professors

CAREERS THAT QUALIFY YOU FOR FEDERAL LOAN FORGIVENESS

After you graduate from college or grad school, you're eligible for PSLF if you take a full-time job at a federal, state or local government agency; at a 501(c)3 tax-exempt nonprofit; in the military; or in an AmeriCorps or Peace Corps position. Workers who qualify include military personnel, teachers, social workers, emergency medical technicians, police officers, firefighters, librarians and nurses. A campaign by the National Young Farmers Coalition is also underway to add farming to the list of PSLF-eligible jobs.

The key to PSLF is that it doesn't matter what you do at a nonprofit or in government, as long as you work for an entity focused on public service. So you can be an administrative assistant at a public school, not necessarily a teacher, and still qualify. You can also work for a private organization that's not a 501(c)3 as long as your job falls into the buckets of public safety, public health, public education or library services. Jobs at religious or political organizations or labor unions aren't eligible.

The American Association of Community Colleges (AACC) released a report, "Where Value Meets Values: The Economic Impact of Community Colleges," showing that community colleges are a boon to the American economy at large and to the individual student.

In 2012 alone, the net total impact of community colleges on the U.S. economy was \$809 billion in added income, equal to 5.4 percent of GDP. Over time, the U.S. economy will see even greater economic benefits, including \$285.7 billion dollars in increased tax revenue as students earn higher wages and \$19.2 billion in taxpayer savings as students require fewer safety net services, experience better health, and lower rates of crime.

Students also see a significant economic benefit. For every one dollar a student spends on his or her community college education, he or she sees an ROI of \$3.80.

- About 90 two-year colleges are offering about 900 baccalaureate programs across the country, according to Beth Hagan, executive director of the Community College Baccalaureate Association, a Florida-based trade association.

Despite limits on what they can offer, some two-year schools are offering baccalaureate programs that officials at four-year schools see as competition. Their programs are commonly found at four-year colleges and universities, ranging from nursing and education to information technology and human resources management.

- From 1987 to 2013, the average annual growth rate for liberal arts or liberal studies degrees at community colleges was 4.3 percent, according to data being released today as part of the Humanities Indicator Project of the American Academy of Arts & Sciences. The total number of degrees awarded a year in these fields grew over that time period from 113,587 to 338,688. The highest rate of increase came in 2010-12, when average annual growth hit 8.5 percent. Those were years when many community colleges reported increased enrollments from students planning to transfer later to four-year institutions.

More part-time community college students are coming to class prepared, working with instructors and participating with other students.

Those findings are part of a broader trend in which part-time students at community colleges are becoming more engaged in their learning, based on a report released today by the Center for Community College Student Engagement at the University of Texas at Austin. Some of the highlights from the report include:

- Part-time students who reported making a class presentation during the spring semester increased from 60 percent to 67 percent from 2004 to 2014.
- The share of part-time students who discussed career plans with an instructor or adviser increased from 61 percent to 70 percent over the same time period.
- Part-time students who reported working with classmates outside of class increased from 52 percent to 57 percent.

- College students around the country promote interfaith to combat religious intolerance that may emerge as religious populations grow, through movements such as the Better Together campaign.

According to projections by the Pew Research Center, the Muslim population will not only equal but also surpass the population of Christians by 2070. Islam will increase faster than the population of the world from 2010 to 2050 with a 35 percent growth, researchers said.

- Transfer rates among U.S. college students are at a high, with a recent report showing that more than one third of students choose to transfer universities at least once during their academic careers.

A July 6, 2015 study published by nonprofit Center shows that of the 3.6 million college students surveyed nationwide — all of who started their undergraduate careers in 2008 — 37.2% transferred between universities. In addition, of the students who chose to transfer, 45% decided to change schools more than once.

These statistics show only a minor rise from the center's 2012 report, which demonstrated a transfer rate of up to 34.4%.

- At the start of this upcoming school year, the U.S. government will roll out its own ranking of national colleges and universities. The framework for this new college rankings system was presented at the end of 2014 at the direction of the Obama administration as a way to confront the growing problems within higher education in America — most notably, the epidemic of student debt.

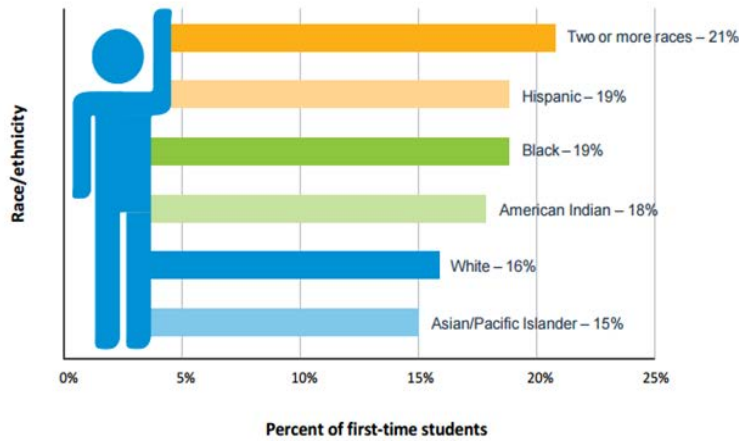
The ratings system is not supposed to be like those made by U.S. News and World Report or similar publications, but is instead described by the department website as “a ratings system that is clear, fair and focused on a few key critical measures of institutional performance, while accounting for the diversity and complexity of the nation's rich system of higher education.”

With outcomes being a key component of the Department of Education's new rankings framework and states beginning to allot funding based on performance, graduation rates are becoming more important than ever.

Changing face of students

Minorities comprise a majority of first-time community college students.

Community college students new to higher education



Attendance trends

Fewer than one-third of students at community colleges attend exclusively full time.

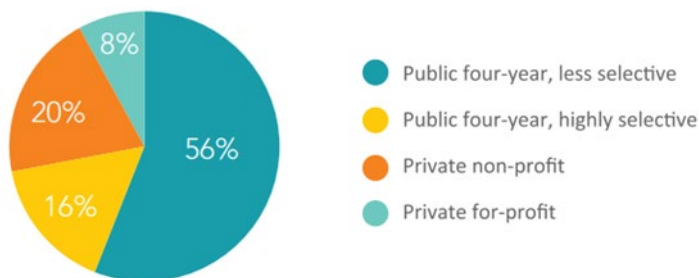
Attendance patterns, 2011-12



Transfer students

The majority of community college students transfer to public institutions.

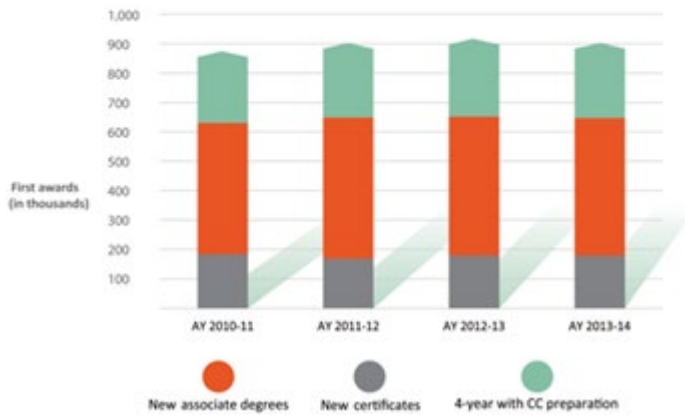
Community college transfer students



Completion progress

Community colleges contributed one million new postsecondary credentials in the 2013-14 academic year.

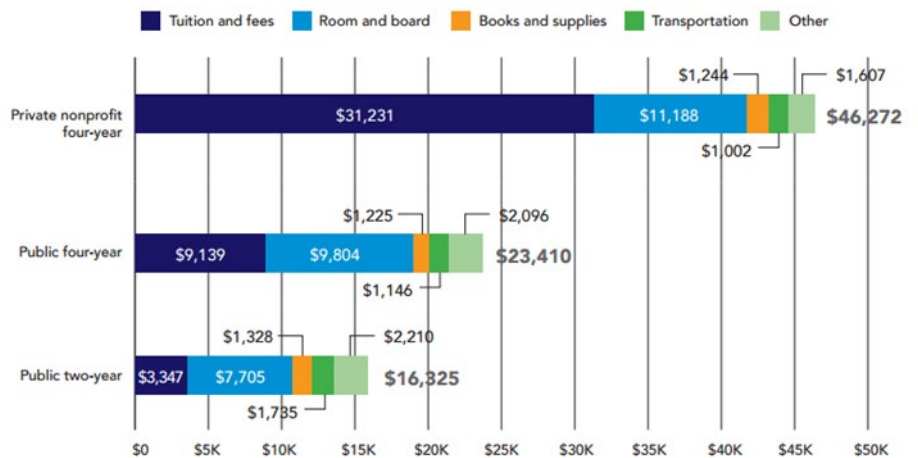
New postsecondary credentials at community colleges: 2010-11 to 2013-14



Student expenses

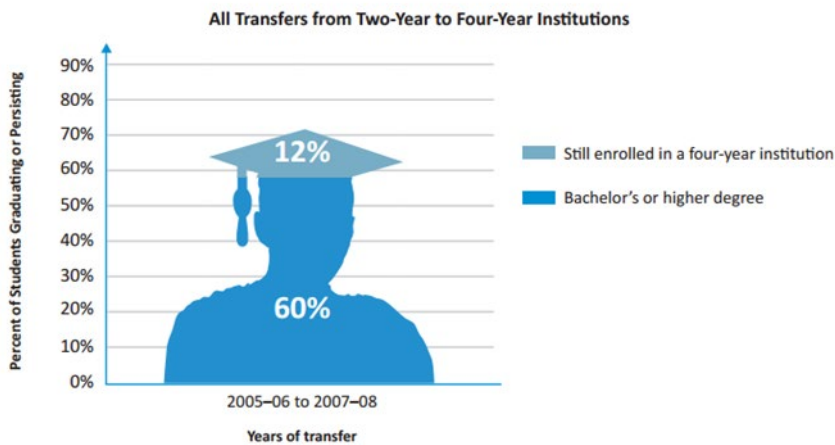
The average public two-year tuition and fees comprise 21 percent of a student's budget.

Average student expenses for 2014-15



Community College Transfer Outcomes

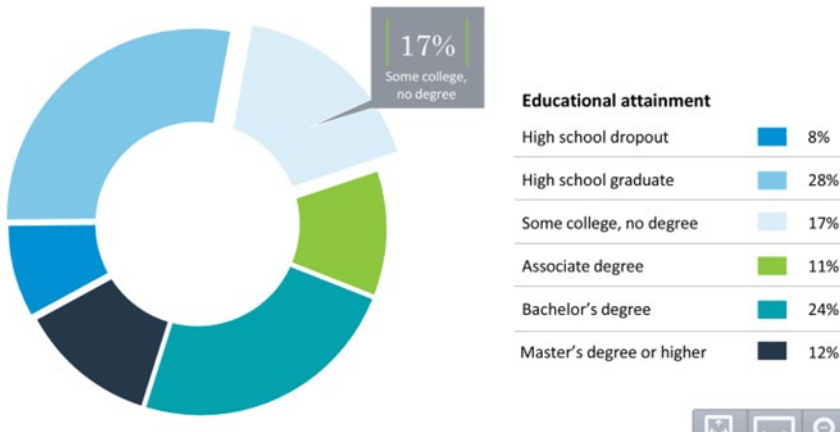
About 72 percent of students who transferred to four-year institutions either graduated or persisted.



Some college but no degree

Seventeen percent of the U.S. population has some college but no degree.

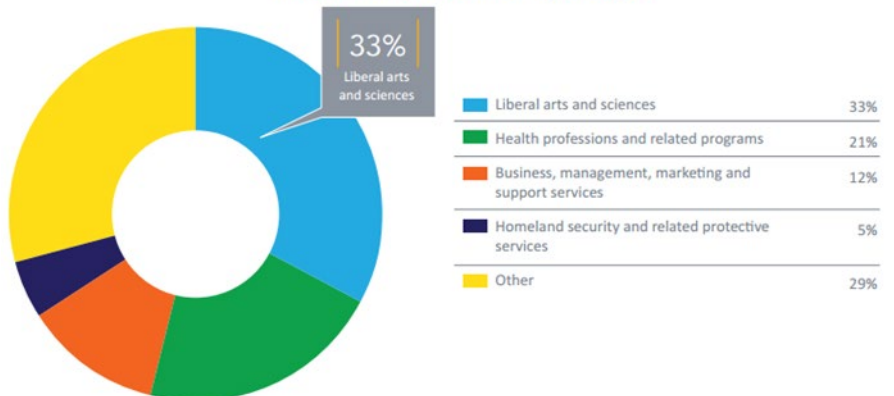
Highest educational attainment of individuals 25 and older



What are students majoring in?

Liberal arts and health professions are among the disciplines popular at community colleges.

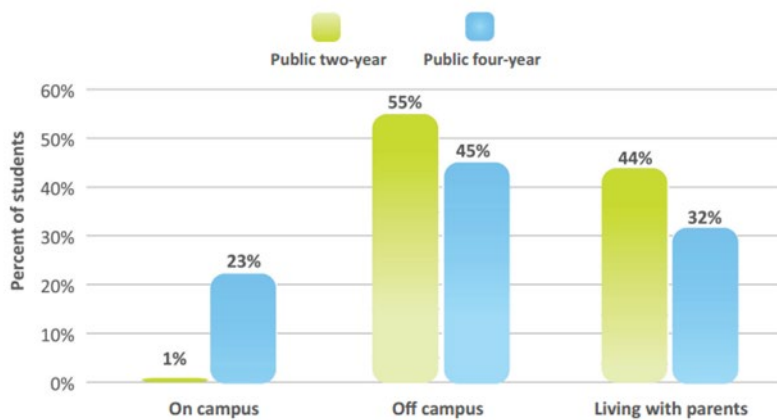
Field of study at community colleges



On-campus housing

Only one percent of community college students live on campus.

Where college students lived in 2011–12



TAPPING INTO THE BRAINS OF PROSPECTIVE STUDENTS

01. Overwhelmed by the application process

35% of students apply to 6+ schools



35% of students feel overwhelmed by the application process

Only 55% of students attend their first choice

02. Worried about financing



1/5 of students need to take out loans

77% have financial support from parents



2/3 students who have concerns about financing college

03. Early decision becoming a bigger factor



65% say academic rep is most important

2.5x

more students use early decision since it debuted in 1999



04. Less experience socializing face-to-face



Only 39% of incoming freshman party

44% of students rank social activities as an important factor in their decision process



27% students who spend 6+ hours on social media

05. Undergrad is the first step in long process

Bachelor's degree is the new high school diploma



1/4 jobs will require bachelor's degree by 2022

86% of students go to college to get a better job



77% students who plan on getting advanced degree

Sources:
Higher Education Research Institute @ UCLA

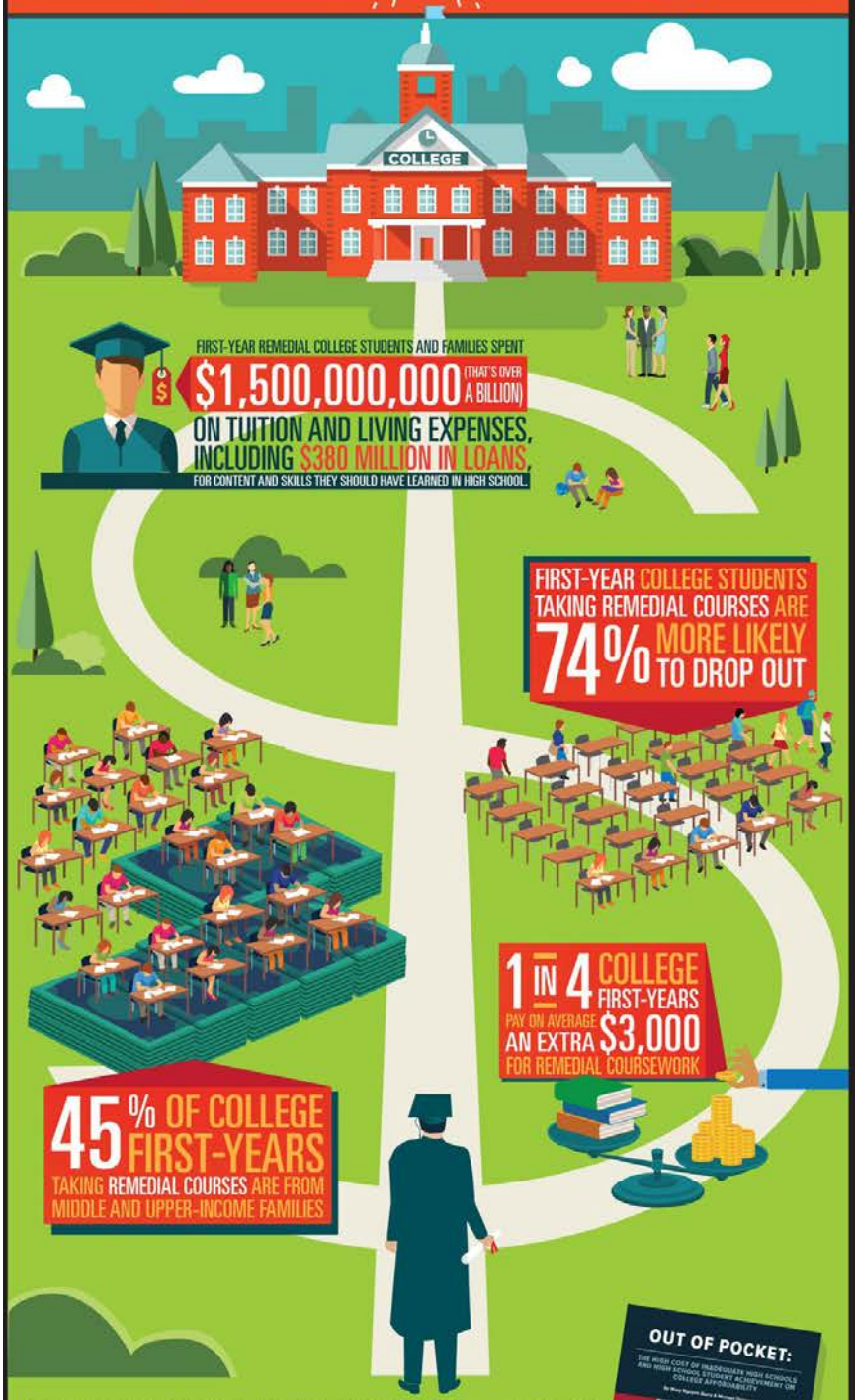
@ohointeractive



NOT READY FOR COLLEGE

THE LACK OF RIGOR IN OUR HIGH SCHOOLS IS MAKING COLLEGE EVEN MORE EXPENSIVE.

AND IT'S NOT JUST A LOW-INCOME OR COMMUNITY COLLEGE PROBLEM.



FIRST-YEAR REMEDIAL COLLEGE STUDENTS AND FAMILIES SPENT **\$1,500,000,000** (THAT'S OVER A BILLION) ON TUITION AND LIVING EXPENSES, INCLUDING **\$380 MILLION IN LOANS**, FOR CONTENT AND SKILLS THEY SHOULD HAVE LEARNED IN HIGH SCHOOL.

FIRST-YEAR COLLEGE STUDENTS TAKING REMEDIAL COURSES ARE **74% MORE LIKELY TO DROP OUT**

1 IN 4 COLLEGE FIRST-YEAR PAY ON AVERAGE AN EXTRA **\$3,000** FOR REMEDIAL COURSEWORK

45% OF COLLEGE FIRST-YEAR TAKING REMEDIAL COURSES ARE FROM MIDDLE AND UPPER-INCOME FAMILIES

TO READ MORE OR TO DOWNLOAD THE COMPLETE RESEARCH REPORT FROM EDUCATION REFORM NOW AND EDUCATION POST VISIT EDUCATIONPOST.ORG.



educationpost
better conversation. better education.



- In addition to the immeasurable academic, cultural, and societal benefits they bring to U.S. community colleges and their surrounding communities, international students generate immense economic value. Data recently released by NAFSA: Association of International Educators shows that the nearly 100,000 international students attending U.S. community colleges contributed \$2.4 billion to the economy and supported more than 14,000 jobs during the 2016-17 academic year.

The data from 2018 show that for every six international students enrolled at community colleges, one job is created and supported by spending in the higher education, accommodation, dining, retail, transportation, telecommunications, and health insurance sectors



ProLiteracy

U.S. ADULT LITERACY FACTS

U.S. FACTS



adults in the United States cannot read, write, or do basic math above a third grade level.



of programs are struggling with long student waiting lists, and less than 10 percent of adults in need are receiving services.

UNEMPLOYMENT/WORKFORCE

Low literacy costs the U.S.



or more each year in non-productivity in the workforce, crime, and loss of tax revenue due to unemployment.³

FAMILY LITERACY

Children whose parents have low literacy levels have a



chance of being at the lowest reading levels themselves. These children are more likely to get poor grades, display behavioral problems, have high absentee rates, repeat school years, or drop out.¹

POVERTY



of adults with the lowest literacy levels live in poverty.²

EDUCATION



ONE IN SIX

young adults—more than 1.2 million—drop out of high school every year.⁴

HEALTH LITERACY



a year in health care costs is linked to low adult literacy skills.⁵

ELL(English Language Learners)

2 million immigrants come to the U.S. each year, and about



of them lack high school education and proficient English language skills.⁶

CORRECTIONS



of state prison inmates did not complete high school or can be classified as low literate.⁷

*Sources: 1 National Bureau of Economic Research (NBER)
2 American Journal of Public Health
3 National Council for Adult Learning

4 National Center for Education Statistics
5 U.S. Department of Justice

6 Rand Report: *Evaluating the Effectiveness of Correctional Education*
7 Center for Immigration Studies

Enrollment concerns and finances remain the biggest challenges community college presidents say they face. The survey found that 71 percent of presidents regard financial matters and 68 percent report enrollment management as major challenges for themselves.

The survey also revealed:

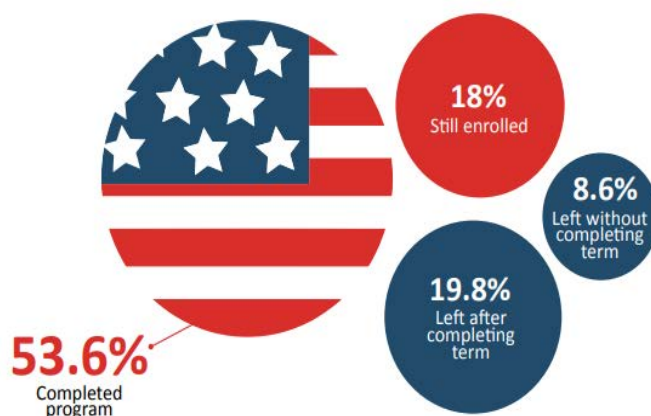
- 75 percent of community college presidents say their college added new programs on campus to make it easier to transfer to universities, with the hope that these arrangements would make it easier for their institutions to recruit new students.
- The number of presidents saying their institutions decreased or froze tuition also decreased from 38 percent last year to 27 percent this year.
- 87 percent of presidents said they expect to see a continued expansion of free college programs, and they believe those programs improve the way people view their local community colleges.
- Americans are increasingly uncomfortable with the current federal role in public education, according to a poll. Just 15 percent of respondents in a Gallup poll said the federal government – as opposed to state governments or local school boards – should have the greatest role in deciding what is taught in public schools. After a survey found support for Common Core shrinking, a second poll found an outright majority opposes the standards. Only 33 percent of U.S. adults who have heard of Common Core favor its use in the nation's classrooms, compared to 59 percent who are opposed, the Gallup poll found.
- Proficiency on the keyboard, according to the Common Core, adopted in most states, is more important than teaching legible handwriting, reports Maria Kinnikova for *The New York Times*. Psychologists and neuroscientists are not so sure. There is evidence of a connection between handwriting and a wide range of educational development processes. One example is that reading is learned more quickly when young students begin to write by hand, and they are better at generating ideas and information retention at this point.

In August 2009, student veterans started using Post 9/11 GI benefits toward their postsecondary education. To gauge how well these students do, data from the U.S. Department of Veterans Affairs was matched to National Student Clearinghouse enrollment and completion data. The results show that about seven out of 10 student veterans using the benefits (71.6 percent) completed or were progressing in their programs between August 2009 and December 2013. More than half (53.6 percent) finished their program, while 18 percent were still enrolled. Of the veterans still enrolled, more than one-third attended public two-year institutions; slightly more than a quarter were in for-profit institutions.

Veterans benefits help students succeed

Of veterans still enrolled in college, more than one-third are at public two-year institutions.

Academic outcomes of student veterans using Post 9/11 GI Bill benefits

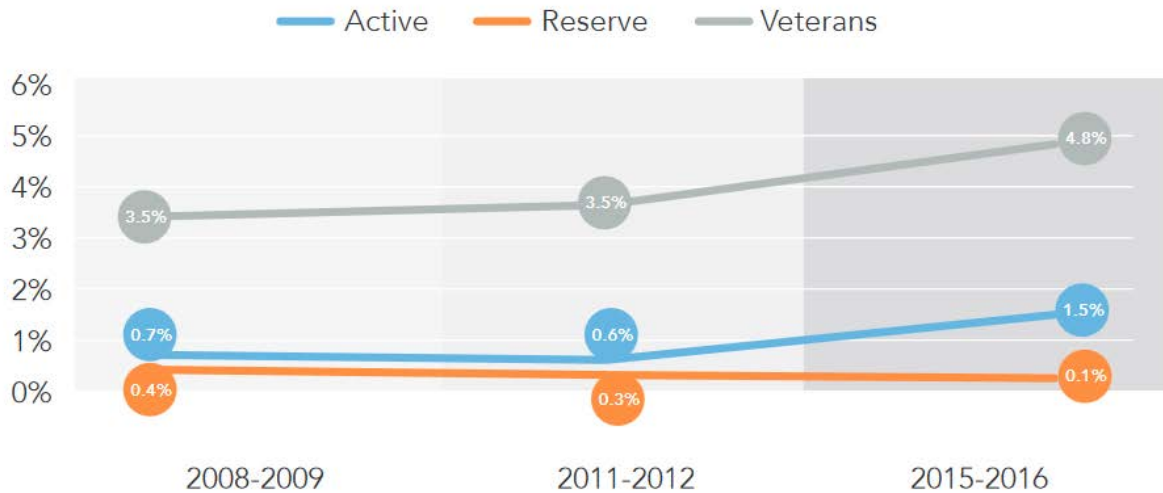


Source: Student Veterans of America, "National Veteran Education Success Tracker: A Report on the Academic Success of Student Veterans Using the Post 9/11 GI Bill," 2017.



- ◆ Developed by more than 100 education experts in collaboration with the Administration and the Departments of Education and Veterans Affairs, the 8 Keys to Veterans' Success on Campus are specific actions that institutions of higher education can take to help veterans and service members transition into the classroom and thrive once they are there. Schools across the country are stepping up to ensure that the women and men who fought for our nation in uniform can succeed on campus, complete their college programs and obtain career-ready skills.

Military-affiliated students enrolled at community colleges, 2008-2016



Source: AACC analysis of National Postsecondary Student Aid Study (NPSAS: 08,12,16) data files, U.S. Department of Education, National Center for Education Statistics, November 2018.



Community colleges enroll a diverse population of military-affiliated students, including those still on active duty, reservists and veterans. According to 2015-16 federal data, student veterans accounted for about 4.8 percent of community college students, active-duty military students another 1.5 percent and reservists comprised 0.1 percent, compared to 2008-09 data when the figures were 3.5 percent, 0.7 percent and 0.4 percent, respectively. In 2015-16, public four-year institution enrollment included 2.8 percent comprised by student veterans, 1.1 percent by active-duty military members and 0.2 percent by reservists. Community colleges provide resources and academic and non-academic programs designed to support military-affiliated students. [Click here for more information.](#)

- Veterans struggling to find full-time employment now have another service at their disposal. The Veterans Retraining Assistance Program (VRAP) is a part of the 2011 VOW to Hire Heroes Act, and it offers vets the necessary training in a myriad of high-demand industries through local trade schools and community colleges. The veterans funding program will fill in gaps left by other services geared to veterans, ensuring every person who serves the country in the armed forces will have the opportunity to get training and gainful employment after their years of service.

- More students from China are studying in the United States than are students from all non-Asian countries combined. China accounts for 29 percent of foreign students in the country. India ranks second, at 11 percent.
- Community college students are more likely to take remedial courses than their four-year counterparts. One estimate suggests that more than two-thirds of community college students take at least one remedial course, compared with 40 percent of four-year college students.
- Grants are now available for community colleges that would like to expand their offerings to include the Plus-50 Encore Completion program started by the American Association of Community Colleges. This program helps adults over the age of 50 find a new start in the workplace by training them up for in-demand industries today. The program is part of a larger initiative to increase the number of college graduates in the United States through 2020.



- College enrollment numbers tend to be cyclical. A poor economy forces many adult learners into the classroom to retrain or hone their skills, but when it improves, enrollments decrease as they return to the workforce. That's the current state of affairs for community colleges and for-profit institutions across the country according to new data released by the National Student Clearinghouse Research Center. The report reveals that 2015 totals are down 1.9 percent -- to fewer than 18.6 million students -- compared to spring 2014. Most of that decline is due to students who are 24 and older. That group declined by 3.6 percent, to about 7 million. The majority of that decline occurred at two-year public colleges -- which were down 3.9 percent -- and at four-year for-profit institutions, which had a drop of 4.9 percent compared to last spring. Nationally the unemployment rate is down to 5.4 percent, according to the U.S. Bureau of Labor Statistics. "The trend of declining enrollment for community colleges is not surprising," said Walter Bumphus, president of the American Association of Community Colleges, in an email. "Remembering that the majority of our students are working, it makes sense that robust job market would have an impact on enrollment." But two-year colleges still enroll nearly 50 percent of American students, he said.

- Computers and technology equipment would become qualified expenses in 529 college savings plans under a bill passed by the U.S. House of Representatives on Feb. 25.

H.R. 529 also designates computer software and internet access as qualified expenses while students are enrolled in school.

- Even when African-American students complete the recommended “core or more” college readiness courses in high school, they still don’t meet the “college readiness” benchmarks on the ACT at the same rate as other students, according to a new report released jointly Monday by ACT and UNCF.

Officials at ACT say the statistics—based on national ACT data and a new report titled “The Condition of College & Career Readiness 2014: African American Students”—suggest that African-American students are being subjected to less rigorous instruction than that of their peers who perform better on the ACT.

- The National Endowment for the Humanities (NEH) is making efforts to ensure that the more than 7 million students enrolled in two-year institutions have access to high-quality humanities resources through the creation of a new NEH grant program for community colleges.

The new Humanities Initiatives at Community Colleges is a grant program intended to strengthen the teaching and study of the humanities in subjects such as history, philosophy, and literature within two-year institutions.

- While recent years have seen a decline in the number of graduates earning humanities degrees at four-year colleges and universities, at the community-college level, the share of associate’s degrees earned in a humanities discipline or requiring a substantial amount of humanities coursework—a degree in liberal or general studies, for example—increased in 2012 and 2013 (the most current years for which data are available). In these years, the humanities’ share of all associate’s degrees was almost four times as large as the field’s share of all bachelor’s degrees, evidence that two-year institutions are a key element of the humanities higher education ecosystem.

- Most Americans feel that their college education was beneficial, but they vary with respect to how well they felt their postsecondary education prepared them for work. The majority (about 62 percent) believe their college degree contributed toward their intellectual growth. Slightly more than half (53 percent) thought it was a stepping stone for job opportunities, and 49 percent reported it gave them specific job-related knowledge and experience. When asked how their education has prepared them for the workforce, professional and technical certificate earners were most likely to respond positively — 26 percent said very well and another 52 percent somewhat well. In comparison, about 12 percent of associate-degree earners felt their education prepared them very well and another 46 percent somewhat well. Sixteen percent of baccalaureate completers indicated their education prepared them very well for the workforce and 51 said somewhat well.

2018 State Child Care Facts in the State of: Maryland



CHILD CARE NEED¹

POPULATION	MARYLAND	UNITED STATES
Total residents	5,959,902	318,558,162
Children age birth to 4 years	367,549	19,853,211
Children age birth to 4 years living in poverty	54,135	4,614,933
Children age 5 to 11	523,300	28,723,602
Total families with children	634,386	33,506,082
Single parent families	206,928	10,934,829
Families in poverty	99,368	8,543,087

CHILDREN UNDER AGE 6 POTENTIALLY IN NEED OF CHILD CARE	MARYLAND	UNITED STATES
Children in two-parent families, both parents in labor force	182,724	8,627,436
Children in single-parent families, parent in the labor force	123,337	6,341,151
Total children under age 6 potentially needing child care	306,061	14,968,587

NUMBER OF WORKING MOTHERS	MARYLAND	UNITED STATES
With infants under one year	50,786	2,492,109
With children under age 6 only	118,382	5,559,717
With children age 6 to 17 only	307,695	14,802,290
With both children under age 6 AND children age 6 to 17	88,621	4,397,360
Married working mothers	326,124	15,768,714
Single working mothers	136,609	6,757,824

AVAILABILITY OF CHILD CARE²

SPACES IN CHILD CARE PROGRAMS	MARYLAND
Total spaces/slots	259,270
Percent of spaces in child care center programs*	69%
Percent of total spaces in licensed FCC homes	17%
Percent of total spaces in school-age care programs	14%
Percent of total spaces in other programs	0%
Percentage spaces/slots of licensed programs	
Percent of licensed spaces for infants	37%
Percent of licensed spaces for toddlers	39%
Percent of licensed spaces for preschool-aged children	72%
Percent of licensed spaces for school-aged children	67%

*Does not include school-aged programs.

TYPES OF AVAILABLE CHILD CARE

TYPES OF CHILD CARE	MARYLAND
Number of center-based child care programs	2,891
Percent of centers nationally accredited	3%
Do faith-based programs need to be regulated?	Yes
Number of regulated faith-based programs	215
Number of family child care (FCC) homes	5,757
Percent of FCC homes nationally accredited	2%
Number of school-aged care programs	8,252
Percent of licensed programs with slots for school-aged children	92%
Percent of licensed programs with slots for ONLY school-aged children	8%
Number of other regulated child care centers	NA
Number of other regulated FCC homes	NA

CHILD CARE WORKFORCE

NUMBERS, INCOME, AND SUPPORT OF THE CHILD CARE WORKFORCE ³	MARYLAND	UNITED STATES
Child care workers (in centers)	8,830	562,420
Average annual income of child care workers	\$25,930	\$22,290
Total paid early childhood workforce ⁴	NA	2.2 million

FOR FURTHER INFORMATION

CCR&R CONTACTS	URL
Maryland Family Network	www.marylandfamilynetwork.org
Child Care Aware® of America	http://usa.childcareaware.org www.childcareaware.org

NOTES

- **NA:** Not Applicable
- **NR:** Data Not Reported or Not Available

- More federal funds are available to support child care programs at two-year and four-year colleges. Congress recently tripled the funding authorized for the Child Care Access Means Parents in School Program, known as CCAMPIS. The program provides grant awards on four-year cycles to two-year and four-year colleges that provide on-campus child care. With the federal spending package that passed in March, Congress increased the Department of Education's annual funding for the program from \$15 million to \$50 million.

"The Department will use the nearly \$35 million increase provided for FY 2018 to make more than 200 additional awards to [higher education institutions] that will support campus-based child-care programs serving low-income parents in postsecondary education," said a U.S. Education Department spokesperson in a written statement to U.S. News.

Among the 86 higher education institutions that received a CCAMPIS grant last year, the vast majority were community colleges.

- Access to campus child care is a key factor in determining if single mothers in college will graduate within six years, according to the latest in a series of reports released Wednesday by the Institute for Women's Policy Research.

Just 8 percent of single mothers who enroll in college graduate with an associate or bachelor's degree within six years, compared to 49 percent of women students who are not mothers, stated the report, "Investing in Single Mothers' Higher Education: Costs and Benefits to Individuals, Families, and Society."

In addition, the vast majority, 89 percent, of single student mothers have low incomes and no money of their own or from their families to cover college expenses.

Researchers also pointed out that single mothers' low completion rates "are particularly concerning given the high proportion who are students of color: 37 percent of Black women, 27 percent of American Indian/Alaska Native women, 19 percent of Hispanic women, and 14 percent of White women in college are single mothers."

For those who graduate, a college degree leads to increased earnings, higher rates of employment, improved health and increased civic engagement for single mothers, and positive outcomes for their children as well. But the roadblocks for single mothers are formidable, primarily the obstacle of child care.

Rural Vs. Urban

Rural areas have higher attainment in associate degrees than do urban areas but lag behind in bachelor's and advanced degrees.

	Rural	Urban
Some College	23%	22%
Associate Degree	9%	8%
Bachelor's Degree Or Higher	19%	32%

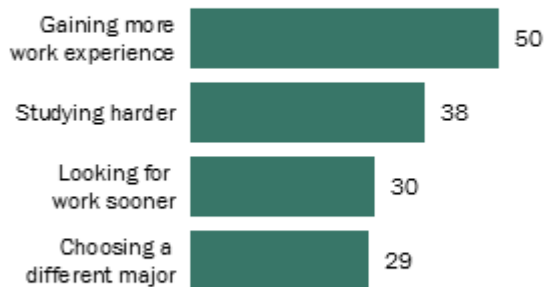
Sources of Revenue

Community colleges are increasingly reliant on tuition to cover expenses as government reduces support for higher education. Here is a look at where colleges get their money.

	Percent (%)	Revenue (in billions)
Tuition	28.9	\$16.6
State	28.5	\$16.3
Federal	15.1	\$8.7
Local	17.8	\$10.2
Other	9.39	\$5.6
Total	100	\$457.5

College Days, Reconsidered

% who say doing each of the following while they were undergraduates would have better prepared them to get the job they wanted

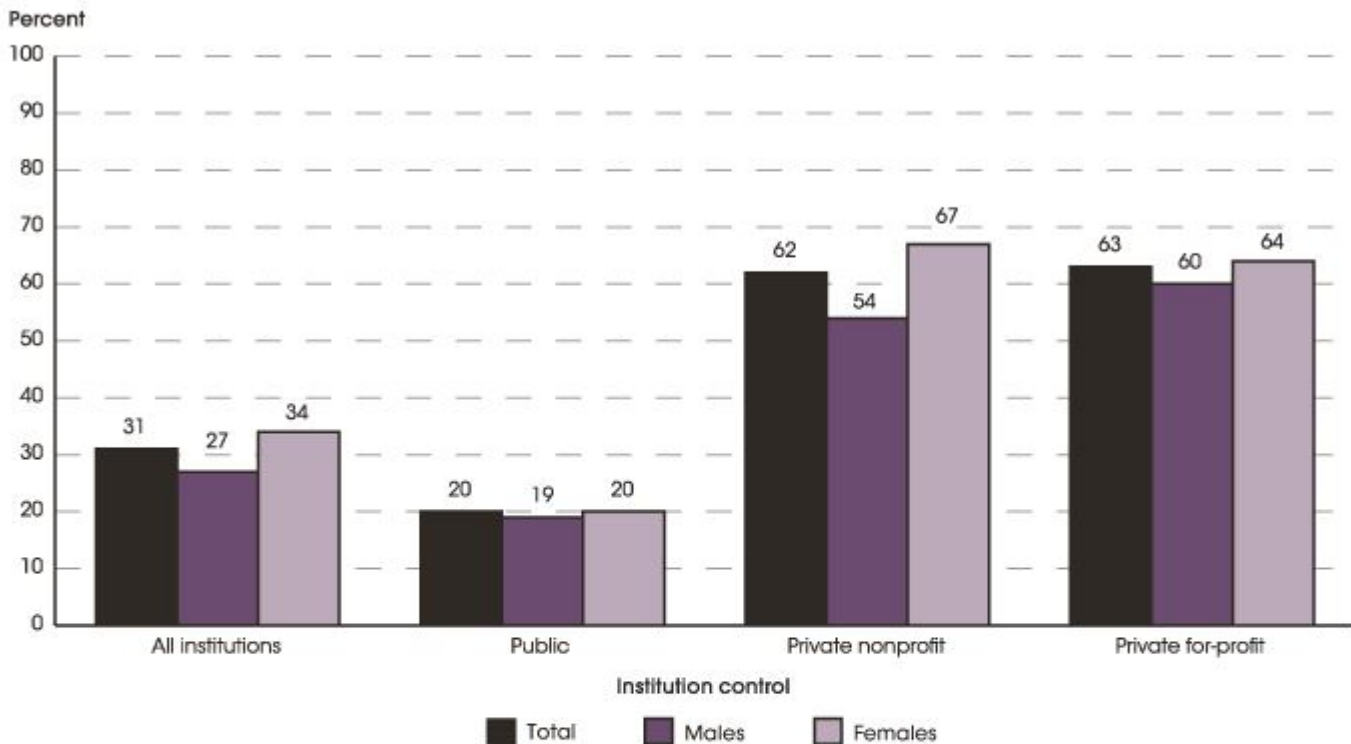


Note: Based on those with at least a bachelor's degree (n=790). Voluntary responses of "Maybe" not included.

PEW RESEARCH CENTER

Q22a-d

Figure 4. Percentage of students seeking a certificate or degree at 2-year degree-granting institutions who completed a credential within 150 percent of the normal time required to do so, by control of institution and sex: Starting cohort year 2009



NOTE: Data are for 2-year degree-granting postsecondary institutions participating in Title IV federal financial aid programs. Graduation rates refer to first-time, full-time students receiving associate's degrees or certificates from their initial institution of attendance only. An example of completing a credential within 150 percent of the normal time required to do so is taking 3 years for a 2-year degree. Students who transferred to another institution and graduated are not counted as completers at their initial institution.

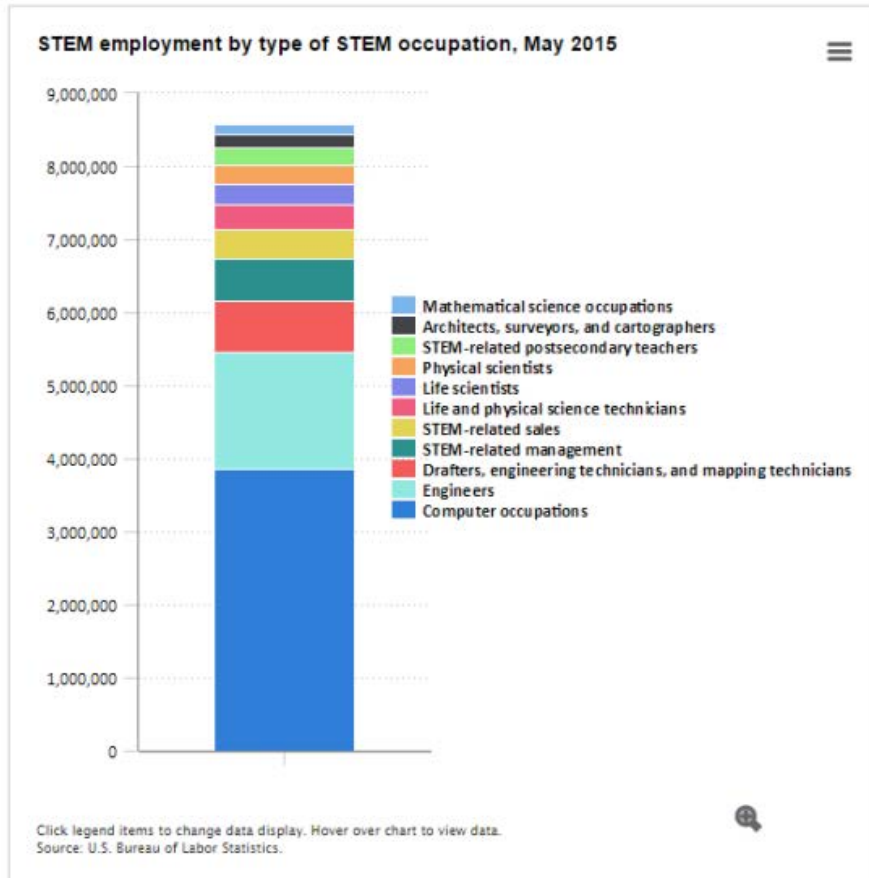
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2013, Graduation Rates component. See *Digest of Education Statistics 2013*, [table 326.20](#).

At 2-year degree-granting institutions, 31 percent of first-time, full-time undergraduate students who began their pursuit of a certificate or associate's degree in fall 2009 attained it within 150 percent of the normal time required to do so. An example of completing a credential within 150 percent of the normal time required to do so is taking 3 years for a 2-year degree. This graduation rate was 20 percent at public 2-year institutions, 62 percent at private nonprofit 2-year institutions, and 63 percent at private for-profit 2-year institutions. At 2-year institutions overall, as well as at each type of 2-year institution, the completion rate was higher for females than for males. At private nonprofit 2-year institutions, for example, 67 percent of females versus 54 percent of males completed a certificate or associate's degree within 150 percent of the normal time required.

- So, what's the No. 1 field of interest for graduating seniors? RIDGID's survey results show 25 percent of students hope to work in a career with computers or the Internet. The next most popular fields of interest include business (16 percent); engineering (15 percent); healthcare, defined as doctors, nurses, assistants and technicians (15 percent); and the entertainment/arts field, defined as actor, musician, TV anchor, reporter and producer (15 percent).

