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SALARIES

What US chemists made before the COVID-19 pandemic

2020 ACS salary survey shows mixed bag for members

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Like many events in 2020, the American Chemical Society salary survey was delayed by the COVID-19 pandemic. Normally conducted in the spring, the survey collected data in June and July of last year. The data shown here reflect the median annual salaries for 4,565 ACS members un-

der age 70 who work as full-time employees in the US. (ACS publishes C&EN.)

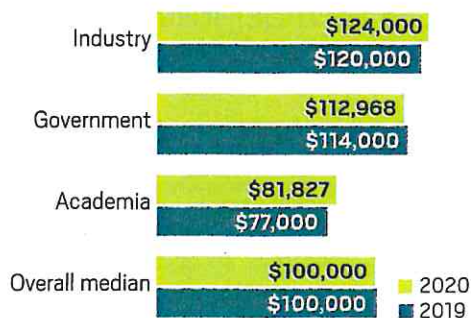
The most notable change from the 2019 survey is the drop in unemployment rate. The salary survey shows an unemployment rate of 1.5% for ACS members, who were asked to report their status as of March 1, 2020. That's down more than a point from

the 2019 rate and is the lowest rate in the past 20 years. Unemployment in some regions dropped to below 1% (see page 22).

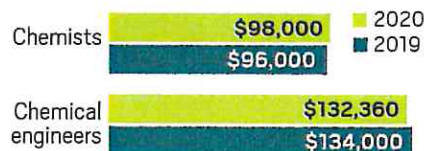
Why the big drop? C&EN asked ACS its thoughts about the change and what might be causing it.

To start, there's the date: March 1 was before most people would have felt the economic effects of COVID-19. "I would point to the rise in the economy and how

Overall, salaries were flat compared with 2019



Chemical engineers made more than chemists



Men made significantly more than women



Note for all data: Data are from 4,565 American Chemical Society members' survey responses collected from June 1 to July 14, 2020, except when other years' data are shown. Salaries reflect the median annual salaries on March 1 for full-time US employees who say their work specialty is chemistry, except for the comparison between chemists and chemical engineers, which includes data from full-time US employees who say their work specialty is chemical engineering. Numbers do not include students, members over 70, or international members.

Unemployment for ACS members fell drastically in 2020 right before the pandemic started to affect the economy

2020: **1.5%**

2019: **2.6%**

Unemployment was highest for ACS members with only a bachelor's degree

Bachelor's **1.9%**

Master's **1.7%**

Doctorate **1.4%**

Note: Numbers reflect employment status as of March 1 in the indicated year.

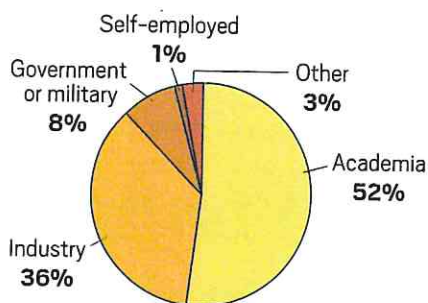
Asian respondents earned the highest salaries



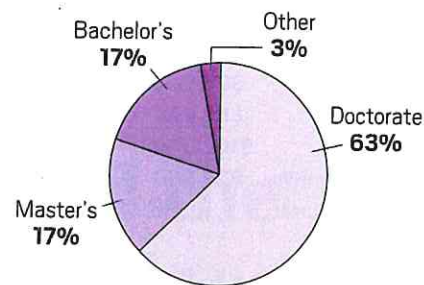
Note: Respondents could choose more than one race and could additionally denote their Hispanic/Latino identity in response to a separate question. Salaries for Native Americans and Pacific Islanders are not reported because of the small number of people who responded in those categories.

our economy's been doing in general prior to the pandemic," says Eric Bruton, a chemist at Boeing and chair of the ACS Committee on Economic and Professional Affairs (CEPA), which oversees the salary survey. He points in particular to growth in several chemical-related industries during late 2019 and early 2020. "Overall, it's a nice positive."