Nearly 8.6 million STEM jobs in 2015

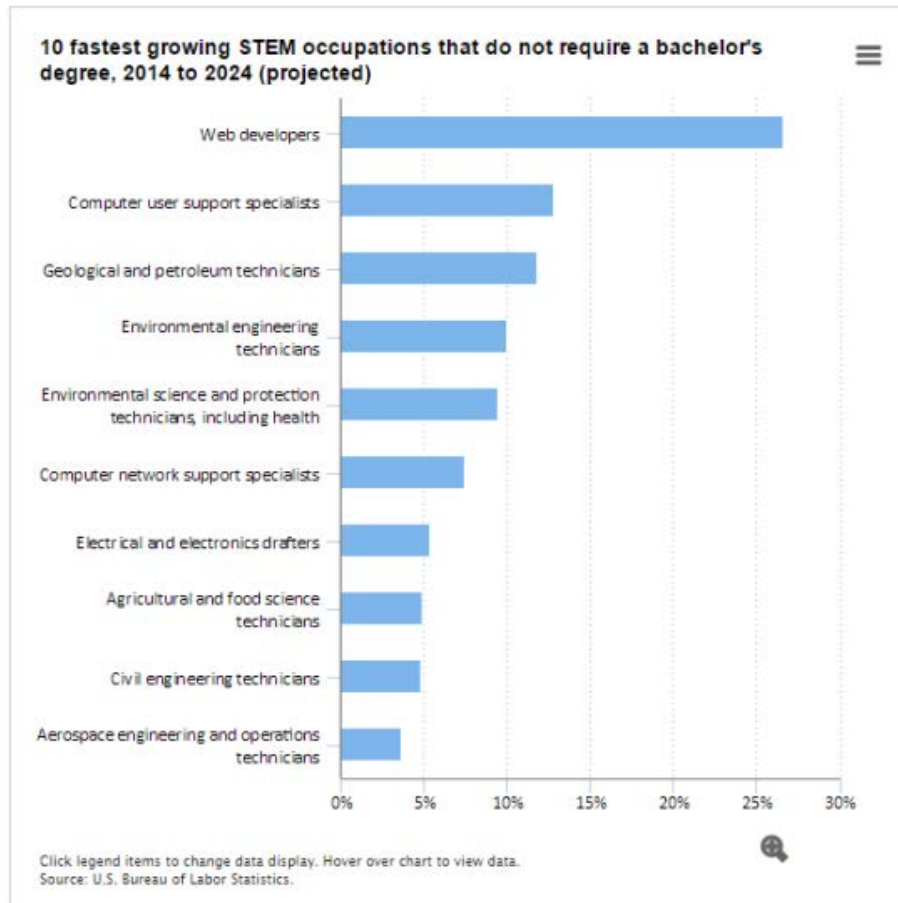
There were nearly 8.6 million STEM jobs in May 2015, representing 6.2 percent of U.S. employment. Computer occupations made up nearly 45 percent of STEM employment, and engineers made up an additional 19 percent. Mathematical science occupations and architects, surveyors, and cartographers combined made up less than 4 percent of STEM employment.



- Employment in STEM occupations grew by 10.5 percent, or 817,260 jobs, between May 2009 and May 2015, compared with 5.2 percent net growth in non-STEM occupations. Computer occupations and engineers were among the types of STEM occupations with the highest job gains. Employment in computer occupations was nearly 3.2 million in May 2009 and nearly 3.9 million in May 2015. Employment of engineers was nearly 1.5 million in May 2009, compared with over 1.6 million in May 2015. Some STEM occupations lost jobs. In 2009, there were nearly 478,000 jobs in STEM-related sales occupations, compared with approximately 406,000 in 2015.

10 fastest growing STEM occupations that do not require a bachelor's degree

Of those STEM occupations that typically require less than a bachelor's degree for entry, the two fastest growing are web developers (26.6 percent) and computer user support specialists (12.8 percent). Four of the fastest growing occupations shown here are drafters or engineering technicians: electrical and electronics drafters, civil engineering technicians, environmental engineering technicians, and aerospace engineering and operations technicians. Nine of the ten occupations shown here typically require an associate's degree for entry. Computer user support specialists typically require some college.



- Between May 2009 and May 2015, over 800,000 net STEM jobs were added to the U.S. economy. The computer systems design and related services industry increased its STEM employment by over 300,000 jobs. Employment services, an industry that helps job seekers to find temporary or permanent employment, added over 86,000 STEM jobs. The data processing, hosting, and related services industry added almost 31,000 STEM jobs, and colleges, universities, and professional schools added over 29,000 STEM jobs. STEM employment in general medical and surgical hospitals increased by slightly more than 23,000 jobs.

- As a share of total employment, STEM employment varied from 3.3 percent in Nevada and Mississippi to over 9 percent in Maryland, Washington, and the District of Columbia. In general, higher shares of STEM employment were associated with higher wages. For example, the District of Columbia had both the highest overall average wage (\$80,150) and one of the highest shares of STEM occupations. However, STEM employment wasn't the only factor affecting wage differences. In addition to high concentrations of STEM occupations like statisticians, physicists, and environmental scientists, the District of Columbia also had above-average shares of other high-wage occupations like lawyers and management analysts, which contributed to its high wage level. New York was one of the highest paying states, but had a below-average share of STEM occupations.
- Some of the fastest growing STEM occupations are in computer systems design and related services. The rapid growth projected for these occupations is due in large part to the projected growth for the industry of 23 percent. Computer programmers are projected to decline in this industry from 2014 to 2024 due to the ongoing trend of outsourcing the work to firms located overseas to cut costs.
- The STEM group that is projected to grow fastest from 2014 to 2024 is the mathematical science occupations group at 28.2 percent, compared with the average projected growth for all occupations of 6.5 percent. This group includes occupations such as statisticians and mathematicians. Since this group has the lowest employment among the STEM groups in 2014, this growth will result in only about 42,900 new jobs over the period. The only STEM group that is projected to show little or no change is drafters, engineering technicians, and mapping technicians, with a slight projected decline of 1.4 percent, a decline of about 9,600 jobs.
- Wages for STEM occupations varied vastly. The national average wage for all STEM occupations was \$87,570, nearly double the national average wage for non-STEM occupations (\$45,700). Ninety-three out of 100 STEM occupations had wages significantly above the national average wage for all occupations of \$48,320. Petroleum engineers was the highest paid STEM occupation, with an annual mean wage of \$149,590, over \$100,000 higher than the national average across all occupations. Physicists (\$118,500) was also among the highest paid STEM occupations. Seven STEM occupations had annual mean wages near or below the national average. Environmental science and protection technicians, including health, and biological technicians had mean wages of \$46,540 and \$45,230, respectively. Agricultural and food science technicians and forest and conservation technicians each earned below \$40,000 per year on average.

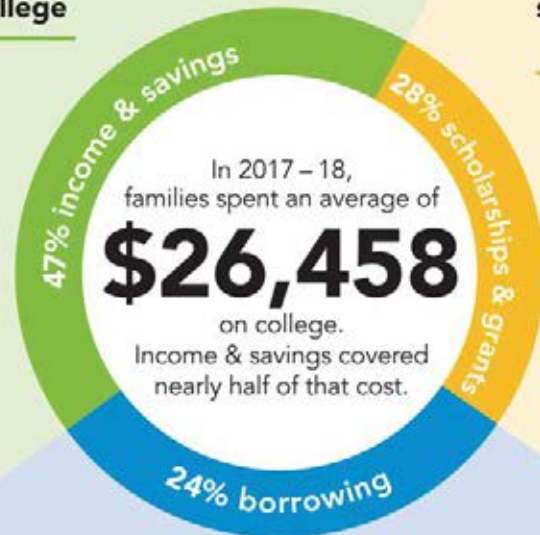
How America Pays for College 2018

A snapshot of the national study by Sallie Mae® and Ipsos

Families reached into their pockets to pay for college

34% of costs covered by parent income & savings, or **\$8,891**

13% of costs covered by student income & savings, or **\$3,339**



Scholarships were the single most-used resource to pay for college

57% of families used scholarships

56% of families used grants

which translates to **17%** of costs covered by scholarships, or **\$4,393**

and **11%** of costs covered by grants, or **\$2,955**

More than half of families borrowed for college

10% of costs covered by parent borrowing

14% of costs covered by student borrowing

65% of families who borrowed say it was always part of their paying-for-college plan

1 in 3 say parents will share responsibility for student loan payments

Each family's paying-for-college strategy and decision-making are different

39% say the parents made the decisions

24% say the students made the decisions

8 in 10 are confident they made the right financial decisions for how to pay for college

75% of families filed the Free Application for Federal Student Aid (FAFSA)

31% of families took advantage of filing during the earlier October – December timeframe

Reasons for filing early



Learn more about how families pay for college at SallieMae.com/HowAmericaPaysForCollege

Join the conversation at #HowAmericaPays



How America Pays for College 2018, by Sallie Mae, the nation's saving, planning, and paying for college company, and Ipsos, the world's third-largest market research company, reports the results of 1,589 online interviews conducted between July 11 and July 30, 2018, with 799 parents of 18 to 24-year-old undergraduate students, and 790 18 to 24-year-old undergraduate students.
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The average composite score on the ACT for high school seniors who graduated in 2018 was 20.8, down from 21.0 the prior year.

All four of the subject tests showed declines. More than 1.9 million students in this cohort took the ACT, down a bit from the previous year, and back to the level of two years prior. The decrease is notable because testing groups generally say that surges in test takers are likely to result in declines in average scores, as a wider cross-section of students is tested. That was not the case this year.

ACT's annual report on college readiness notes that, judging by courses completed as well as test scores, most high school graduates are not prepared for college. Generally, students who have completed recommended college preparatory courses do better than others on the ACT.

Here are the most recent scores, with averages over the last five years. (A perfect score is 36 on either a subject test or the composite.)

Average ACT Scores, 2014-2018

Year	English	Mathematics	Reading	Science	Composite
2014	20.3	20.9	21.3	20.8	21.0
2015	20.4	20.8	21.4	20.9	21.0
2016	20.1	20.6	21.3	20.8	20.8
2017	20.3	20.7	21.4	21.0	21.0
2018	20.2	20.5	21.3	20.7	20.8

- A new survey from GradStaff, a Minneapolis-based leader in outsourced college recruiting services for companies from 50 to 2,000 employees, reveals that college graduates aren't necessarily prepared to navigate the complex world of job hunting, with 64 percent surveyed revealing they are often unsure which job opportunities are a fit for their newly acquired skillset.
- Research shows many college students who take developmental education classes, usually required when they score low on placement exams, fail to graduate. Only 28% of two-year college students who took at least one developmental course earned a degree or certificate within 8.5 years, compared to 43% of non-remedial students, according to one study. The study concluded the gap in graduation rates reflected differences in learning skills carried over from high school, rather than the impact of remedial classes themselves.
- Over the next two years, AARP Foundation will invest more than \$2 million to expand the program and reach thousands more older workers. To date, Back to Work 50+ has provided more than 5,000 unemployed workers with information and resources to help them find meaningful jobs.

There are more than 3 million workers age 50-plus looking for full-time employment, according to AARP Foundation.

- A growing number of startups want to play the matchmaker role between community colleges and employers. One of them, WorkAmerica, makes an unusual offer as part of their pitch: students get a legally binding job offer before they enroll at one of the company's partner colleges.

WorkAmerica has begun placing students in trucking programs at community colleges. Gutman said more deals are in the works, and that the company plans to branch into other fields with a high churn of workers, such as employers of welders, medical assistants, and IT and HVAC technicians.

- As community colleges become even more important, so do their career centers. The typical career center is under-resourced, under-staffed and underutilized. Listed are 5 ways to make the career center the place to be on campus.
 1. Improve website and make it mobile friendly
 2. Empower your community to engage in online and in-person advising
 3. Communicate with students their way
 4. Connect students with employers and alumni
 5. Be where your students are

The Department of Education will make sure students don't take on more debt than they can handle by holding schools accountable for the return on investment of their degree programs. In many cases, especially with for-profit colleges, institutions have over-promised earning potential and students have taken on mountains of debt that they can't repay.

The new set of rules, called the gainful employment regulations, require colleges to track their graduates' debt and employment to prove that their programs don't fall short of federal guidelines. Institutions now have to provide information on program costs, how much students earn after they graduate and how much debt they could accumulate. This will let the Department see which programs are saddling students with debt and leaving them with low earning prospects, and which offer affordable training that leads to well-paying jobs.



Schools will have to show that a typical graduate's estimated annual loan payment does not exceed 20% of his or her discretionary income, or 8% of his or her total earnings. Programs that go over these levels risk losing federal funding, which makes up 90% of revenue at for-profit institutions, according to the DOE. The effects of the new rules could topple the for-profit industry, since roughly 1,400 programs serving 840,000 students would not pass the accountability standards today, according to the Department. About 99% of those students are at for-profit colleges.

KNOW THIS!

51.7%

of those entering
a 2-year college
**ENROLL IN
REMEDICATION**



22.3%

of those students
**COMPLETE
REMEDICATION and
associated college-level
courses in two years**

9.5%

**GRADUATE
within 3 years**



Nearly 52 percent of community college students in the United States begin their freshman year in at least one remedial class. These courses, which help students acquire knowledge and skills they should have acquired in high school, do not count toward their degree requirements. As a result, students are taking longer than ever to obtain their degree, if they obtain one at all.

- No other nation has as diverse a selection of higher education opportunities. There are nearly 8,300 degree and non-degree granting institutions in the nation, from two-year public community colleges to private four-year universities to private vocation-specific graduate schools.
- Only South Korea has a larger percentage of its citizenry enrolled in higher education.
- Recent community college graduates are finding jobs with starting salaries well above \$40,000 per year, which outpaces the national average.
- Unemployment for individuals with a college degree has remained at about 5 percent, even through the Great Recession.

WHERE WE STAND

The National Picture

Most college students don't graduate on time.

1-YEAR CERTIFICATE



15.9%
ON TIME

2-YEAR ASSOCIATE



5%
ON TIME

4-YEAR BACHELOR'S
(NON-FLAGSHIP)



19%
ON TIME

4-YEAR BACHELOR'S
(FLAGSHIP)



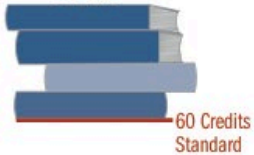
36%
ON TIME

Many graduates earn excess credits.

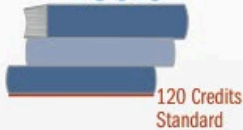
64.9



80.9



133.5

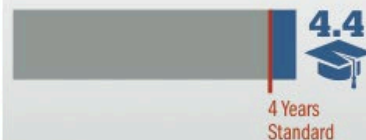


134.6



And graduates take far too long to finish, costing missed opportunities and money.

YEARS 1 2 3 4 5 6



Cost of each additional year:

extra \$38,264
in tuition, fees, and lost wages for each student

extra \$63,718
in tuition, fees, and lost wages for each student

extra \$63,718
in tuition, fees, and lost wages for each student

KNOW THIS: Excess credits alone cost taxpayers and students **\$19.2 BILLION EACH YEAR.***

Data for students who began college going full-time.
*Includes associate and bachelor's degrees only.

AAAC FAST FACTS 2018



NUMBER & TYPE OF COLLEGES (2018)¹

Public 980 Tribal 35 Independent 88

TOTAL 1,103

HEADCOUNT ENROLLMENT (FALL 2016)

Estimated change
Fall 2016 - Fall 2017: -1.7%⁽⁴⁾

CREDIT

59%
7.1M

NON CREDIT⁽³⁾

41%
5.0M

TOTAL 12.1M

CREDIT BY ATTENDANCE²



GENDER²



DEGREES AND CERTIFICATES AWARDED (2016-2017)⁸

ASSOCIATE DEGREES 833,093 CERTIFICATES 533,579

DEMOGRAPHICS OF STUDENTS ENROLLED FOR CREDIT²

HISPANIC.....24%
BLACK13%
WHITE.....47%
ASIAN/PACIFIC ISLANDER.....6%
NATIVE AMERICAN1%
2 OR MORE RACES.....3%
OTHER/UNKNOWN....4%
NONRESIDENT ALIEN.....2%

AGE⁵

AVERAGE:28
MEDIAN:24

51%
<21

39%
22-39

10%
40+



A BETTER MEASURE OF SUCCESS

Fall 2010 Cohort

VFA metrics are a better measure of community college student success than traditional IPEDS metrics.

VFA
59%

vs.

IPEDS
25%

VFA measures:
• All entering students
• 6 years to complete
• 9 separate outcomes

Traditional IPEDS measures:
• First time, Full time
• 3 years to complete
• Only graduates

OTHER SIGNIFICANT DEMOGRAPHICS⁵

First generation to attend college36%
Single parents.....17%
Non-U.S. citizens7%
Veterans4%
Students with disabilities..12%
Students with prior bachelor's degree.....7%

AVERAGE ANNUAL TUITION AND FEES (2017-2018)⁷



\$3,570

Community Colleges
(public, in district)

\$9,970

4-Year Colleges
(public, in state)



PUBLIC COMMUNITY COLLEGES WITH ON-CAMPUS HOUSING¹⁰

REPRESENTATION OF COMMUNITY COLLEGE STUDENTS AMONG UNDERGRADUATES (FALL 2015)²

41%

All U.S. undergraduates

40%

First-time freshmen

56%

Native Americans

52%

Hispanics

43%

Blacks

40%

Asian/Pacific Islanders



MEDIAN EARNING OF FULL-TIME EMPLOYEES BY EDUCATIONAL ATTAINMENT¹¹

Less than High School Diploma

\$26,200

High School

\$36,000

Associate Degree

\$42,600

Bachelor's Degree

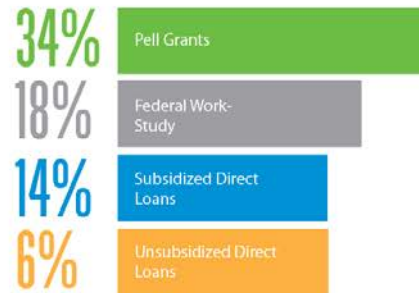
\$60,100



COMMUNITY COLLEGE REVENUES BY SOURCE (2015-16)⁴

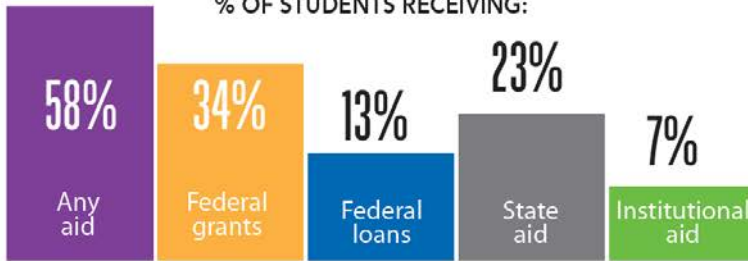
Tuition	\$16,988,079,491	28.0%
Federal	\$7,376,275,873	12.2%
State	\$19,769,112,283	32.6%
Local	\$11,729,703,963	19.3%
Other	\$4,808,613,589	7.9%

% OF FEDERAL AID RECEIVED BY COMMUNITY COLLEGE (2015-2016)⁶



STUDENT FINANCIAL AID (2015-2016)¹²

% OF STUDENTS RECEIVING:



% OF STUDENTS APPLYING (2011-2012)⁵

Any aid 72%
Federal aid 62%

SOURCE:

- ¹ AACC membership database, January 2018.
- ² NCES. (2018). IPEDS Fall 2016 Enrollment Survey [AACC analysis].
- ³ AACC membership database, 2018 [AACC analysis].
- ⁴ NSC (2017). Estimates provided on NSC (2017) Term Enrollment Estimates Fall 2017.
- ⁵ NCES (2018). 2011-12 National Postsecondary Student Aid Study (NPSAS:12) [AACC analysis].
- ⁶ College Board. (2017). Trends in Student Aid: 2017.
- ⁷ College Board. (2017). Trends in College Pricing: 2017.
- ⁸ NCES (2018). IPEDS 2016-17 Completion Survey [AACC analysis].
- ⁹ NCES (2018). IPEDS 2016-17 Finance Survey Files [AACC analysis].
- ¹⁰ NCES. (2018). IPEDS 2017 Institutional Characteristics Survey File [AACC analysis].
- ¹¹ Bureau of Labor Statistics (2018). Career Outlook: More Education: Lower Unemployment, Higher Earning.
- ¹² NCES (2018). 2015-16 National Postsecondary Student Aid Study (NPSAS:16)



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www.aacc.nche.edu

Prices at most schools, including public ones, increased for the 2018-2019 school year, according to data submitted to U.S. News in an annual survey. While the average price for tuition and fees at in-state schools rose by nearly 2 percent, the average out-of-state price increased by less than 1 percent. Similar to previous year-over-year increases, the average tuition and fees at private colleges climbed 3 percent.

But the prices that students pay, even when grant aid and tax benefits are factored in, isn't keeping pace with rising sticker prices, higher education analysts say. Students also have to pay for other expenses, such as housing, food and books, which can run thousands of dollars a year.

Seemingly small increases can add up over decades, especially with several years of static or declining wages. According to the Federal Reserve Bank of St. Louis, U.S. median household income is almost the same as it was 20 years ago.

Choice of college contributes to affordability. According to the recent 2018 Sallie Mae survey How America Values College, more than 75 percent of families say they weighed cost and affordability as part of their college selection process. The study also found that 77 percent of students chose a school in their home state; nearly half of them – 37 percent – live at home or with relatives to save on housing costs.

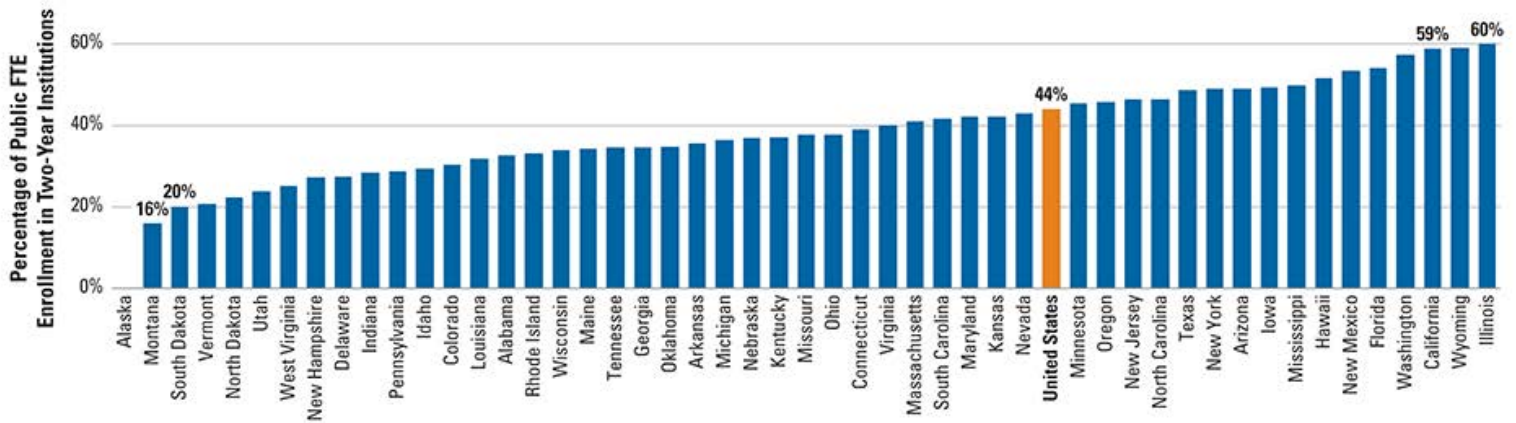
The average tuition and fees at an in-state public college is 73 percent less than the average sticker price at a private college, at \$9,716 for the 2018-2019 year compared with \$35,676, respectively, U.S. News data show. Among U.S. News-ranked private institutions, more than 100 private colleges charge at least \$50,000 or more in sticker price for the current academic year, according to tuition and fees data reported to U.S. News by 737 ranked private institutions. Only a few ranked private colleges and universities – 49 – list a full rate price of less than \$20,000 for 2018-2019.

Average Tuition & Fees

2018-2019



Public two-year colleges, some of which offer a limited number of bachelor's degrees, accounted for 50% or more of undergraduate enrollment in the public sector in eight states in 2014, but in seven states, they were 25% of the total or less.



trends.collegeboard.org

- Historically, four-year colleges and universities awarded bachelor's degrees and advanced degrees (and not associate's degrees) and community colleges awarded associate's degrees (and not bachelor's degrees). Now, however, an increasing number of community colleges also offer baccalaureate degrees. The practice began as a response to the acute teacher shortage. States allowed community colleges to award baccalaureate degrees to prospective teachers in areas of particular need, such as math and science. Community college baccalaureate programs have also been established in areas that are not adequately served by four-year institutions because they are too costly or geographically too far away. Proponents of community college baccalaureate degrees claim that the practice serves the wider goal of making a college education more accessible. The subject is controversial, however. Some fear that the community college teaching programs may not be as rigorous as those of four-year institutions or worry about competition with the four-year programs.
- According to a new survey from fidelity, parents expect their children to pay a larger share of the costs – an average of \$15,385. Less than half of parent-respondents reported feeling as though it was their obligation to cover college expenses themselves. Forty percent of people with sophomore age children or older hadn't communicated those funding expectation, up 9 percentage points over 2016.

- Student loan debt statistics show 44 million Americans owe over \$1.4 trillion in student loan debt. The total debt is also more than double the \$620 billion Americans owe on credit card debt.

Class of 2016 graduate has roughly \$37,172 in student loan debt. This is a six percent increase from last year.

According to Make Lemonade, there are more than 44 million borrowers with \$1.4 trillion in student loan debt in the U.S. alone. The average student in the Class of 2016 has \$37,172 in student loan debt.

Retirees are bringing unprecedented levels of student loan debt into their later years, according to a new report that shows Baby Boomers may be woefully unprepared for retirement.

The result of helping their kids or grandkids pay for college, those ages 65-74 have nearly six times the amount of education debt now than they did two and a half decades ago, when they had almost none, according to an analysis of government data by LIMRA Secure Retirement Institute.



Student Loan Balance	Number of Borrowers
Less Than \$5,000	8,960,200
\$5,000 - \$10,000	7,740,700
\$10,000 - \$25,000	12,434,400
\$25,000 - \$50,000	8,319,600
\$50,000 - \$75,000	3,341,100
\$75,000 - \$100,000	1,350,800
\$100,000 - \$150,000	1,116,500
\$150,000 - \$200,000	500,400
\$200,000+	415,400

As of 2015, more than 42 million student loan borrowers have student loan debt of \$100,000 or less. More than 2 million student loan borrowers have student loan debt greater than \$100,000, with 415,000 of that total holding student loan debt greater than \$200,000. The largest concentration of student loan debt is \$10,000 – \$25,000, which accounts for 12.4 million student loan borrowers.

The Department of Education is going to make it easier for students to get a college loan, even if they or their parents have less than great credit histories, according to Andrew Taylor of *Associated Press*.

These changes will make getting a loan from the government's Direct Loan program less restrictive. Up until now, students with "adverse debt" were denied automatically, unless they had extenuating circumstances. Sometimes students in this situation are required to have loan counseling.

The new regulations allow up to \$2,085 debt or written-off debt and would shorten the debt securitization from five years to two. Under these standards about 370,000 students could now qualify for direct loans.

Students who attend community college are defaulting on their loans more often than those who attend a four-year school.

With 70% of students borrowing less than \$6,000, this may come as a surprise. However, low graduation rates may explain why so many cannot repay these small amounts.

Only 7% of young-adult families hold \$50,000 or more in debt related to education. In contrast, 58% of the same households have less than \$10,000 in this type of debt. These are the graduates who have a difficult time finding a job and paying back their loans.

College Loan Payment Responsibility

While a majority of families who borrowed to pay for college view paying college costs as a joint effort between parent and student, there is a notable difference between overall responsibility and repayment of any loans accrued.

In families where the student borrowed a federal or private education loan, fewer than one-third say parents will contribute to loan payments; a strong majority (71%) say the student will be solely responsible for repaying the loans. In families where the parent borrowed a federal or private education loan, the student is again expected to take responsibility. Only 12 percent say the parent will be solely responsible for the payments. The vast majority expect students to make some payments on parent loans with 24 percent saying the student will be fully responsible for those payments.

SallieMae.com

- The fiscal year 2018 omnibus spending bill released last month included several unexpected victories for student aid programs and policies, including an increase of \$175 to the maximum Federal Pell Grant—a need-based grant awarded to qualified low-income students to help defray the cost of college. As a result, the maximum Pell Grant award for students enrolled in the 2018-19 school year has jumped from \$5,920 to \$6,095.
- The high school class of 2017 left as much as \$2.3 billion in free federal grant money for college on the table, according to a new analysis by NerdWallet. Free money went unclaimed due to students not completing or submitting the Free Application for Federal Student Aid, or FAFSA.

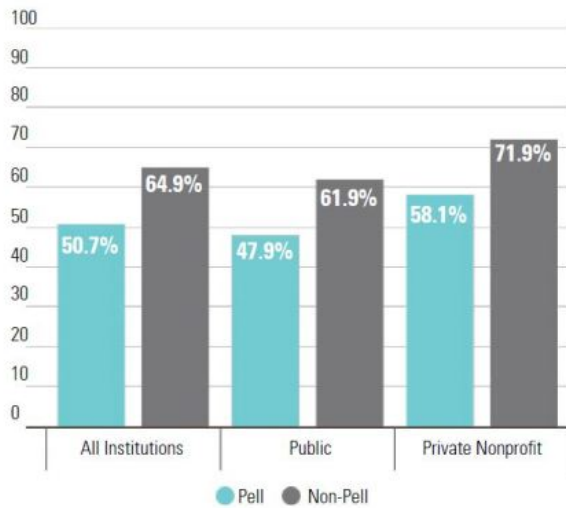
Filling out the FAFSA is the key to unlocking financial aid for college, including federal, state and institutional money. Federal aid includes Pell Grants, which are awarded to undergraduate students from low-income families. Unlike student loans, Pell Grants do not have to be repaid. They are awarded based on financial need — determined via the FAFSA — and other factors. The maximum Pell amount for the 2017-18 school year is \$5,920.

Pell Grant money left on the table: Full breakdown

State	Percentage of High School Students Not Completing the FAFSA	Graduates Who Didn't Complete the FAFSA	Pell Grant Graduates that Didn't Complete the FAFSA	Average Pell Grant in 2016-17	Total Pell Grant Money Left On the Table
West Virginia	32%	5,660	3,080	\$3,611	\$11,123,470
Virginia	38%	33,582	14,716	\$3,570	\$52,535,616
Pennsylvania	36%	49,171	21,524	\$3,689	\$79,411,774
Maryland	38%	23,611	10,246	\$3,361	\$34,440,133
US Total	36%	1,234,249	647,261	\$3,583	\$2,319,016,315

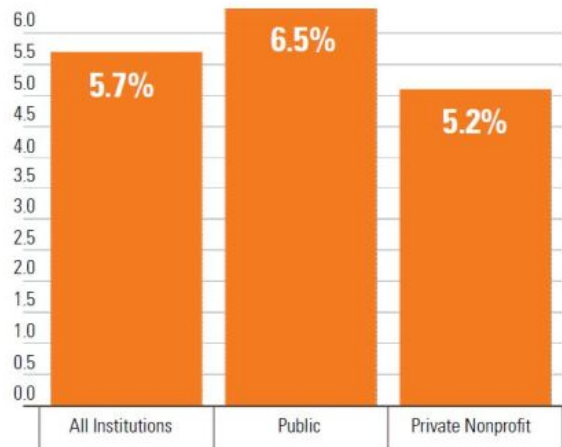
www.nerdwallet.com

Figure 1: 2013 Six-Year Bachelor's Degree Completion Rates



Notes: Analysis includes 1,149 institutions (505 public and 644 private nonprofit).
Source: The Education Trust's Pell Grant Graduation Rate Database

Figure 2: Average Institutional Completion Gap Between Pell and Non-Pell Students



Notes: Analysis includes 1,104 institutions (498 public and 606 private nonprofit).
Only institutions with 30 Pell and non-Pell students were included in this analysis.
Source: The Education Trust's Pell Grant Graduation Rate Database

COURTESY OF THE EDUCATION TRUST

The most expensive education is one that doesn't lead to a degree

While graduating with high levels of debt is holding too many borrowers back from reaching their full potential, the even more damaging outcome is for students who take on debt but never complete their degree. In fact, students' ability to repay their loans depends more strongly on whether they graduate than how much total debt they take on.

- Students who take out college loans but don't graduate are three times more likely to default than borrowers who complete.
- The median debt of borrowers who default is under \$8,900, which is barely half of the median debt load for all students, and the average debt for students in default is \$14,500, which is half the average debt of those who graduate.
- States with the highest default rates for their four-year colleges tend to be near the bottom on completion rate too; and states with the lowest default rates tend to rank higher in four-year completion rates.
- More than 40 percent of first-time full-time students who enroll in a bachelor's degree program don't graduate within 6 years.
- Low-income students, first-generation college students, and minority students, in particular, are being underserved by the current system. Just 9 percent of students from the lowest income quartile graduate with a bachelor's degree by age 24, compared to 77 percent for the top income quartile.
- Students from low-income families are also less likely to enroll in and complete college than their peers, even when academic ability is taken into consideration.

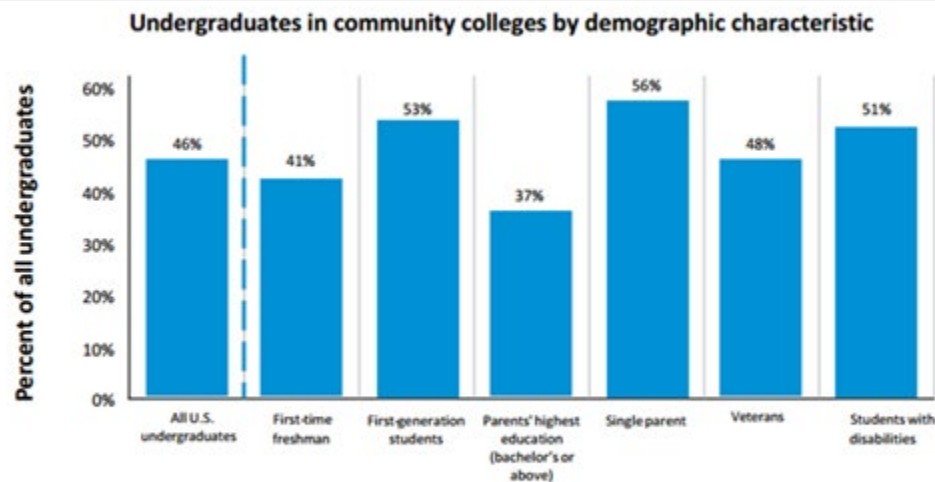
Seven Trends in Community Colleges

1. Increased Distance Learning
2. Greater Number of Baccalaureate Degrees Awarded
3. Increased Partnerships Between Community Colleges and Four Year Institutions
4. Greater Recruiting of Baby Boomers
5. Increased Enrollment Across Different Student Groups (high school students, reverse transfer students & veterans)
6. Increased Partnership with Business
7. Increased Response to Globalization

The Bureau of Labor Statistics reports, as of September 2014, college grads age 25-plus had a 2.9 percent unemployment rate. For high school-only grads, it was 5.3 percent (and 8.4 percent for those who never received a diploma or GED). Additionally, Pew says those with Bachelor's degrees have higher job satisfaction, clearer career paths, and substantially lower rates of poverty. The statistics on that last point are particularly persuasive: In 2012, 6 percent of college grads ages 25-32 lived in poverty. For those with no college, it was a staggering 22 percent.

Who attends community college?

Community college students come from a broad range of backgrounds.



Source: AACC's analysis of Integrated Postsecondary Education Data System (IPEDS) fall 2013 enrollment data and 2011-2012 National Postsecondary Student Aid Study (NPSAS: 12) data computed using PowerStats data tools, U.S. Department of Education, National Center for Education Statistics.



Prospective online students are skewing younger, tend to enroll in local institutions and put a program's cost and reputation at the top of their priority list, according to a recent survey. Those and other findings are outlined in "Online College Students," a July report by Aslanian Market Research and the Learning House, a company that helps colleges and universities improve their online degree programs. Among the most surprising findings in the report, authors say, is the shifting age of online students. While distance education students are often assumed to be older, the report found the popularity of online undergraduate programs is growing among those under 25. Thirty-four percent of undergraduate online students were under the age of 25 this spring, up from 25 percent in 2012, according to the report.

- Online students have, on average, higher first-term GPAs than face-to-face students, according to the study. But the grades and completion rates of face-to-face courses within the study still trumped those of online courses.
- The study found only 79% of students completed their online course, while 85% of students completed their face-to-face course. Meanwhile, 56% of students passed their online course, whereas 63% of students passed their face-to-face course. Overall, the study found that if a student were to take a course in person and then take the same course online, the student would be 11% less likely to finish and pass online.
- Labor market data continue to indicate that earnings increase for each educational level achieved. According to data from the U.S. Bureau of Labor Statistics, median weekly earnings for workers ages 25 and older with less than a high school diploma was \$502 compared to \$774 for those with some college but no degree. Conversely, unemployment rates decline as the level of education attainment increases. In 2017, the average unemployment rate was 3.6 percent for the total population compared to 6.5 percent for individuals with less than a high school diploma and 4.6 percent for those with a high school diploma.

- Class Central's 2017 report finds that the number of students enrolled in at least one MOOC continued to rise significantly, to 78 million from 58 million in 2016.

While that's a 34 percent increase, it actually represents a slowing in the number of new course takers, as 2016's 58 million total was 23 million higher than 2015's 35 million, which represented a 66 percent increase.

If the outright number of students enrolling in MOOCs is slowing slightly, course providers are unlikely to mind, because they appear to be successfully increasing the number people willing to pay -- at least something -- to take their courses. This has been a several-year-long transition away from the "free" model that MOOCs began with.

The major MOOC providers -- Coursera, edX, XuetangX, FutureLearn and Udacity -- are all experimenting with multiple ways that the providers are charging for their content, from paid certificates for single courses through microcredentials up to full master's degrees in which universities wrap significant additional services around the open courses.

Class Central reports that Udacity now has more than 50,000 paying students in its nanodegree programs, and that Coursera's paying users increased by 70 percent from 2016 to 2017.

- Between 1993 and 2009, the student body—as defined by the distribution, not the number, of students—on community college campuses shifted. For instance, students under the age of 18 are increasingly enrolling in community colleges. While the student body is becoming increasingly younger, the characteristics of younger students are not homogenous across all sectors of higher education. Community college students have a greater proportion of students with various risk factors when compared to all of higher education.

These colleges also provide access to nearly half of all minority undergraduate students and more than 40% of undergraduate students living in poverty.

- According to the annual report published by the College Board, fewer than half the members of the 2013 high school class who took the SATs had the academic skills necessary to succeed in college. More troubling still, this percentage has not varied much over the past five years, breaking the trend of small but notable gains in the decade before.

Opioid Education, Now a College Requirement

More than 2,000 people died of drug and alcohol overdoses in Maryland last year -- a record number that is part of the nation's opioid-abuse crisis.

As part of their response, Maryland legislators have passed a law requiring that students be educated four times -- twice in elementary school, once in high school and once at the college level for incoming full-time students -- on the dangers of opioids, including heroin. The law applies to all higher education institutions that accept state money -- and so includes private colleges as well -- and requires naloxone (which can be used in cases of overdoses) to be stocked by campus police and public safety officers.

Preventative education for new students is nothing new for higher ed, as colleges often offer or require student participation in programs aimed to prevent drug and alcohol abuse, or sexual assault.

www.insidehighered.com

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- As more students seek flexible alternatives to traditional, on-campus courses, online education continues to evolve.

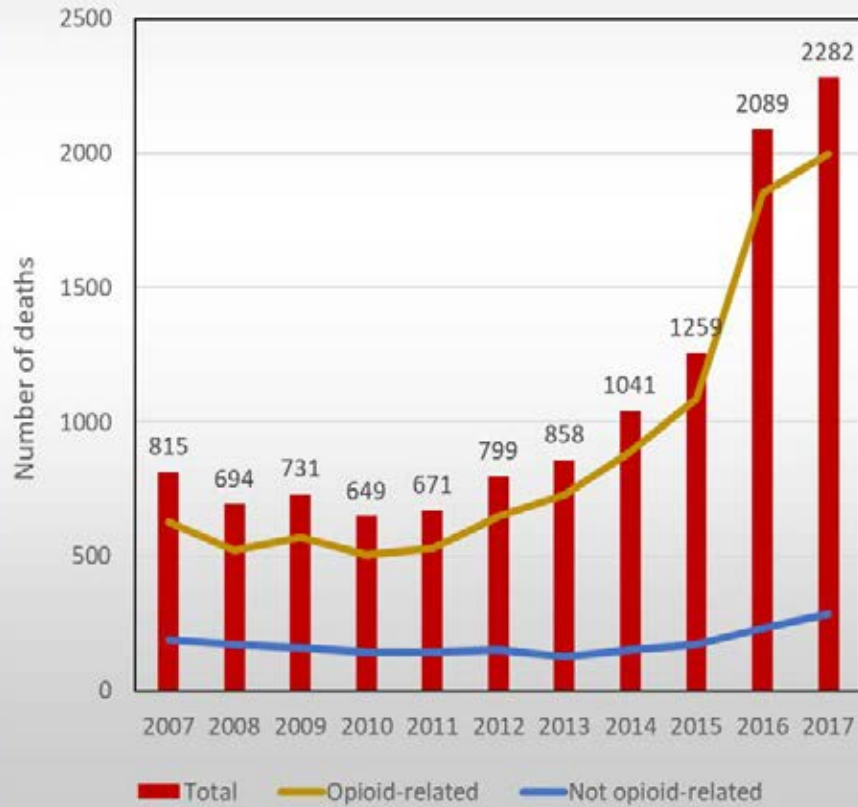
Among other trends, 2017 saw the proliferation of smaller credentials beyond online degrees, rising online course enrollment at nonprofit universities and the use of big data to track student performance.

And there's plenty more in store for 2018, experts say. Here are four trends in online higher education that prospective students should watch this year.

- 1. Continued overall enrollment growth:** The number of U.S. students who enrolled in at least one online course rose by 5.6 percent between fall 2015 and fall 2016 -- a faster rate than in the previous three years, according to a 2018 report published by the Babson Survey Research Group.
- 2. Use of more modern technologies in courses:** Susan Aldridge, president of Drexel University Online, says online degree programs in 2018 will increase their use of modern technologies to enhance their curriculums.
- 3. More health-related online degrees and courses:** Technologies such as virtual reality and simulations may contribute to more online degree offerings in health-related fields, experts say, since online programs can now virtually teach students how to interact with patients. Even medical schools are increasingly incorporating online education into their classes.
- 4. A greater push to teach specific job skills:** Many students complete degrees online because they plan to either accelerate or switch careers but still want to keep working full time, experts say.



Unintentional Drug- and Alcohol-Related Intoxication Deaths in Maryland, 2017



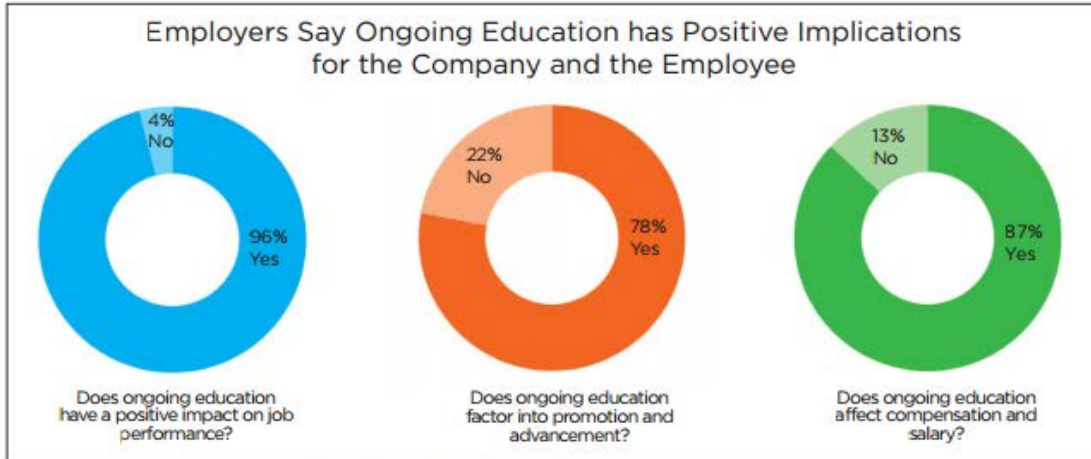
Drug and Alcohol use in College-Age Adults in 2017

Below are the highlights from the 2017 MTF survey results on drug use among college students compared to their peers not attending college (ages 19-22).

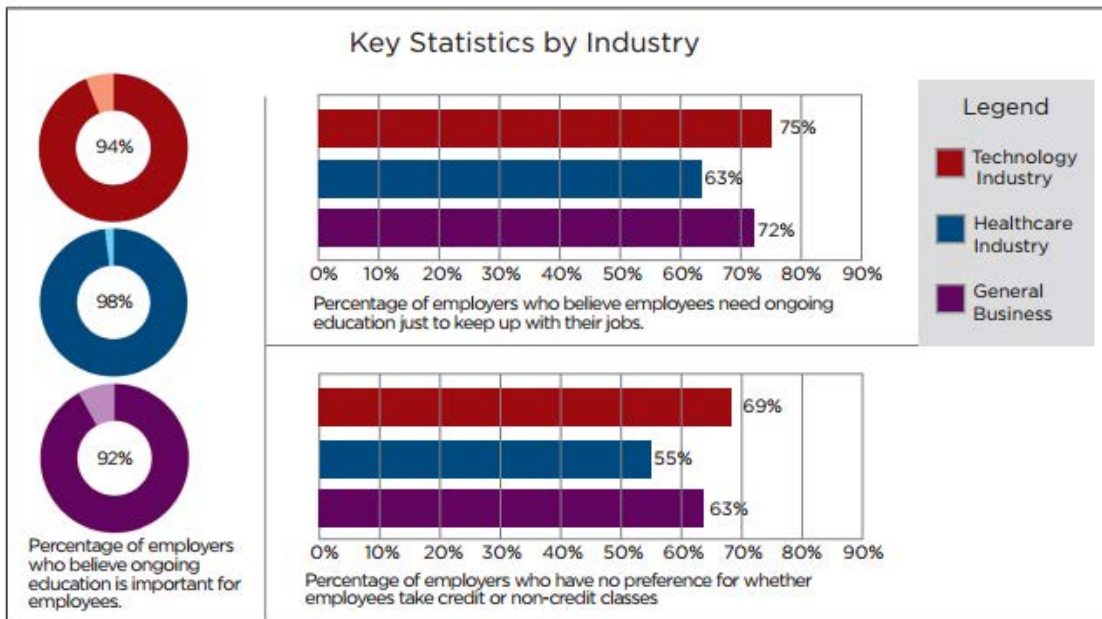
- Daily, or near daily, **marijuana** use among non-college young adults has continued to rise, reaching its highest level (13.2 percent). **As a result, daily, or near daily, marijuana use is now nearly three times as high among non-college young adults as among college students.**
- For the first time, questions about **vaping marijuana**, were added to the survey in 2017. Past month use appears to be higher among non-college young adults than among college students (7.8 percent vs. 5.2 percent).
- With respect to past month use, **alcohol** use in college students is higher than in non-college peers (62 percent vs. 56.4 percent). Additionally, mixing alcohol with energy drinks appears to be higher among college students than the non-college group (31.5 percent vs. 26.7 percent) in the past year.
- The largest difference between annual, past month and daily use in rates for college vs. non-college groups is for smoking **cigarettes**. Daily smoking for non-college peers is higher than college students (14.4 percent vs. 2 percent). Past month use of vaping nicotine appears to be higher for non-college young adults compared to college students (7.9 percent vs. 6 percent).
- Past year misuse of **Vicodin®** in both college and non-college peers dropped dramatically since 2009 (8.4 percent in 2009 to 1.1 percent in 2017 and 11.2 percent to 1.8 percent, respectively).
- **Synthetic drug use** over the last year is lower in college students than in non-college peers. Synthetic cannabinoids (K2/spice) use is 0.5 percent vs. 2.4 percent and synthetic cathinones (bath salts) is 0.2 percent vs. 1.5 percent, respectively.

www.drugabuse.gov

Workplace roles and requirements are changing at an unprecedented rate. Of the employers surveyed, 70% believe that employees need continuous education just to keep pace with the demands of their current jobs. While on-the-job training or other informal methods of learning can be somewhat useful, formal education is considered to be much more effective. A recent global study of 12,500 managers strongly concluded that formal education was the most effective way to develop necessary workplace skills, outscoring all other training methods.



Employers recognize the impact of ongoing education and reward their employees accordingly.



Each sector has slightly different uses and levels of reliance on education. For example, the technology sector relies on education for employees to keep up with the rapid pace of change, whereas the healthcare field relies on certifications to keep employees on par with tight regulations.

LIFELONG LEARNING

NEVER TOO YOUNG, NEVER TOO OLD TO LEARN



Only **54%** of children have the **chance** to attend **pre-primary education**



126 MILLION illiterate youth

Only **1 in 4** countries addresses the need for **second chance programmes** for youth



About **23%** of upper-secondary school pupils are enrolled in **technical and vocational education**



781 MILLION illiterate adults

Typically, **less than 3%** of the national education budget is allocated to **literacy and adult education programmes**

THERE ARE MANY LEARNING PATHS

Over **150** countries are reforming qualification systems enabling recognition of learning outcomes irrespective of when, where and how the learning has taken place



Over **95** countries have adopted a policy on lifelong learning.

ICTs have become a viable mean for expanding learning opportunities

LEARNING BENEFITS



THE INDIVIDUAL
healthy life and decent work



SOCIETY
contributes to peace, responsible citizenship and sustainable development

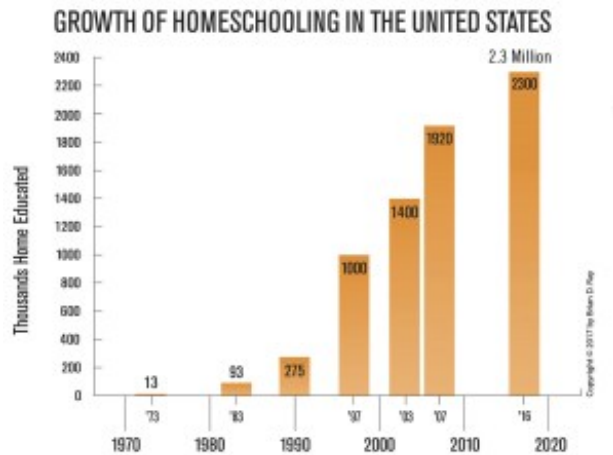


THE ECONOMY
contributes to inclusive and sustainable economic growth

Homeschooling

Researchers for the U.S. Department of Education recently reported on data gathered from the National Household Education Surveys program of 2016.

McQuiggan and her fellow researchers estimated that there were 1,689,726 students of ages 5–17 being homeschooled during the spring of 2016. That is, they estimated 1.69 million. They also reported that this number represented 3.3 percent of all school-age children that year. While the overall school-age population in the United States grew by about 2.0 percent from spring 2012 to spring 2016, data from 16 states from all four major regions of the nation showed that homeschooling grew by an average of about 25 percent in those states.



- Homeschooled students are making a smooth transition to higher education, thanks to a marked increase of available resources and a friendlier public perception. Data shows that more homeschooled students than ever are going into college life with better skills and preparation, and in many cases better than their non-home-schooled peers
- Gov. Larry Hogan has announced initiatives to support charter schools, including a new funding proposal.

Hogan announced the Public Charter School Facility Fund Act of 2019. It would provide \$1,600 in per-pupil funding for each public charter school student. Maryland has about 23,000 charter school students, so that would add up to about \$36.8 million, if passed in its entirety.

It would be distributed through the Maryland State Department of Education.

- For-profit educational institutions continue to increase in size and number competing with established public community colleges. Colleges like Phoenix University offer flexibility for the working student. For-profit technical schools like ITT, guarantee job placement. Community colleges must quickly distinguish themselves so that their offerings or mode of delivery are unique in the marketplace. The community college as a low cost option for higher education does not have the same attraction for students that it did even five years ago.

States That Drew the Most Out-of-State Freshmen, 2012

Pennsylvania drew more freshmen from New Jersey alone (almost 9,000) than most single states drew from all others combined. While many states drew the highest number of students from neighboring states, California contributed many students to distant states like New York and Illinois.

	State	Number of out-of-state freshmen	Top 3 sending states
1.	Pennsylvania	27,936	New Jersey, New York, Maryland
2.	New York	27,830	New Jersey, California, Massachusetts
3.	Massachusetts	20,914	New York, Connecticut, New Jersey
4.	Virginia	14,804	Maryland, New Jersey, Pennsylvania
5.	Ohio	14,476	Pennsylvania, Illinois, Michigan
6.	North Carolina	11,976	Virginia, Maryland, New Jersey
7.	Indiana	11,648	Illinois, Ohio, Michigan
8.	California	10,601	Washington, Texas, Oregon
9.	Illinois	9,676	California, Michigan, Missouri
10.	Wisconsin	9,597	Illinois, Minnesota, Michigan

Note: The data cover only domestic enrollments from the 50 states and the District of Columbia. The colleges represented are those designated doctorate-granting, master's, or baccalaureate institutions by the Carnegie Foundation for the Advancement of Teaching in 2010. Private for-profit institutions are not included, as many rely on distance learning, which skews migration data. Figures are from the most-recent year when institutions were required to report residency data to the Education Department.

Source: *Chronicle* analysis of U.S. Department of Education data

- The National Student Clearinghouse Research Center put out a Snapshot Report on persistence and retention, which shows what's happening to first-time college students after their first year. While persistence (students who return to the same college for their second year) has dropped a bit, retention (students who return anywhere for their second year) has stayed steady. About one in nine students who start in the fall transfer.
- The average college graduate banks \$800,000 more over the course of his or her lifetime than the average high school degree-holder (this figure accounts for the cost).
- For the last four years, enrollment declined across most sectors of higher education, though there was a slight increase among public four-year institutions, according to National Student Clearinghouse Research Center data. These data indicate that in 2013 public two-year institutions enrolled approximately 6.3 million students. By fall 2016, enrollment at public two-year colleges dropped to around 5.7 million students — a 2.6 percent decrease from the previous year and at 9.6 percent decrease since 2013. The declining enrollment will affect community college efforts to meet their completion agenda, which aims to increase the number of awarded college credentials by 2020. Community colleges must innovate to supply the enrollment pipeline with students from various backgrounds in order to progress toward the completion goal, and re-double efforts to keep students enrolled on their path to credentials. Community colleges will also face challenges maintaining revenues as enrollment rates decline.
- Nationally, hate crimes in 2017 rose by 17 percent compared with the year before, according to the FBI.

While fewer campus police departments and security services report hate-crimes data to the FBI compared with the thousands of public and private institutions that are required to disclose such incidents to the U.S. Department of Education under the Clery Act, the bureau's report is an early indicator of campus-climate issues that many large universities and colleges are facing.

Nearly 60 percent of campus hate crimes reported to the FBI in 2017 involved vandalism and destruction of property. An additional 27.6 percent of incidents were intimidating in nature. And 31 assaults that were reported by campus police departments were rooted in hateful bias, according to the FBI data.

Education achievement increases earnings and leads to lower unemployment rates.

Median weekly earnings by education attainment for workers ages 25 and older, 2017



Source: U.S. Department of Labor, Bureau of Labor Statistics, "Career Outlook: Measuring The Value of Education," April 2018.



Labor market data continue to indicate that earnings increase for each educational level achieved. According to data from the U.S. Bureau of Labor Statistics, median weekly earnings for workers ages 25 and older with less than a high school diploma was \$502 compared to \$774 for those with some college but no degree. Conversely, unemployment rates decline as the level of education attainment increases. In 2017, the average unemployment rate was 3.6 percent for the total population compared to 6.5 percent for individuals with less than a high school diploma and 4.6 percent for those with a high school diploma.

CareerBuilder.com lists the following emerging careers that are making a mark and poised for growth in the coming years

Home Stager

Health Informatics Technician

Simulation Developer

Green Jobs

Emergency Management

Career Counselor

Patient Advocate

According to degreedriven.com, the six fastest-growing degree programs in response to the world's newest challenges are:

Health Informatics

Homeland security

Information Assurance and Cyber Security

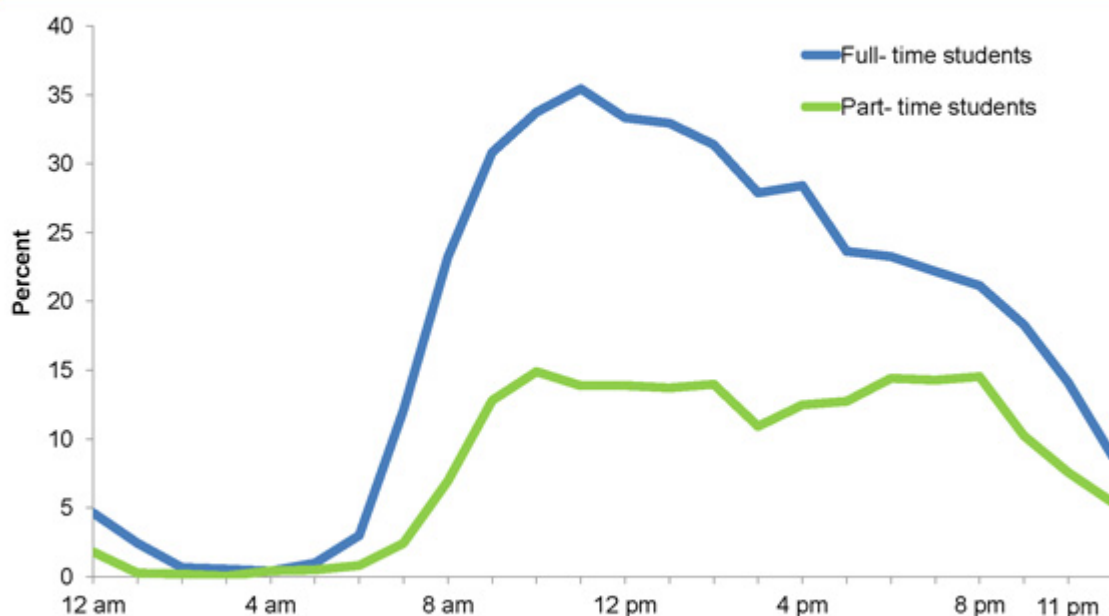
Nanotechnology

Public Health

Environment Studies and Environmental Science

Patient Advocate

Percent of university and college students who did educational activities, by hour of day on weekdays



NOTE: Data include individuals, ages 15 to 49, who were enrolled at a university or college. Data include non-holiday weekdays and are averages for 2008-12.

SOURCE: Bureau of Labor Statistics, American Time Use Survey

- The Department of Labor (DOL), in partnership with the Department of Commerce, will establish a new Center for Workforce and Industry Partnerships, which will champion regional partnerships. DOL will also be creating a business engagement metric for all WIOA-funded programs, and adult education programs will need to address how they will teach “employability skills.” The document also notes that WIOA-funded job training programs will be required to display outcomes in a standard “scorecard” format, and that DOL does not plan to offer waivers to WIOA’s requirements in this area, as it had often done in the past. The scorecard requirements are embedded in WIOA itself.
- A number of pilot programs were announced, including Department of Education experimental sites to explore student aid eligibility for competency-based and shorter term training programs, and prior learning assessment, which were originally put forward last year as part of the president’s college affordability proposals. The administration’s ongoing focus on getting the long-term unemployed back to work and expanding apprenticeship programs will also be addressed in today’s release.

- According to the U.S. Department of Agriculture, during the next five years, U.S. college graduates will find good employment opportunities if they have expertise in food, agriculture, renewable natural resources or the environment. Between 2015 and 2020, the nation expects to see 57,900 average annual openings for graduates with bachelor's or higher degrees in those areas.
- Tennessee students now have an opportunity to attend community college for free through the Tennessee Promise program. The Tennessee Promise — which is a combination of a scholarship and mentoring program — will allot \$34 million to eligible students and cover the remaining tuition and fees not covered by federal and state grants. Per the program website: “Students may use the scholarship at any of the state’s 13 community colleges, 27 colleges of applied technology or other eligible institution offering an associate’s degree program.”

Here’s the catch — in order to be eligible for the program, students must complete eight hours of community service by Aug. 1, 2015.

- Homelessness and hunger among college students is prevalent in all regions of the country and is not isolated to urban or high-poverty areas, according to the report. Students with children were more likely to experience food and housing insecurity than those without. Nearly a third of students going without food or shelter held jobs and received financial aid, and many work long hours at low-wage, low-quality jobs and get little sleep, the study showed.
- A new study by the Wisconsin HOPE Lab has revealed that about half of community college students in the United States, which make up 46 percent college students in the country, do not have consistent housing and that 13 percent are homeless. In absolute terms, this means at least one million people trying to receive postsecondary education do not have a roof over their heads.

- The White House’s Council of Economic Advisers released a report outlining the importance of re-skilling America’s workers for emerging jobs. It noted work-based learning opportunities as a critical component, including apprenticeships, as well as policy changes, such as allowing students to use Pell grants for short-term workforce programs.

The report stressed lifelong learning and opportunities to update skills for all Americans, from recent high school and college graduates to older incumbent workers. It highlighted examples of current innovative programs, from the National Science Foundation’s Advanced Technological Education program, which brings together community colleges with industry, to individual community college and business partnerships. Examples of those include collaborations between South Carolina community colleges and Toyota, and Pierpont Community and Technical College’s retraining opportunities through the Robert C. Byrd National Aerospace Education Center in West Virginia.

- The U.S. Department of Labor (DOL) has announced \$150 million in grants to support sector-based approaches to expand apprenticeships on a national scale in key industry sectors.

The program aims to accelerate the expansion of apprenticeships to new industry sectors, and to increase apprenticeship opportunities for all Americans, according to DOL. It added that there are more than 6.6 million job openings in the U.S., many of which require advanced skills.

Grant funds will go to higher education institutions in partnership with national industry associations. Public-private partnerships are required for eligibility. The application deadline is October 16.

DOL will award up to \$150 million in H-1B funds to 15 to 30 apprenticeship programs, with awards ranging from \$1 million to \$12 million. The grant size will depend on the size of the targeted industry sector and the proposed scale of the apprenticeship projects, according to the department.

Funding will go to projects designed to:

- Expand apprenticeships to occupations that have not typically used apprenticeships to bring new employees into the workforce, including information technology, advanced manufacturing, banking and finance, and healthcare.
- Increase the level of apprenticeship activity among a range of new employers within these industry sectors, particularly small and medium-sized businesses.
- Promote a sector-based approach to large-scale expansion of apprenticeships that include a paid, work-based learning component and a required educational or instructional component that results in issuing an industry-recognized credential.



Fast Facts

- Annually community colleges provide customized training to more than 1,200 Maryland businesses and organizations – upgrading the skills of over 80,000 employees
- Maryland's community colleges teach 50% of the State's undergraduates
- Each year nearly 500,000 Marylanders attend one of Maryland's 16 Community Colleges; 150,000 in credit programs and 350,000 in continuing education and workforce development courses

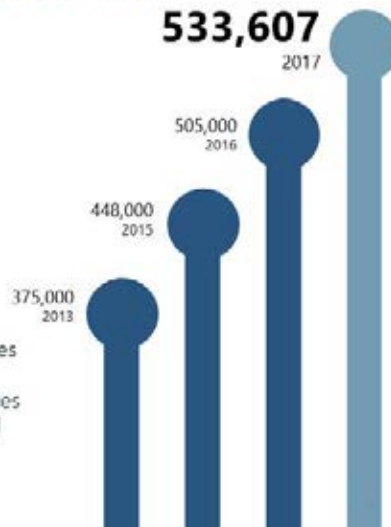
Apprentices National Growth Chart

42%

GROWTH SINCE 2013

Key Facts

- The annual average of active apprentices for the last 20 years = 425,416.
- The current number of active apprentices is 125% higher than the 20 year annual average (533,607/425,416).



Apprentices and Participation Trends

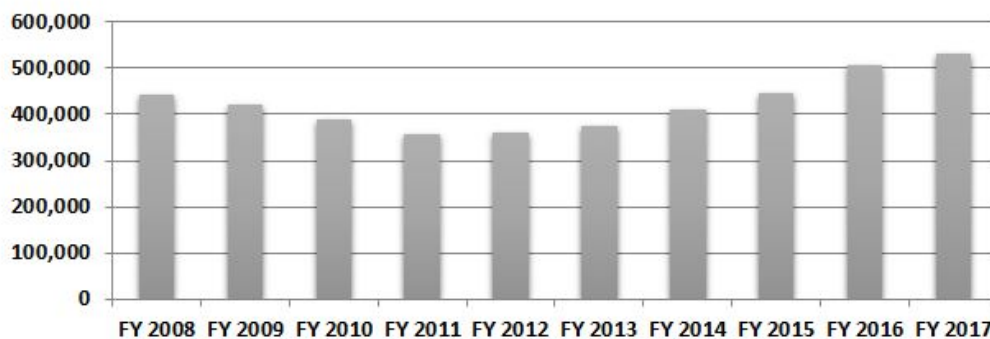
- In FY 2017, more than 190,000 individuals nationwide entered the apprenticeship system.
- Nationwide, there are over 533,000 apprentices currently obtaining the skills they need to succeed while earning the wages they need to build financial security.
- 64,000 participants graduated from the apprenticeship system in FY 2017.

Apprenticeship Sponsors and Trends

- There are more than 22,000 registered apprenticeship programs across the nation.
- 2,369 new apprenticeship programs were established nationwide in FY 2017

National Apprenticeship Data

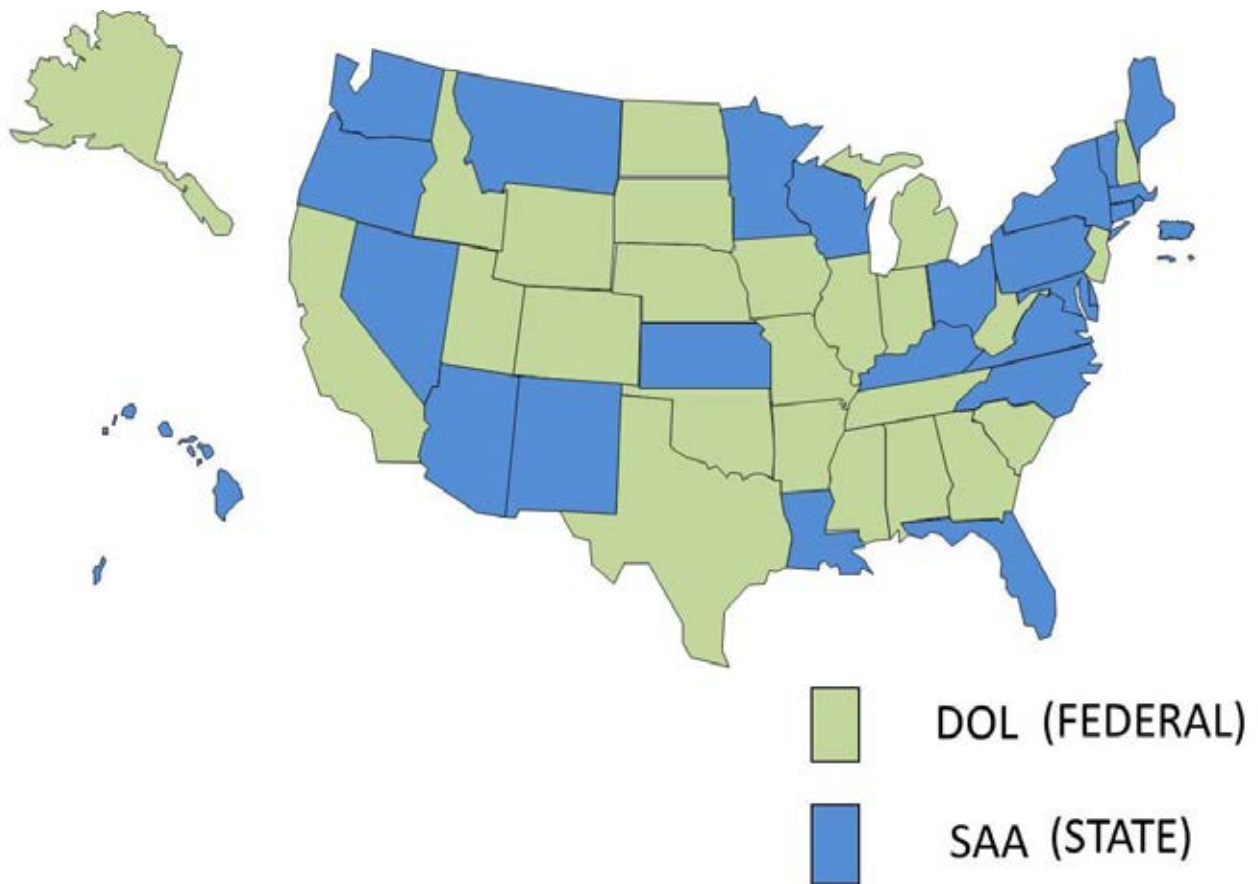
National Total: Active Apprentices*



* Includes US Military Apprenticeship Program (USMAP) Data starting in FY 2008

FY 2017 State Totals

State Name	Active Apprentices	New Apprentices	Completers	Active Programs	New Programs
Maryland	9,090	2,631	332	133	128
Pennsylvania	16,662	4,797	1,669	761	38
West Virginia	5,487	1,467	401	249	5
Virginia	15,429	3,395	2,079	1,930	301



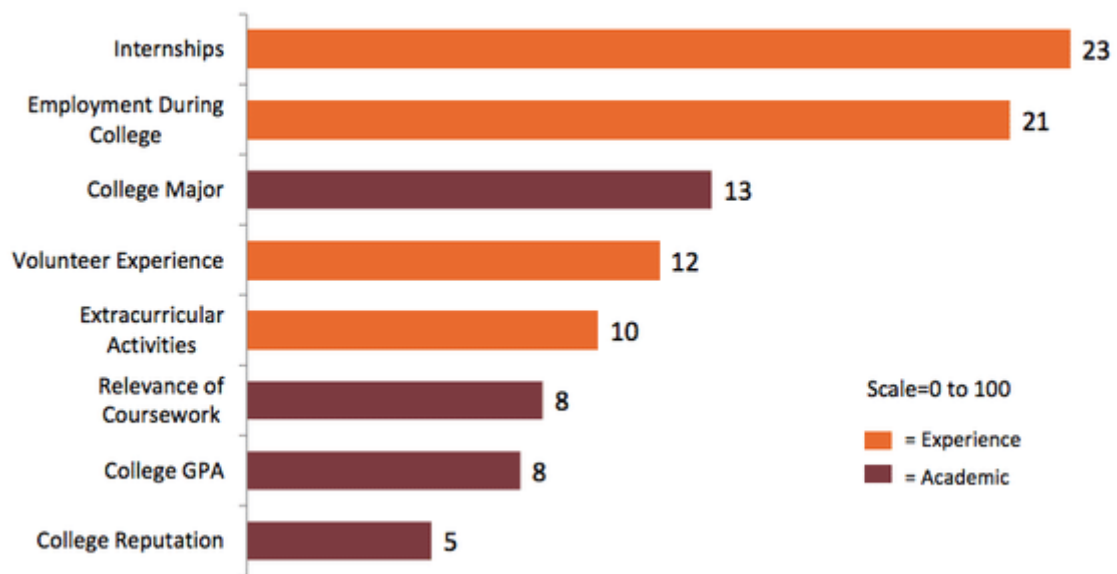
Federal Data: Top 30 Occupational Federal Workload (Fiscal Year 2017)

Occupation Title	O*NET Code	Active Apprentices
Electrician	47-2111.00	45,264
Carpenter	47-2031.01	17,297
Construction Craft Laborer	47-2061.00	14,089
Truck Driver, Heavy	53-3032.00	15,801
Plumber	47-2152.02	14,532
Pipe Fitter	47-2152.01	8,541
Line Maintainer	49-9051.00	7,993
Sheet Metal Worker	47-2211.00	7,638
Structural Steel Worker	47-2221.00	6,121
Dry-Wall Applicator	47-2081.00	5,779
Roofer	47-2181.00	5,489
Sprinkler Fitter	47-2152.01	4,383
Millwright	49-9044.00	4,265
Operating Engineer	47-2073.00	3,974
Elevator Constructor	47-4021.00	3,847
Painter	47-2141.00	3,833
Boilermaker	47-2011.00	3,414
Maintenance Mechanic	49-9041.00	2,875
Protective Service Specialist (Active Duty Military)	33-3051.01	2,870
Heating and Air-Conditioner Install/Service	49-9021.01	2,660
Cement Mason	47-2051.00	2,516
Telecommunications Technician	49-2022.00	2,303
Reinforcing Metal Worker	47-2171.00	2,299
Cook	35-2012.00	2,197
Line Installer-Repairer	49-9052.00	2,107
Floor Layer	47-2042.00	2,001
Glazier	47-2121.00	1,858
Fire Fighter	33-2011.01	1,788
Pharmacy Support Staff	29-2052.00	1,735
Tool and Die Maker	51-4111.00	1,679

64% of manufacturing companies report that SKILL GAPS ARE LIMITING THEIR EXPANSION OR PRODUCTIVITY.

\$98,718 more IS EARNED ON AVERAGE by apprentices during their careers than workers who did not apprentice.

Relative Importance of Attributes in Evaluating Graduates for Hire



- Employers are projecting to hire 3.4 percent more interns and 6.3 percent more co-ops in 2017 than they did in 2016, marking the first year since 2013 that employers have reported positive hiring projections for interns, co-ops, and full-time, entry-level hires, according to NACE's 2017 Internship & Co-op Survey.

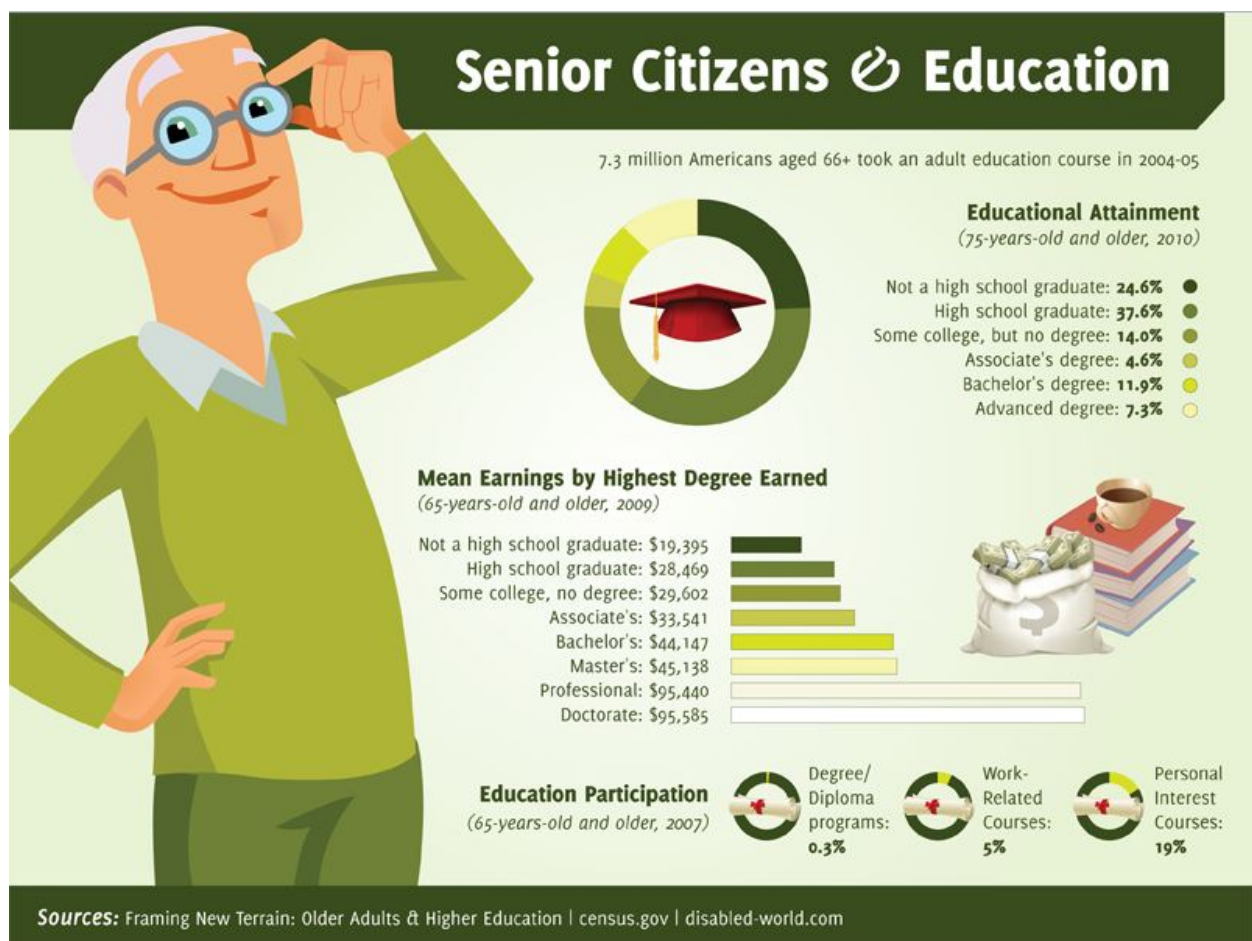
- The immediate college enrollment rate of high school completers at 2-year colleges increased from 20 percent in 1990 to 29 percent in 2012. The rate fluctuated between 20 and 25 percent in the 1990s and then increased from 21 percent in 2000 to 29 percent in 2012. The immediate college enrollment rate at 4-year colleges in 2012 (37 percent) did not differ significantly from the corresponding rate in 1990 (40 percent), but the rate in 2012 (37 percent) was lower than the rates in 2011 and 2000 (42 percent each). In each year between 1990 and 2012, the immediate college enrollment rate at 4-year colleges was higher than that at 2-year colleges. For example, in 2012 the immediate college enrollment rate at 4-year colleges was 37 percent, compared with 29 percent at 2-year colleges.
- On June 25, the House Ways and Means Committee approved the Student and Family Tax Simplification Act (H.R. 3393), a bill that would consolidate several existing higher education tax credits and deductions into an improved American Opportunity Tax Credit. AACC was strongly supportive of the bill as introduced, as it better aims the benefits of higher education tax credits to low-income students attending lower-cost institutions.
- According to a report on Google News, the Associated Press and Stanford University conducted a poll to find out what Americans' attitudes were toward community college. The poll found that the vast majority of Americans (71%) believe it is advantageous for some students to attend a community college, rather than a four-year institution. Nearly the same number polled agreed that an education received from a community college is "excellent" or "good."

The poll also asked whether community colleges do a good job of preparing students for a professional job after graduation. Out of the individuals polled, 62% said community colleges adequately prepare students for the work force, while 68% said that four-year universities succeed in this goal. These numbers indicate that the majority of Americans today are pleased with the education received at a two-year college, improving the image of community colleges in the world of higher education overall.

The only groups that did not find community colleges on par with other institutions were Blacks and Hispanics. According to the poll, 43% of minorities believed it was better to get into a four-year university, as opposed to just 17% of whites. Because minorities are also more likely to enroll in a two-year college than whites, the numbers show a difference between where these students want to go to college and where they actually enroll.

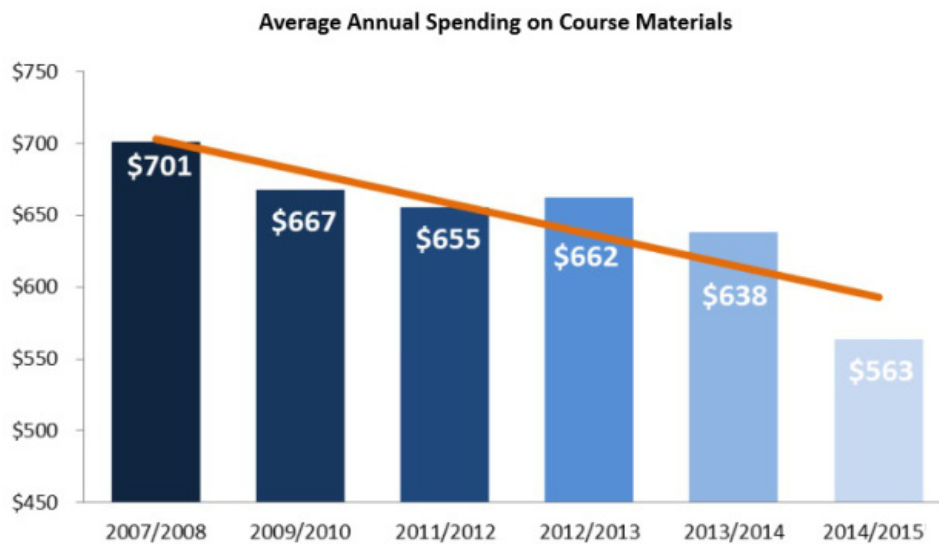
- \$8.6 billion - The estimated amount of money spent at family clothing stores in August 2013. Sales at bookstores in August 2013 were estimated at \$1.6 billion, For back-to-school shopping, choices of retail establishments abound: In 2012, there were 25,421 family clothing stores, 6,945 children and infants clothing stores, 25,455 shoe stores 7,443 office supply and stationery stores, 20,893 sporting goods stores, 7,244 book stores and 8,196 department stores.

Source: U.S. Census Bureau Monthly Retail Trade and Food Services.



A survey by the National Association of College Stores released today found that college students spent an average of \$563 on course materials during the 2014-2015 academic year, a drop from the average of \$638 the year before.

According to Elizabeth Riddle, the director of the National Association of College Stores' research team, more than 9,000 undergraduates from 23 campuses nationwide participated in the survey. A mixture of private and public schools as well as two-year and four-year campuses were selected for the survey, says Riddle. The chosen institutions represented different geographic locations and with varying enrollment numbers.



Source: OnCampus Research Spring 2015 Student Watch Report

The decrease is due in part to the rise of textbook-rental programs, which cost less, association officials note. But of those students who did not buy textbooks, the report noted, a greater percentage than in the past said it was because "they believed them to be unnecessary."

Another recent survey of college students, by the Book Industry Study Group, found a similar change in attitude, says Nadine Vassallo, a project manager for the group. "Students say, We see the materials as recommendations rather than requirements," she explains.

A separate survey of professors on the same campuses, meanwhile, found that they almost never see the course materials as optional. "What we think is happening is students are waiting to see how much the material is used before they buy them," Ms. Vassallo says.

- Nearly 30 percent of graduates of community colleges make more money than their counterparts with bachelor's degrees, other research by the Georgetown Center on Education and the Workforce shows. And while that advantage narrows by mid-career, it's also true that the community college graduates who benefit from it pay much less on average for their educations — \$3,264 per year for tuition and fees, according to the College Board, compared to \$8,893 per year at public and \$30,094 per year at private four-year colleges and universities.

Their bachelor's degrees, many students have discovered, "didn't focus on them getting the job they need," said Michael McCall, president of the Kentucky Community and Technical College System. "Whereas they can get an allied health degree from us and go out and make \$60,000 or \$70,000 a year."

Annual Personal Income, by College Graduation Type

Among graduates who completed college between 1990 and 2014

	Traditional (graduated between ages of 18 and 24)	Nontraditional (graduated at age 25 or older)
	%	%
Less than \$24,000	23	22
\$24,000 to less than \$90,000	49	50
\$90,000 to less than \$180,000	13	13
\$180,000 or more	9	10

Gallup-Purdue Index, Feb. 4-March 7, 2014

GALLUP®

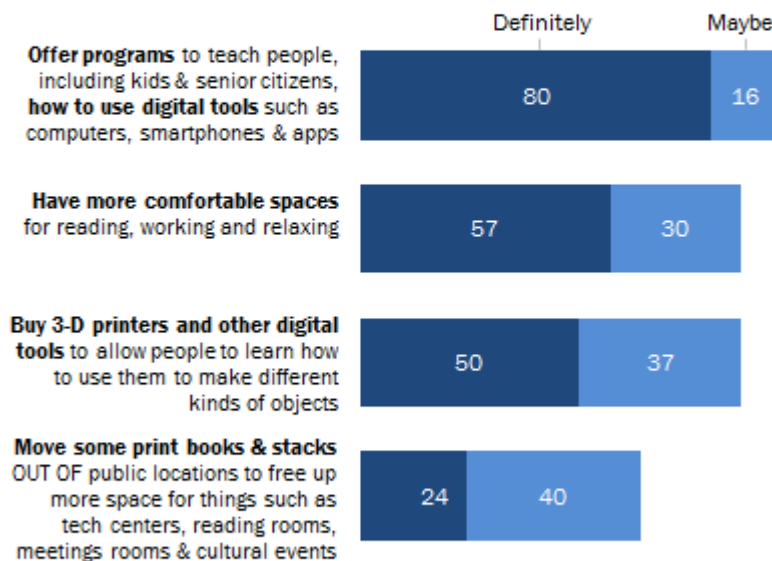
- A Pew Research Center telephone survey of 1,601 Americans ages 16 and older conducted from March 7 to April 4, 2016, finds that Americans continue to express largely positive views about the current state of their local public libraries. For instance, around three-quarters (77%) say that public libraries provide them with the resources they need. And 66% say the closing of their local public library would have a major impact on their community although notably, just 33% say this would have a major impact on them personally or on their family.
- There is also a growing sense that libraries can help people decide what information they can trust: 37% of Americans feel that public libraries contribute “a lot” in this regard, a 13-point increase from a survey conducted at a similar point in 2015.
- A majority of Americans feel libraries are doing a good job of providing a safe place for people to hang out or spend time (69% feel libraries contribute “a lot” to their communities in this regard) as well as opening up educational opportunities for people of all ages (58%). And roughly half think their libraries contribute “a lot” to their communities in terms of helping spark creativity among young people (49%) and providing a trusted place for people to learn about new technologies (47%).
- Young adults are more likely to have visited a library in the past 12 months than those ages 65 and older: 53% of those ages 18 to 29 visited a library or bookmobile in person in the past year, compared with 40% of those 65 and older.
- 19% of American adults say they have never visited a public library, including 11% of those who have college or graduate degrees. This report profiles those who say they have never in their lives been to public libraries.
- The act of borrowing printed books is still by far the most popular activity at libraries, even compared with using computers: 64% of library users ages 16 and

older checked out a book in the last 12 months, compared with 29% who used a computer at the library in the same time frame.

- An emerging library “service” is its Wi-Fi connection, which can be used separately from the hours library buildings are open: 7% of those 16 and older say they have connected to a library’s Wi-Fi system when the library building itself was closed.
- 44% of those 16 and older say their public libraries loan out e-books, while 10% say this is not true of their communities’ libraries. Researchers at the University of Maryland report that 90% of libraries have e-book lending programs. So, many of Americans are not aware of this core service available at most local libraries.
- The idea that libraries serve communities at times of crisis is now pretty well established. Some 55% of those ages 16 and older say libraries contribute a lot (19%) or somewhat (37%) when a natural disaster or major problem strikes the community. There have been dramatic examples of libraries becoming refuges and outposts, for instance after Hurricane Sandy in the Northeast in 2013.

Large majority says that libraries should have programs to teach digital skills; many hope they provide comfortable reading and working spaces

% of U.S. adults ages 16 and older who say libraries should definitely or maybe ...



Gallup collaborated with Purdue University and Lumina Foundation to conduct a nationally representative study of U.S. college graduates with Internet access. Based on interviews with more than 30,000 graduates in early 2014, the Gallup-Purdue Index measures the degree to which graduates have "great jobs," through their engagement at work and if they are leading "great lives" by thriving in their overall well-being.

1. College rankings not linked to graduates' well-being and engagement at work: As many graduates from the Top 100 *U.S. News & World Report* schools are engaged in their work and are thriving in all elements of well-being as graduates from other institutions.
2. Key outcomes do not differ for private vs. public college graduates: Graduates of public versus not-for-profit private colleges do not differ in terms of employee engagement or well-being, but there are substantial differences between graduates of for-profit institutions and the rest. Graduates of for-profit institutions experience lower levels of employee engagement and well-being.
3. Student debt linked to worse health and less wealth: An analysis of Americans who graduated college since 1990 shows that graduates who took on \$50,000 or more in student loan debt, are less likely than their fellow graduates who did not borrow for college to be thriving in four of five elements of well-being: purpose, financial, community and physical.
4. Useful internships improve grads' chances of full-time work: Work and internship opportunities in college that allow students to apply what they learn improve the chances that college graduates will land work after college. Seventy-one percent of the most recent graduates who strongly agreed they had these types of jobs or internship opportunities as undergrads are working full time now for an employer, compared with 56% of those who strongly disagreed.
5. Black college grads more likely to graduate with debt: Half of 2000-2014 black college graduates in the U.S. report graduating with more than \$25,000 in undergraduate student loan debt. By comparison, 34% of recent white graduates report similar levels of debt, revealing a large borrowing gap between the races.
6. Graduating college later in life doesn't hamper income: Despite delaying their college education, nontraditional college graduates -- defined as those who earn their degree at age 25 or older -- have personal incomes later in life that are similar to those of traditional graduates, or those who earn their degree before age 25.
7. Fraternity and sorority membership linked to higher well-being for college grads: The 16% of college graduates who were members of sorority or fraternities are more

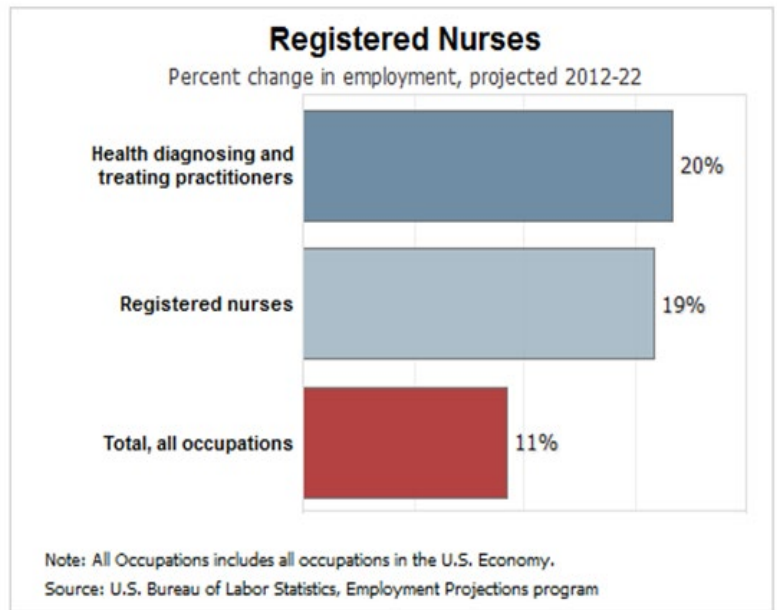
likely to be "thriving" in their well-being and engaged at work than college graduates who were not members of these organizations.

8. U.S. business majors least likely to get support in college: With about half (51%) of business majors saying they had a college professor who made them excited about learning, business students are the least likely of all college majors to report having a motivating professor. Seven in 10 arts and humanities majors say they had such a professor, and strong majorities of social sciences/education graduates (66%) and sciences/engineering graduates (58%) say they had this important experience.
9. Emotionally attached alumni have higher well-being: Twenty-nine percent of graduates who are attached to their alma mater are thriving in well-being, versus 4% who are actively unattached to their colleges.
10. SEC alumni feel stronger school ties than other grads: Nearly three in 10 graduates of Southeastern Conference universities still feel a strong emotional connection to their alma maters. In fact, alumni attachment among graduates of the 14 universities currently in the SEC is nearly twice as high as that of graduates of other four-year colleges and universities nationwide (18%).

Nursing and Health Care

Employment of registered nurses is projected to grow 19 percent from 2012 to 2022, faster than the average for all occupations. Growth will occur for a number of reasons.

Demand for healthcare services will increase because of the aging population, since older people typically have more medical problems than younger people. Nurses also will be needed to educate and to care for patients with various chronic conditions, such as arthritis, dementia, diabetes, and obesity. In addition, the number of individuals who have access to healthcare services will increase, as a result of federal health insurance reform. More nurses will be needed to care for these patients.



- Nursing students comprise more than half of all health professions students.
- Generally, licensed graduates of any of the three types of education programs (bachelor's, associate's, or diploma) qualify for entry-level positions as a staff nurse. However, some employers may require a bachelor's degree.

Many registered nurses with an ADN or diploma choose to go back to school to earn a bachelor's degree through an RN-to-BSN program. There are also master's degree programs in nursing, combined bachelor's and master's programs, and programs for those who wish to enter the nursing profession but hold a bachelor's degree in another field. Some employers offer tuition reimbursement.

Certified nurse specialists (CNSs) must earn a master's degree in nursing. CNSs who conduct research typically need a doctoral degree.

- The primary pathway to professional nursing, as compared to technical-level practice, is the four-year Bachelor of Science degree in nursing (BSN). Registered nurses are prepared either through a four-year baccalaureate program; a three-year associate degree in nursing program; or a three-year hospital diploma program. Graduates of all three programs take the same state licensing exam, the NCLEX-RN. (The number of diploma programs has declined steadily -- to less than 10 percent of all basic RN education programs -- as nursing education has shifted from hospital-operated instruction into the college and university system.)