These are the US ACS members who took the 2020 survey



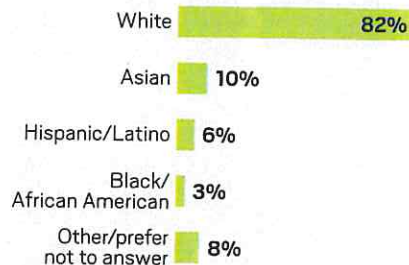
More respondents worked in academia than industry



Most respondents had a doctoral degree

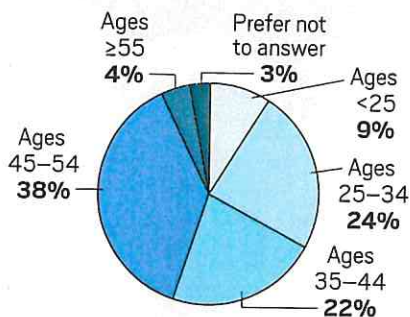


Most respondents were men



Respondents were predominantly White

Note: Numbers do not add to 100% because respondents could choose more than one race and could additionally denote their Hispanic/Latino identity in response to a separate question.



The largest proportion of respondents were 45-54 years old, with an average age of 42.6

Steven Meyers, who oversees the salary survey as ACS's senior director of member programming, says the low employment rate "is emblematic of a trend that we've been seeing since the end of the last recession" in 2008-9, reflecting more than 10 years of economic growth.

The drop in unemployment in the ACS survey data isn't reflected in the US unemployment rate in March for people with at least a bachelor's degree, which was up slightly from 2.0% in March 2019 to 2.5% in March 2020, according to the US Bureau of Labor Statistics. ACS often uses this number to compare trends for ACS members with the larger economy.

But Meyers points out that the ACS salary survey "is not of the entire US economy. It's not of global chemists. It's not even of US chemists. It's a measure of the mem-

bership." The ACS survey unemployment rate doesn't include students, members over 70, or international members, Meyers says. In addition, ACS members are more likely to have a PhD and work in academia than US bachelor's degree recipients. Those groups tend to have better employment outcomes.

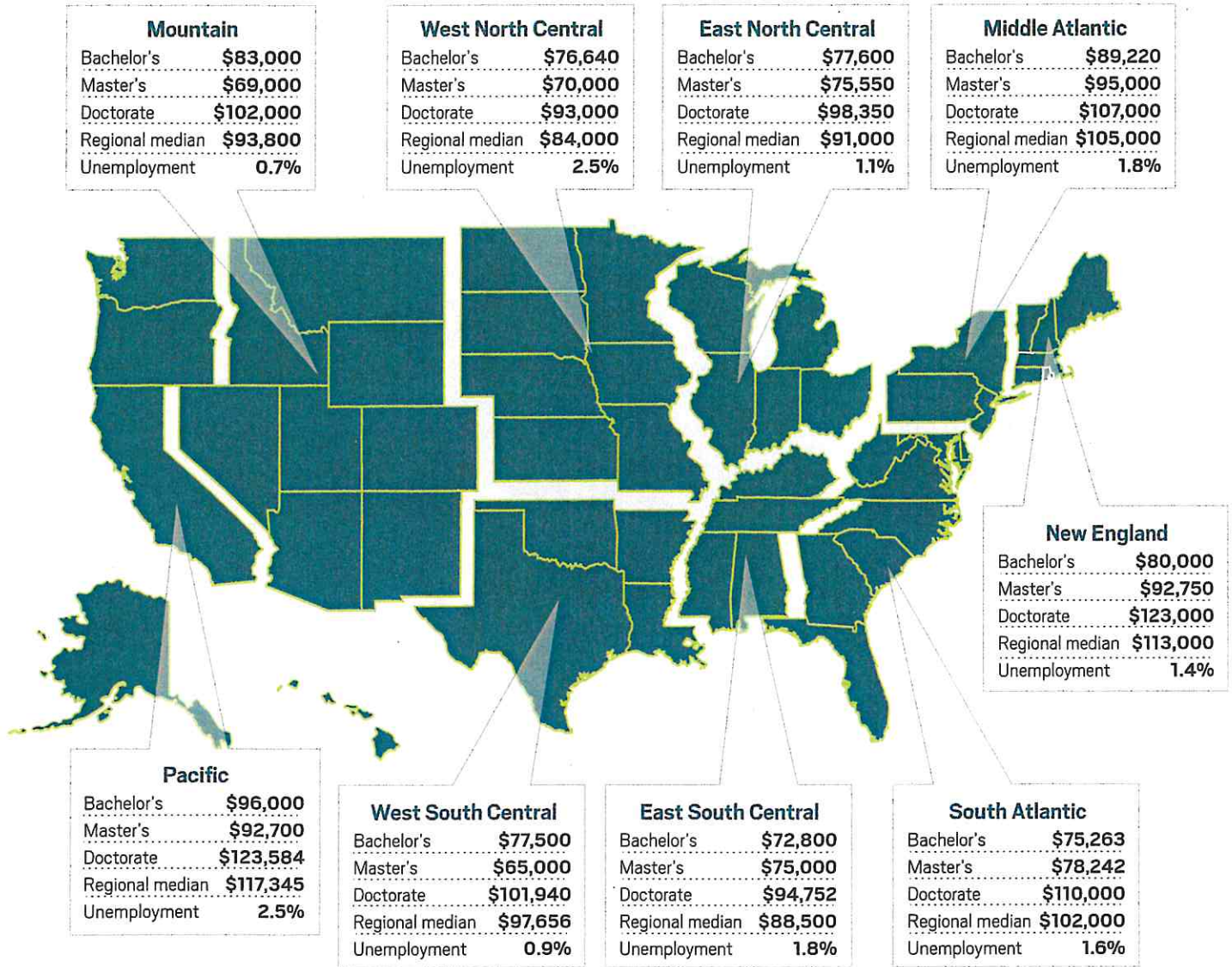
ACS calculated a margin of error of ±1.45 percentage points for the unemployment rate, which could put the real unemployment at almost 0 or up to 3%, Meyers says.