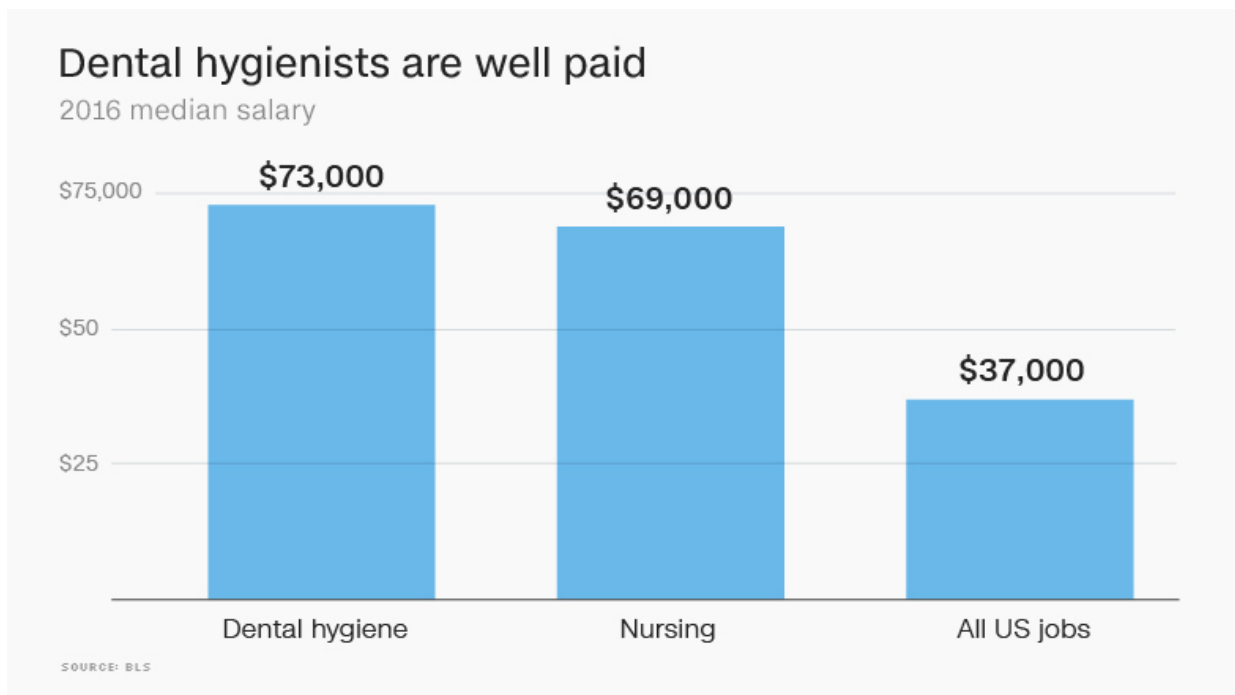
In order to identify the metropolitan areas that pay registered nurses the highest and lowest salaries, 24/7 Wall St. reviewed data from the Bureau of Labor Statistics' Occupational Employment Statistics program for May 2016. The largest hospital for each area is based on the number of employees.

Winchester, VA ranked 16 out of the top 25 areas in the Best Paying Cities for Nurses report.



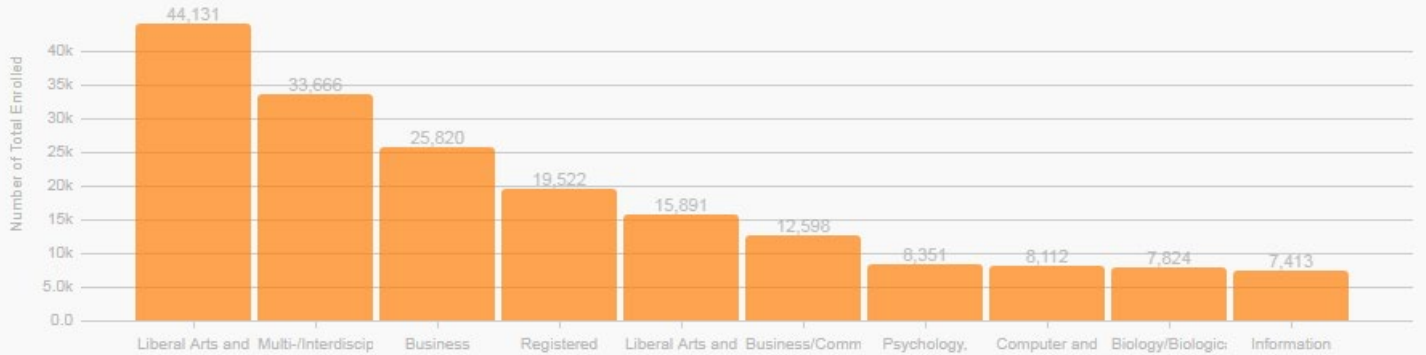
16. Winchester, VA-WV
Median annual salary: **\$52,820**
Total no. of registered nurses: **1,330**
Median annual salary, all jobs: **\$35,110**
Largest hospital: **Frederick Memorial Hospital**

Employment of dental hygienists is projected to grow 19 percent from 2014 to 2024, much faster than the average for all occupations. Ongoing research linking oral health to general health will continue to spur demand for preventive dental services, which are provided by dental hygienists.



State of Maryland and Washington County

Top Programs By Enrollment (All Programs, All Degrees, Maryland)



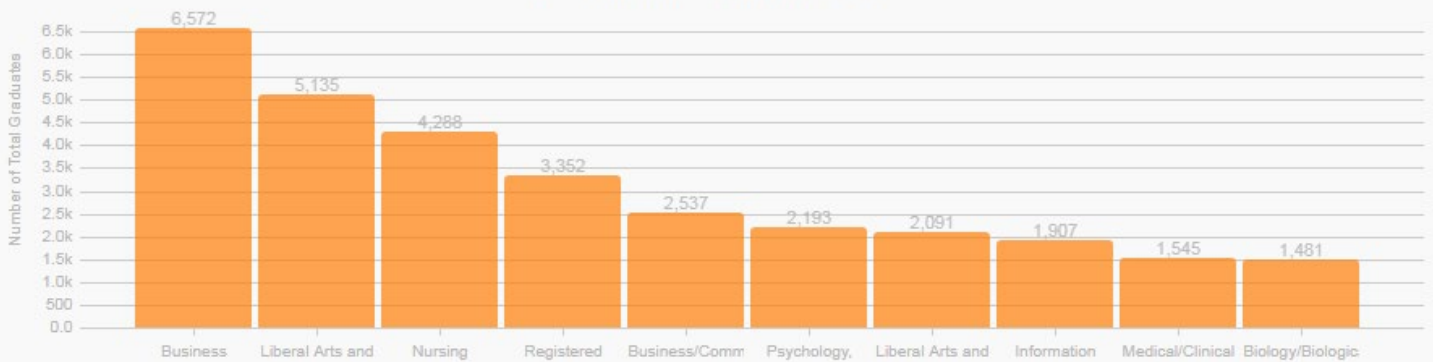
Source: Maryland Higher Education Commission, 2012

Education Statistics (All Programs, Maryland)

Degree Type	Enrollment	Graduates
All Degrees	388,615	88,759
Graduate Degree	66,854	22,439
Bachelor Degree	144,430	30,385
Associate Degree	118,403	14,470
None-Degree	18,655	0
Higher Ed. Certificate	11,289	6,037
Occupational Training	28,984	15,428

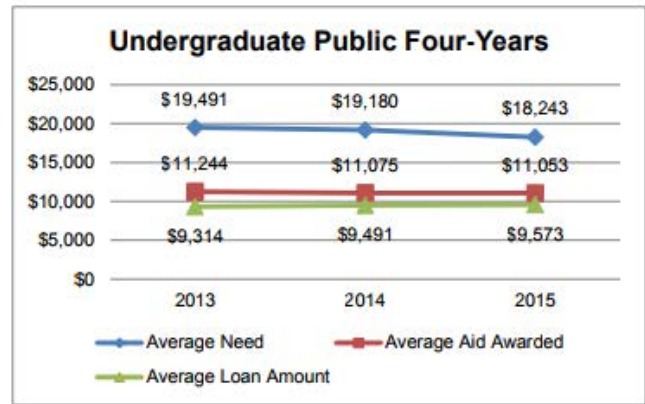
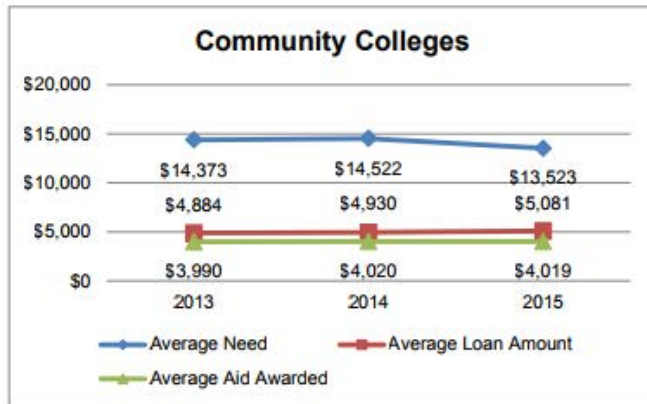
Source: Maryland Higher Education Commission, 2012

Top Programs By Graduates (All Programs, All Degrees, Maryland)



Source: Maryland Higher Education Commission, 2012

Financial Aid (FY2013 – FY2015)



Source: Maryland Higher Education Commission, 2016 Data Book

Degrees Awarded by Maryland Colleges and Universities

Major Program	Bachelor's	Master's	Doctorates
Agriculture and Natural Resources	349	48	20
Architecture and Environment	130	83	3
Biological Science	2,322	762	259
Business and Management	5,998	5,082	59
Computer Science	3,177	2,182	91
Engineering	1,840	1,183	243
Health Professions	2,997	1,818	965
Mathematics	521	140	49
Physical Sciences	452	157	132
All Others	16,845	7,112	980
Total	34,631	18,567	2,801

24/7 Wall St reviewed state higher education investments per full time student in the 2015 academic year. How states allocate money to public colleges and universities varies, but the majority of money goes to general operations of the institutions with the rest going to various forms of student aid. These figures come from “State Higher Education Finance (SHEF): FY 2015,” a report by the State Higher Education Executive Officers Association (SHEEO). Net tuition, defined as out-of-pocket tuition payments excluding financial aid, room and board, and other fees, also came from SHEEO. Median household income and educational attainment rates came from the U.S. Census Bureau’s 2015 American Community Survey

Maryland ranked 11th:

Maryland

Annual higher ed. spending per student: \$8,024

5-yr. chg.: 0%

Total public college enrollment: 231,570 (16th highest)

Tuition cost per student: \$7,819 (14th highest)

Unlike most states with relatively high public higher education per pupil spending, out of pocket tuition expenses are relatively high in Maryland. After receiving state and other financial aid, waivers, discounts, and excluding room and board, the average public university student in Maryland pays \$7,819 annually. By contrast, the national net average tuition is just over \$6,000.

Source: *Maryland Higher Education Commission. Date of data: 2016.*



- Maryland ranks 4th in R&D expenditures at universities and colleges, totaling \$3.74 billion in FY 2015. Further, Maryland ranks 3rd in federal government R&D spending at universities and colleges with \$2.94 billion.

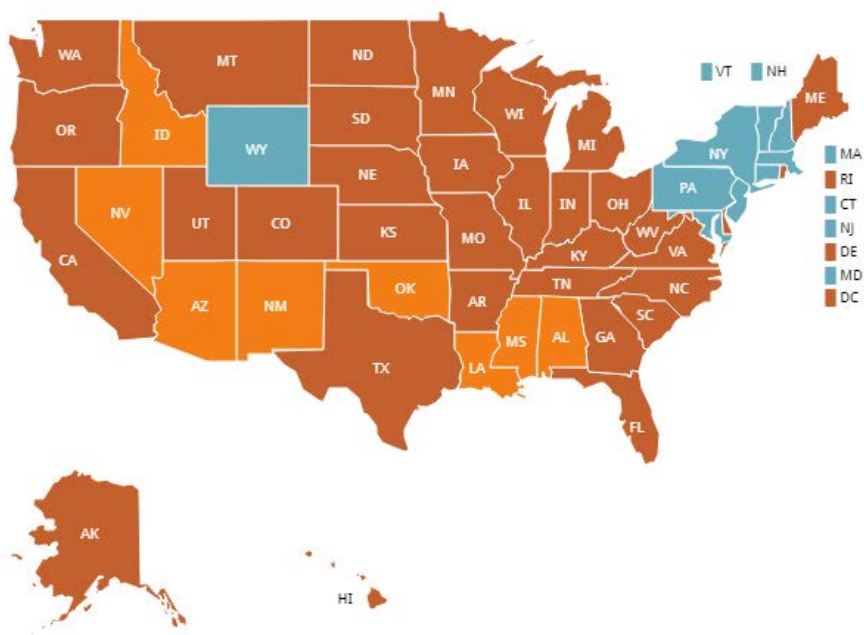
The 21st annual edition of *Quality Counts—Under Construction: Building on ESSA’s K-12 Foundation*—continues *Education Week’s* long-standing tradition of grading the states on their performance. A state’s overall grade is the average of its scores on the three separate indices tracked by the report. This year, Maryland finishes fifth among the 50 states and the District of Columbia, with an overall score of 82.8 out of 100 points and a grade of B. The nation as a whole posts a grade of C.

Diving into the findings for the three graded indices, Maryland earns a B in the Chance-for-Success category and ranks eighth. The average state earns a C-plus. In School Finance, Maryland receives a B-plus and ranks fifth. For the K-12 Achievement Index, last updated in the 2016 report, it finishes fifth with a grade of C-plus. The average state earns grades of C and C-minus in School Finance and K-12 Achievement, respectively.

Overall Grades & Scores (2017)



U.S. Score = C (74.2)



www.edweek.org

There are 94 colleges in Maryland State. In-state tuition & fees is risen by 22.04% from \$6,374 (2011) to \$7,779 (2018) and out-of-state tuition & fees grew by 20.27% last 8 years, from \$17,255 (2011) to \$20,751 (2018).

Year	Living On Campus		Living Off Campus	
	In-State	Out-of-State	In-State	Out-of-State
2010-11	\$18,595	\$29,476	\$19,117	\$29,998
2011-12	\$18,972	\$29,994	\$19,395	\$30,418
2012-13	\$19,534	\$30,803	\$20,084	\$31,353
2013-14	\$20,104	\$31,382	\$20,743	\$32,021
2014-15	\$20,695	\$32,281	\$21,177	\$32,763
2015-16	\$21,180	\$33,083	\$21,480	\$33,383
2016-17	\$22,137	\$34,672	\$21,829	\$34,364
2017-18	\$22,557	\$35,529	\$22,422	\$35,395

Cost of Attendance Changes of Colleges in Maryland State

collegetuitioncompare.com

SCHOOLS AND COLLEGES^{3,8}

Educational Attainment - age 25 & over (2011-2015)

High school graduate or higher	86.7%
Bachelor's degree or higher	19.9%

Public Schools

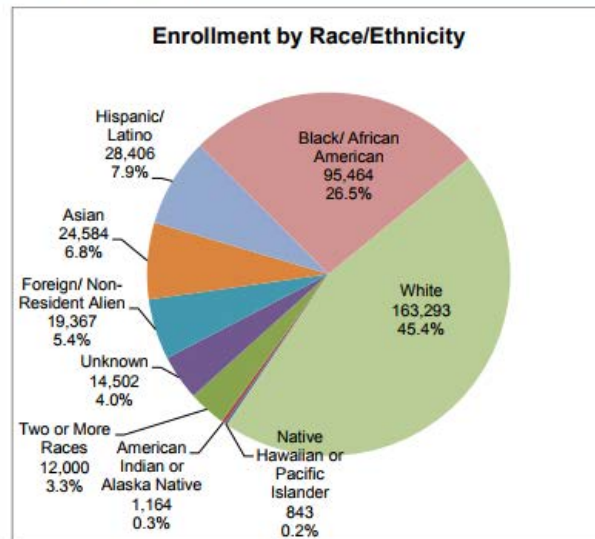
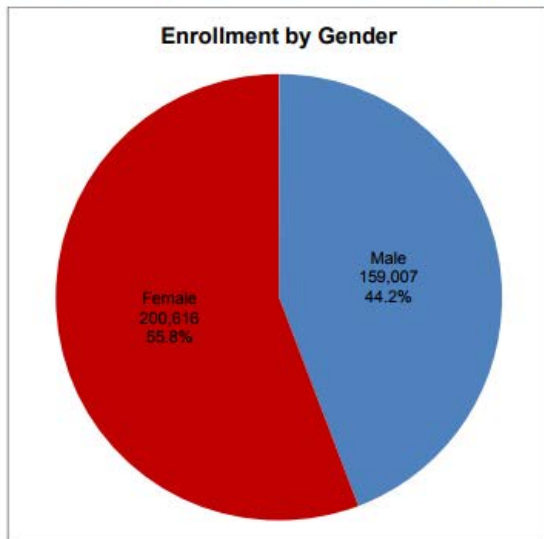
Number: 28 elementary; 8 middle/combined; 8 high
 Enrollment: 22,545 (Sept. 2016)
 Cost per pupil: \$12,720 (2014-2015)
 Students per teacher: 15.6 (Oct. 2016)
 High school career / tech enrollment: 2,514 (2016)
 High school graduates: 1,528 (July 2016)

Nonpublic Schools

Number: 37 (Sept. 2016)

Higher Education (2016)	Enrollment	Degrees
2-year institution		
Hagerstown Community College	4,063	661

Enrollment By Gender and Race in Fall 2015 (Undergraduate & Graduate)

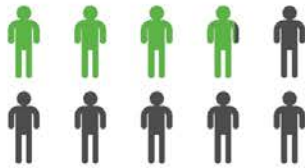




college graduate National Career Outcomes Report

IPEDS 2016 - 2017
Academic Year
from Graduation to Six Months Out*

39.5% responded
92,692 graduates surveyed



83% of employed undergraduates reported employment in a position related to their career goals

83% of employed undergraduates reported employment in a position related to their major area of study

81% of employed undergraduates reported satisfaction (satisfied or very satisfied) with their current occupation



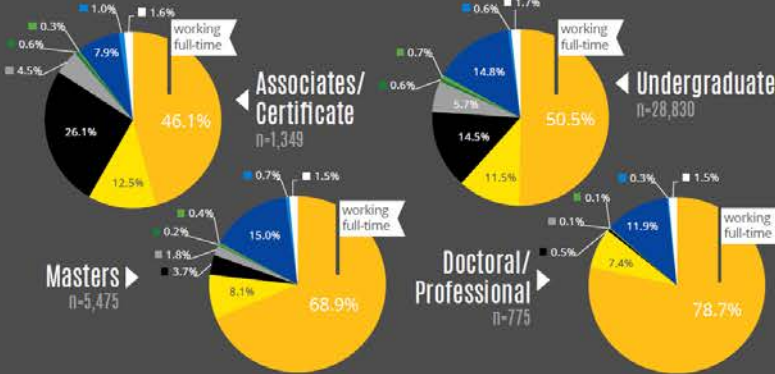
104
Institutions

35
States

Primary Status by Degree Level



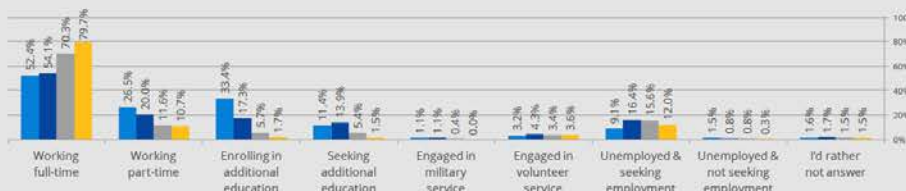
- Working full-time
- Working part-time
- Enrolling in additional education
- Seeking additional education
- Engaged in military service
- Engaged in volunteer service
- Unemployed and seeking employment
- Unemployed and not seeking employment
- I'd rather not answer



Multiple Status by Degree Level



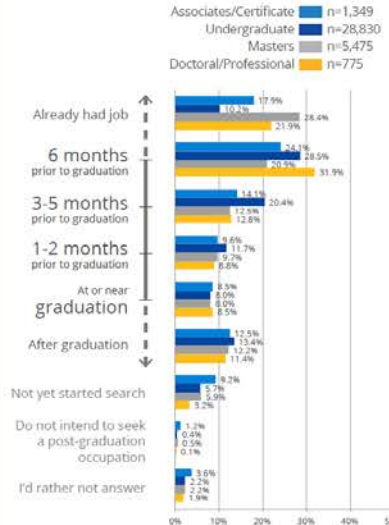
Associates/Certificate n=1,349
Undergraduate n=28,830
Masters n=5,475
Doctoral/Professional n=775



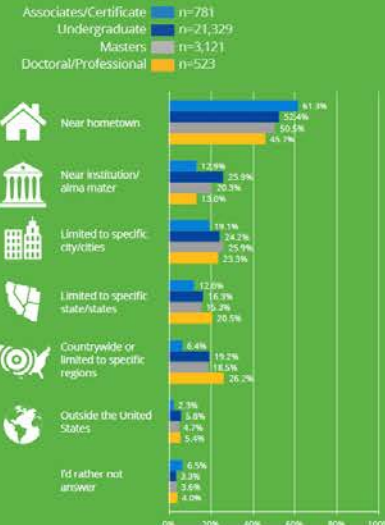
Average Income by Degree Level*



Occupation Search Start Date



Employment Search Geography



*The information contained in this infographic is intended as a demonstration of the data collected by The Outcomes Survey (TOS). This infographic includes data on TOS respondents in the 2016 - 2017 cohort collected during the period starting one month prior to graduation up to the period ending at six months post-graduation. This infographic only includes data from those institutions following the data collection standards prescribed by TOS. To protect respondent confidentiality, median incomes have been rounded to the nearest \$500 interval. For more information on TOS standards, research methodology and data collection approach, please visit TheOutcomesSurvey.com/DataStandards.

Washington County Public Schools

Dropout Rate: 4-Year Adjusted Cohort | All Students Sorted by Class

The 4-Year Adjusted Dropout Rate is calculated by dividing total Dropouts by the 4-Year Adjusted Cohort. Students who dropout of high school remain in the adjusted cohort—that is, the denominator of the dropout rate calculation.

All Students

Class of 2017 1 st time freshmen, Fall '13	1 st Year ('13-'14)	2 nd Year ('14-'15)	3 rd Year ('15-'16)	4 th Year ('16-'17)	4-Year Totals
Dropout Rate (%)					5.78
Dropouts	*	*	*	*	95
4-Yr Adjusted Cohort					1644
Class of 2016 1 st time freshmen, Fall '12	1 st Year ('12-'13)	2 nd Year ('13-'14)	3 rd Year ('14-'15)	4 th Year ('15-'16)	4-Year Totals
Dropout Rate (%)					6.70
Dropouts	*	*	*	*	111
4-Yr Adjusted Cohort					1656
Class of 2015 1 st time freshmen, Fall '11	1 st Year ('11-'12)	2 nd Year ('12-'13)	3 rd Year ('13-'14)	4 th Year ('14-'15)	4-Year Totals
Dropout Rate (%)					5.64
Dropouts	*	*	*	*	99
4-Yr Adjusted Cohort					1754
Class of 2014 1 st time freshmen, Fall '10	1 st Year ('10-'11)	2 nd Year ('11-'12)	3 rd Year ('12-'13)	4 th Year ('13-'14)	4-Year Totals
Dropout Rate (%)					6.54
Dropouts	*	*	*	*	114
4-Yr Adjusted Cohort					1743
Class of 2013 1 st time freshmen, Fall '09	1 st Year ('09-'10)	2 nd Year ('10-'11)	3 rd Year ('11-'12)	4 th Year ('12-'13)	4-Year Totals
Dropout Rate (%)					5.99
Dropouts	*	*	*	*	98
4-Yr Adjusted Cohort					1637
Class of 2012 1 st time freshmen, Fall '08	1 st Year ('08-'09)	2 nd Year ('09-'10)	3 rd Year ('10-'11)	4 th Year ('11-'12)	4-Year Totals
Dropout Rate (%)					7.39
Dropouts	*	*	*	52	124
4-Yr Adjusted Cohort					1679
Class of 2011 1 st time freshmen, Fall '07	1 st Year ('07-'08)	2 nd Year ('08-'09)	3 rd Year ('09-'10)	4 th Year ('10-'11)	4-Year Totals
Dropout Rate (%)					6.46
Dropouts	*	*	*	*	107
4-Yr Adjusted Cohort					1657
Class of 2010 1 st time freshmen, Fall '06	1 st Year ('06-'07)	2 nd Year ('07-'08)	3 rd Year ('08-'09)	4 th Year ('09-'10)	4-Year Totals
Dropout Rate (%)					6.60
Dropouts	*	*	*	*	108
4-Yr Adjusted Cohort					1636

[View this cohort's Graduation Rate](#)

** indicates no students or fewer than 10 students in category, or *% indicates the percentage for the category is either ≤3 or ≥95 and the corresponding counts have been suppressed.

Washington County Public Schools lost 132 teachers to resignations, retirements and non-renewals during the 2017-18 school year.

Director of Human Resources Terri Baker told the Board of Education at its meeting Tuesday that her department analyzes the annual turnover data to help come up with a new recruitment plan.

Last year's turnover rate was higher than 2016-17, where 105 left, but consistent with 2015-16 and 2014-15, which both lost 133.

- Maryland ranks second nationally in the percentage of high school seniors who scored at the mastery level on Advanced Placement (AP) exams, with 30.4% earning a score of 3 or higher in 2016. Maryland also ranks second among the states in the percentage of graduates taking AP tests during high school at 49.3%, up from 32.7% in 2006.
- Maryland is first in the nation with 16 higher education institutions designated by the National Security Agency and Department of Homeland Security as National Centers of Academic Excellence in Cyber Defense education and research.
- According to Quality Counts, Education Week's annual assessment of key indicators of student success, Maryland's K-12 public school system ranks fifth overall based on three graded categories that include chance for success, K-12 achievement and school finance.



SAT College Bound Seniors Mean Score Trends by Year
Washington County

Year	Critical Reading Mean	Math Mean	Writing Mean	Composite Mean	Test Takers
2008	499	515	493	1507	724
2009	490	510	480	1480	770
2010	501	518	487	1507	712
2011	495	504	489	1488	815
2012	494	511	484	1489	886
2013	493	511	484	1487	869
2014	492	507	477	1476	864
2015	499	518	481	1498	862
2016	497	511	478	1485	786



ACT Graduating Class Mean Score Trends by Year
Prince George's County

Year	English Mean	Math Mean	Reading Mean	Science Mean	Composite Mean	Student Count
2008	16	17	17	17	17	871
2009	17	17	18	17	17	1010
2010	17	18	18	18	18	1039
2011	17	18	18	18	18	1076
2012	17	18	18	18	18	1101
2013	17	18	19	18	18	933
2014	17	18	19	18	18	1029
2015	18	18	19	19	18	1196
2016	18	19	19	19	19	1183

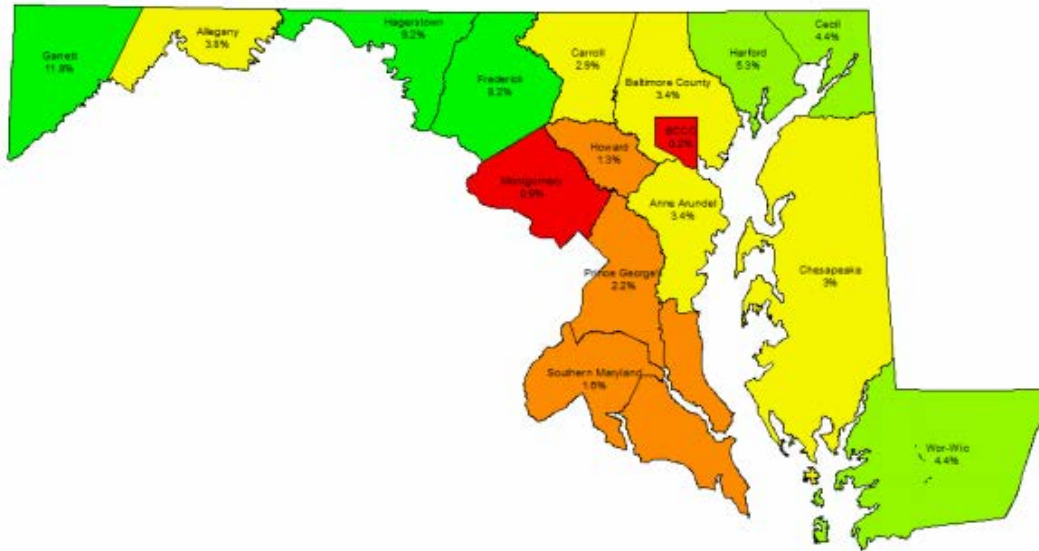
- Maryland was the first state in the nation to set specific STEM education standards telling teachers not just what STEM is, but how to teach the subjects. The O'Malley-Brown Administration set a goal of increasing STEM college graduates by 40 percent by 2015. Through 2013, we are nearly there with a 37.1 percent increase so far.
- Maryland is home to many schools ranked in 2017 among the U.S. News Best High Schools, including 12 with gold medals, 44 with silver medals and eight with bronze medals.
- Washington County Public Schools will implement a shared safety program, working closely with students, parents and staff to help better educate students and parents about online safety. WCPS will also consult with both groups about how school leaders can improve the school climate in light of issues regularly surfacing in social media conversations.

In addition, WCPS has contracted with Social Sentinel, Inc., an education safety and security company that will assist the district in monitoring publicly available social media streams for threats of harm against students, staff or school sites in general.

- In fall 2016, some 304,922 students (undergraduate, graduate, and professional) enrolled at Maryland public universities and colleges. Women accounted for 54.8 of all students.
- For undergraduates in fall 2015, Maryland residents constituted 92.5% of enrollees at community colleges, 71.0% at public four-year institutions, and 42.9% at independent universities and colleges.
- Maryland participates in the Academic Common Market, an education consortium of fifteen southern states. Reduced tuition is offered to students who attend schools out of state because their program is not available at a public in-state college or university. States who participate with Maryland in this program are: Alabama; Arkansas; Delaware, Florida (graduate programs), Georgia, Kentucky, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee, Texas (graduate programs), Virginia, and West Virginia.



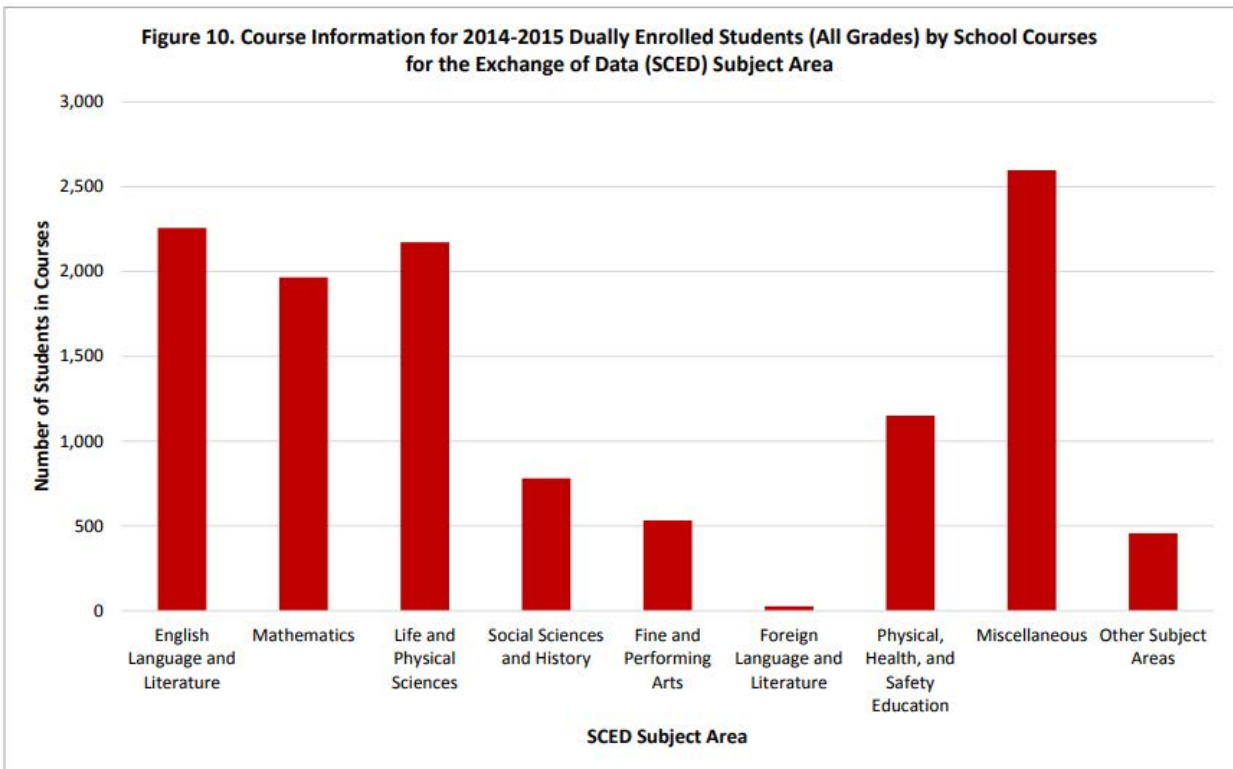
HIGH SCHOOL DUAL ENROLLMENT PARTICIPATION RATE BY COMMUNITY COLLEGE SERVICE AREA



Colleges	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016
Allegany College of Maryland	125	134	113	121	98
Anne Arundel Community College	586	425	643	523	788
Baltimore City Community College	1	33	28	54	38
Carroll Community College	108	143	202	229	244
Cecil College	133	160	207	176	206
Chesapeake College	268	217	202	212	215
College of Southern Maryland	202	607	305	850	293
Community College of Baltimore County	742	654	912	745	1061
Frederick Community College	854	535	844	790	1026
Garrett College	33	28	63	106	130
Hagerstown Community College	618	588	601	573	615
Harford Community College	319	289	446	450	609
Howard Community College	99	90	177	354	221
Montgomery College	475	442	394	401	426
Prince George's Community College	674	699	741	802	800
Wor-Wic Community College	183	190	200	220	272
Total	5,420	5,234	6,078	6,606	7,042

In the 2014- 2015 academic year, female students were over-represented in the 12th grade dually enrolled population (59%) when compared to the total 12th grade population (50%). Students eligible for FARMs were underrepresented in the 12th grade dually enrolled population (21%) when compared to the total 12th grade population (34%). White students were over-represented in the 12th grade dually enrolled population (65%) when compared to the total 12th grade population (49%). Hispanic students were under-represented in the 12th grade dually enrolled population (7%) when compared to the total 12th grade population (11%).

Maryland Longitudinal Data System Center



Nationally, 10% of School revenue came from the federal government, and roughly the same came from state sources and local sources. In the nation's highest spending states, local sources were more likely to account for high portions of expenditures, with little coming from the federal government.

Educational attainment rates among adults were also higher in the states that spent more per student. Students in these states were much more likely to complete high school and go on to complete college. More than 30% of adults in the majority of the top spending states had at least a bachelor's degree, compared to the U.S rate of 29.1%.

Maryland ranks second nationally in the percentage of high school seniors who scored at the mastery level on Advanced Placement (AP) exams, with 30.4% earning a score of 3 or higher in 2016. Maryland also ranks second among the states in the percentage of graduates taking AP tests during high school at 49.3%, up from 32.7% in 2006.

Maryland is first in the nation with 16 higher education institutions designated by the National Security Agency and Department of Homeland Security as National Centers of Academic Excellence in Cyber Defense education and research.

According to Quality Counts, Education Week's annual assessment of key indicators of student success, Maryland's K-12 public school system ranks fifth overall based on three graded.

According to a U.S. News and World Report ranking of U.S. public high schools, for the third year in a row Maryland places first in the percentage of schools awarded a gold or silver medal for how well schools prepare students for college-level work, based on performance on state and national proficiency tests and graduation rates.

- The public education system, which includes Washington County Public Schools, Hagerstown Community College, and the University System of Maryland at Hagerstown, are positioned to work in partnership with each other and other community interests to serve bioscience development within the county. Issues for education include: participating in a community education campaign; finding ways to increase the math and science interests and skills of local students; working to provide financial assistance to for higher education; and developing clear pathways among educational levels.

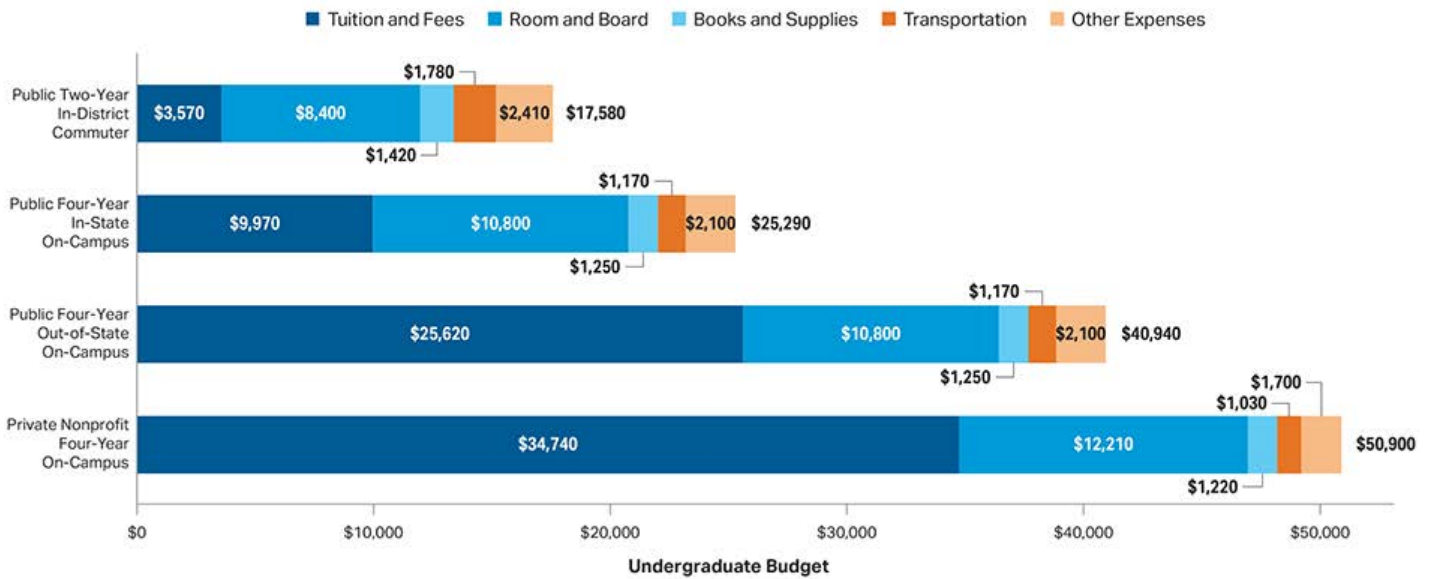
- HCC's closest competition, in terms of location, is Kaplan University - Hagerstown. As shown on the chart below, HCC is a better buy! Kaplan offers several of the same programs: Business Administration, Medical Receptionist/Transcriptionist, Medical Secretary/Assistant, Accounting, Phlebotomist, Criminal Justice, and Information Technology.

Hagerstown Community College		Kaplan University (Hagerstown Campus)				
Degrees Offered						
Associates and Certificates		Bachelors, Associates and Certificates				
Enrollment						
Total enrollment:		4,069	Total enrollment:			
			564			
Percent of Enrollment	By gender		by gender			
	Men	37%	Men:	21%		
	Women	63%	Women:	79%		
	By race/ethnicity		by race/ethnicity			
	Black non-Hispanic	10%	Black non-Hispanic:	12%		
	American Indian or Alaskan Native:	0%	American Indian or Alaskan Native:	0%		
	Asian or Pacific Islander:	2%	Asian or Pacific Islander:	0%		
	Hispanic:	6%	Hispanic:	3%		
	White non-Hispanic:	74%	White non-Hispanic:	63%		
	Race-ethnicity unknown:	2%	Race-ethnicity unknown:	20%		
	Two or more races	4%	Two or more races	1%		
	(Enrollment data Fall 2017)		(Enrollment data Fall 2017)			
	Academic year prices for full-time, first-time undergraduate students					
	Financial		2017-2018	2016-2017		2017-2018
Tuition & fees				Tuition & fees	\$14,263	\$14,325
In-district		\$3,616	\$3,564			
In-state		\$5,384	\$5,280			
Out-of-state		\$6,918	\$6,788			
Books and supplies		\$1,720	\$1,874	Books and supplies	Not available	Not available
Off-campus				Off-campus		
Room and board		\$11,222	\$11,061	Room and board	\$4,960	\$4,920
Other expenses		\$2,266	\$2,435	Other expenses	\$3,189	\$2,190
Off-campus with family				Off-campus with family		
Other expenses	\$2,266	\$2,435	Other expenses	\$2,471	\$2,190	
Source: College Navigator						

College Tuition Comparison 2018-2019

School Name	Tuition & Fees		Books & Supplies	Living Costs	
	In-State	Out-of-State		On Campus	Off Campus
Hagerstown Community College	\$5,490	\$7,050	\$1,720	NA	\$13,488
Allegany College of MD	\$7,499	\$8,909	\$1,624	\$14,280	\$14,280
Frederick Community College	\$7,048	\$9,304	\$1,200	NA	\$10,900
Frostburg State University	\$9,131	\$23,349	\$1,400	\$11,328	\$9,706
Kaplan University	\$14,201	\$14,201	NA	NA	\$7,110
Hood College	\$39,435	\$39,435	\$1,200	\$15,680	\$14,670
Salisbury University	\$9,805	\$19,508	\$1,300	\$14,180	\$14,180
Towson University	\$9,989	\$23,258	\$1,080	\$15,534	\$15,534
University of MD – College Park	\$10,622	\$35,243	\$1,250	\$14,842	\$81,114
Shepherd University	\$7,489	\$18,265	\$1,000	\$12,703	\$14,250
Shippensburg University	\$12,755	\$20,851	\$1,200	\$14,914	\$12,842
Penn State – Mont Alto	\$13,710	\$22,127	\$1,840	\$16,018	\$16,018
Blue Ridge Community and Technical College	\$3,612	\$7,622	\$1,390	NA	\$10,999
Wilson College	\$24,474	\$24,474	\$1,100	\$13,064	\$9,680

collegetuitioncomapre.com



Tuition and fees constitute 39% of the total budget for in-state students living on campus at public four-year institutions and 20% of the budget for public two-year college students who pay for off-campus housing.

	Sector					Carnegie Classification					
	Public Two-Year In-District	Public Four-Year In-State	Public Four-Year Out-of-State	Private Nonprofit Four-Year	For-Profit	Public Four-Year			Private Nonprofit Four-Year		
						Doctoral	Master's	Bachelor's	Doctoral	Master's	Bachelor's
Tuition and Fees											
2017-18	\$3,570	\$9,970	\$25,620	\$34,740	—	\$10,830	\$8,670	\$8,230	\$42,920	\$29,960	\$33,450
2016-17	\$3,470	\$9,670	\$24,820	\$33,520	\$16,000	\$10,510	\$8,360	\$7,980	\$41,340	\$28,930	\$32,050
\$ Change	\$100	\$300	\$800	\$1,220	—	\$320	\$310	\$250	\$1,580	\$1,030	\$1,400
% Change	2.9%	3.1%	3.2%	3.6%	—	3.0%	3.7%	3.1%	3.8%	3.6%	4.4%
Room and Board											
2017-18	\$8,400	\$10,800	\$10,800	\$12,210	—	\$11,220	\$10,020	\$10,160	\$13,800	\$11,490	\$11,370
2016-17	\$8,170	\$10,480	\$10,480	\$11,850	—	\$10,900	\$9,690	\$9,970	\$13,370	\$11,170	\$11,000
\$ Change	\$230	\$320	\$320	\$360	—	\$320	\$330	\$190	\$430	\$320	\$370
% Change	2.8%	3.1%	3.1%	3.0%	—	2.9%	3.4%	1.9%	3.2%	2.9%	3.4%
Tuition and Fees and Room and Board											
2017-18	\$11,970	\$20,770	\$36,420	\$46,950	—	\$22,050	\$18,690	\$18,390	\$56,720	\$41,450	\$44,820
2016-17	\$11,640	\$20,150	\$35,300	\$45,370	—	\$21,410	\$18,050	\$17,950	\$54,710	\$40,100	\$43,050
\$ Change	\$330	\$620	\$1,120	\$1,580	—	\$640	\$640	\$440	\$2,010	\$1,350	\$1,770
% Change	2.8%	3.1%	3.2%	3.5%	—	3.0%	3.5%	2.5%	3.7%	3.4%	4.1%

The average published tuition and fee price for full-time in-state students at public four-year colleges and universities is \$9,970 in 2017-18, \$300 (3.1% before adjusting for inflation) higher than it was in 2016-17.

FOR-PROFIT COLLEGES: LESS FAVORABLE OUTCOMES, DEEPER DEBT FOR STUDENTS

MARYLAND



MD for-profit colleges disproportionately HARM:
LOW-INCOME FAMILIES • COMMUNITIES OF COLOR • WOMEN

Undergraduate enrollment at Maryland for-profit colleges is:

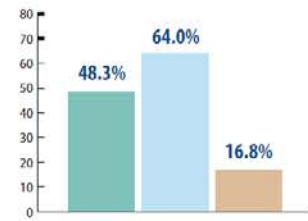
- **65.4% low-income**, compared to 31.4% low-income for all nonprofit undergraduate institutions in the state.
- **58% African American**, compared to **28.3%** African American for all nonprofit undergraduate institutions in the state.
- **62.5% female**, compared to 54.9% female for all nonprofit undergraduate institutions in the state.

LESS LIKELY TO GRADUATE

Students at for-profit colleges are **LESS LIKELY TO GRADUATE**

MARYLAND COMPLETION RATE (IN 6 YEARS)

- Public 4-Year
- Private 4-Year
- For-Profit 4-Year

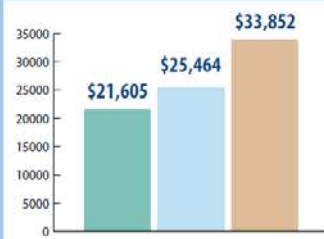


DEEPER IN DEBT

GRADUATES LEAVE SCHOOL **MORE INDEBTED**

MARYLAND MEDIAN DEBT AT GRADUATION

- Public 4-Year
- Private 4-Year
- For-Profit 4-Year

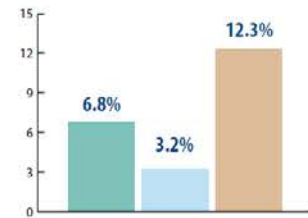


MORE LIKELY TO DEFAULT

Students at for-profit colleges are **MORE LIKELY TO DEFAULT** on their college debt, leading to economic instability

MARYLAND THREE-YEAR COHORT DEFAULT RATE

- Public 4-Year
- Private 4-Year
- For-Profit 4-Year



POOR OUTCOMES

National studies show that for-profit college grads are **LESS LIKELY TO** get a well-paying job in their field, compared to nonprofit college grads

Maryland Students **DESERVE HIGHER EDUCATION, NOT INCREASED DEBT**



Following then are the top 10 trends in the CE industry today according to the Learning Resources Network (LERN), the largest continuing education association in the world.

1. Mobile Technology is changing the way CE programs communicate and market to its customers, including the ability to produce QR codes and place on brochures and catalogs. Courses on mobile marketing are being offered by many programs, online courses are starting to be formatted so students can take them on mobile devices, and printed materials are being turned into e-books.
2. The focus from the Baby Boom generation to Generation Y (along with Gen X) is becoming more critical for CE programs going forward. CE programs that fail to incorporate Gen Y into their staffing and moving them more into positions of leadership risk falling into irrelevance going forward.
3. Despite our tough economy, absence of understanding and support from intuitional leaders, government and society, and lack of overall business investment, many CE programs are not only surviving, but thriving today.
4. CE programs are offering new courses on topics such as mobile marketing, social media and Photoshop to improve the skills of information and knowledge workers.
5. The need for CE programs to have the right data to help make the right decisions, and having someone on staff to analyze the data, is being recognized as vital to future success of the program.
6. Online certificate programs are set to take off and promise to be one of the biggest new growth areas in CE.
7. The shift in focus towards gaining more customer share vs. market share, and improving customer retention is helping CE programs to become more efficient and profitable.
8. Grow or die: The CE programs that are thriving today are embracing the changes in the marketplace, tapping into areas of growth, and developing programs that are comprehensive, intensive and high dollar.
9. With the need for learning at an all-time high in society, support for CE should also be at an all-time high. However, institutional support of CE remains fragile, meaning it is vital for CE programs to continue to strengthen their relationships with central administration at their institutions, local businesses, government and society at large.
10. Good management will continue to be key to day-to-day execution of CE programs, but vision and leadership will become even more important as the CE industry moves from outdated practices to practices that respond to the needs of the new economy.

WORKFORCE AND ECONOMIC DEVELOPMENT

United States – National

- Colleges should develop closer partnerships with business partners and employers to be more market and workforce driven.
- An executive summary prepared for Georgetown University's Center on Education and the Workforce notes that women represent 23% of the workers in science, technology, engineering and mathematics (STEM) professions. But women make up 48% of workers in all occupations across the board.
- U.S. News & World Report writes that a study completed by HSBC and the Cicero Group found that more than a third of working Americans would like to semi-retire before retiring completely.

Of those who responded to the survey, 19 percent between 55 and 64 said they consider themselves to be semi-retired, while another 32 percent hope to transition into semi-retirement before completely retiring. It's a trend that is growing among the younger generations, too. In fact, 43 percent of 25- to 34-year-olds and 41 percent of people between 35 and 44 hope to one day semi-retire. Interestingly enough, workers between 45 and 54 aren't as inclined to consider semi-retirement, with only 27 percent planning to, according to *U.S. News & World Report*.

- Crowdsourcing can be a great opportunity for baby boomers looking to continue working in the disciplines they've worked in for the last several decades (for instance, finance, tech support, sales) but part-time, from home and maintaining work-life balance. These types of opportunities allow baby boomers to be entrepreneurs, solopreneurs or independent contractors.
- U.S. manufacturing will need nearly 3.5 million manufacturing workers by 2025, but it's projected that 2 million of those jobs will go unfilled due to a proficiency gap, according to a 2015 study. These jobs tend to pay well: In 2017, the average manufacturing worker in the U.S. earned more than \$27 per hour. The average hourly wage for all occupations in May 2017 was \$24.34.



- Checking emails at home is just part of the job for most Americans, who would also prefer to receive money rather than more paid vacation or sick days, according to a poll. More than half of adults questioned in a 60 Minutes/Vanity Fair survey said monitoring emails outside office hours was routine, compared to 38 percent who said it was unnecessary. But younger Americans were more willing to keep in touch on work issues at home. Nearly 70 percent of employees under 30 years old said it wasn't a problem but the number dropped to 52 percent for workers 30 and older.
- Nearly three-quarters of office workers in North America would quit their job to move to an organization that allows them to work remotely more frequently, even if they don't get a pay hike, according to a recent report from Softchoice.

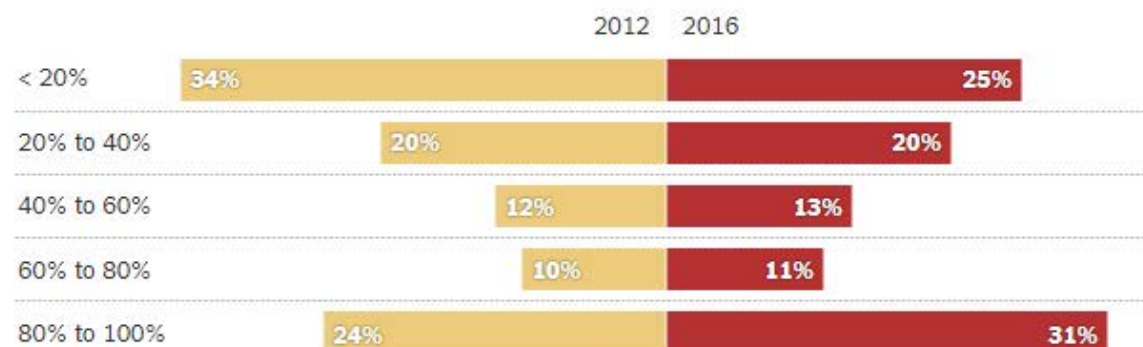
The company surveyed about 1,000 full-time workers and found that 74% of them were willing to make this move.

Proportion of users willing to take a lower salary in return for flexible working privileges:



The Time Employees Spend Working Remotely

Americans who work remotely are doing so for longer periods of time.



Source: Gallup

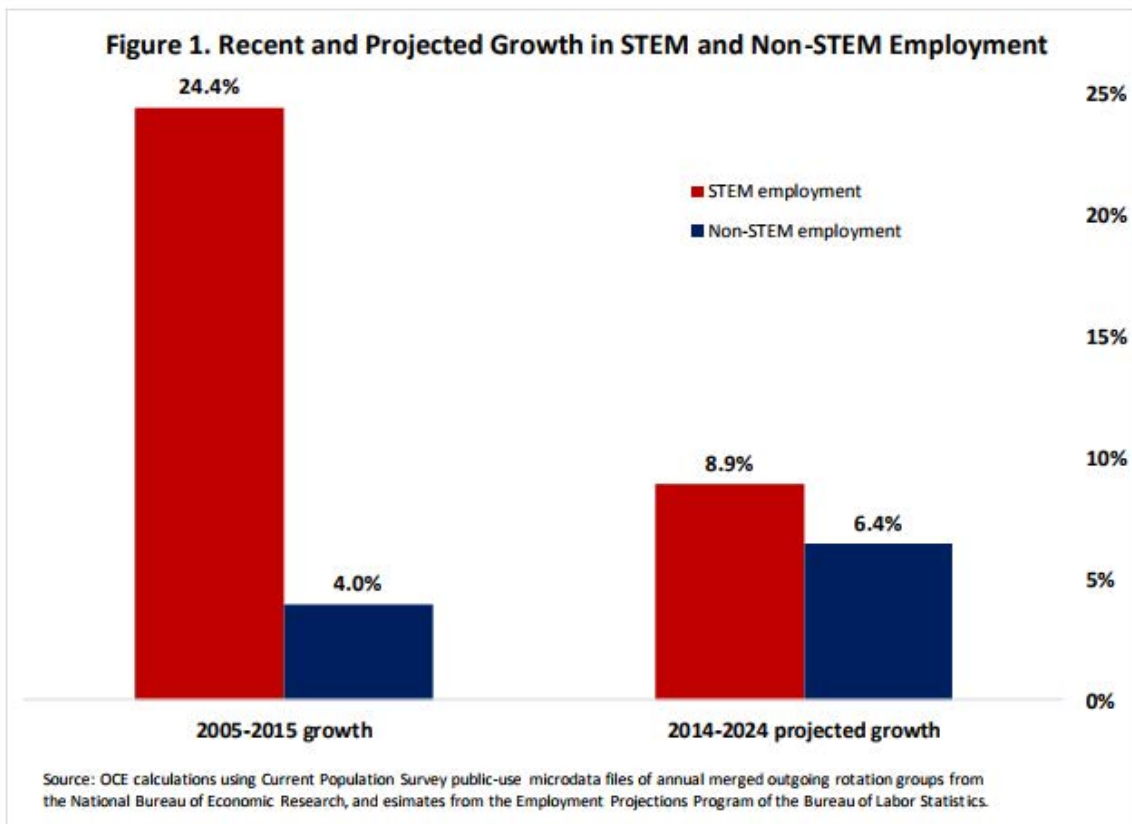
- A 2013 study by the software company Intuit estimates that 40 percent of the U.S. workforce (more than 60 million people) will be employed as contractors or temporary workers by the year 2020. Many people, especially those in creative or technology occupations, will work as contractors by choice. They value the flexibility and the higher pay they can command compared to work as full-time employees.
- In 2013, 7.2 million employees in the public sector belonged to a union, compared with 7.3 million workers in the private sector. The union membership rate for public-sector workers (35.3 percent) was substantially higher than the rate for private-sector workers (6.7 percent). Within the public sector, the union membership rate was highest for local government (40.8 percent), which includes employees in heavily unionized occupations, such as teachers, police officers, and firefighters. In the private sector, industries with high unionization rates included utilities (25.6 percent), transportation and warehousing (19.6 percent), telecommunications (14.4 percent), and construction (14.1 percent). Low unionization rates occurred in agriculture and related industries (1.0 percent), finance (1.0 percent), and in food services and drinking places (1.3 percent). Among occupational groups, the highest unionization rates in 2013 were in education, training, and library occupations and protective service occupations (35.3 percent each). Farming, fishing, and forestry occupations (2.1 percent) and sales and related occupations (2.9 percent) had the lowest unionization rates.
- The job market for blue collar professionals is experiencing a decline due to outsourcing and a movement towards service-based economy. However, several of these professions maintain a strong presences in today's workforce. The pay for these jobs is comparable to many white collar jobs. According to the 2006-2007 Bureau of Labor Statistics' Occupational Outlook Handbook, the following jobs are still very much in demand and pay more than \$43,318 annually:
 - Construction and Building Inspectors
 - Plumbers, Pipefitters and Steamfitters
 - Structural iron and Steel Workers
 - Electricians
 - Elevator Installers
 - Police Officers
 - Subway/Streetcar Operators
 - Commercial and Industrial Equipment Repairers
 - Aircraft and Avionics mechanics
 - Plastic Machine Setters

STEM Employment and Worker Earnings In 2015, 9.0 million people, or 1 in 16 workers, held STEM jobs. Although STEM employment currently makes up only a small fraction of total U.S. employment, it has been growing and continues to grow rapidly. In our previous report, we found that STEM employment grew 7.9 percent from 2000 to 2010, or 0.8 percent per year. In contrast, employment in non-STEM jobs grew just 2.6 percent over this period, for an annual growth rate of 0.3 percent per year. Since then, employment growth in STEM has accelerated to 1.7 percent per year over the past five years, a two-fold increase from the pre-recession period. Much of this growth is likely due to the economic recovery, as non-STEM occupations have grown by 0.6 percent annually over the same time period, also double their pre-recession rate (see Figure 1).

24.4% 8.9% 4.0% 6.4% 0% 5% 10% 15% 20% 25% 2005-2015 growth 2014-2024 projected growth

Figure 1. Recent and Projected Growth in STEM and Non-STEM Employment

Source: OCE calculations using Current Population Survey public-use microdata files of annual merged outgoing rotation groups from the National Bureau of Economic Research, and estimates from the Employment Projections Program of the Bureau of Labor Statistics.



According to new statistics from the 2012 American Community Survey, engineering and computer, math and statistics majors had the largest share of graduates going into a STEM field with about half employed in a STEM occupation. Science majors had fewer of their graduates employed in STEM. About 26 percent of physical science majors; 15 percent of biological, environmental and agricultural sciences majors; 10 percent of psychology majors; and 7 percent of social science majors were employed in STEM.

Approximately 14 percent of engineers were women, where they were most underrepresented of all the STEM fields. Representation of women was higher among mathematicians and statisticians (45 percent), life scientists (47 percent) and social scientists (63 percent). The rates of mathematicians and statisticians, and life scientists are not statistically different from each other.

- At 9.1 million, the college major with the most graduates was business, while multidisciplinary studies was the major with the smallest number of graduates at 275,000.
- Engineering was the major with the highest earnings (\$92,900), while the major with the lowest earnings was visual and performing arts (\$50,700).
- In 2012, 3.6 percent of all college graduates between the ages of 25 and 64 were unemployed. A larger percentage of men than women were unemployed: 3.7 percent and 3.5 percent, respectively.
- Non-STEM management occupations employed the most male college graduates (3.8 million), while education occupations employed the most female college graduates (4.3 million).
- States with the largest percentage of STEM workers: Maryland (18.8 percent), Washington (18.3 percent) and Virginia (16.5 percent). The rates of workers in Maryland and Washington are not statistically different from each other.

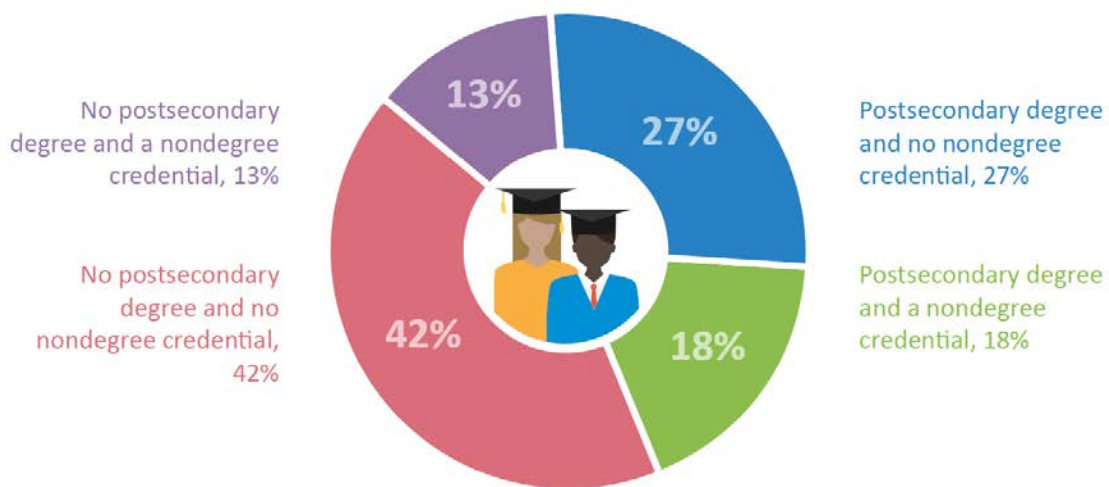
The workforce who will man (and woman) the workplace of 2020 are:

- › **Tech-savvy** – Younger generations grew up as digital natives, not knowing a world without the internet.
- › **Socially conscious** – Seventy-five percent of millennials think highly of companies that support social causes.
- › **Short on attention span** – Multitasking is the new norm, with some workers using an average of five devices at once.
- › **Ambitious** – Many workers expect to be promoted every year or two.
- › **Job hoppers** – Ninety-one percent expect to stay with a company for less than three years.
- › **Boomerang employees** – There's no shame in their game for leaving a company only to return to work later.

Adult workers and postsecondary credentials

Nearly 60 percent of adult workers have some postsecondary credential. Among credentialed workers with no degree, 43 percent have a postsecondary certificate.

Percentage of adults in the labor force who have degree and nondegree credentials



Source: National Center for Education Statistics, "Degree and Nondegree Credentials Held by Labor Force Participants," March 2018



According to data recently released by the National Center for Education Statistics, most adults in the workforce (58 percent) either have a postsecondary degree or some other form of workforce credential, including postsecondary certificates, occupational licenses or occupational certifications. This is higher than the 45 percent of adult workers with postsecondary credentials using traditional measures that only looked at postsecondary degrees (associate degree or higher). Over one in 10 adult workers (13 percent) indicated that they had no postsecondary degree, but had some form of nondegree credential. Over half (56 percent) of the non-degreeed adult workers who had one or more non-degree credentials had an occupational license; 43 percent had a postsecondary certificate, and 21 percent had an occupational certification. These data provide a better understanding of the diverse training background of the working adult population in the United States.

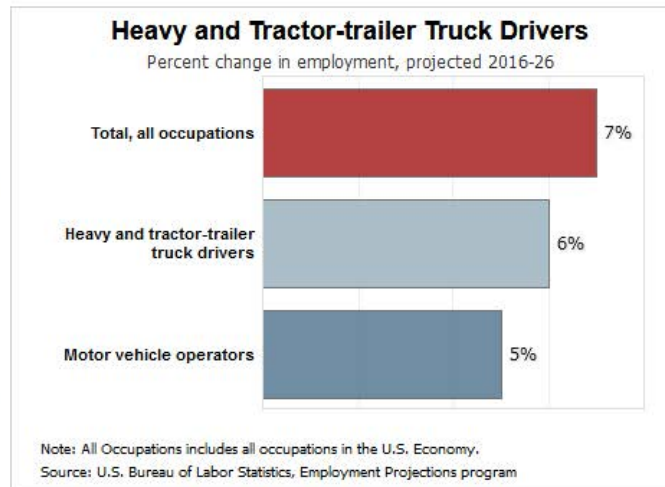
Job Outlook

About this section [?](#)

Employment of heavy and tractor-trailer truck drivers is projected to grow 6 percent from 2016 to 2026, about as fast as the average for all occupations.

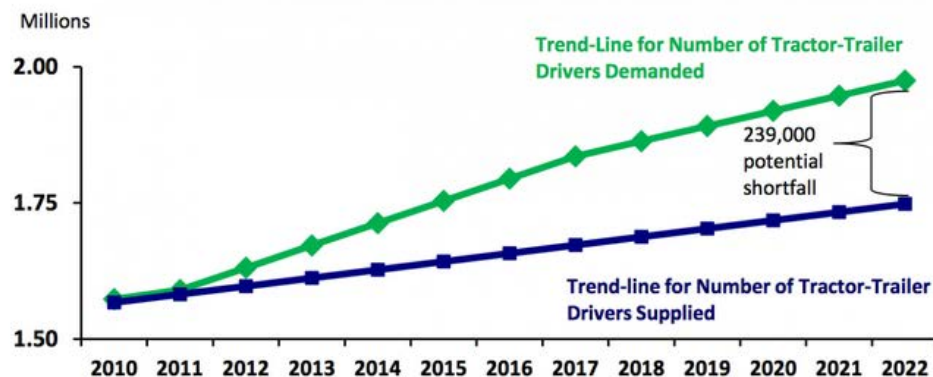
The economy depends on truck drivers to transport freight and keep supply chains moving. As the demand for goods increases, more truck drivers will be needed. Trucks transport most of the freight in the United States, so, as households and businesses increase their spending, the trucking industry should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

Technological advancements should result in trucks that are more fuel efficient and easier to drive. For example, automatic transmissions, blindspot monitoring, braking assistance, and variable cruise control are all recently developed features that may become more standard throughout the trucking industries within the next decade. In addition, technological advances may lead to further developments in platooning, which is a method of transport where several trucks form a line and automatically mimic the speed, braking, and steering behaviors of the lead truck. These technologies can help ease driver burden and create a safer driving environment for all vehicles.



America is facing a shortage of truck drivers, and that problem is expected to get worse. The current shortage is estimated to be at 30,000, and a new regulation will help drive that higher. A mandate requiring commercial vehicles to have an electronic logging device is likely to go into effect in early 2015. This will make it harder for drivers to fudge the numbers and work more than the legally mandated limit on hours. Right now 75% of the industry does not have these logging devices. Analysts expect 100% compliance within a year or two of the rule going into effect.

The American Trucking Associations expects the estimated U.S. shortage of 30,000 to surge to 239,000 by 2022.



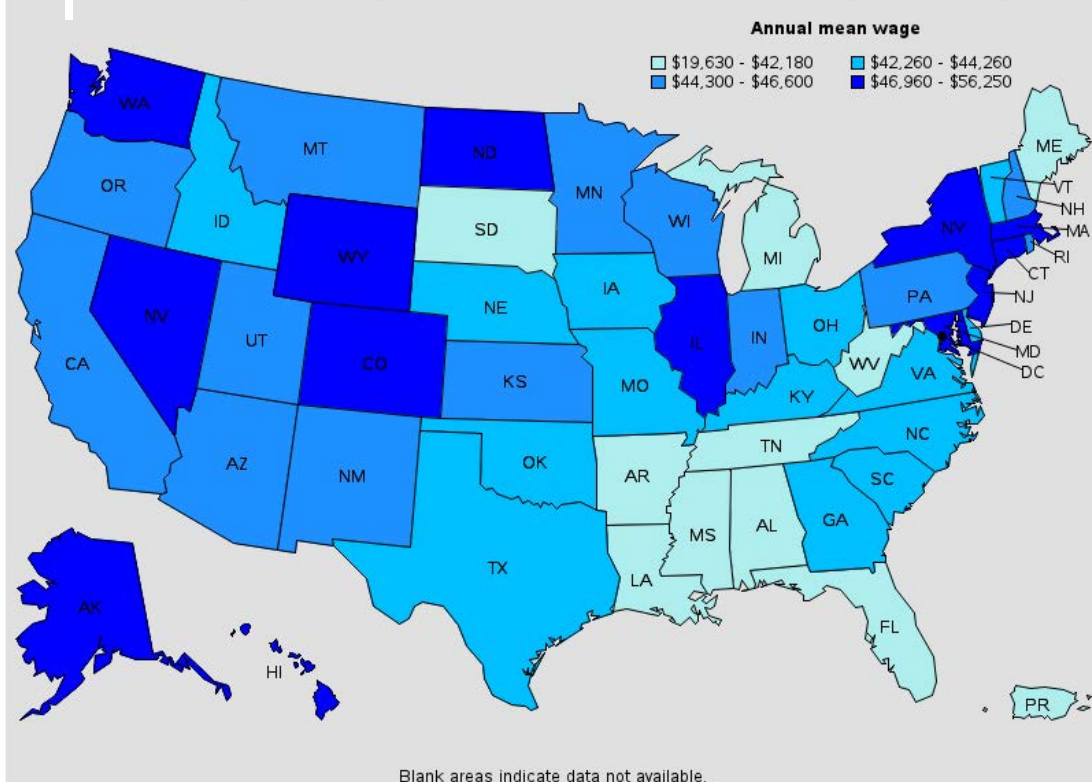
The main three reasons why there is a truck driver shortage are:

1. The new rules and regulations have caused a lot of drivers to go out of the trucking industry;
2. The second reason why there is a truck driver shortage is that most of the drivers are approaching retirement;
3. The third reason is that there were new regulations about the hours of service. According to these rules it is requested from the drivers to deliver the same amount of goods in fewer hours, which adds a lot of pressure to drivers.

In order to meet the continued demands of the recovering economy, experts within the trucking industry expect the number of truckloads moved by carriers around the country to increase in 2016. According to the American Trucking Associations (ATA), 81 percent of the total revenue seen in the shipping sector was the result of activity by trucking companies. Steady increases are expected with revenues swelling by 66 percent by 2022.

- There are approximately 400,000 commercial trucking companies in the United States alone, and with truck drivers in such high demand, a qualified trucker might be able to obtain his or her dream career virtually anywhere in the U.S.
- Approximately 1 out of every 14 American jobs are in the trucking industry. That's equals out to about 9 million workers.

Annual mean wage of heavy and tractor-trailer truck drivers, by state, May 2017



Top paying States for this occupation:

State	Employment (1)	Employment per thousand jobs	Location quotient (9)	Hourly mean wage	Annual mean wage (2)
Alaska	2,640	8.30	0.68	\$27.04	\$56,250
North Dakota	11,000	26.39	2.15	\$25.49	\$53,020
Massachusetts	25,790	7.31	0.60	\$24.32	\$50,580
Nevada	11,630	8.88	0.72	\$24.25	\$50,440
District of Columbia	510	0.72	0.06	\$24.16	\$50,250

A new analysis from CareerBuilder and EMSI indicates that, when it comes to post-recession job recovery, baby boomers are leading the charge against millennials.

While the number of jobs held by baby boomers (individuals aged 55-64) grew 9 percent from 2007 to 2013, jobs held by millennials (individuals aged 25-34) have increased a mere .3 percent. In terms of numbers, that translates to a gain of 1.9 million jobs versus 110,000 jobs, respectively. Baby boomers now also hold a larger percentage of jobs in STEM and other occupations than before the recession, outpacing millennials.

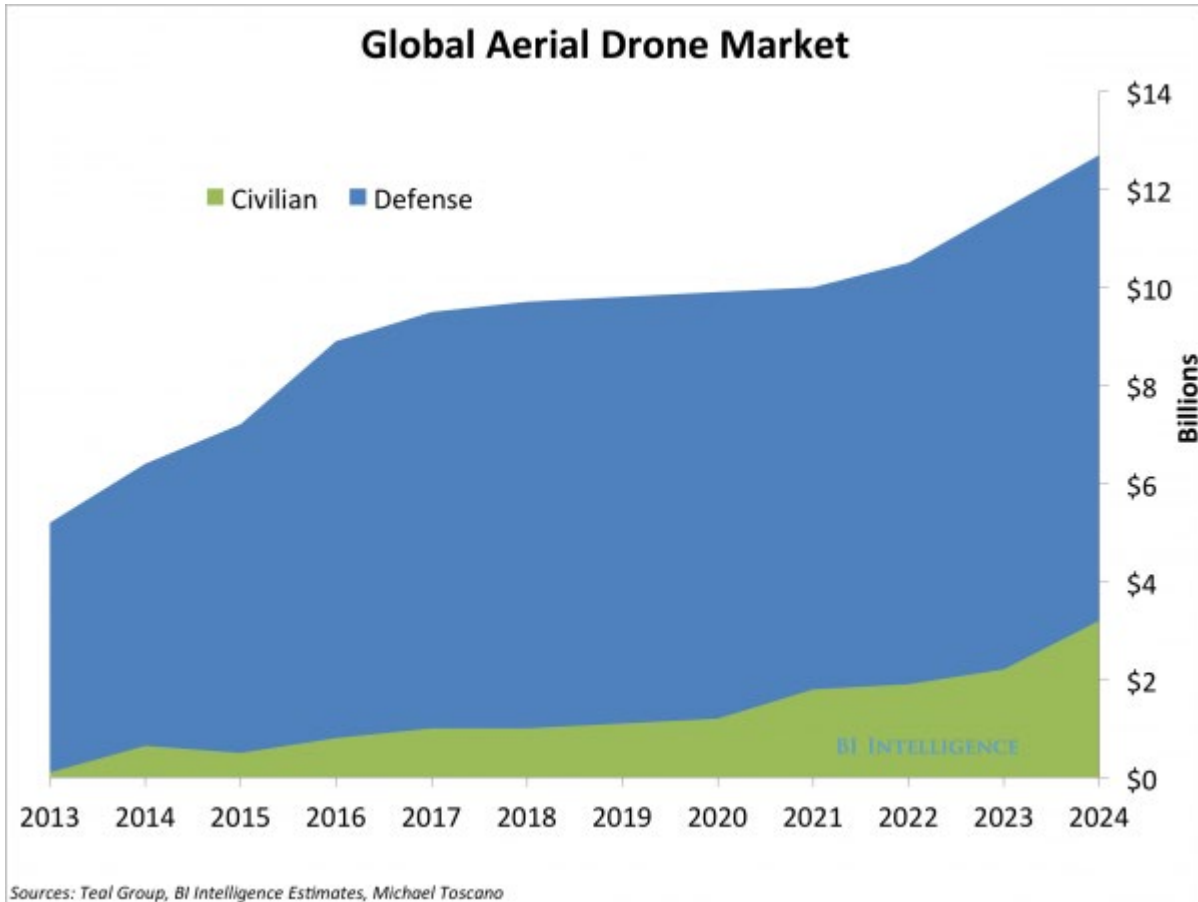
- As millions of boomers are driven by both the desire to remain productive and the need to make ends meet over longer life spans, this is good news for a society facing significant labor shortages in critical areas. Although, there are many obstacles: the cost of additional education and certification in a new field, securing and affording new health insurance, and the trepidation of many employers hiring older Americans. Policymakers must eradicate the barriers and disincentives that penalize individuals for continuing to contribute. This means changes in Social Security, pension rules, and health coverage.
- The U.S. Office of Technology Assessment defines bioscience as "any modern technology that uses living organisms (or parts of organisms) to produce or modify products, to improve plants or animals, or to develop microorganisms for specific uses." The bioscience field, one of the most rapidly changing areas of science, offers a wide variety of high skill, high wage employment options, including laboratory technicians, research associates, manufacturing and production technicians, as well as senior scientists. Positions can relate to medical and pharmaceutical research, microbiology, forensics, and product development, and are typically better paid than jobs in manufacturing. For example, former textile workers now working as research technicians in North Carolina have increased their earning capacity after community college biotechnology training.
- CareerBuilder's midyear survey finds that employers will continue to place an emphasis on roles that involve new technologies. Over the next six months, 16 percent of employers plan to hire for jobs tied to mobile technology, as consumers rely more heavily on their devices for both professional and personal use. Another 15 percent of employers plan to recruit for cloud technology-related jobs, as more companies adopt cloud computing as a way to replace computer products with Web-based services, streamlining the way they do business. Also, technology is being used to help businesses manage and interpret big data, and so 12 percent of employers plan to hire for jobs tied to this area.

- In a recent news, Richard Branson has welcomed the unlimited vacation policy for all of his Virgin Staffers. He says he was inspired by Netflix to introduce this policy to his staff. Netflix introduced the unlimited vacation policy back in 2004, followed by BestBuy, Tumblr, Foursquare and Evernote. Many new age companies have turned their focus to the efficiency with which the work is done than the number of hours clocked. As a reward to that kind of behavior, unlimited vacation policy is a huge hit with the 1% of small organizations that have implemented it. The employees will only take off “when they feel one hundred percent comfortable that they and their team are up to date on every project and that their absence will not in any way damage the business — or, for that matter, their careers”, notes Branson.

According to the U.S. Bureau of Labor Statistics, by 2014 the U.S. will need 29 percent more HVACR and 21 percent more plumbing technicians, a total of more than 100,000 skilled workers in the job pool. Among the 500,000 plumbers in the United States alone, the demand is expected to grow 10 percent by 2016, however, due to an aging generation of skilled professionals, more than a third of all plumbers – or approximately 167,000 workers – will be exiting the workforce.

There is another side to the U.S. unemployment problem: Believe it or not, there are *three million* jobs going unfilled. Employers can't seem to find the right match for more than 200,000 manufacturing jobs alone. The transportation, utilities and trades sectors have almost half a million jobs open, waiting for the right applicant. These positions are for vocational or skilled workers, who are in short supply.

A growing ecosystem of drone software and hardware vendors is already catering to a long list of clients in agriculture, land management, energy, and construction. Many of the vendors are smallish private companies and startups — although large defense-focused companies and industrial conglomerates are beginning to invest in drone technology, too.





Storm Drone 4. Credit: Helipal

A SHORT HISTORY OF DRONES

FAA estimates that as many as 7,500 small commercial drones could be operational within five years in U.S. airspace.



Prime Air delivery drone. Credit: Amazon

2011: FAA fines Raphael Pirker \$10,000 for operating a drone for commercial purposes without a license.



RMAA agr/culture drone. Credit: Yamaha

Dec. 1, 2013: Amazon announces its intention to explore package delivery via drones.

March 6, 2014: Judge rules in favor of Pirker and dismisses the FAA's fine.

March 7, 2014: FAA appeals decision in the *Harris v. Pirker* civil penalty case.

April 21, 2014: FAA announces first drone test site in operational in North Dakota.

SOURCES: FAA, NPR, FORTUNE, CNN, flying mag.com, motherboard.vice.com, The Real Group, <http://slingshot.com/the-big-business-of-consumer-drones-infographic/>

- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

2007: FAA issues a policy statement prohibiting the use of drones for commercial purposes.



Image credits: Parrot, FAA

2012: Congress passes the FAA Modernization and Reform Act, which funds the FAA through 2015, and also encourages the integration of drones in U.S. airspace.

November 2013: The FAA releases its integration road map, a 77-page plan outlining how the agency will safely integrate unmanned aircraft into the airspace.



EYE-DEAD FOUR. Credit: Infotote Mkrvr.

2015/2016: FAA is expected to issue its rules and regulations for drones that weigh less than 55 pounds.

- Commercial drones, which are expected to be approved for use in the U.S. in 2015, will create 100,000 jobs in 10 years, adding \$13.7 billion to the American economy, according to a new study.

The study was published by the Association for Unmanned Vehicle Systems International, a trade association with an interest in promoting the benefits of unmanned aircraft -- the industry does not like the word "drone" -- but its assumptions offer an interesting assessment of the sector's opportunities.

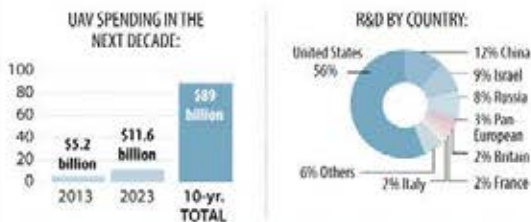
- Over the last decade, it's gotten much tougher to get a job as an airline pilot. Many pilots started out at smaller regional airlines, but pay there is poor, and airlines are shifting away from smaller planes. Meanwhile, growth has been minimal at major U.S. airlines, cutting the number of new jobs for pilots, and bankruptcies have reduced pay.

Compare that to the outlook for drones. The Federal Aviation Administration projects some 7,500 commercial drones could be aloft within five years of getting widespread access to American airspace.

An industry commissioned study last spring predicted more than 70,000 jobs would develop in the first three years after Congress loosens restrictions on U.S. skies. The same study projects an average salary range for a drone pilot between \$85,000 and \$115,000.

R&D FUNDING AND UAV SPENDING

There are 4,000 different unmanned aerial vehicles in circulation on the global market, most built by the United States.



WHERE THE DRONES ARE

Drone test sites selected by the FAA:



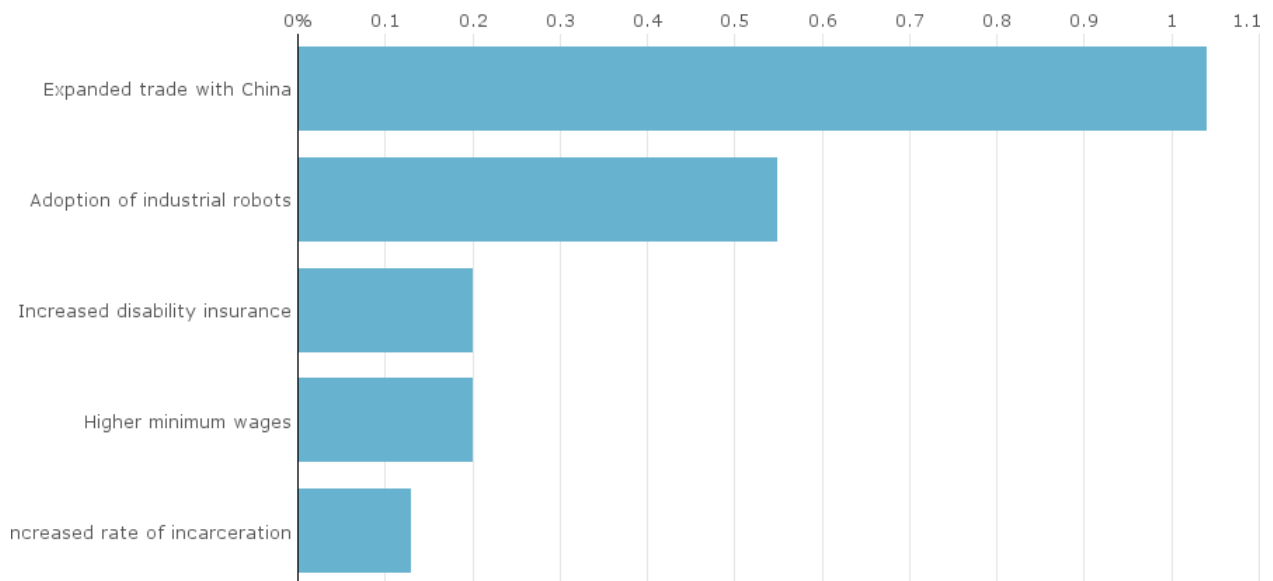
- The World Economic Forum has just published its report "The Future of Jobs 2018" on the future of the world of work. According to the foundation, 52% of current job tasks will be performed by robots from 2025. The study was conducted in 20 countries around the world and from companies operating in 12 different sectors.

According to the study, 75 million jobs could be eliminated by 2022 in sectors such as customer management centers, accounting, postal services or assembly plants. Nevertheless, the World Economic Forum estimates that the 'robot revolution' could create a net 58 million new jobs over the next five years.

- If men and women from the ages 25 to 54 took part in the labor market at the same rates as they did in 1999, another 3.5 million Americans could either be at work today or looking for jobs. That would be more fuel for the U.S. economy and a bigger source of workers for businesses crying out about a shortage of labor.

Why millions of Americans aren't working

Factors contributing to decline in the employment-to-population ratio from 1999 to 2016



Source: Abraham and Kearney study

- The sizzling U.S. labor market has knocked the unemployment rate down to a 17-year low, but millions of Americans in their prime who would have been working back then do not have jobs now.

How come? China, robots, disability benefits, minimum wages and jail-time are the biggest culprits, according to a pair of researchers at the University of Maryland.

The percentage of the U.S. population with jobs sank from a record 64.7% in 2000 to a 28-year low of 58.2% by 2011 before beginning a gradual recovery. The brunt of the decline occurred during the 2007-2009 recession, but the problem had been long in the making.

Employment-population ratio

Seasonally adjusted

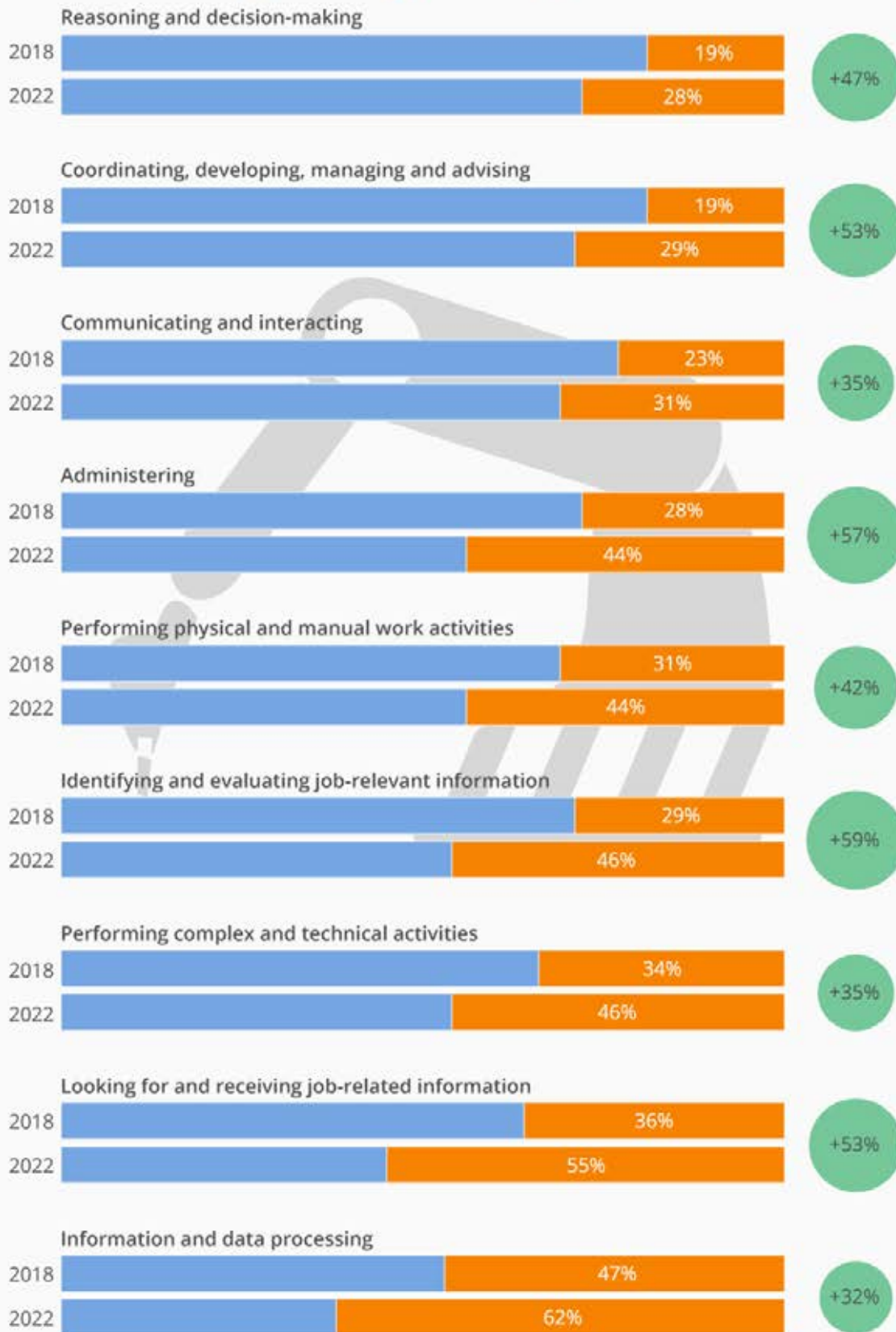


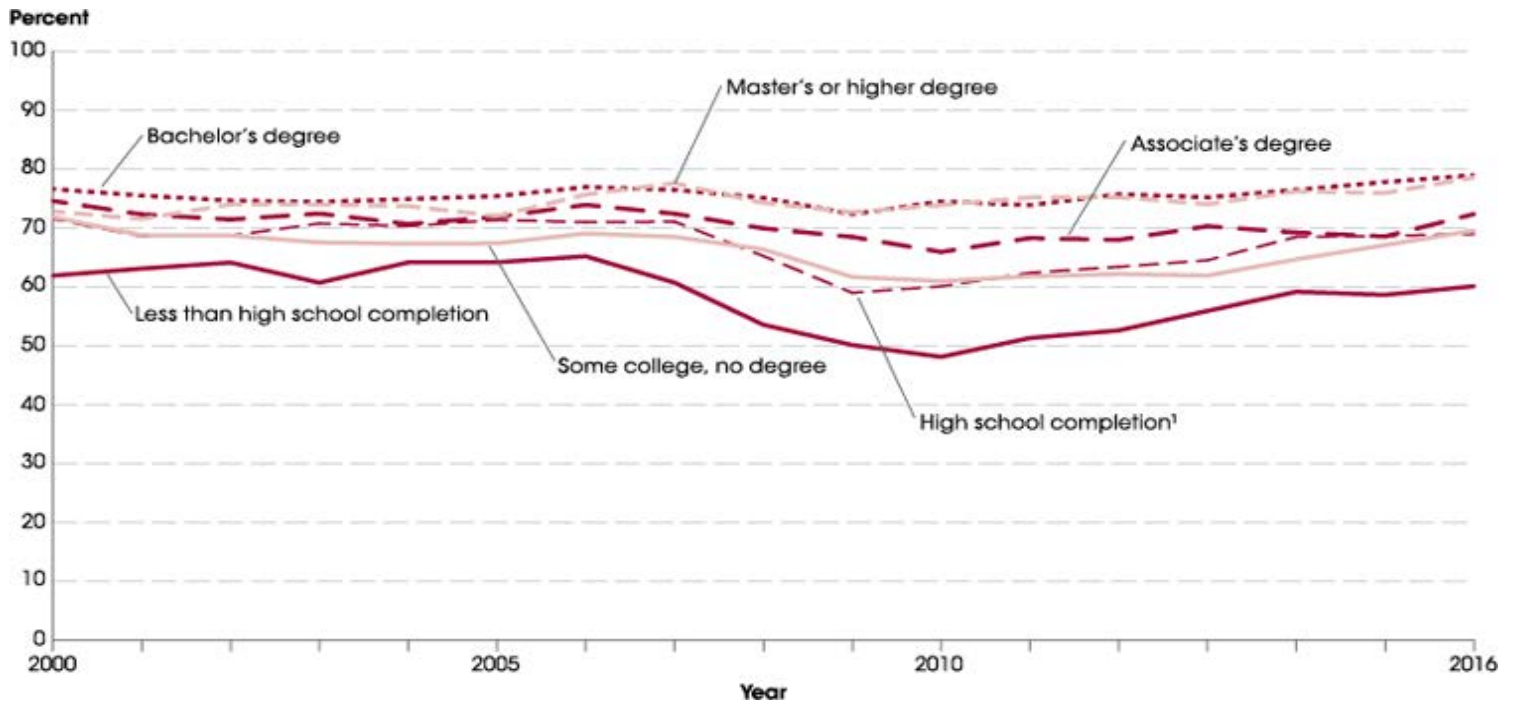
Source: Labor Department via FRED

A Robot May Take Your Job Sooner Than You Think

Forecast ratio of human/machine working hours in 2018 and 2022, by task type

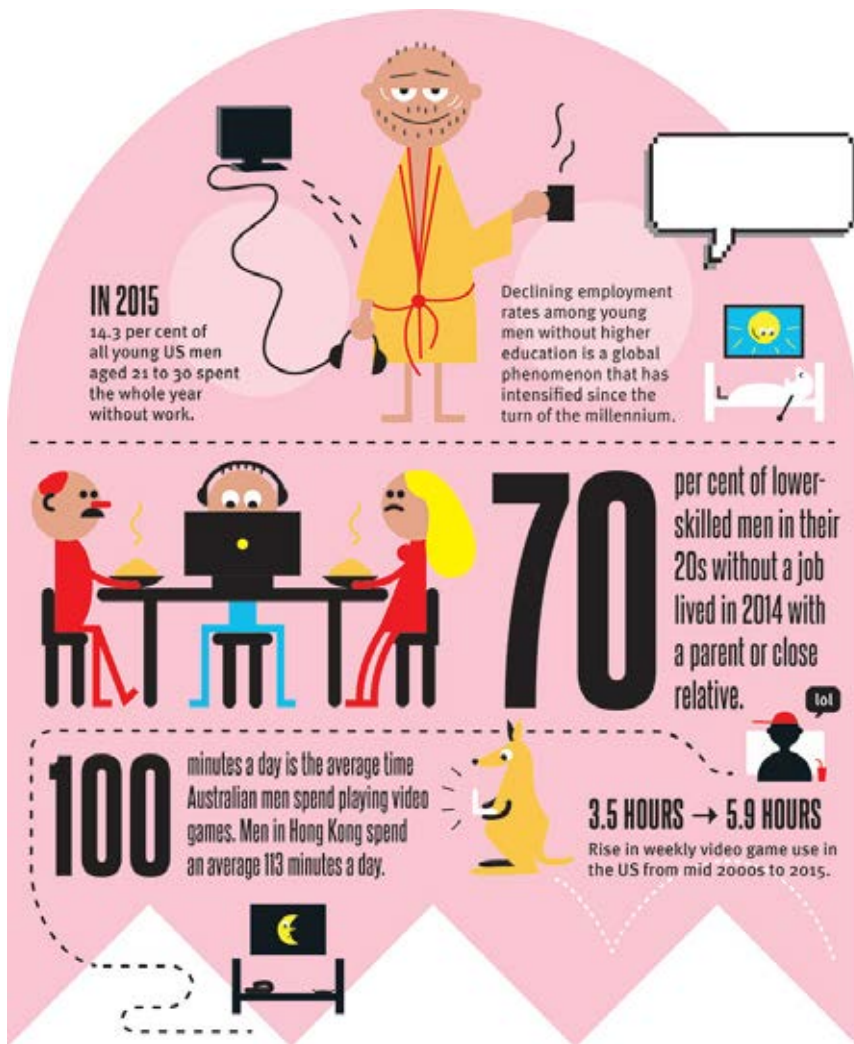
Human Machine Growth rate





For young adults ages 25-34 who worked full time, year round, higher educational attainment was associated with higher median earnings, this pattern was consistent from 2000 through 2015. For example, in 2015 the median earnings of a young adult with a bachelor's degree (\$50,000) were 64 percent higher than those of young adult high school completers (\$30,500). The median earnings of young adult high school completers were 22 percent higher than those of young adults who did not complete high school (\$25,000). In addition, median earnings of young adults with a master's or higher degree were \$60,000 in 2015, some 20 percent higher than those of young adults with a bachelor's degree. This pattern of higher earnings associated with higher levels of education attainment also held for both male and female young adults as well as for White, Black, Hispanic, and Asian young adults.