ACS expects to see ACS member unemployment increase in 2021 as a result of the pandemic. Bruton encourages unemployed ACS members to use services such as career counseling, webinars, and dues waivers for people experiencing hardship because of the pandemic.

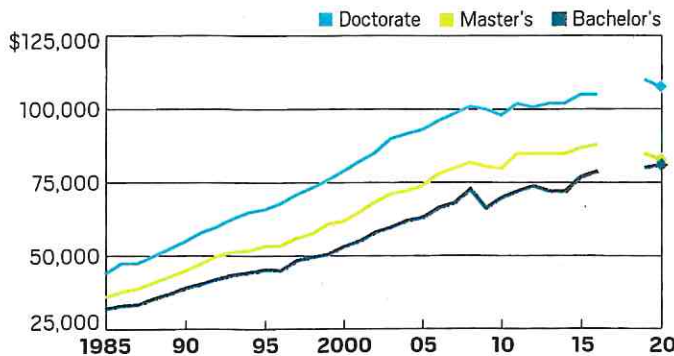
More online

See additional data on who took the survey and where respondents worked at cenm.ag/salary2020.

Salaries continued to vary widely by region. In some cases, bachelor's degree recipients made more than those with a master's degree

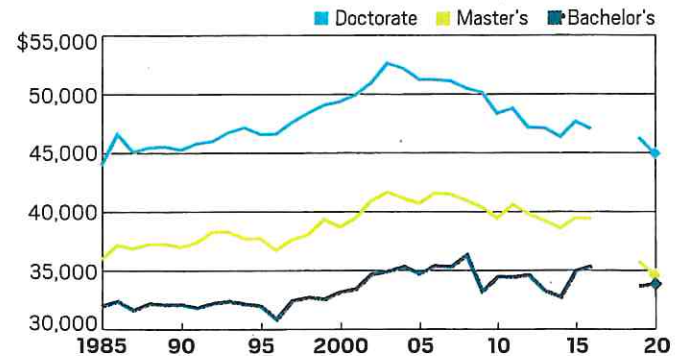


Salaries have increased steadily since 1985 when viewed in current dollars



Note: Current dollars are the value in the year the salary was reported. Data are missing for 2017 and 2018 because of changes to the survey. For more explanation, see the 2019 salary report at cenm.ag/salariesurvey2019.

But salaries have been almost flat when adjusted for inflation



Note: Salaries were adjusted for inflation using 1985 as the base year. Data are missing for 2017 and 2018 because of changes to the survey. For more explanation, see the 2019 salary report at cenm.ag/salariesurvey2019.