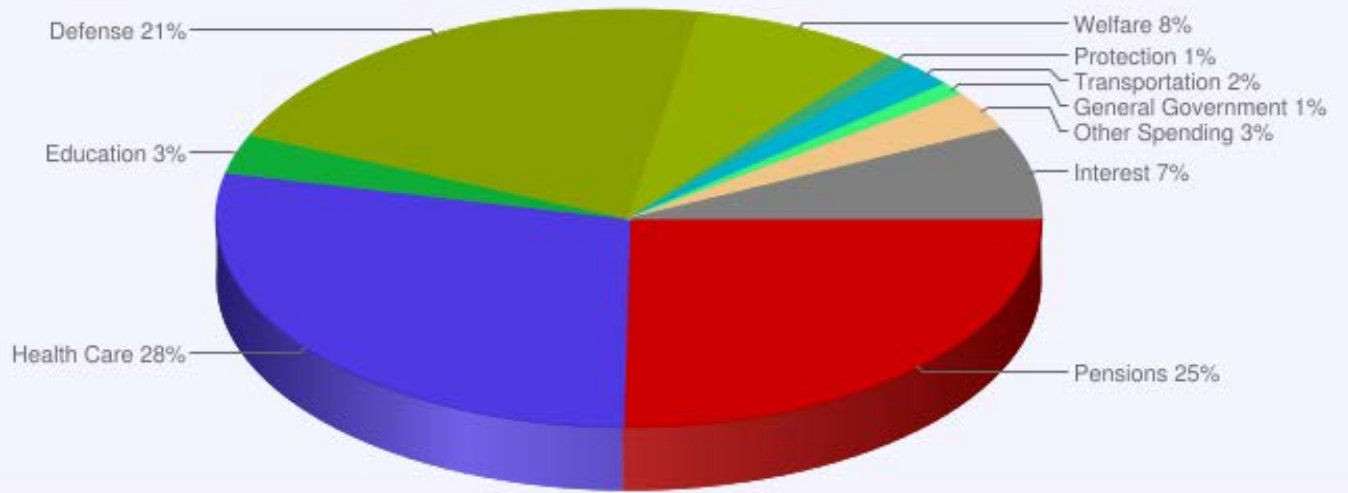
New research has found a surprising culprit for the serious decline in working hours among young American men over the last 15 years: video games.



The decline of young men’s working rate has been steady and substantial over nearly two decades. As of 2016, 15% of men between 21 and 30 were not working or in full-time education—nearly double the 8% rate in 2000. Aggregate hours worked for men in that group fell by 12% between 2000 and 2015, higher than the declines for older male workers. A research team including faculty from Princeton and the University of Chicago now argues that “innovations in gaming/recreational computing”—and not, say, lower demand for less-skilled workers—explain as much as 79% of the difference in working rates between younger and older men.

On average, video game use rose from 3.5 hours per week in the mid 2000s to 5.9 hours per week by 2015. A quarter of young unemployed men reported playing at least three hours per day; 10 per cent played for six hours daily.

Federal Spending for United States - FY 2018



“The 50 Best Careers of 2018” was published on January 101, 2018 by US News and World Report, which includes job growth through 2026, stress level, typical education requirements (although they vary), and the national median salary for 2016.

<http://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs>

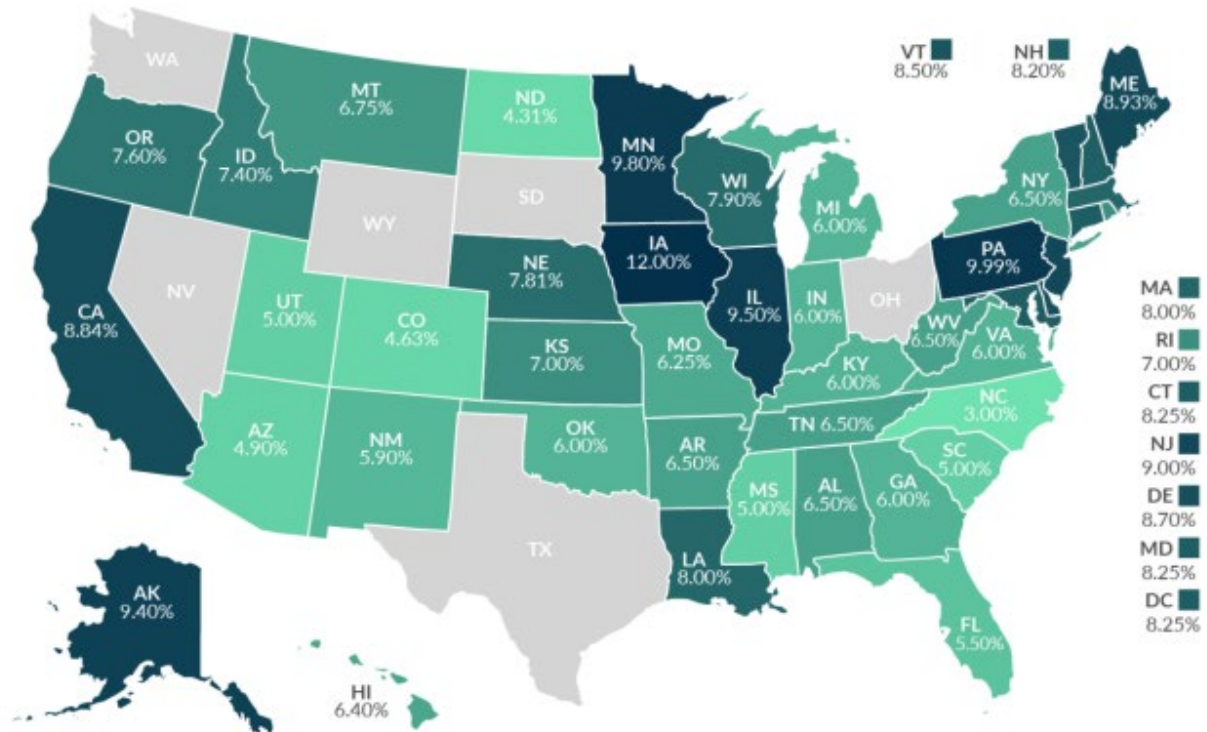
US NEWS & WORLD REPORTS 50 BEST CAREERS FOR 2018				
	Outlook - % of Job Growth 2016 – 2026	Stress Level	Education & Prep	National Median Pay 2016
Technology				
Software Developer	19%	Average	BS or Cert.	\$100,080
Computer Network Architect	6%	Above Avg.	BS or MS	\$101,210
Information Security Analyst	28%	Above Avg.	BS	\$92,600
Computer Systems Analyst	9%	Average	BS or MS	\$87,220
IT Manager	12%	High	BS or MS	\$135,800
Healthcare				
Dentist	17%	Average	Doctorate	\$153,900
Nurse Practitioner	36%	Above Avg.	BS+	\$100,910
Pharmacist	6%	Above Avg.	Pharm. D	\$122,230
Occupational Therapist	21%	Average	MS	\$81,910
Dental Hygienist	20%	Average	AA	\$72,910
Physician	17%	High	Med School	\$196,380
Diagnostic Medical Sonographer	23%	Above Avg	Cert. or AA	\$69,650
Orthodontist	17%	Below Avg	Doctorate	\$208,000
Anesthetist	18%	High	Doctorate	\$208,000
Registered Nurse	15%	Above Avg.	AA or BS	\$68,450
Physician Assistant	37%	Above Avg.	MS	\$101,480
Psychiatrist	4%	Above Avg.	Med School	\$194,740
Pediatrician	18%	Above Avg	Doctorate	\$168,990
School Psychologist	14%	Above Avg	BS	\$73,270
Nurse Midwife	21%	Above Avg.	BS	\$100,910
Massage Therapist	24%	Below	License	\$39,860
Speech Language Pathologist	NA	Above Avg.	MA	\$74,680
Psychologist	19%	Above Avg.	Doctorate	\$94,590
Respiratory Therapist	23%	Above Avg.	AA or BS	\$58,670
OB/GYN	18%	Above Avg.	Med School	\$208,000
Oral Surgeon	17%	Above Avg.	Dental School+	\$208,000
Optometrist	17%	Average	Doctorate	\$106,140
Nurse Anesthetist	16%	Above Avg.	BA+	\$160,270

Physical Therapist	25%	Above Avg.	DPT	\$85,400
Podiatrist	10%	Avg.	DPM	\$124,830
Surgeon	17%	High	Doctorate	\$187,200
Physical Therapy Assistant	31%	Average	AA	\$56,610
Prosthodontist	17%	Above Avg.	Doctorate+	\$126,050
Veterinarian	18%	Above Avg.	DVM	\$88,770
Radiation Therapist	12%	Below	AA or BS	\$86,160
Engineering				
Civil Engineer	11%	Average	BS or MS	\$83,540
Wind Turbine Technician	96%	Below Avg.	On Job or Accreditation	\$52,260
Mechanical Engineer	9%	Average	BA or MS	\$84,190
Business				
Mathematician	29%	Below Avg.	BA or MA	\$105,810
Operations Research Analyst	27%	Above Avg.	BA or MA	\$79,200
Accountant	10%	Average	BA	\$68,150
Financial Advisor	14%	Above Avg.	BA	\$90,530
Actuary	22%	Average	BA	\$100,610
Statistician	33%	Below Avg.	BA or MA	\$80,500
Financial Manager	19%	High	BA	\$121,750
Marketing Manager	19%	Above Avg.	BA	\$131,180
Cost Estimator	11%	Above Avg.	BA	\$61,790
Business Op . Manager	9%	Above Avg.	BA or MA	\$99,310
Social Services				
Lawyer	9%	High	Juris Doc.	\$118,160
Construction				
Plumber	16%	Average	License	\$51,450

Four of the five bottom-ranked states overall for starting businesses all have high corporate income tax rates compared to the national average. Texas (#1) doesn't even have a corporate income tax, while the other top four are all on the lower side.

How High Are Corporate Income Tax Rates in Your State?

Top State Marginal Corporate Income Tax Rates in 2018



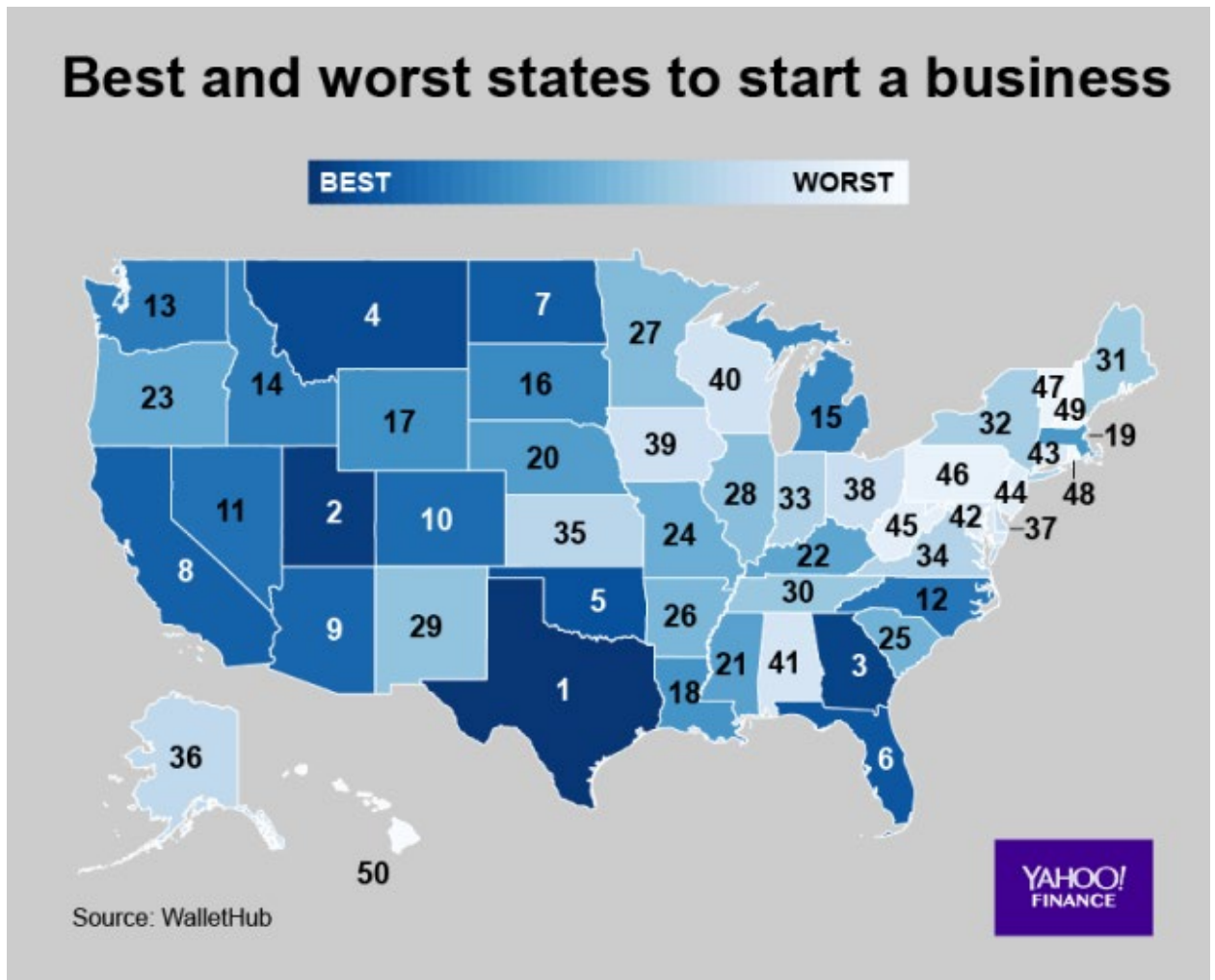
Note: (*) Nevada, Ohio, Texas, and Washington do not have a corporate income tax but do have a gross receipts tax with rates not strictly comparable to corporate income tax rates. Arkansas has a "benefit recapture," by which corporations with more than \$100,000 of taxable income pay a flat tax of 6.5% on all income, not just on amounts above the benefit threshold. Connecticut's rate includes a 10% surtax, which effectively increases the rate from 7.5% to 8.25%. Surtax is required by businesses with at least \$100 million annual gross income. Illinois' rate includes two separate corporate income taxes, one at a 7.0% rate and one at a 2.5% rate.

Source: State tax statutes, forms, and instructions; Bloomberg BNA



Texas is the best state to start your own business and Hawaii is the worst, according to a study from WalletHub.

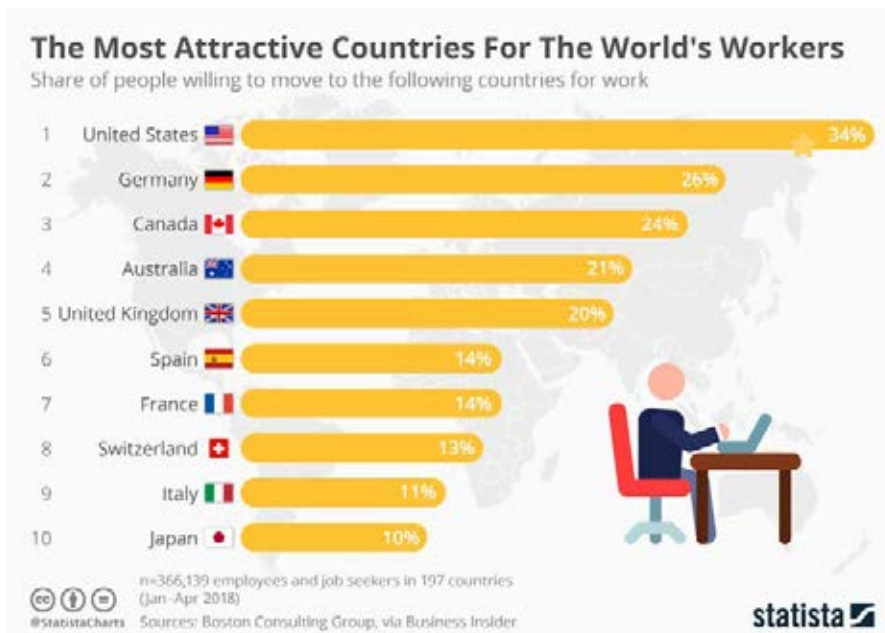
The personal finance site analyzed data from a variety of sources — including the U.S. Department of Labor and Statistics, the U.S. Census Bureau — and found that the top five states to start a business were Texas, Utah, Georgia, Montana, and Oklahoma. The bottom five were Pennsylvania, Vermont, Rhode Island, New Hampshire, and Hawaii.



CareerCast.com's 10 toughest jobs to fill for 2018 focuses on some of the positions this year most aggressively pursuing candidates, based on Bureau of Labor Statistics forecasts, trade and professional association data, graduation rates, and CareerCast.com's own database of job listings. Factors driving demand vary, as do causes behind employers having difficulty filling positions. Not enough people with the skills to do the job, a lack of new graduates in the profession, and industry growth are among the reasons certain jobs are harder to fill than others.

10 Hardest Jobs to Fill in America	
1	Truck Driver
2	Physical Therapist
3	Personal Care Aide
4	Home Health Aide
5	Information Security Analyst
6	Nurse Practitioner
7	Medical Services Manager
8	Financial Analyst
9	Construction Laborer
10	Software Developer

Source: CareerCast.com



According to a major survey by the Boston Consulting Group, 57 percent of 366,000 people from 197 countries expressed desire to move to another country for work. While this is a considerable decline from 64 percent expressing the same desire in 2014 it's still a large number of workers who aren't happy with the situation at home. Out of those that claimed they would move abroad, 34% said the US would be their prime destination.

Fastest growing occupations: 20 occupations with the highest percent change of employment between 2016-26.

Click on an occupation name to see the full occupational profile.

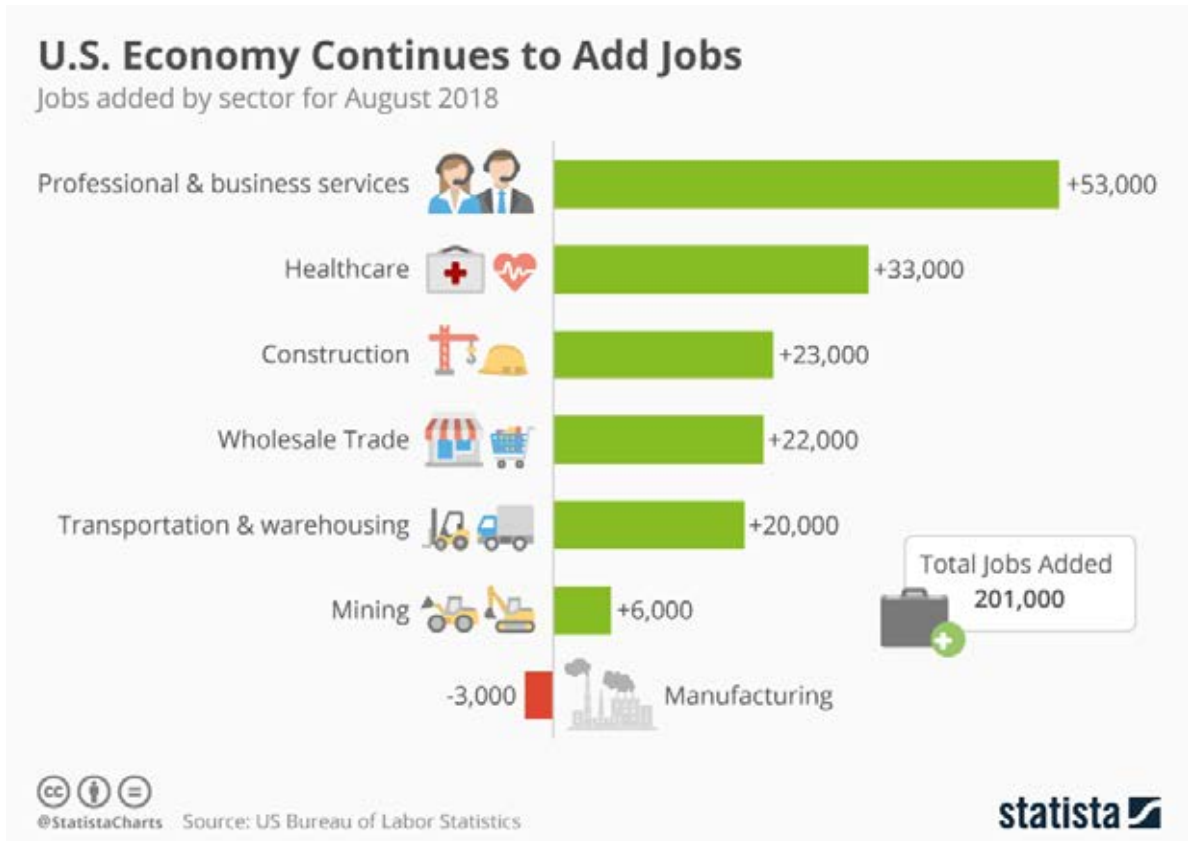
OCCUPATION	GROWTH RATE, 2016-26	2017 MEDIAN PAY
Solar photovoltaic installers	105%	\$39,490 per year
Wind turbine service technicians	96%	\$53,880 per year
Home health aides	47%	\$23,210 per year
Personal care aides	39%	\$23,100 per year
Physician assistants	37%	\$104,860 per year
Nurse practitioners	36%	\$103,880 per year
Statisticians	34%	\$84,060 per year
Physical therapist assistants	31%	\$57,430 per year
Software developers, applications	31%	\$101,790 per year
Mathematicians	30%	\$103,010 per year
Physical therapist aides	29%	\$25,730 per year
Bicycle repairers	29%	\$28,390 per year
Medical assistants	29%	\$32,480 per year
Genetic counselors	29%	\$77,480 per year
Occupational therapy assistants	29%	\$59,310 per year
Information security analysts	28%	\$95,510 per year
Physical therapists	28%	\$86,850 per year
Operations research analysts	27%	\$81,390 per year
Forest fire inspectors and prevention specialists	27%	\$37,380 per year
Massage therapists	26%	\$39,990 per year

Last Modified Date: Friday, April 13, 2018

Source: bls.gov

The United States economy is humming along, with over 200,000 jobs added in August and the unemployment rate at a cool 3.9 percent. The economy has been adding jobs for 95 months straight as of last month. The U.S. experienced job gains across most sectors, except for manufacturing. The sector saw a small drop in jobs, the first in a little over a year.

Average wages showed some signs of growth, indicating a tightening job market. Average hourly wage growth moved up by less than half a percent last month, the largest jump since 2009. Some experts say this may be a sign that employers are trying to hold onto their workers ahead of the seasonal hiring spree.



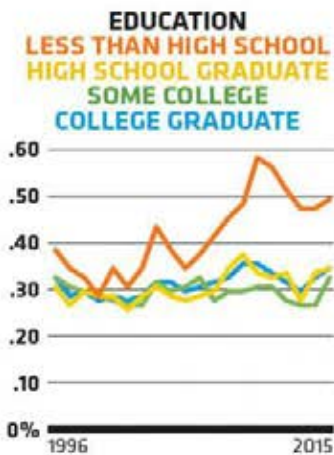
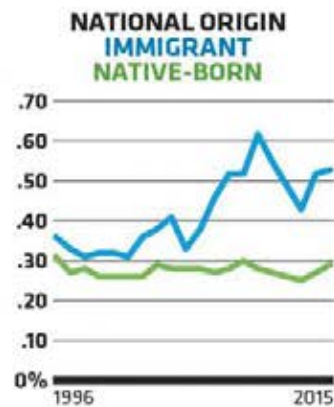
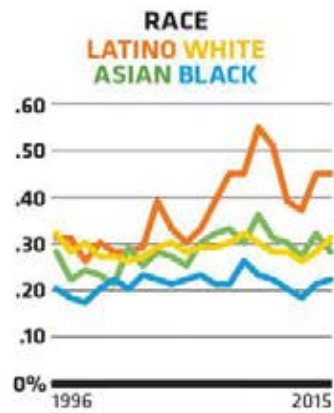
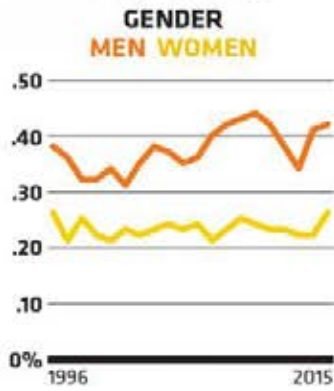
- The strong representation of women on the Upstart 25 list reflects the growth of female entrepreneurship both at home and abroad. Women now make up 40 percent of new entrepreneurs in the United States — the highest percentage since 1996, according to the 2016 Kauffman Index of Startup Activity.

Meanwhile, in the 40 economies participating in the sweeping Global Entrepreneurship Monitor (GEM) survey in both 2011 and 2016, women's entrepreneurship rates rose by 13 percent on average, while male rates increased by 5 percent, according to lead author Donna Kelley, a professor of entrepreneurship at Babson College, which prepares the report with Baruch College.

The growth has been very swift in recent years. From 2015 to 2016, women's entrepreneurship rates increased by 10 percent on average versus 5 percent for males, across 51 economies that participated in the GEM survey. And in 29 of the 51, the ratio of male to female entrepreneurs has increased.

- In the US, recent studies show that a record number of Americans identify themselves as entrepreneurs—approximately 27 million people, or 14% of all working-age adults; one in four millennials say they would like to eventually own their own business; and in higher education there's been a well-documented explosion of innovation and entrepreneurship (I&E) courses, programs, makerspaces, accelerators, competitions and more. Globally, countries from Vietnam to Senegal to Peru are developing innovative ecosystems, building networks, and expanding impact.

The growth rate of new entrepreneurs by:



"Conditions for private companies today are very favorable," says Brian Hamilton, chairman of Sageworks, which tracks some 400,000 companies. Sales are still rising more than 7%, net profit margins even more.
CREDIT: Sageworks



65%
The average approved in bank loans sought

\$100,000
Median amount applied for—all capital sources



\$40,500
What entrepreneurs actually walked away with

Babson College's survey found that borrowers were getting a lot less than they asked for. And just 21% said it was important that their lending institution be in the community. Big banks are coming back into the game.
CREDIT: Babson College, State of Small Business in America 2016

The 2014 Annual Survey of Entrepreneurs statistics show that there were 949,318 minority-owned firms with paid employees, comprising 17.5 percent of all employer firms. These minority-owned employer firms generated \$1.1 trillion in receipts (approximately 3.3 percent of the receipts for all employer firms). Among minority-owned employer firms, 12.9 percent had been in business for less than two years, while only 1.4 percent had been in business for 16 or more years.

Of the 949,318 minority-owned firms with paid employees, more than half (506,595, or 53.4 percent) were Asian-owned; 108,473 (11.4 percent) were black or African-American-owned; 26,757 (2.8 percent) were American Indian or Alaska Native-owned; 4,701 (0.5 percent) were Native Hawaiian and Other Pacific Islander-owned; and close to a third (298,563, or 31.5 percent) were Hispanic-owned. The owner of a Hispanic-owned firm may be of any race.

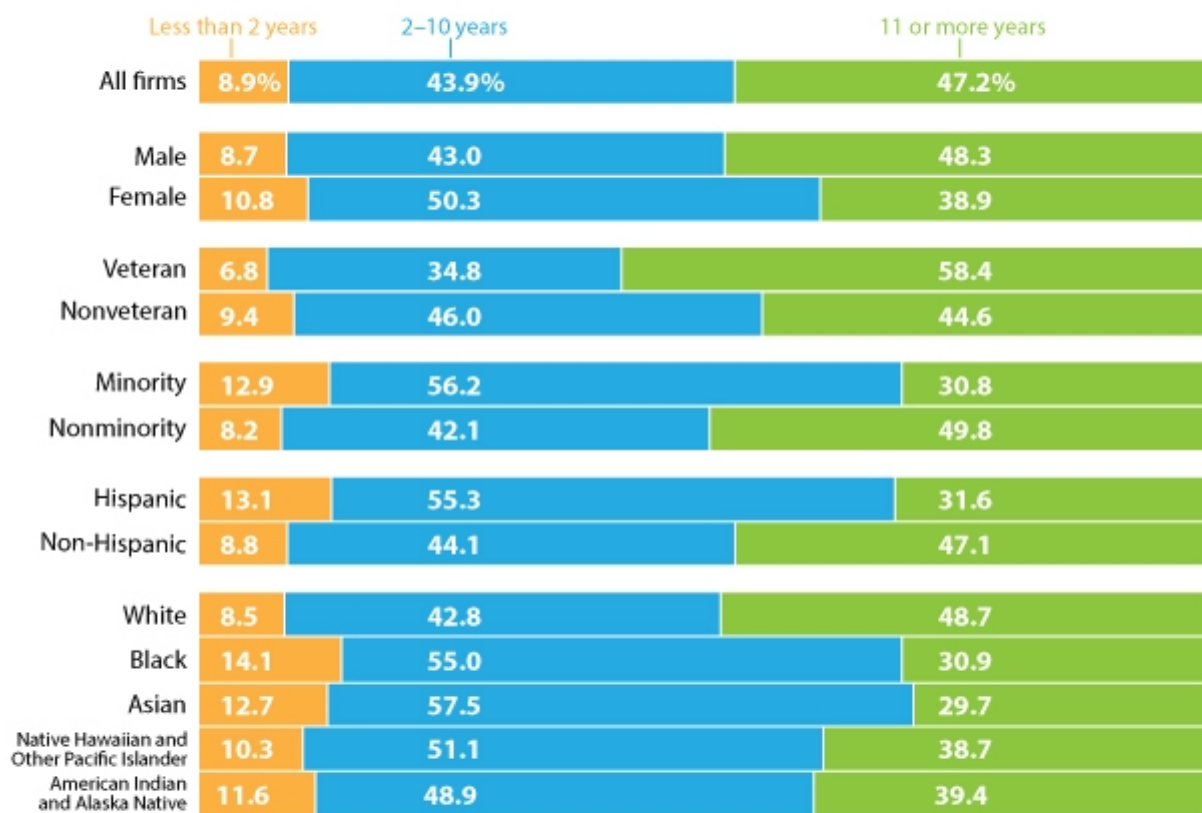
Women owned approximately 1.1 million employer firms, or 19.4 percent, with receipts totaling \$1.3 trillion, or 4.0 percent. Of these, 10.8 percent had been in business for less than two years, whereas 1.9 percent had been in business for 16 or more years.

Veterans owned 405,235 employer firms, or 7.5 percent, with receipts of \$924.1 billion, or 2.8 percent. Of these, 6.8 percent had been in business for less than two years, while 3.6 percent had been in business for 16 or more years.



America's Entrepreneurs

How Long Have America's Firms Been in Business?



Note: The number of years a firm has been in business is determined by the first year that the Census Bureau received administrative records data for the business. This graphic does not show firms that are equally owned by men and women, veterans and nonveterans, minorities and nonminorities, nor Hispanic and Non-Hispanic. In some instances, percentages do not add to 100 due to rounding.



Top States for Women Entrepreneurs

- | | |
|----------------|------------|
| 1 North Dakota | 6 Maryland |
| 2 South Dakota | 7 Maine |
| 3 Hawaii | 8 Iowa |
| 4 Minnesota | 9 Colorado |
| 5 Virginia | 10 Montana |

#6: Maryland



Fundera Score: 61.37

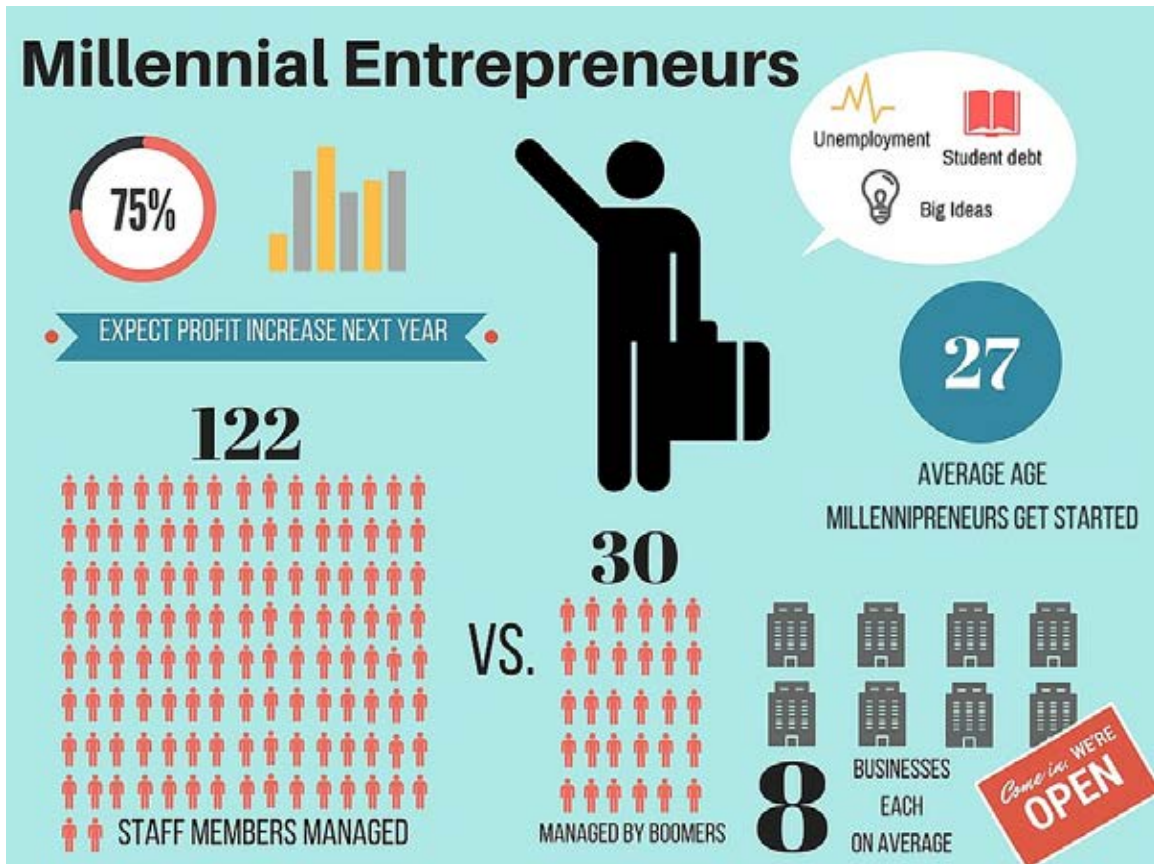
The Good:

- % of Total Businesses Owned by Women: 40.1% (3rd)
- % of Women with Bachelor's Degree or higher: 21% (9th)
- 5-year growth in average revenue of Women-Owned Businesses: 31.6% (12th)

The Bad:

- 5-year growth in number of Women-Owned Businesses: 21.5% (34th)
- % of Women-Owned Businesses with Paid Employees: 9.9% (40th)

Millennials are introducing businesses around the age of 27, while their parents didn't launch their first businesses until the age of 35 or so. The rapid advancement of technology has definitely aided Millennials in the success of business launches, but it's also an overall acceptance of their position. Society has shifted in the sense that young business owners are accepted and respected just as much as seasoned veterans who have been behind the desk or cash for 30 or more years. Millennials have surpassed nearly one third of boomers with 75% expecting their profits to increase within the next year, proving they are clearly attacking markets in the right way.



State of Maryland

- Maryland's state minimum wage rate is \$10.10 per hour. This is greater than the Federal Minimum Wage of \$7.25. You are entitled to be paid the higher state minimum wage. The minimum wage applies to most employees in Maryland, with limited exceptions including tipped employees, some student workers, and other exempt occupations.

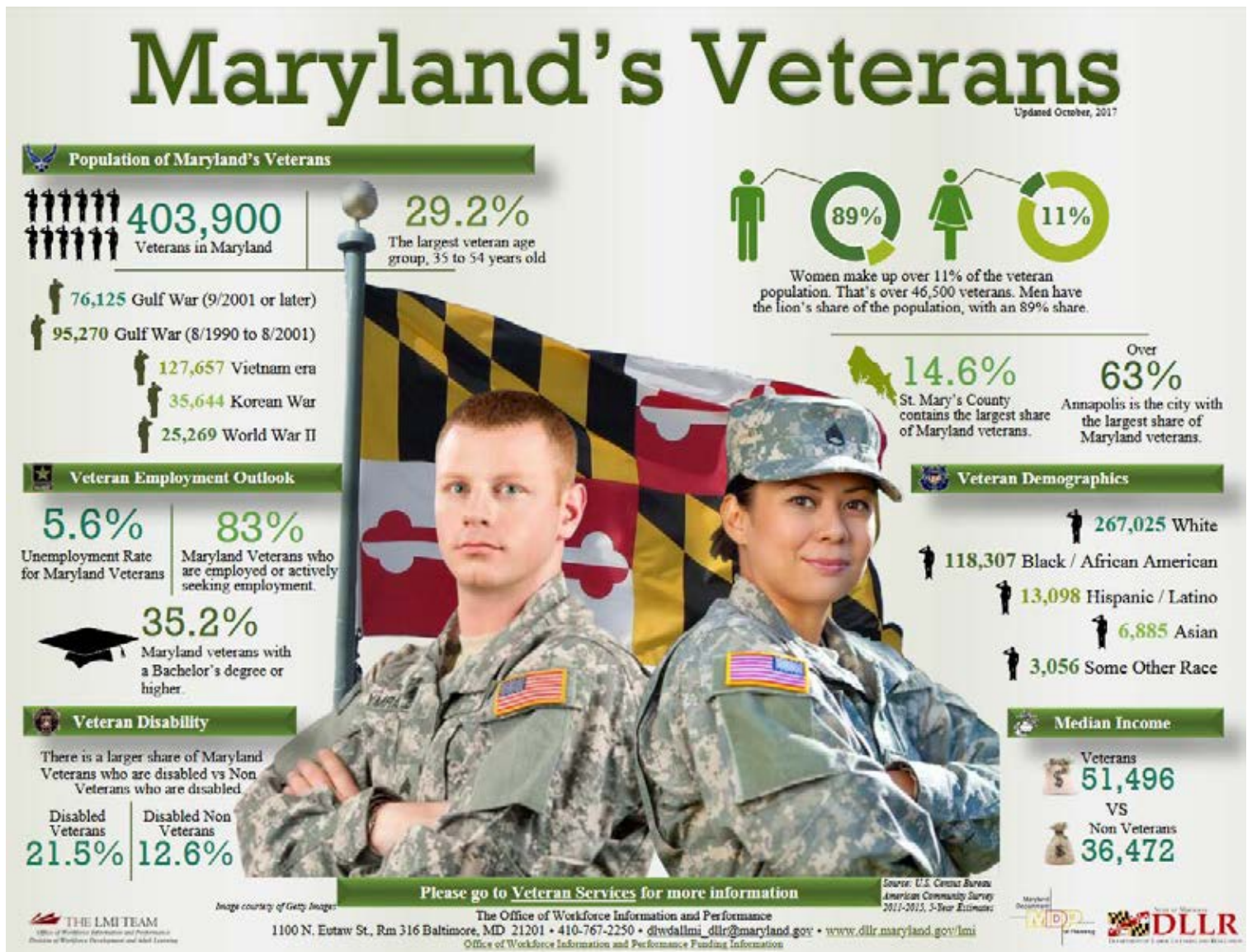
The Maryland minimum wage was last changed in 2008, when it was raised \$3.55 from \$6.55 to \$10.10. Maryland's minimum wage rate is linked to a Consumer Price Index, which is intended to raise the rate along with inflation. The current minimum wage rate is re-evaluated yearly based on these values.

- In 2013, the Maryland civilian labor force totaled 3,127,700 workers, with almost 90 percent living within the central Maryland region. The Maryland work force is highly industrious—nearly 70 percent of the state's population 16 years and older is in the labor force. During the current decade, Maryland's labor force is projected to increase by over 200,000, with participation remaining high. The state boasts a large number of female workers, as well as workers in the experienced 25 to 44 year age group.
- Maryland is home to a highly skilled civilian labor force of over three million workers, and filling this labor pipeline is a network of 57 accredited two-and four-year colleges and universities currently serving over 357,000 students around the state. The second highest concentration of professional and technical workers among the states, and the highest proportion of doctoral scientists and engineers in the nation can be found in Maryland. Though the workforce is highly skilled, wages in the state remain competitive, offering employers an exceptional value.
- In 2014, Maryland was ranked first in the nation in "Entrepreneurship and Innovation" by the U.S. Department of Commerce for the third year in a row. Maryland also ranked first for concentration of businesses and jobs in science, technology, engineering, and mathematics.
- In 2014, Maryland exports reached a record \$12.2 billion (State Exports via Maryland , U.S. Census Bureau). Trade to countries specifically targeted, such as Egypt and China, grew by 74% and 27% respectively. Key exports include transportation equipment, chemicals, and electronics

With 178,300 workers in 2014, Maryland tech employment density is the fourth highest in the nation. Aiding the State's growth is the InvestMaryland Program,

which added \$84 million to Maryland's high-tech base during Fiscal Year 2012, and is overseen by the Maryland Venture Fund Authority.

- In 2014, Maryland ranked second in the nation in the fields of technology and science, as well as in human capital investment (Milken Institute index). Human capital investment is determined by creating a population average of SAT and ACT test scores, state education appropriations and spending, as well as academic degrees, particularly in the fields of engineering and sciences. Some 11,440 high-tech companies were located in Maryland as of 2013.



- Maryland has more than 30 incubators, which provide companies with workspaces and resources and serve as hubs of innovation for the state's robust network of startups. Many incubators are mixed-use and others are industry-specific for companies in markets ranging from education technology to clean technology.

-

Software and biotech companies pulled in the biggest investments, both nationally and within the D.C. metro region, which includes the District, Maryland, Virginia and West Virginia.

The biotech industry is experiencing a financing boom due to research breakthroughs that have made venture capitalists more willing to invest in them, said Phillips.

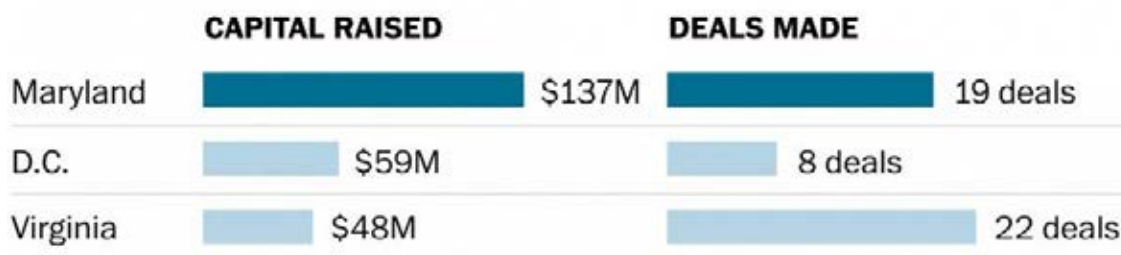
Nationwide, biotech companies picked up \$2.2 billion in 126 deals in the quarter, while software companies picked up \$7.3 billion in 491 deals. Silicon Valley-based companies led the pack, followed by those based in the New York metro region and New England.

In the Washington region, Maryland brought in the most money.

Maryland-based companies brought in more than \$137 million raised in 19 deals, up from \$63 million in 25 deals a year ago. Many biotech firms are located in Montgomery County, which is also home to the National Institutes of Health and the Food and Drug Administration.

Maryland sees biotech venture capital boom

U.S. companies raised a historic \$17.5 billion in venture capital last quarter. Growth in the D.C. area was led by biotech and software companies.



Source: PwC/NVCA/Thomson Reuters

THE WASHINGTON POST

- Maryland's private nonprofit organizations the second largest industry in the state in terms of employment behind only retail trade. More specifically, Maryland nonprofits employ nearly six and a half times as many workers as the real estate industry, more than six times as many workers as the information industry and about three and a half times as many workers as the transportation industry. Nearly three times as many workers as the finance and insurance industry and more than two and a half times as many workers as state government. About two and a half times as many workers as the manufacturing industry and nearly twice as many workers as the construction industry.
- Maryland ranks first among the states in the percentage of professional and technical workers (28.3%) in the workforce.
- Maryland ranks third among the states in the percentage of the population age 25 and above with a bachelor's degree or higher (39.3%) and second in the percentage with a graduate or professional degree (18.5%).
- According to the Cyberstates 2017 report, Maryland ranks fifth in the concentration of tech jobs in the private sector workforce (8.6%) and sixth in the tech concentration in the total workforce (7.0%). Maryland ranks seventh among the states in average tech industry wages (\$107,193), seventh in the ratio of female workers in tech occupations (23.6%), and eighth for tech GSP as a percentage of total GSP (8.8%). Further, the state places ninth for most new tech startups and new tech business establishments in 2015 (1,040).
- Maryland ranks fourth among the states in federal government employment, with 145,783 non-military federal jobs in 2016. On a per capita basis, the state ranks first with 242 federal jobs per 10,000 residents. Non-military federal jobs generate \$14.5 billion in total wages in Maryland, ranking fourth among the states. Further, these jobs pay better in Maryland than in any other state, with an average annual wage of \$99,351, which is 27% higher than the national average.

- Sixty percent of Maryland's manufacturers are advanced – producing high-mix, low volume, high technology products. Using advanced materials, processes and machinery, companies develop heavily engineered, customized products such as sensors, unmanned and autonomous systems, medical devices, electronics and capital equipment.
- Manufacturing Maryland's traditional manufacturing industry includes a diverse blend of companies, some over 100 years strong. Spanning the continuum is W.R. Grace, established in the 1800s, the second longest operating chemical company in the U.S. and a leading global supplier of catalysts and engineered materials with sales of \$1.6 billion in 2016. The state hosts a variety of 21st century industries including defense electronics, aeronautics, systems engineering, medical diagnostics, specialty chemicals, software and aircraft engines. Further, moving products to market is enhanced by the states central east coast location and excellent transportation infrastructure, including a deep water port, two Class 1 railroads, five major interstate highways, and access to four international airports. Maryland's 3,740 manufacturing businesses generate \$20.73 billion in gross state product. Major Manufacturing Employers in Maryland Employer Employment Product / Service Northrop Grumman 10,365 Electronic systems Lockheed Martin 3,255 Aerospace and electronics MedImmune/Astra Zeneca 2,920 Pharmaceuticals W. L. Gore & Associates 2,405 GORE-TEX® products McCormick & Company 1,900 Food flavorings Under Armour 1,855 Sports apparel BD Diagnostics 1,580 Medical equipment H&S Bakery 1,575 Commercial food products Perdue Farms 1,500 Poultry processing Volvo Powertrain 1,300 Diesel engines and transmissions Note: Numbers are rounded. Source: Maryland Department of Commerce, July 2017.
- Industry Snapshot – Manufacturing in Maryland v Employment (2016) – 103,330 jobs Leading subsectors: □ Computer and electronic product manufacturing – 17,600 jobs □ Food manufacturing – 15,100 jobs □ Chemical manufacturing – 11,500 jobs □ Fabricated metal product manufacturing – 7,900 jobs v Business establishments (2016) – 3,740 v Total wages (2016) – \$7.63 billion v Average salary (2016) – \$73,840 v Gross state product (2015) – \$20.73 billion 0817 Manufacturing ♣ page 2 v Federal procurement (FY2016) – \$4.5 billion v Exports (2016) – \$9.3 billion Sources: Maryland Department of Labor, Licensing and Regulation; U.S. Bureau of Economic Analysis; U.S. Census Bureau

- According to a study on business taxes by Ernst & Young, Maryland businesses pay the second lowest share of state and local taxes, with business taxes accounting for 30.5% of total taxes collected in the state, compared with 45.2% for the national average. Further, Maryland ranks ninth nationally in state and local business taxes as a share of private sector GSP. Maryland has a total effective business tax rate of 4.0% on economic activity compared with 4.8% for the U.S. as a whole.
- In the 2014 Enterprising States study which looks at how states are creating an environment in which the private sector can thrive, Maryland ranks first in “Technology and Entrepreneurship,” and third in the human capital “Talent Pipeline.”
- In the 2013 Business Facilities Ranking Report, Maryland ranks first overall among the states in education climate, fifth in per capita income and eighth in installed solar power capacity. In the logistics category, the Port of Baltimore ranks third among U.S. ports, and the Baltimore Foreign Trade Zone #74 ranks third among top FTZs in merchandise received.
- Maryland is a thriving location for space exploration, satellite technology and research, design and manufacturing of UAVs and robotics. The industry includes Department of Defense related activities such as biodefense, cybersecurity, avionics, informatics and ordnance and weapons testing. Under the Base Realignment and Closure (BRAC) process, Maryland added thousands of jobs, primarily at Aberdeen Proving Ground, Fort Meade, and the Naval National Medical Center at Bethesda. Maryland's 8,520 aerospace and defense businesses annually generate \$35.45 billion in economic activity and secure \$7.33 billion in federal contracts.
- Maryland's 11,440 information technology businesses are annually awarded \$9.92 billion in federal contracts and generate \$37.79 billion in economic activity, making it one of the nation's leaders and a major economic engine for the state.
- In 2014, Maryland ranked 4th nationally in concentration of technology jobs: 86 of every 1,000 private sector workers. The average annual wage for employees in this field is \$101,849, the eighth highest in the nation.

**Top Highest-Paying Occupations by Median Hourly Wages in 2017
Requiring an Associates' Degree or Post-Secondary Training
For the State of Maryland**

#	Occupation	Median wages, 2017	
		Hourly	Annual
1	Air Traffic Controllers	\$54.39	\$113,100
2	Funeral Service Managers	\$45.08	\$93,800
3	Dental Hygienists	\$43.06	\$89,600
4	Engineering Technicians, Except Drafters, All Other	\$41.56	\$86,400
5	Nuclear Medicine Technologists	\$38.09	\$79,200
6	Magnetic Resonance Imaging Technologists	\$35.90	\$74,700
7	Diagnostic Medical Sonographers	\$35.68	\$74,200
8	Aerospace Engineering and Operations Technicians	\$34.56	\$71,900
9	Avionics Technician	\$34.54	\$71,800
10	Electrical and Electronic Engineering Technicians	\$34.22	\$71,200
11	Web Developer	\$33.57	\$69,800
12	Respiratory Therapists	\$32.63	\$67,900
13	Computer Network Support Specialist	\$32.49	\$67,600
14	Electro-Mechanical Technician	\$32.44	\$67,500
15	Radiation Therapists	\$31.86	\$66,300
16	Radiologic Technologists	\$32.07	\$66,700
17	Radio, Cellular, and Tower Equipment Installers & Repair	\$31.29	\$65,100
18	Industrial Engineering Technicians	\$30.85	\$64,200
19	Occupational Therapy Assistants	\$30.78	\$64,000
20	Broadcast Technicians	\$29.85	\$62,100
21	Respiratory Therapy Technicians	\$29.30	\$60,900
22	Morticians, Undertakers, and Funeral Directors	\$28.81	\$59,900
23	Legal Support Workers	\$28.75	\$59,800
24	Physical Therapist Assistant	\$28.72	\$59,700
25	Electrical and Electronics Drafters	\$28.41	\$59,100

Careeronestop.org

LEADERSHIP AND WORK EXPERIENCE MATTER MOST IF YOU CAN LAND THE INTERVIEW

On average, employers resoundingly selected these two areas over GPA, with “Honors and Awards” and “Community Service” having the least impact. This is consistent with the fact that a strong majority of firms (63%) had defined core competencies that they were looking for in candidates. They were looking for specific skill sets, not just good grades. Community service — which many believe to be very important in the college selection process — did not matter greatly in the recruitment process. We asked recruiters to rank the importance of these various factors in their recruitment process from most important (1) to least important (6).

**Average Rank of Importance by Recruiters
(1 = Most Important, 6 = Least Important)**



In calendar year 2014, at least 264 projects were publicly announced in 21 local jurisdictions, representing 10,172 new jobs and \$8.2 billion in capital investment. Of these, 42 are businesses new to Maryland (or to a Maryland labor market) and 222 are expansions of existing businesses. Publicly announced plans for new establishments in calendar year 2014 represented at least 5,631 new jobs and \$1.8 billion in capital investment. Major new projects (ranked by number of new jobs) include:

- MGM National Harbor (Prince George's) – 4,000 new jobs, \$925M investment
- Capitol Concierge, Inc. (Montgomery) – 400 new jobs
- IronNet Cybersecurity (Howard) – 260 new jobs
- WebstaurantStore (Allegany) – 150 new jobs • Gordon Food Service, Inc. (Harford) – 150 new jobs, \$60M investment
- Compass Pointe Healthcare (Baltimore Co.) – 125 new jobs
- SAK Construction (Baltimore Co.) – 50 new jobs
- Salsa Labs, Inc. (Montgomery) – 50 new jobs, \$1M investment
- Quantum Controls, Inc. (Cecil) – 45 new jobs
- VSP Global (Baltimore Co.) – 40 new jobs
- Immunodiagnostic Systems (Montgomery) – 37 new jobs
- The Ivy Hotel (Baltimore City) – 30 new jobs, \$18M investment
- ScholarChip Card LLC (Baltimore Co.) – 30 new jobs

Publicly announced planned expansions of existing businesses in calendar year 2014 represented at least 4,541 new jobs and \$6.3 billion in capital investment. Major expansions (ranked by number of new jobs) include:

- Coastal Sunbelt Produce (Howard County) – 400 new jobs, \$1M investment
- MedImmune (Frederick County) – 300 new jobs, \$200M investment
- Costco Distribution Center (Frederick County) – 200 new jobs
- Sourcefire, Inc. (Howard County) – 200 new jobs
- Thompson Creek Window Company (Prince George's County) – 200 new jobs
- BSC America (Harford County) – 150 new jobs, \$20M investment
- Smiths Detection, Inc. (Harford County) – 141 new jobs
- Cinemark Towson and XD (Baltimore County) – 125 new jobs
- Tractor Supply Company (Washington County) – 125 new jobs
- Rapid Financial Services, LLC (Montgomery County) – 124 new jobs, \$2.5M Investment

**Maryland Employment and Wages by Industry
Annual Average – By Place of Work**

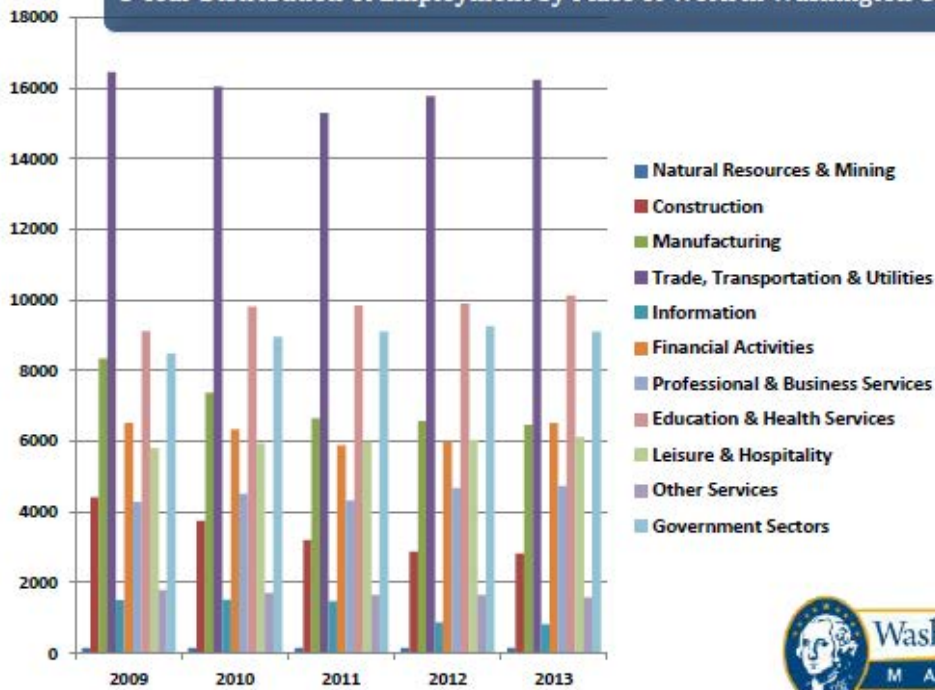
Industry Group	Number of Business Establishments	Employment	Percent of Total Employment	Average Weekly Wage
TOTAL	171,480	2,626,510	100.0	\$1,118
Total Government Sector	3,541	486,101	18.5	\$1,317
Federal Government	1,007	145,800	5.6	\$1,912
State Government	443	97,937	3.7	\$1,099
Local Government	2,091	242,364	9.2	\$1,046
Total Private Sector	167,939	2,140,409	81.5	\$1,072
<i>Goods-Producing</i>	20,960	270,891	10.3	\$1,276
Natural Resources and Mining	727	6,431	0.2	\$784
Construction	16,423	160,868	6.1	\$1,203
Manufacturing	3,810	103,592	3.9	\$1,419
<i>Service-Providing</i>	146,907	1,869,496	71.2	\$1,043
Utilities	169	9,838	0.4	\$2,298
Wholesale Trade	10,598	85,919	3.3	\$1,490
Retail Trade	18,791	290,416	11.1	\$592
Transportation and Warehousing	3,911	74,975	2.9	\$992
Information	2,701	37,695	1.4	\$1,675
Financial Activities	15,042	139,872	5.3	\$1,706
Professional and Business Services	41,556	442,057	16.8	\$1,439
Education and Health Services	20,040	425,693	16.2	\$1,004
Leisure and Hospitality	14,599	272,346	10.4	\$431
Other Services	19,500	90,685	3.5	\$775

Source: Maryland Department of Labor, Licensing and Regulation, Office of Workforce Information and Performance. Date of data: 2016.

Notes: Details may not add to totals due to rounding and exclusion of some industries. The statistics in this table are from Maryland's QCEW Program, which covers over 91 percent of all civilian employment in the state. Data are based on the North American Industrial Classification System (NAICS).

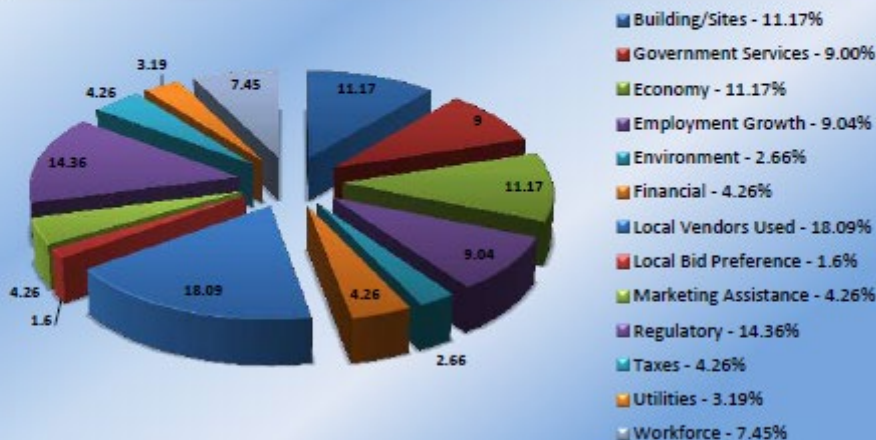
Employer Outlook

5 Year Distribution of Employment by Place of Work in Washington County



Business Outreach and Retention

Washington County Business Outreach Program Trending Chart



- Compared to the Washington/Baltimore metro region, the cost of doing business in Washington County is 18% lower and the cost of living is 23% lower. With a pro-business climate and lower operating costs, manufacturers greatly benefit from the County's manufacturing-friendly tax environment.
- A diversified regional workforce of 400,000 (skilled and manufacturing-oriented) includes over 12% of the employment base in advanced manufacturing. Customized workforce and training development programs are also offered through the Western Maryland Consortium, higher learning institutions, and Washington County Public Schools Academy of Manufacturing & Engineering
- Hagerstown has an established defense presence and is an ideal place to conduct defense related work because it is outside of Washington, DC's highly-controlled air traffic area, but still within an hour's drive of the Pentagon. Existing infrastructure such as the extended airport runway, aviation workforce, telecommunications, and local shipping powerhouses nearby, help businesses easily succeed at HGR.

Washington County is a major industrial and transportation hub in the Mid-Atlantic region. Interstates 81, 70 and 68, coupled with excellent rail service, provide easy market access. The Hagerstown Regional Airport is a fully instrumented airfield with the second-longest commercial runway in the state. In fact, assets such as the airport helped the county earn recognition as one of the country's "Top Five Defense Destinations" by Expansion Solutions magazine. Hagerstown, the county seat and business center, is Maryland's sixth largest city and is easily accessible to both Baltimore and Washington, D.C. Washington County's 3,410 businesses employ 58,000 workers; over 90 of these businesses have 100 or more workers. Key employers include The Bowman Group, Citi, FedEx Ground, First Data, Fives Cinetic, Meritus Health System, Sierra Nevada, Staples Distribution, and Volvo Group. Washington County is home to more than twenty industrial, technology and business parks, Foreign Trade Zone #255, and two State Enterprise Zones. A significant project announced in 2018 is a \$62.5 million investment by Trammell Crow to construct a new 1.2 million-square-foot distribution center. Other projects under development include a joint venture between the county and the City of Hagerstown for an Urban Improvement Plan with a \$40 million renovation to the Maryland Theatre.

Washington County and Hagerstown are historical aviation centers. The Hagerstown Regional Airport (HGR) has been a hub of the aviation business since before World War II, so consequently there is an available workforce with a strong background and training in aircraft maintenance and modifications.

Southern Business & Development magazine, ranks Hagerstown-Washington County as one of 20 areas in the Southern United States that feature a robust defense industry. This is attributed to the strong aero defense presence and growth at HGR.

Historically, Hagerstown's nickname of the "Hub City" came from the large number of railroads that served the city. Today that nickname applies as the intersection of Interstates 81 and 70, which makes Washington County a critical transportation hub. Business growth along the interstate corridors has created more employment opportunities in the Western Maryland. In addition, this interstate system established Washington County as a home for commuters to the Baltimore and Washington DC employment areas.

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The historic development of Washington County has led to a unique blending of the past with the present. A challenge for the County is the preservation and balance of its historic rural character with the need to grow in order to effectively compete in the new global economy.

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Biotechnology

Located an hour from Washington, DC's biotech corridor and less than 30 minutes from well-known national biodefense resource Fort Detrick in Frederick, Maryland, Washington County is an affordable place to do business with close proximity to local metropolitan areas.

About 25% of Fort Detrick's employees live in Washington County, MD and the activities and related agencies at Fort Detrick generate more than \$1.7 billion in economic activity in the region.

Hagerstown-Washington County is a transportation hub for the regional economy with easy access to major Atlantic coast cities and the Midwest. With three interstates, a regional airport, two major rail providers, and a location less than 90 minutes from the Port of Baltimore, our transportation infrastructure is unmatched.

- Washington County's available, relatively low-cost land, as well as its comparative lower property taxes and operating costs, make the area potentially attractive for start-up and expanding companies. The county's proximity to the Baltimore-Washington metropolitan area makes it an attractive site for a variety of businesses and its transportation network incorporates air, rail, and interstate connections.
- Likely future career growth areas in the local workforce include healthcare; education; law enforcement; biotechnology; advanced technology including systems and management; financial services; defense industries; government; security; gerontology; and hospitality/tourism/culinary arts. The clinical and allied health fields are the single most promising sources of jobs locally, where demand for nurses and a broad range of other medical support workers will be substantial, especially as the population ages.
- The College's role in the County's and State's economic development continues to expand. HCC's clinical and allied health programs, along with other certificate/degree programs including teacher education, business, technology-related development, and workforce development, will expand to help meet State and local work force needs.

Distribution by Place of Work			
	Employment	Percent	Weekly Wage
Total Employment	66,884	100	\$822
Federal Government	592	0.9	\$1,024
State Government	2,216	3.3	\$976
Local Government	5,877	8.8	\$862
Private Employment	58,270	87.0	\$763
Natural Resources & Mining	146	0.2	\$847
Construction	2,825	4.2	\$872
Manufacturing	6,356	9.5	\$1,107
Trade, Transportation & Utilities	17,293	25.8	\$667
Information	691	1.0	\$931
Financial Activities	6,224	9.3	\$979
Professional & Business Services	5,553	8.3	\$819
Education & Health Services	10,861	16.2	\$835
Leisure & Hospitality	6,655	9.9	\$301
Other Services	1,666	2.5	\$553

* Figures represent the number of employees in the County from any origin. NOTE: Percentages may not total 100% due to rounding.

SOURCE: 2016 Annual Averages; Quarterly Census of Employment & Wages - Bureau of Labor Statistics (2016)

A large percentage of the local workforce is devoted to health care and services; financial services; education; state and local government; and transportation and warehousing.

Top 15 Employers in Washington County - 2016	
Employer	Employment
Washington County Public Schools	3,100
Meritus Medical Cnter	2,740
Citi	2,300
First Data	2,185
Washington County Government	1,352
Volvo Group	1,300
Fedex Ground	900
Hagerstown Community College	890
Bowman Group, LLC (The)	745
Federal Government*	567
Merkle Response Management Group	545
City of Hagerstown	500
Direct Mail Processors	500
City of Hagerstown	486
Brook Lane Health Services	485

SOURCE: Washington County Department of Business Development, based on 2016 year-end data reported by employers; Maryland Department of Commerce, Brief Economic Facts: Washington County, Maryland

Regional Workforce Draw - June 2017

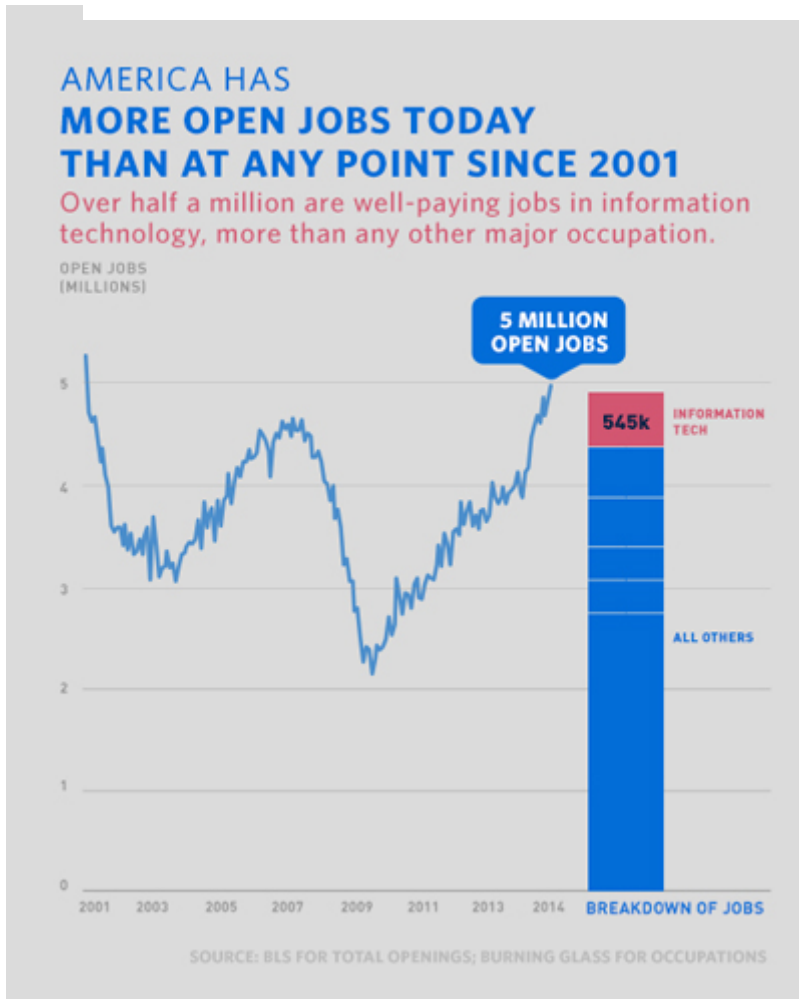
State/County	Population*	Labor Force	Employed	UE	UE Rate	No. of Commuters into W. County**
State of Maryland	6,016,447	3,230,814	3,098,784	132,030	4.1%	
United States	323,127,513	160,145,000	153,168,000	6,977,000	4.4%	
Maryland						
Washington County	150,292	78,208	74,687	3,521	4.5%	21,987***
Allegany County	72,130	32,556	30,663	1,893	5.8%	588
Frederick County	247,591	133,260	12,296	4,964	3.7%	1,968
Pennsylvania						
Franklin County	153,851	77,300	73,800	3,500	4.6%	9,284
Fulton County	14,640	7,200	6,800	400	5.1%	1,142
West Virginia						
Berkeley County	113,525	56,340	54,290	2,050	3.6%	5,290
Jefferson County	56,368	30,190	29,230	960	3.2%	442
Morgan County	17,632	7,920	7,600	310	4.0%	882
Total Regional Workforce	826,029	422,974	405,366	17,598		19,596

Employment and unemployment data are seasonally adjusted

**U.S. Census Bureau - 2016 Population Estimates*

TECHNOLOGY

The TechHire Opportunity



Today there are over half a million unfilled jobs in information technology across all sectors of the economy. These IT jobs make up ~12% of the approximately 5 million job openings making IT the largest occupational category for open jobs right now. Non-IT industries currently employ two-thirds of these private sector IT workers. **IT jobs in fields like cybersecurity, network administration, coding, project management, UI design and data analytics offer pathways to middle-class careers with average salaries more than one and a half times higher than the average private-sector American job.** IT and cybersecurity jobs are not only for people with advanced degrees. In fact, hundreds of thousands of these jobs require skills that can be learned not only in universities, but also in community colleges, in industry certified training programs, in “coding boot camps” or in high-quality online courses. And they’re not just in Silicon Valley, or in the high tech industry – many are in industries we don’t think of as part of the technology sector – in

health care, retail, manufacturing, financial services, energy, transportation, or in local government. Helping more Americans train and connect to these jobs is a key element of the President’s middle-class economics agenda.

In its effort to illustrate the sheer supremacy of U.S. companies, HowMuch.net took the biggest 50 tech companies in the world by market capitalization and then drew up a chart comparing them to their competitors.

Seven out of the top 10 biggest corporations in the world were from the U.S., along with two from China and one from Korea. They were then divided into five categories to show where each U.S. entity stood versus their competitors. In almost all sectors except for media, U.S. companies were facing challenges from foreign competitors.

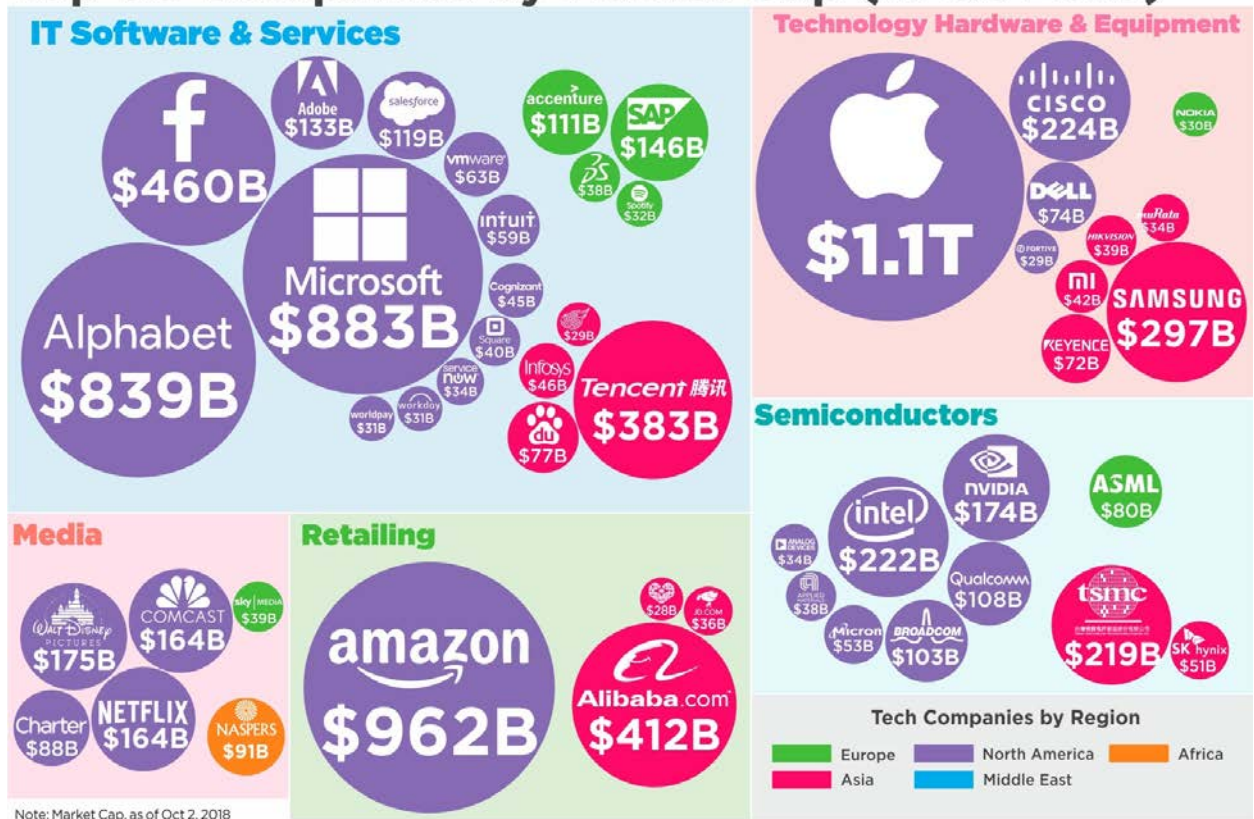
“The biggest companies come from North America (purple), and most are headquartered in Silicon Valley, CA. Second place clearly goes to China (red), which boasts several companies in the top 50, but none are even half the size of the world’s leaders like Apple, Amazon and Microsoft,” said Raul Amoros, director of content development at HowMuch.net.

Top 10 Biggest Digital Companies 2018

1. Apple: Technology Hardware & Equipment (US), \$1,100B
2. Amazon.com: Retailing (US), \$962B
3. Microsoft: IT Software & Services (US), \$883B
4. Alphabet: IT Software & Services (US), \$839B
5. Facebook: IT Software & Services (US), \$460B
6. Alibaba: Retailing (China), \$412B
7. Tencent Holdings: IT Software & Services (China), \$383B
8. Samsung Electronics: Technology Hardware & Equipment (S. Korea), \$297B
9. Cisco Systems: Technology Hardware & Equipment (US), \$224B
10. Intel: Semiconductors (US), \$222B

The World's Tech Giants 2018

Top 50 Companies by Market Cap (in Q3 2018)



Note: Market Cap. as of Oct 2, 2018

Article & Sources:

<https://howmuch.net/articles/the-world-tech-giants>
<https://finance.yahoo.com/>

howmuch^{net}

The latest Facebook facts and statistics

Here are some fascinating numbers on a range of Facebook facts and metrics from mobile, revenue and a host of other facts.

1. Every second there are 20,000 people on Facebook. This means in just 18 minutes there are 11 million users on Facebook
 2. On average there are 486,183 users a minute accessing Facebook from their mobile
 3. 79% of all users are accessing Facebook from their mobile.
 4. There are 745 million daily mobile users
 5. Facebook is adding 7,246 people every 15 minutes or 8 per second
 6. Every minute there are 150,000 messages sent
 7. Every 15 minutes there are over 49 million posts. To be precise 49,433,000 or 3 million posts per minute
 8. There are 100,000 friend requests every 10 minutes
 9. There are 500,000 Facebook “likes” every minute
 10. Facebook generates \$1.4 million in revenue every hour
 11. Nearly 73% of Facebook’s ad revenue comes from mobile advertising
 12. Facebook earns \$2.5 billion a quarter from mobile advertising
 13. People share 1.3 million pieces of content on Facebook every minute of every day
 14. In November of 2014 the number of video uploads to Facebook exceeded YouTube video uploads according to [Social Bakers](#)
 15. Facebook generated \$12.47 billion in sales in 2014 (a rise of 58% year on year)
 16. Photo uploads are 350 million per day
 17. Users spend 21 minutes per day on average on Facebook
 18. 31% of US senior citizens are on Facebook
 19. 66% of all millennials (15-34 year olds) use Facebook
 20. People spend 927 million hours a month playing Facebook games
 21. There are 1 billion mobile app links enabled on Facebook
- HCC was designated as a National Center of Academic Excellence in Information Assurance Two-Year Education (CAE-2Y) by the NSA and is one of only six two-year schools to receive this honor. This distinction enables students to transfer seamlessly from HCC to a four-year college in order to complete their degree. HCC’s designation as a CAE-2Y couldn’t have occurred at a better time because the Department of Defense, one of the largest employers of cyber security specialists, now requires incoming workers to have both a bachelor’s degree, as well as the necessary certification training needed to meet the rapidly changing demands of the information assurance field.

Mostly thanks to a massive solar farm placed on state prison lands south of Hagerstown, Washington County currently leads all Maryland counties in solar-energy production capacity with 33.8 megawatts, according to officials with the Maryland Energy Administration, or MEA.

MEA officials said the county's solar capacity represents about 18 percent of the state's total 184-megawatt capacity as of Aug. 4. Larger solar projects also have been undertaken by businesses and government, including Maryland's public-private partnership with First Solar Inc. that resulted in a 29-megawatt solar farm on state prison lands off Md. 65 in 2012. The power produced there is sold by First Solar back to Potomac Edison's electrical grid.

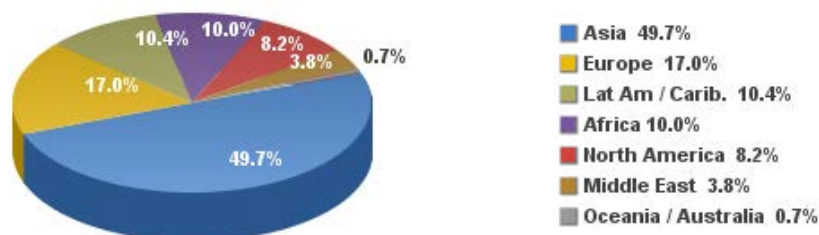
Staples and Walmart are among larger local businesses that have added solar panels to their facilities. On the government level, Washington County and the Town of Boonsboro have agreements in place for solar-farm projects in the near future.

The rise in solar technology has prompted a corresponding increase in the industry that sells, installs and maintains solar arrays.



- The world is seeing an accelerating pace of technological change, an increasingly multidisciplinary nature of technology, and continued globalization. Technology is an integral part of our lives, the economy, and education. All education sectors are increasingly dependent upon technological development support systems for teaching and learning including distance learning, E-learning, distributed learning, hybrid applications, access to information on-line, local integrated systems, and migration to fused media.
- Students are engaging with a number of different applications on their smartphones and tablets. More than 6 in 10 claim to regularly use games (73%), music (67%), entertainment (64%) and social networking (64%) apps, with a majority also putting photo and video (53%) apps to use. Interestingly, productivity apps are on the low end of the totem pole, with less than 1 in 5 saying they regularly use them.

Internet Users in the World by Regions - June 30, 2017



Source: Internet World Stats - www.internetworldstats.com/stats.htm
Basis: 3,885,567,619 Internet users in June 30, 2017
Copyright © 2017, Miniwatts Marketing Group

- Ramping up the bandwidth capabilities of campus networks certainly ranks among the top IT investments at many colleges. “Where we’ve really had to adapt and adjust is on our wireless network,” said Charles Spann, assistant vice president for service delivery and communications for the Division of Information Technology at George Washington University. “We’ve been in the process of upgrading our wireless network over the last two years, and it seems that whenever we finish our last wireless upgrade project it’s time to start the next.”

While student consumption of bandwidth has gone through the roof in recent years, the wireless network now plays an increasingly central role in teaching and administration, too. “Faculty are leveraging [student mobile devices] to be more creative in how they conduct their classes,” explained Spann. “It’s becoming more common for faculty to conduct an online quiz at the beginning of the class, for example, or have students take a test over the wireless network on the laptops they bring to class. This has caused quite a surprise at times when a faculty member’s use of a technology has got ahead of our wireless upgrade.”

- Cloud based computing is an important component that is driving the higher education market. In today's present competitive world, cloud based education has developed into an increasingly attractive alternative for educators to offer innovative learning platforms and services continuously. Educational institutions are implementing the model of cloud computing within the campuses so that it is easier to share, accumulate and collaborate the data from any location, and at any time.
- As college life becomes increasingly digital, universities are finding more ways to keep tabs on their students online and on campus.

Student ID cards can track students around campus. Computers can analyze students' academic data and predict their future performance. For some, this starts to feel like "Big Brother" is watching, a college that would be at home in George Orwell's 1984.

But analytics companies and administrators both say they're using the data to help students succeed.

"This is the ethical thing to do," said Bridget Burns. "Students are investing thousands of dollars for an outcome they won't be able to see if we aren't giving them the tools." Burns is the executive director of the University Innovation Alliance, an organization that advises schools on how to use predictive analytics.

Analytics relies on past student data, such as grades, credit hours and class difficulty, to predict how future students may fare. And so, when advisers look at the data, they aren't spying, they're helping, Burns said.

- 24 college students completed a survey on their views of the pros and cons of using smartphones in the classroom. Each student completed the survey twice: first in 2010, before they started using iPhones for classroom-related tasks, and then in 2011, after they had been using the phones for a year. The students' survey responses changed substantially over the year. Before the study period, most of the students thought the smartphone would help with their schoolwork. By the end of the study, most viewed their phones as a distraction and not very helpful.

Smartphones are the devices whose classroom use is most likely to be banned or discouraged, followed by wearable devices like Google Glass.

	Ban	Discourage	Neither discourage nor encourage	Encourage	Require
Smartphone	27%	24%	36%	12%	1%
Tablet or iPad	9%	9%	51%	28%	3%
Laptop	7%	8%	47%	32%	6%
Wearable (e.g., Google Glass)	21%	11%	64%	4%	0%

Note: Survey data were collected in February and March 2014 from 17,451 faculty members at 151 institutional sites.

Source: Educause Center for Analysis and Research

- Many people fear a jobless future - and their anxiety is not unwarranted: Gartner, an information technology research and advisory firm, predicts that one third of jobs will be replaced by software, robots, and smart machines by 2025.

Artificial intelligence and robots are not just challenging blue-collar jobs; they are starting to take over white-collar professions as well. Financial and sports reporters, online marketers, surgeons, anesthesiologists, and financial analysts are already in danger of being replaced by robots.

While one camp of experts predict that several unlucky Americans will be pushed out of work in the near future, others argue that this increase in computing prowess will simply eliminate old jobs and introduce new ones, resulting in a net-zero effect - or even an increase in jobs. New technology means new products and services, they argue, as we saw during the Industrial Revolution.

Experts are calling this movement the "Second Machine Age," as it is comparable to what we saw 200 years ago with the invention of the steam engine and the machine age that ensued.

- Students who want a solid footing in tomorrow's job market need look no further than information security.

Both the public and the private sector are shopping for talent to meet the demand in the workforce. The Bureau of Labor Statistics projects a massive shortage in the IT workforce by 2020: There will be **1.4 million openings, but only 400,000 computer science graduates** with the necessary skills to fill the positions.

In March, the U.S. Cyber Command announced a hiring spree, fast-tracking the hiring of 3,000 new personnel to staff the Pentagon's cyber defenses.

The job growth rate for information security analysts is higher than the average for all occupations (37 percent and 11 percent, respectively), according to the Bureau of Labor Statistics' *Occupational Outlook Handbook* published in 2012. And that growth is accelerating due to the increasing threat of cyberattacks.

ISACA recently released the fourth annual ISACA State of Cybersecurity 2018 Report. The research details the worldwide cybersecurity skills gap with an alarming 59 percent of information security professionals reporting unfilled cyber/information security positions within their organizations, and more than half taking at least three months to fill.

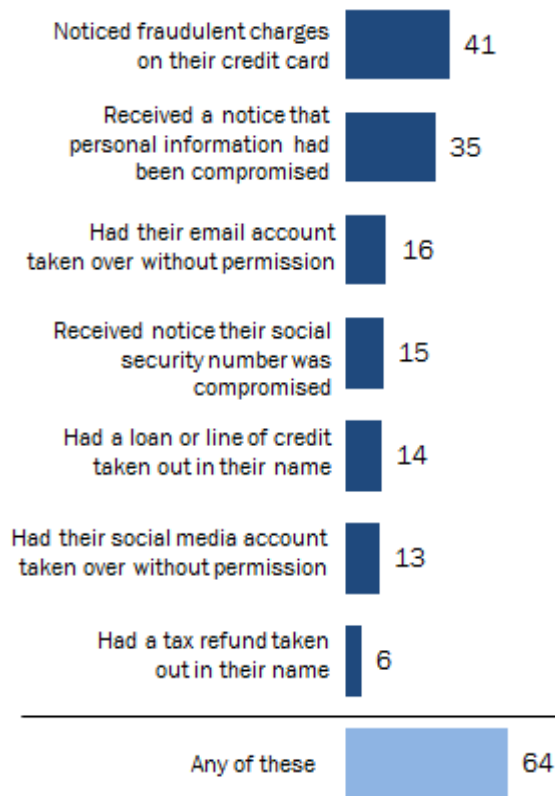
While cybersecurity budgets are still increasing, the qualified talent to fill positions is still lagging behind. Other key findings and trends from the research that might peak your interest are:

- **Four in five (81%) security professionals indicated that their enterprises are likely or very likely to experience a cyberattack this year**, while 50% of respondents indicate that their organization has already experienced an increase in attacks over the past year.
- **Men tend to think women have equal career advancement in security, while women say that's not the case.** A 31-point perception gap exists between male and female respondents, with 82% of male respondents saying men and women are offered the same opportunities for career advancement in cybersecurity, compared to just 51% of female respondents. Of those surveyed, about half (51%) of respondents report having diversity programs in place to support women cybersecurity professionals.
- **Cybersecurity budgets are still increasing.** 64% of respondents indicate that security budgets will increase this year, compared to 50% last year.

- 64% of Americans have an online account involving health, financial or other sensitive data
- 55% of Americans report having an online account with banks or other financial service providers.
- 36% have an online account with household utility providers.
- 32% have an online account with their healthcare providers.
- 39% have some other kind of online account that involves bill payments or transactions.

Many Americans have experienced some form of data theft

% of U.S. adults who have ever ...



Source: Survey conducted March 30-May 3 2016.
"Americans and Cybersecurity"

PEW RESEARCH CENTER

- Americans in their early 30s through mid-60s are especially likely to have encountered many of these forms of data theft. Nearly half (48%) of Americans ages 30 to 64 have noticed fraudulent charges on their credit cards, while around one-in-five (19%) have received notices that their social security number was compromised. Overall, nearly three-quarters of Americans in this age range (72%) have experienced at least one of the seven types of breaches (compared with 55% of those ages 18 to 29 and 50% of those 65 and older). Along with Americans in this age range, college graduates (78% of whom have experienced at least one of these breaches) and those with household incomes of \$75,000 or more per year (77%) are also relatively likely to have encountered these various types of data theft.

- A study released by data security solutions firm Datto, found that small-to-mid-sized businesses paid \$301 million in ransomware – or malicious software that blocks access to a system until a ransom is paid – to hackers last year alone. The company said 5% of all small-to-mid sized businesses across the globe fell victim to a ransomware attack in 2016.

- According to new research from the International Data Corporation, spending on the Internet of Things will jump from \$655.8 billion in 2014 to \$1.7 trillion by 2020, when devices, connectivity and IT services will dominate the IoT market.

While those figures represent spending across markets — including healthcare, government and manufacturing — they signal significant opportunities for higher education.

On-campus use of the IoT today is largely limited to facilities management. Bournville College in Birmingham, England, has long regulated building access and monitored foot traffic patterns with Cisco Physical Access Control technology. As far as other uses go, some universities' staff receive alerts when solar-powered trash cans are full, and students in residence halls can track the availability of washers and dryers through real-time laundry apps.

Technology repair services on campuses will likely be seen as a higher-ed essential critical to boosting outcomes and helping students save time.

A growing number of college bookstores are offering on-campus tech repair services to fix damages and minimize the time students are without their devices (should accidents happen).



As the use of technology in education continues to grow, and as students have become increasingly reliant on their smart phones, tablets and laptops, it's never been more critical to ensure students can successfully and efficiently complete their school work in a timely manner.

According to recent research from McGraw-Hill Education, 48 percent of students definitively said technology saves them time while studying. Moreover, 77 percent of those students indicated technology saves them two to five hours per week or more.

Whether it's a cracked screen on a phone or a virus on a laptop, the importance of quality repair services to alleviate problems such as these that students often face can not be understated moving forward, especially during important times such as finals week or simply when working on a group presentation.

Also, when technology repair services become readily available, students and even faculty often feel more comfortable about adopting new devices and software, due to the knowledge that they will be protected should anything go wrong.

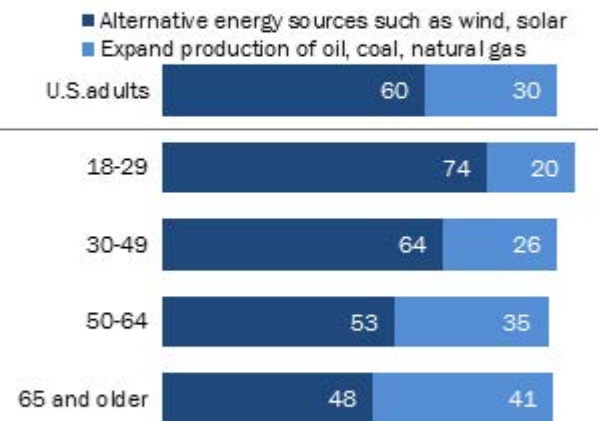
50%

PERCENTAGE OF CIOs WHO SAY LEARNING NEW SKILLS TO STAY CURRENT WITH TECHNOLOGY IS THE MOST IMPORTANT ADVICE THEY WOULD GIVE TO NEW COLLEGE GRADS IN TECHNOLOGY FIELDS

Hands-on experience should be a central part of any IT student's curricula, says Matthew Bourdeau, Miami regional vice president of Robert Half Technology, a national IT staffing firm. In a recent Robert Half survey, 71 percent of CIOs said that they prioritize proven skills and hands-on experience over formal education when evaluating job candidates, which obliges new grads to demonstrate real-world competence if they want to compete with veteran IT workers, Bourdeau says.

Younger Americans More Likely to Prioritize Alternative Energy

% of U.S. adults saying... should be the more important priority for addressing America's energy supply



Survey of U.S. adults Dec. 3-7, 2014. Q18. Those volunteering both or saying "don't know" are not shown.

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- MarketsandMarkets forecasts the global Higher Education Market to grow from \$43.06 billion in 2013 to \$65.83 billion in 2019. In terms of regions, North America is expected to be the largest market in terms of market size, while Europe and Asia-Pacific (APAC) are expected to experience an increase in market traction, during the forecast period.
- Colleges have started to jump on the mobile craze, and schools such as Ohio State University and Massachusetts Institute of Technology have launched apps that allow students to check grades, manage their university accounts and track campus bus lines.

Apps created by colleges often go beyond just schedules and grades, says Chester Goad, director of disability services for Tennessee Technological University.

"Many colleges and universities upload tips and tricks for navigating campus, best places to eat, college traditions and more," he says, adding that these apps often include emergency alerts to help keep students safe on campus.

- Using those apps takes time, and college students are spending more of it with their devices. On average, they report spending 0.8 hours with a tablet, up from half-an-hour last year. And they're spending 3.6 hours a day with their cell phones and smartphones (presumably more on smartphones), up from 3.3 hours last year. By contrast, they're spending less time with computers, TVs, handheld gaming devices, and e-readers.
- Most relevant for college admins, the 2013 E-Expectations Report, conducted by Noel-Levitz, OmniUpdate, CollegeWeekLive, and NRCCUA, examined how social media and mobile devices are affecting students' search for the right college. About 2,000 students participated in the survey and the results were enlightening:

67 percent of the respondents said they still use Facebook, but that's a drop of 12 percentage points from last year

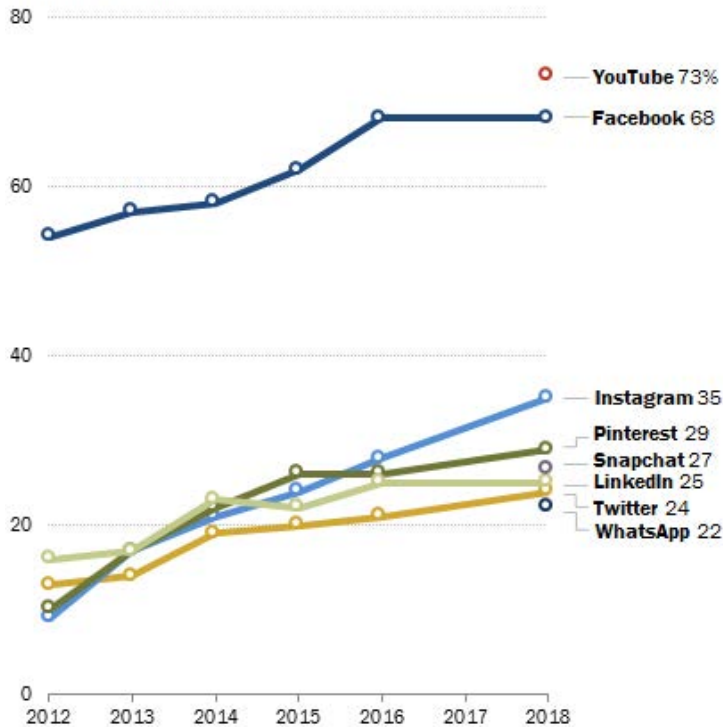
The survey also found that while virtually all of the students said they think information on a university's website is reliable, only about half of them said they trust information delivered through a university's social media

5 Must-Have Tech Skills for College Students

- Typing ability
 - Online etiquette skills
 - Software suite basics
 - Online research skills
 - Privacy and security awareness
-
- Technological advances make it possible for people to live longer. As the overall population increases, community college enrollment is expected to grow. Technological innovations in the workplaces are expected to continue to fuel community college enrollment by people seeking training and skills upgrades. Distance learning technologies may increase community colleges' capacity without massive new building projects. Through distance learning, the Internet and other means, colleges can compete on a greater scale overcoming limitations in size, location, and costs.
 - Rapid advances in information systems, technology and its applications are having a profound impact on teaching and learning, necessitating that colleges invest in technology and integrate it into curriculum and instructional practices.
 - The rapid integration of evolving and emerging technologies influence how people live, learn and work. Hence, the public in general and students in particular, are putting an increased importance on the use of technology in education and training. Thus, there is a need for an interdisciplinary teaching approach that combines information technology, science and engineering.
 - Technology in the biosciences will have a dramatic impact and influence during the next decade. The revolution of information availability and utility, and the use of multidisciplinary technology open the opportunity for technological breakthroughs and advancements.

Majority of Americans now use Facebook, YouTube

% of U.S. adults who say they use the following social media sites online or on their cellphone



Note: Pre-2018 telephone poll data is not available for YouTube, Snapchat or WhatsApp.
Source: Survey conducted Jan. 3-10, 2018. Trend data from previous Pew Research Center surveys.

"Social Media Use in 2018"

PEW RESEARCH CENTER

A new Pew Research Center survey of U.S. adults finds that the social media landscape in early 2018 is defined by a mix of long-standing trends and newly emerging narratives.

Facebook and YouTube dominate this landscape, as notable majorities of U.S. adults use each of these sites. At the same time, younger Americans (especially those ages 18 to 24) stand out for embracing a variety of platforms and using them frequently. Some 78% of 18- to 24-year-olds use Snapchat, and a sizeable majority of these users (71%) visit the platform multiple times per day. Similarly, 71% of Americans in this age group now use Instagram and close to half (45%) are Twitter users.

- The benefits of mobile learning are well-known for organizations both big and small, especially as it relates to improved knowledge retention and increased employee engagement. These factors are even more important when you consider the fact that workforces around the world are at a crossroads, on which Baby Boomers and Gen-Xers are retiring (or preparing to), making way for the mobile-dependent Millennial and Gen-Z cohorts.

The future of mobile learning might look a little different than you'd expect. Here are 10 stats that prove that making the leap into mobile-enabled learning will be the core component to guiding your learning activities into the future.

1. 64% of learners find accessing their training content from a mobile device essential [Towards Maturity]
2. 43% of learners see improved productivity levels compared to non-mobile users [Towards Maturity]
3. 89% of smartphone users download apps, 50% of which are used for learning [Towards Maturity]
4. 46% of learners use mobile learning before they go to sleep at night [Learner Events]
5. The number of mobile-only users (27%) has grown, now surpassing desktop-only users (14%) [Google].
6. Mobile device users will own three to four personal devices by the end of 2018 [Global Mobile Market]
7. 71% of Millennials say they connect more with mobile learning than L&D activities delivered via desktop or formal methods. [Gallup]
8. The average person spends 2 hours and 51 minutes on their smartphone each day, looking at it roughly 221 times and touching its screen more than 2,600 times. [Dscout]
9. 65% of all digital media is viewed on smartphones [Marketing Land]
10. Smartphone learners complete course material 45% faster than those using a computer. [Lynda]

- Magna released a bullish assessment and forecast for US ad revenue in 2018 and 2019. The report covers all the major advertising and media categories including both digital and traditional media.

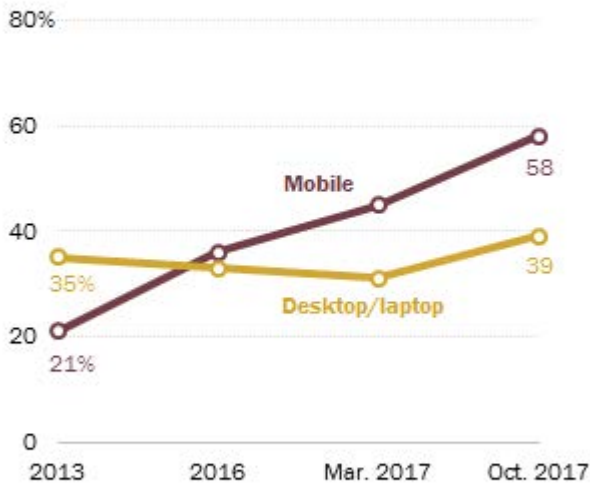
Ad sales up, especially digital. Magna says that “net advertising sales” will grow by 6.9 percent this year to reach \$207 billion, which is “a new all-time high.” And, for the first time, digital ad revenues surpassed 50 percent of total ad spending in the US. The company said that digital ad revenue in 2018 will reach \$106 billion, or 51.5 percent of total ad sales.

Digital advertising on mobile devices accounts for roughly two-thirds of all digital ad spending, representing a 30 percent growth rate year over year. Magna says that mobile now exceeds TV and is twice desktop ad revenue. Accordingly, the firm predicts that desktop ad revenue will decline by 4 percent based on declining usage and ad blocking.

- The term ‘podcast’ is a combination of the words ‘pod’, derived from Apple’s portable media player, the iPod, and ‘broadcast’. In 2006, only 22 percent of the adult population in the United States was aware of this phrase, but this figure rose to 64 percent in 2018, thereby highlighting the increasing popularity of podcasting in the United States. In fact, as of 2018, there are an estimated 73 million podcast listeners in the United States, a number which is forecast to grow to around 132 million by 2022. This trend can be further seen by the fact that over a quarter of the population reported to have listened to a podcast in the past month in 2018, a huge increase from the nine percent figure of 2008.
- Radio has recently experienced a resurgence thanks in large part to the success that streaming technology is having in the music industry. As of 2017, streaming revenues made up 65 percent of music industry revenue in the United States, and radio providers have quickly begun to take advantage of the power of streaming through online radio offerings. Forty-one percent of U.S. adults aged 18 to 49 report to have listened to internet radio within the past month, and online radio's share of total station revenue is increasing. American adults are tuning in to online radio for an average of 13 hours and 40 minutes every week. Forecasts suggest that 55.8 percent of the entire U.S. population and as much as 68.4 percent of the U.S. internet users will have become online radio users by 2018.

About six-in-ten now often get news on a mobile device

% of U.S. adults who often get news from ...



Source: Survey conducted May 30-Oct. 23, 2017.

PEW RESEARCH CENTER

Mobile devices have become one of the most common ways Americans get news, outpacing desktop or laptop computers. Roughly six-in-ten U.S. adults (58%) often get news on a mobile device, 19 percentage points higher than the 39% who often get news on a desktop or laptop computer, according to a Pew Research Center survey.

The share of Americans who often get news on a mobile device is nearly triple the 21% who did so in 2013. At the same time, the portion of Americans who often get news on a desktop has remained relatively stable, with 39% of adults often getting news on a desktop or laptop computer, up just 4 percentage points from 2013.

• More than 80 percent of college students claimed in a recent survey they have cheated in some way while in school.

300 students from both public and private colleges were surveyed, including online universities.

The survey found:

- 86 percent claimed they cheated in school.
- 54 percent indicated that cheating was OK. Some said it is necessary to stay competitive.
- 97 percent of admitted cheaters say they have never been caught.
- 76 percent copied word for word someone else's assignments..
- 12 percent indicated they would never cheat because of ethics.
- 42 percent said they purchased custom term papers, essays and thesis online.
- 28 percent said they had a service take their online classes for them.
- 72 percent indicated that they had used their phone, tablet or computer to cheat in class.

Professors use technologies, including text-matching software, webcams and cheat-proof tests to try and catch cheaters. They may also ban laptops, smartphones and smart watches from exams.

2018 *This Is What Happens In An Internet Minute*



In Maryland, an effort to improve STEM education began in 2009. A state task force recommended curriculum changes, internship opportunities and teacher professional development to help meet a goal of increasing the pool of STEM college graduates. Representatives from companies such as Lockheed Martin and Apple worked with educators on the task force. Meanwhile, a national effort was ongoing to redesign science education. Maryland and 26 states worked alongside the National Science Teachers Association, the American Association for the Advancement of Science, and Achieve, as well as teachers from around the country. Two Maryland school board members, including the president, have been directly involved in the effort funded by the Carnegie Foundation.



As scientists look to find alternatives to traditional fossil fuels, a number of major projects, including Cape Wind (in Massachusetts' Nantucket Sound) and Deepwater Wind (near Block Island, Rhode Island), are vying to become the first offshore windfarm in the U.S.

Two companies, Cape Wind and Deepwater Wind, are competing to lead the way in offshore wind power in the U.S. Alongside power from volcanoes, waves, biomass and the sun, , wind power is set to become a significant alternative energy source in 2014.

-
- President Obama has signed an Executive Order calling for the US to significantly up its game in the supercomputer space. The effort, known as the National Strategic Computer Initiative (NSCI), will aim to build the world's fastest supercomputer by 2025.

- Effective programming in distance learning and on-line education requires application of best practices in designing and delivering instruction. The expansion of on-line and distance learning and a commitment to the assessment of student learning outcomes are required of any community college wishing to remain competitive and effective. To do so requires sound faculty and staff development programs and the funding to maintain the curriculum and equipment necessary for quality programming.
- Electronic portfolios are becoming a common place repository for student work.
- The advancement in technology represents another challenge that has significantly impacted traditional methods of delivery. Many students come to campus expecting to find a far more sophisticated environment than the one that exists. The so called iPod generation is demanding eye-catching visuals, interactive instructional methods, and active engagement in learning.

Energy & Sustainability

Maryland's natural gas, electricity and nuclear power companies are joined by solar, wind, geothermal and biomass enterprises with a shared vision toward the state's "smart, green and growing" energy future. The state receives electric power via North America's largest power pool, the PJM Interconnection. Calvert Cliffs Nuclear Power plant, in operation since 1975, supplies all of Maryland's nuclear power and accounts for more than one-fourth of total electric generation. Further, Maryland's Renewable Portfolio Standard (RPS) requires that 25 percent of the state's energy come from renewable sources by 2020. The state's 1,280 energy and sustainability businesses generate \$8.16 billion in gross state product. Major Energy & Sustainability Employers in Maryland Employer Employment Product / Service Exelon 5,200 Energy services Washington Suburban Sanitary Commission 1,580 Water and wastewater services W.R. Grace & Company 1,100 Petroleum refining technologies SolarCity 1,000 Solar energy contractor Johnson, Mirmiran & Thompson (JMT) 600 Environmental planning and engineering services Rummel Klepper & Kahl (RK&K) 550 Water and wastewater services Siemens 500 Environmental controls Southern Maryland Electric Cooperative (SMECO) 460 Energy products and services Washington Gas 400 Natural gas distribution Waste Management 370 Waste treatment and disposal KCI Technologies 325 Environmental planning and engineering services NRG 185 Energy services Note: Numbers are rounded. Source: Maryland Department of Commerce, July 2017.

Maryland ranks ninth in the 2016 State Energy Efficiency Scorecard compiled by the American Council for an Energy-Efficient Economy. The report ranks states on the adoption and implementation of energy efficient policies which reduce energy costs, spur job growth, and benefit the environment. Maryland is a top ranked state in the combined heat and power policy category. v In the 2015 Enterprising States study, which looks at how states are creating an environment in which the private sector can thrive, Maryland ranks second in the high-tech "Talent Pipeline," third in "Innovation and Entrepreneurship," and fifth in "High Tech Performance." v Maryland ranks ninth in solar industry jobs per capita, with 5,429 total jobs in 2016. v Maryland ranks seventh among the states in the square footage of LEED-certified commercial and institutional green buildings per capita for 2016.

- Many students, including non-traditional, are comfortable with the newest technological devices as they use camera phones, keep Blogs, use wireless devices effortlessly, use Instant Messaging (IM) constantly, and regularly use videoconferencing and Internet based telephony. Though many will not need training in the use of these tools, some will. Meeting the needs created by these varying degrees of expertise is a challenge.

- With the expansion of on-line learning opportunities for students, issues of faculty training and development, intellectual property rights, adequacy of technical infrastructure and evaluation of learning are becoming major pieces of the accountability concerns for this relatively new mode of student learning.
- Tuition costs at online institutions tend to be significantly higher than those of community colleges and many four-year institutions.
- Having the ability to do mass messaging is becoming more important on college campuses today. The potential use of such a messaging system is important for emergency messaging and campus-wide announcements.
- Technological security at the college is also an essential issue, which includes security of institutional databases, as well as the security of its students when online. Due to the large quantities of downloading and internet surfing worms and viruses are rampant on college campuses and can be quite expensive to be removed.
- Technological changes will pave the way for a greater demand for data transparency. Transparent data are those that can be accessed from one entry point, such as your personal web page, and are constantly available. Transparent data are critical for speeding up the pace of institutional planning. Decisions need to be data driven, with data easily found and manipulated for fast turnaround. Data transparency is not limited to college administration. Students need transparency within their own data sets so they can increase their learning. Use of a student portal should allow individual students to see all of their own data and interact with data sets that will help them make decisions.
- With changing demographics nationally, as well as locally, students should be able to speak any language because of translation software. This will allow the classes to become more tailored for each student while simultaneously expanding enrollments internationally. While a lecture going on, students will be able to pull up information, on their individual screen, for a topic for which they are having trouble.
- Nanotechnology is a type of manufacturing technology that will build objects from the atom up as well as be able to manipulate atoms within a current structure. It is technology that works with elements the size of a nanometer, and it will play a major role in the future of security, medicine, economic productivity, and environment. The National Science Foundation estimates that 2 million workers are expected to be needed to support the industries of nanotechnology worldwide within the next 15 years.

- According to the Microsoft Corporation, the following are technological changes that will be used in colleges across the country by 2020:
 - Simulation technologies and powerful sensor technologies provide scalable models engage in learning by doing. Sensors in laboratories provide students feedback as they reconstruct and deconstruct various objects in real time, with real materials.
 - There are intelligent laboratory objects where technology is embedded in them. Students receive physical components that instruct the students on how to design, test, and connect them together. Instrumentation is also managed remotely. Internet based laboratories are the norm where students are able to run laboratory experiments wherever they find them.
 - All scientific disciplines require increasing amounts of computing sophistication. Thus, students will need to know how to program software. So, students must be taught to identify opportunities and customers, manage their requirements, provide effective documentation, and manage source code.
 - Voice technology eases communication as students will wear technology on their clothing.

- As reported by the National Intelligence Council, biotechnology, (the use of living organisms to make a product or run a process) is revolutionizing industry, modern medicine and agriculture, will show continued expansion improving the quality and length of human life. The ability to work and manipulate materials using technology at the “nano” level will allow industry in general to better design and produce chemical, fluidic, optical, mechanical and biological components. Not only are these technologies having impact on our lives, but they are heavily intertwined, making the technology revolution highly multidisciplinary and accelerating progress in each area. Fundamental changes in what and how we manufacture will produce unprecedented customization and fundamentally new products and capabilities.

- With new technology also comes the issue of cost. Technology has the costs of employees that can install and maintain the new technology as well as the cost of the technology itself. Classrooms are seen as out of date if technology is not used. Therefore, the issue becomes how to balance an effective classroom at reasonable cost.

- Alternate sources of revenue can increase institutional giving by leveraging technology. As funds from the state continue to tighten, Institutional Advancement offices at community colleges look for new sources of funding. The institution's Benefactor system can be tapped for valuable data leading to improved targeting of Alumni for events and fund-raisers that will particularly interest them.

Information Technology

- Maryland's information technology industry thrives on a concentrated and collaborative environment spurring innovative communities in cybersecurity, information technology, interactive technologies and communications. A strong network of research and education resources and a highly educated and talented workforce stimulate myriad opportunities for new and expanding businesses. Maryland's 11,600 information technology businesses are annually awarded \$10.36 billion in federal contracts and generate \$39.55 billion in economic activity, making it one of the nation's leaders and a major economic engine for the state. Major Information Technology Employers in Maryland Employer Employment Product / Service Northrop Grumman 10,365 Electronic systems Verizon 6,500 Telecommunications Johns Hopkins University Applied Physics Laboratory 5,545 R&D, systems engineering Comcast 4,000 Telecommunications Lockheed Martin 3,255 Aerospace and electronics Leidos 2,595 National security, health and engineering services Booz Allen Hamilton 2,100 IT services, systems engineering Westat 2,000 Contract research and surveys CSC 1,230 IT services, systems engineering KeyW 700 Information technology services BAE Systems 580 Defense electronics, aerospace Cisco 350 Network security Tenable Network Security 350 Network security Note: Numbers are rounded. Source: Maryland Department of Commerce, July 2017.
- Maryland ranks first among the states in the percentage of professional and technical workers (28.3%) in the workforce, third in the percentage of the population age 25 and above with a bachelor's degree or higher (38.8%) and second in the percentage with a graduate or professional degree (17.7%). v Maryland ranks third in the Milken Institute's State Technology and Science Index for 2016, including first in the component categories of technology and science workforce, and technology concentration and dynamism. v Maryland ranks fifth in the 2014 State New Economy Index, a measure of a state's economy as knowledge-based, globalized, entrepreneurial, innovative, and information technology-driven. v Maryland ranks fifth in the concentration of IT jobs, which employed 86 of every 1,000 private sector workers in 2016 according to the Cyberstates report.

PUBLIC POLICY AND ACCOUNTABILITY

The public will continue to demand increased return on its investment in education. From an institutional point of view, this will require much better results when assessing institutional effectiveness. Not only will it mean educators must increase their ability to measure it, to assure the validity and reliability of the data being gathered and used, but also they must show evidence of continuous improvement in quality in order to remain competitive. As competition in the educational arena increases from for-profit educational providers, community colleges will need to continually improve to survive.

Accrediting bodies, through their standards, expect institutional commitments to providing high quality education congruent with their institutional mission. Colleges are required to conduct ongoing institutional evaluation and improvement. Evaluation must focus on student achievement, student learning, and the effectiveness of processes, policies, and organization. Institutions are required to make improvements through an ongoing and systematic cycle of evaluation, integrated planning, implementation, and re-evaluation.

Accountability challenges related to performance are requiring more comprehensive monitoring of student outcomes data related to special initiatives developed to improve student performance. Student learning outcomes are central to accreditation standards. Student learning outcomes are knowledge, skills, abilities, and attitudes that a student has attained at the end (or as a result) of his or her engagement in a particular set of collegiate experiences. Institutions are asked to demonstrate the effectiveness of its efforts to produce and support student learning by developing student learning outcomes at the course, program, and degree level. Student learning outcomes must be measured and assessed to determine how well learning is occurring so that changes to improve learning and teaching can be made. Colleges must show evidence of a conscious effort to create a culture of evidence.

Accreditation standards emphasize the need for integration of the college's many planning activities, with an emphasis on the integration of planning and budgeting. As components of accountability mandates, educational entities need to demonstrate, through outcomes assessment and cost benefit studies, efficiencies in all areas, including academic programs, support services and administration. Additionally, colleges are required to demonstrate institutional integrity (i.e., concern with honesty, truthfulness, and the manner in which it represents itself) to all stakeholders, internal and external.

Government will continue to be involved in education, establishing standards and demanding accountability. In all probability, the government will not be able to provide the strong or consistent financial support institutions require. Government support for educational institutions is subject to change and often accompanied by performance mandates and “other strings” attached.

Faced with the “trickle down” effect of the national economy, the State of Maryland has decreased its funding to colleges and universities. Additionally, the State is cutting aid to counties, some of which, in turn, are cutting local support for community colleges. Diminished public resources will require community colleges to be more productive with the resources they have, pursue innovative partnerships with community entities, and be more innovative in fundraising.

The current political climate calls for a better response from colleges and universities to address the critical shortage of teachers and nurses, as well as workforce development.

Diversity awareness, support, and programming will become increasingly central to the community college’s mission.

With a greater array of choices for the community, competition will present a challenge to make programs responsive, accessible, convenient, and current.

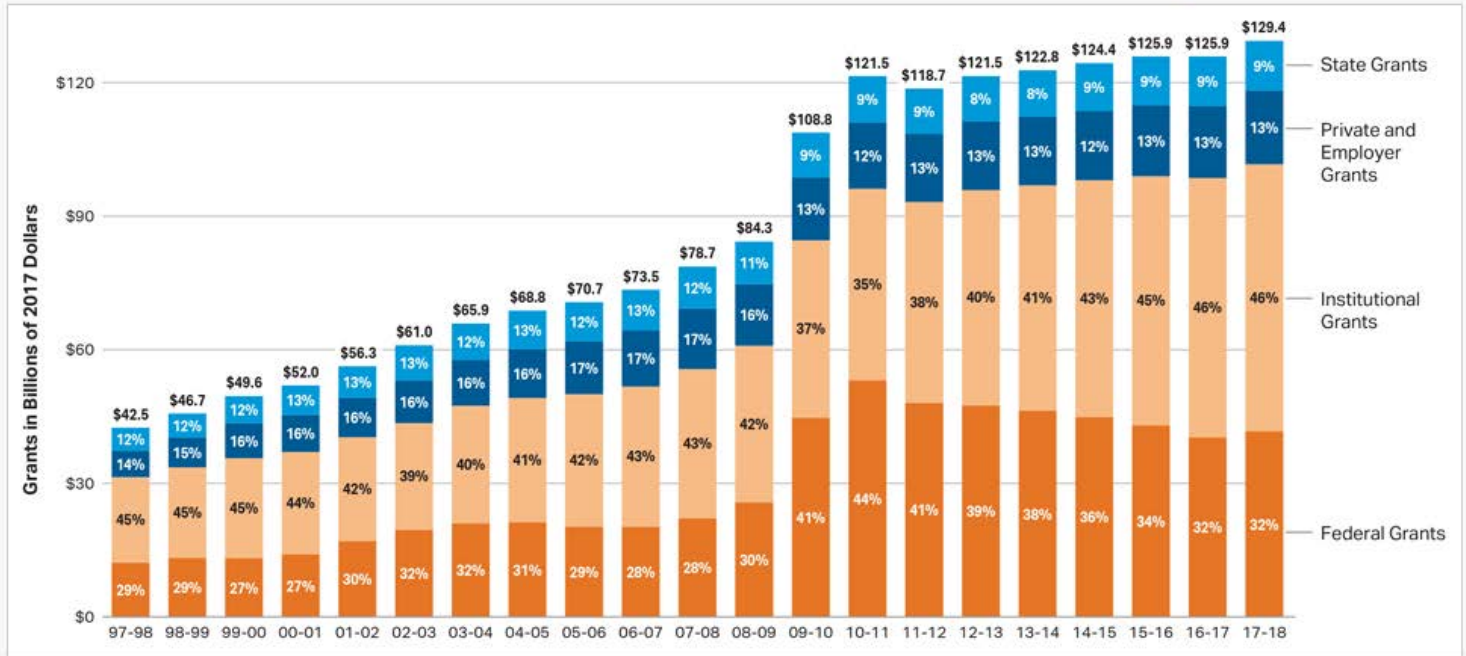
Managing internal data has become imperative in this age of accountability. Getting the right data into a resource system(s) and then getting it back out has posed many challenges for community colleges. Data systems are particularly important when administering Federal grants.

The total amount of grant aid supporting postsecondary students increased by 85% (after adjusting for inflation) between 1997-98 and 2007-08 and by another 64% between 2007-08 and 2017-18, reaching a total of \$129.4 billion.

Figure 5: Total Grant Aid in 2017 Dollars by Source of Grant, 1997-98 to 2017-18

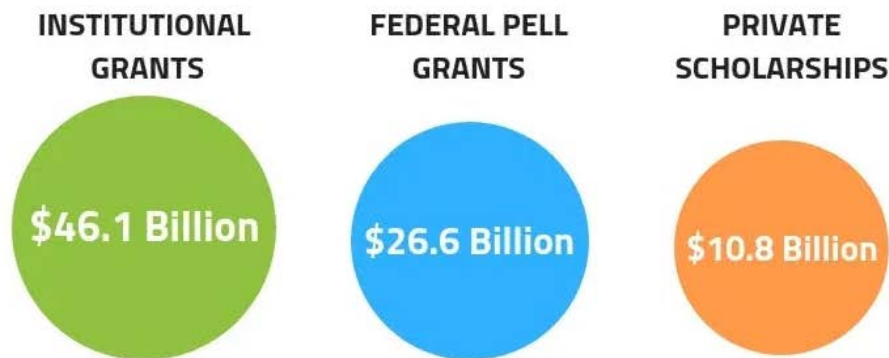
[Download Data in Excel](#)

[See Key Points](#) | [See Also Important](#)



College/University funding

Colleges and universities are the largest source of gift aid to undergraduate students*. While both public and private colleges provide gift aid to students, private colleges tend to have a much larger pool of these funds.

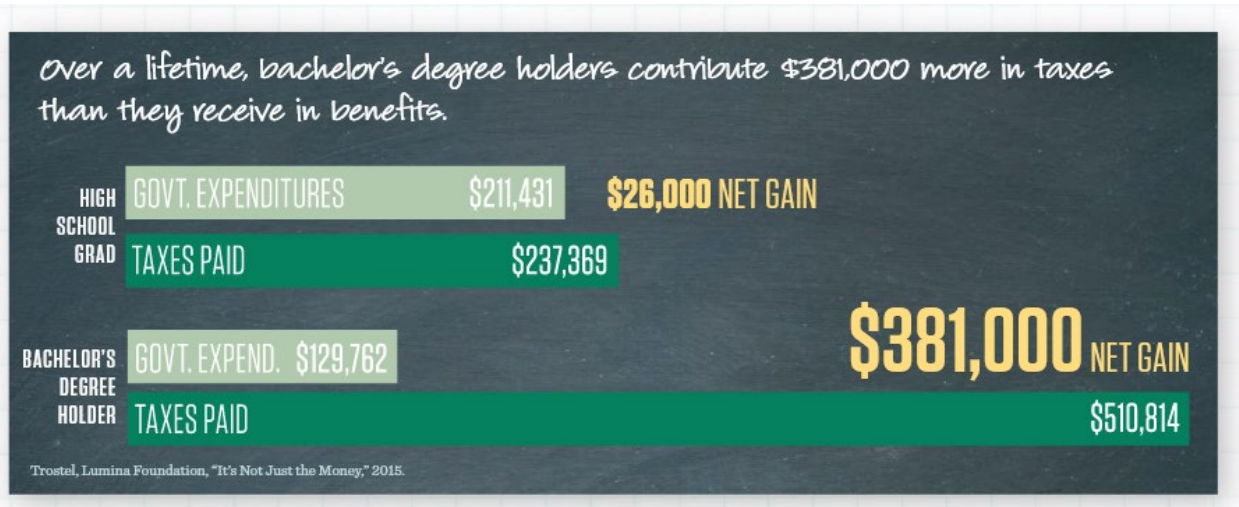


*Trends in Student Aid 2017 CollegeBoard

Families who may not meet the eligibility criteria for federal or state grants may still qualify for gift aid from the institutions themselves.

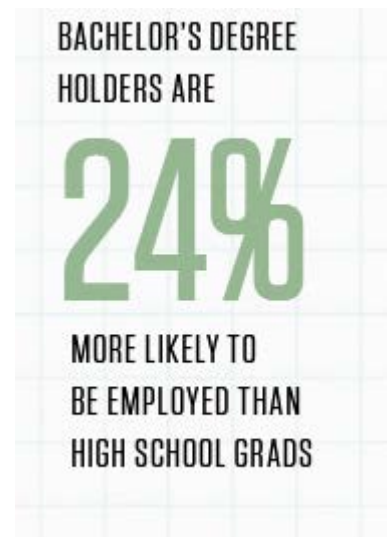
PUBLIC UNIVERSITY VALUES

How do college graduates benefit society at large? Over 60 percent of bachelor's degree holders earn their diplomas from public universities and public university graduates play a central role in enhancing their communities. Although the public often emphasizes the benefits of a college degree to graduates themselves, the benefits to society are just as important. Through volunteer work, leadership, and philanthropic contributions, public university graduates enrich the civic and economic life of their communities. They also contribute more in taxes and are less reliant on government services than their peers whose highest degree is a high school diploma.



A MORE VIBRANT SOCIETY

By nearly any measure, college graduates outperform their peers who have only completed their high school degree. For example, the average graduate is 24 percent more likely to be employed and average earnings among graduates are \$32,000 higher annually and \$1 million higher over a lifetime. Moreover, those with college degrees are more than twice as likely to volunteer and they contribute nearly 3.5 times more money to charity.³ And 75 percent of bachelor's degree completers vote in presidential election years, compared with about 52 percent of high school graduates.⁴ What's more, college graduates are considerably less reliant on government programs and services than those with a high school degree.





These government programs include Medicaid, housing subsidies, nutrition assistance, unemployment benefits, and other public assistance. For instance, those who graduated college are 3.5 times less likely to be impoverished and nearly five times less likely to be imprisoned. In all, lifetime government expenditures are \$82,000 lower for college graduates than for those with high school degrees.

Governments also rely on college graduates for a disproportionate share of their tax revenues. Because college graduates typically earn more and higher earnings are taxed at an increased marginal rate, they contribute over \$510,000 in taxes during their lifetime—\$273,000 more than a high school graduate.

All told, an average bachelor's degree recipient contributes \$381,000 more in taxes than they use in government services and programs over their lifetime. Those with high school degrees contribute just \$26,000 more. That's a contribution of \$355,000 more per bachelor's degree holder over those whose highest degree is a high school diploma. Those with advanced degrees contribute even more—another \$167,000 on top of the \$355,000 for those whose highest degree is a bachelor's degree.

On average, state and local governments contribute \$7,000 per full-time bachelor's degree-seeking student—or about \$28,000 for a student who earns a degree in four years. In other words, the \$28,000 in state and local investment results in \$355,000 reduced government spending and increased tax revenues across all levels of government. Public universities also play a central role educating students in areas of national need. In 2015, public universities awarded 63 percent of all bachelor's degrees and 53 percent of all graduate level degrees and certificates in areas of national need as defined by the federal government, including agriculture, computer science, health, education, engineering, biology, physical sciences, math, foreign languages, social work, and protective services.



State and Local

Approximately 88% of Maryland's community colleges' students remain in Maryland upon completing their educational goals. As students earn more, they pay higher taxes. Employers also pay higher taxes through their increased output and spending.

Over the students' working lives, state and local government in Maryland will collect a present value of \$1.1 billion in the form of higher tax receipts. Students from Maryland's community colleges who achieve higher levels of education are statistically less likely to have poor health habits, commit crimes, or claim welfare or unemployment benefits.

The improved lifestyles of students result in a reduced demand for government-supported services. Better health leads to reduced health care costs. Reduced crime leads to a reduced burden on the criminal justice system. Further, increased employability leads to fewer claims for welfare and unemployment benefits.

As a result, taxpayers in the state of Maryland will see a present value of \$184.1 million in savings to government over the students' working careers.

In FY 2015-16, state and local taxpayers in Maryland paid \$830.9 million to support the operations of Maryland's community colleges.

For every \$1 of public money spent on the community colleges, taxpayers receive a cumulative return of \$1.50 over the course of students' working lives in the form of higher tax receipts and public sector savings.

Taxpayers see an annual return of 4.2% on their investment in Maryland's community colleges. This return compares favorably with the 1.1% discount rate used by the federal government to appraise long-term investments.

SUMMARY OF THE TAXPAYER INVESTMENT



In FY 2015-16, Maryland's community colleges employed 18,843 full-time and part-time faculty and staff, with an annual payroll of \$965.3 million. Much of this was spent in Maryland to purchase groceries, clothing, and other household goods and services.

The community colleges are themselves buyers of goods and services and spent another \$476.9 million to support their operations during the analysis year.

The net impact of the community colleges' payroll and expenses in Maryland was \$992.6 million in added income.

Around 4% of students attending Maryland's community colleges originated from outside the state. Some of these students relocated to Maryland and spent money on groceries, transportation, rent, and so on at state businesses. These expenditures helped support local businesses.

In addition, a number of in-state students would have left the state for other education opportunities if not for the existence of the community colleges.

The expenditures of these students added approximately \$282.9 million in income to the state during the analysis year.

ADDED INCOME CREATED BY MACC IN FY 2015-16



\$992.6 million
Operations Spending Impact



\$282.9 million
Student Spending Impact



\$8.6 billion
Alumni Impact



\$9.9 billion
Total Impact

Students earn more because of the skills and qualifications they acquire at Maryland's community colleges. Further, employers earn more because the added skills of the students they hire make their businesses more productive

Together, increases in earnings and business output stimulate corresponding increases in earnings and employment throughout the state. Over their working lives, MACC's 2015-16 student population will increase the state's economic base by \$12.9 billion.

As MACC students achieve higher levels of education, they are statistically more likely to develop good health habits. This leads to a present value of \$340.9 million in savings to students and to society as a whole for medical treatment related to smoking, alcoholism, obesity, drug abuse, and mental disorders.

Students enjoy better employment opportunities as a result of their education at Maryland's community colleges. This makes them less likely to require earnings assistance and less likely to commit crimes. These effects translate to a present value of \$4.8 million in unemployment-related savings and \$148.3 million in law enforcement savings to society as a whole.

Altogether, savings to society amount to a present value of \$494 million, equal to the sum of avoided costs related to health, crime, and unemployment.

In FY 2015-16, society invested \$3.6 billion in MACC educations. This includes all community college expenditures, all student expenditures, and all student opportunity costs. In return for this investment, society as a whole will receive a present value of \$13.4 billion in benefits, the sum of the increased economic base and social savings that the community colleges's 2015-16 student population will generate in the state.

For every dollar spent on Maryland community college educations, society as a whole in Maryland will receive a cumulative value of \$5.70 in benefits, for as long as MACC's 2015-16 students remain active in the state workforce.

PRESENT VALUE OF SOCIAL SAVINGS (THOUSANDS)

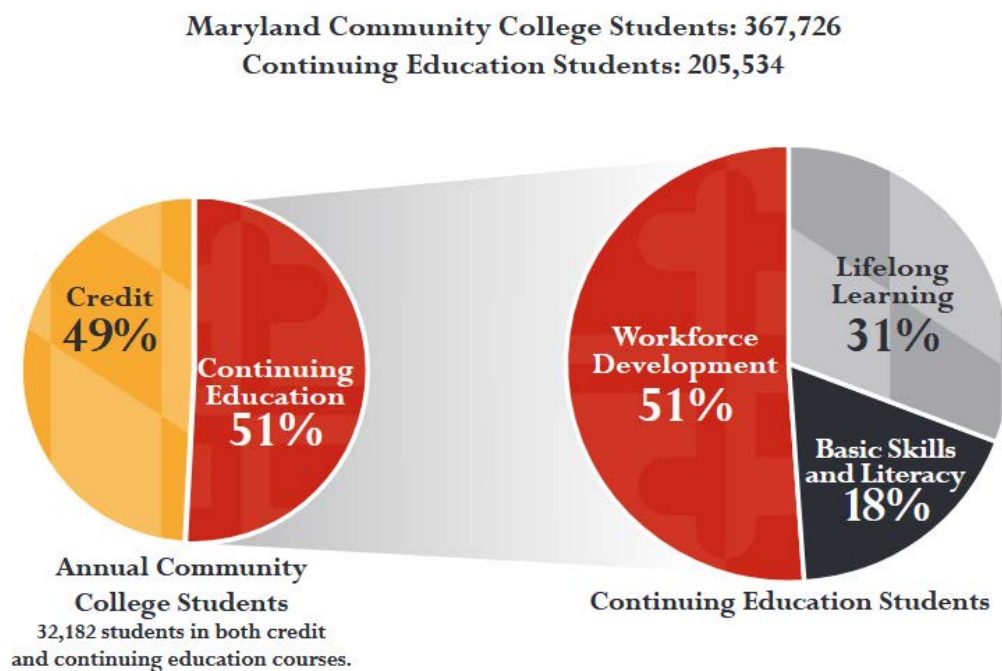


The Maryland Community College Association for Continuing Education and Training (MCCACET), which represents continuing education professionals from all 16 Maryland colleges, is an integral part of the post-secondary educational delivery system in Maryland. In FY2017, over 51% of all Maryland community college students enrolled in non-credit continuing education courses and programs to increase their skills; to start, change, or advance in a career; to enrich or improve quality of life; or to become a more informed citizen.

Maryland community colleges' continuing education courses and programs are highly effective workforce and economic development resources for Maryland employers. In FY2017, Maryland Community College's delivered instruction to 367,726 individual students with 205,534 students enrolled in continuing education courses. Of the 367,726 students approximately 9% of those students enrolled in both credit and continuing education courses.

Over one-half of the continuing education students enrolled in workforce development courses and programs. (See MCCACET Reports 2017-2, 2017-3 and 2017-4.)

Eighteen percent of these students enrolled in courses to increase literacy skills, including pursuit of their high school diploma, for speakers of other languages, and coursework to elevate academic preparation. Thirty-one percent of these students attended courses for lifelong learning or personal enrichment purposes that contribute significantly to the quality of life. Some students enrolled in courses in two or more of these instructional areas.



Data Source: Preliminary 2017 PAR Data, Spring 2018

THE ECONOMIC VALUE OF THE
**MARYLAND ASSOCIATION OF
 COMMUNITY COLLEGES**



**ALUMNI
 IMPACT**

\$8.6 billion
 ANNUAL ADDED INCOME

an economic
 boost similar
 to hosting the
 Superbowl

12x

or
125,318
 ADDED JOBS

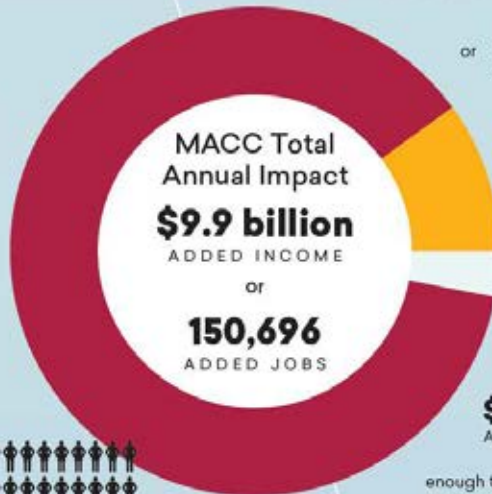


**OPERATIONS
 SPENDING IMPACT**

19,704
 ADDED JOBS

or **\$992.6 million**
 ADDED INCOME

enough to buy
29,000
 new cars



**STUDENT
 SPENDING IMPACT**

\$282.9 million
 ADDED INCOME

enough to buy a
 year's groceries for a
 family of four about
20,000x

or **5,947**
 ADDED JOBS



ABOUT THE ASSOCIATION OF MARYLAND COMMUNITY COLLEGES

178,995
 Credit Students

196,948
 Non-Credit Students

18,843
 Employees

\$965.3 million
 Annual Payroll

WHAT DOES THIS MEAN FOR MARYLAND?

For every \$1 invested by...

STUDENTS
 = **\$2.60**
 in lifetime earnings

TAXPAYERS
 = **\$1.50**
 in added state revenue and social savings

SOCIETY
 = **\$3.70**
 in added taxes and public sector savings

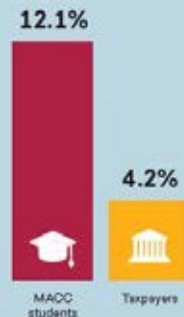
Regional impact

ANNUAL
 ADDED INCOME
 DUE TO MACC
2.9% EQUIVALENT TO
150,696
 ADDED JOBS



slightly larger than the state's
 entire Transportation &
 Warehousing industry

Average annual return
 on investment for...



Source: Emsi Economic Impact Study <http://www.emsi.com/2016/07/07/paper.html>, benefits from city led by Anne Arundel <http://www.aacounty.org/emsi/2016/06/24/news-center/newsroom-press-3-416-kelley-blue-book/201606>,
<http://www.economic.com/maryland/human/2016/06/03/maryland-college-for-america/201606>



Hagerstown Community College (HCC) creates a significant positive impact on the business community and generates a return on investment to its major stakeholder groups—students, taxpayers, and society. Using a two-pronged approach that involves an economic impact analysis and an investment analysis, this study calculates the benefits to each of these groups. Results of the analysis reflect Fiscal Year (FY) 2015-16.

IMPACT ON BUSINESS COMMUNITY

IMPACTS CREATED BY HCC IN
FY 2015-16

ADDED INCOME	JOBS
\$24.3 million	567
Operations spending impact	
\$1.1 million	40
Student spending impact	
\$150.9 million	2,480
Alumni impact	
\$176.2 million	3,088
Total impact	

During the analysis year, HCC and its students added **\$176.2 million** in income to the Washington County economy, approximately equal to **3.0%** of the county's total gross regional product (GRP). By comparison, this impact from the college is slightly larger than the entire Administrative & Waste Services industry in the county. The economic impacts of HCC break down as follows:

Operations spending impact

HCC employed 560 full-time and part-time employees in FY 2015-16. Payroll amounted to **\$24.8 million**, much of which was spent in Washington County to purchase groceries, clothing, and other household goods and services. The college spent another **\$20 million** to support its day-to-day operations.

The net impact of college payroll and expenses in Washington County during the analysis year was approximately **\$24.3 million** in income.

Impact of student spending

Around **28%** of students attending HCC originated from outside the county. Some of these students relocated to Washington County. In addition, a number of students would have left the county if not for HCC. These relocators and retained students spent money on groceries, transportation, rent, and so on at county businesses.

The expenditures of relocators and retained students during the analysis year added approximately **\$1.1 million** in income to the Washington County economy.



Alumni impact

Over the years, students have studied at HCC and entered or re-entered the workforce with newly-acquired skills. Today, thousands of these former students are employed in Washington County.

The accumulated contribution of former students currently employed in the county workforce amounted to **\$150.9 million** in added income during the analysis year.

RETURN ON INVESTMENT TO STUDENTS, TAXPAYERS, AND SOCIETY

Student perspective

HCC's FY 2015-16 students paid a total of **\$20.2 million** to cover the cost of tuition, fees, and supplies. They also forwent **\$53.2 million** in money that they would have earned had they been working instead of learning.

In return for the monies invested in the college, students will receive a present value of **\$211.5 million** in increased earnings over their working lives. This translates to a return of **\$2.90** in higher future earnings for every \$1 that students invest in their education. The average annual return for students is **13.6%**.

Taxpayer perspective

In FY 2015-16, state and local taxpayers in Maryland paid **\$20.8 million** to support the operations of HCC. The net present value of the added tax revenue stemming from the students' higher lifetime earnings and the increased output of businesses amounts to **\$40.7 million** in benefits to taxpayers. Savings to the public sector add another **\$4.8 million** in benefits due to a reduced demand for government-funded services in Maryland.

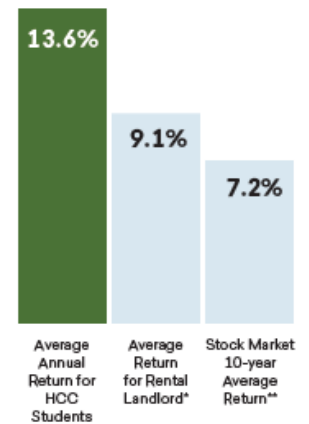
Dividing benefits to taxpayers by the associated costs yields a **2.2** benefit-cost ratio, i.e., every \$1 in costs returns \$2.20 in benefits. The average annual return on investment for taxpayers is **7.3%**.

Social perspective

The economic base in Maryland will grow by **\$493.9 million** over the course of the students' working lives. Society will also benefit from **\$14.7 million** in present value social savings related to reduced crime, lower unemployment, and increased health and well-being across the state.

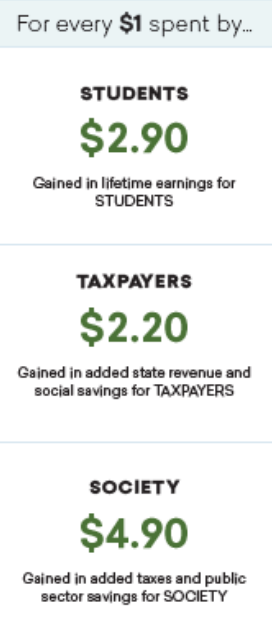
For every dollar that society spent on HCC educations during the analysis year, society will receive a cumulative value of **\$4.90** in benefits, for as long as the FY 2015-16 student population at HCC remains active in the state workforce.

STUDENT RATE OF RETURN



* RealtyTrac's Q3, 2014

** Forbes' S&P 500, 1994-2014.



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