Monthly Labor Review

June 2021

As the COVID-19 pandemic affects the nation, hires and turnover reach record highs in 2020

Data from the Job Openings and Labor Turnover Survey (JOLTS) highlight the effects of the coronavirus disease 2019 (COVID-19) pandemic and the results of efforts to mitigate its spread in 2020. With the challenges of the pandemic, many of the JOLTS data elements experienced shocks early in the year before returning to previous trends. In fact, many of the data elements experienced series highs. For example, the hires level reached a series high of 8.3 million in May 2020, bouncing back from a depressed level of 3.9 million in April 2020. The total separations level, also referred as turnover, reached a series high of 16.3 million in March 2020, boosted largely by a spike in layoffs and discharges.

Larry Akinyooye
akinyooye.larry@bls.gov

Larry Akinyooye is an economist in the Office of Employment and Unemployment Statistics, U.S. Bureau of Labor Statistics.

Eric Nezamis
nezamis.eric@bls.gov

Eric Nezamis is an economist in the Office of Employment and Unemployment Statistics, U.S. Bureau of Labor Statistics.

The Job Openings and Labor Turnover Survey (JOLTS) data show that job openings, hires, and total separations experienced large movements early in 2020 in the wake of an economic recession because of the coronavirus disease 2019 (COVID-19) pandemic.[1] After the initial economic downturn, many of the JOLTS data series started to return to prepandemic levels. This article reviews the JOLTS data for 2020 at the total nonfarm, industry, and regional levels.[2] (For definitions of JOLTS terms, see the box that follows.)

Definitions of JOLTS terms*

Job Openings

Job openings include all positions that are open on the last business day of the reference month. A job is open only if it meets the following three conditions: (1) A specific position exists and there is work available for that position; the position can be full time or part time, and it can be permanent, short term, or seasonal; (2) the job could start within 30 days, whether or not the employer can find a suitable candidate during that time; and (3) the employer is actively recruiting workers from outside the establishment to fill the position; active recruiting means that the establishment is taking steps to fill a position and may include advertising in

newspapers, on television, or on the radio; posting internet notices, posting “help wanted” signs, networking or making “word-of-mouth” announcements; accepting applications; interviewing candidates; contacting employment agencies; or soliciting employees at job fairs, state or local employment offices, or similar sources.

Excluded are positions open only to internal transfers, promotions or demotions, or recalls from layoffs. Also excluded are openings for positions with start dates more than 30 days in the future, positions for which employees have been hired but the employees have not yet reported for work, and positions to be filled by employees of temporary help agencies, employee leasing companies, outside contractors, or consultants.

Hires

Hires include all additions to the payroll during the entire reference month, including newly hired and rehired employees; full-time and part-time employees; permanent, short-term, and seasonal employees; employees who were recalled to a job at the location following a layoff (formal suspension from pay status) lasting more than 7 days; on-call or intermittent employees who returned to work after having been formally separated; workers who were hired and separated during the month; and transfers from other locations.

Excluded are transfers or promotions within the reporting location, employees returning from a strike, and employees of temporary help agencies, employee leasing companies, outside contractors, or consultants.

Separations

Separations include all separations from the payroll during the entire reference month and are reported by type of separation: quits, layoffs and discharges, and other separations. Quits include employees who left voluntarily, except for retirements or transfers to other locations. Layoffs and discharges include involuntary separations initiated by the employer, including layoffs with no intent to rehire; layoffs (formal suspensions from pay status) lasting or expected to last more than 7 days; discharges resulting from mergers, downsizing, or closings; firings or other discharges for cause; terminations of permanent or short-term employees; and terminations of seasonal employees (whether or not they are expected to return the next season). Other separations include retirements, transfers to other locations, separations due to employee disability, and deaths.

Excluded are transfers within the same location, employees on strike, and employees of temporary help agencies, employee leasing companies, outside contractors, or consultants.

*From U.S. Bureau of Labor Statistics, *Handbook of Methods*, "Job Openings and Labor Turnover Survey: Concepts," https://www.bls.gov/opub/hom/jlt/concepts.htm.

Job openings

The job openings level is a procyclical measure of labor demand; the number of job openings tends to increase during economic expansion and decrease during an economic contraction.[3] A larger number of job openings

generally indicates that employers need additional workers, which is a sign of a demand for labor and confidence in the economy. Job openings and employment are closely linked and tend to rise and fall together. Also notable in this context is that the number of employees on nonfarm payrolls is considered a Principal Federal Economic Indicator; more particularly, it is frequently cited as a coincident economic indicator.[4]

Job openings fell sharply in March 2020 by 17.1 percent. In April, job openings fell further to a level of 4.6 million on the last business day of the month. As lockdown efforts lifted throughout the country, job openings showed a slow recovery by the close of 2020, although still below levels seen in 2019. Comparing December 2019 and December 2020, job openings declined by 0.1 percent.[5] The small decline in job openings signals a drop in the demand for labor from December 2019 to December 2020. (See table 1.) The volatility of job openings from December 2019 to December 2020 correlates with the economic recession as a result of the COVID-19 pandemic. Despite over-the-year declines in job openings, they are still at a higher level compared with historical levels.

Table 1. Change in level and percentage of job openings, by industry and region, not seasonally adjusted, December 2018–December 2020 (level in thousands)

Industry and region	Level by month and year			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	December 2018	December 2019	December 2020	Level	Percent	Level	Percent
Total nonfarm	6,749	6,039	6,032	-710	-10.5	-7	-0.1
Industry							
Total private	6,124	5,323	5,422	-801	-13.1	99	1.9
Mining and logging	23	12	14	-11	-47.8	2	16.7
Construction	293	210	211	-83	-28.3	1	0.5
Manufacturing	441	349	444	-92	-20.9	95	27.2
Durable goods	297	206	253	-91	-30.6	47	22.8
Nondurable goods	144	144	191	0	0.0	47	32.6
Trade, transportation, and utilities	1,269	1,063	1,086	-206	-16.2	23	2.2
Wholesale trade	163	165	159	2	1.2	-6	-3.6
Retail trade	801	631	682	-170	-21.2	51	8.1
Transportation, warehousing, and utilities	305	266	245	-39	-12.8	-21	-7.9
Information	132	145	107	13	9.8	-38	-26.2
Financial activities	341	311	279	-30	-8.8	-32	-10.3
Finance and insurance	278	221	220	-57	-20.5	-1	-0.5
Real estate and rental and leasing	63	90	59	27	42.9	-31	-34.4
Professional and business services	1,196	1,071	1,327	-125	-10.5	256	23.9
Education and health services	1,251	1,164	1,190	-87	-7.0	26	2.2
Educational services	93	101	75	8	8.6	-26	-25.7
Healthcare and social assistance	1,159	1,064	1,115	-95	-8.2	51	4.8
Leisure and hospitality	907	749	569	-158	-17.4	-180	-24.0
Arts, entertainment, and recreation	97	114	36	17	17.5	-78	-68.4
Accommodation and food services	810	635	533	-175	-21.6	-102	-16.1

See footnotes at end of table.

Table 1. Change in level and percentage of job openings, by industry and region, not seasonally adjusted, December 2018–December 2020 (level in thousands)

Industry and region	Level by month and year			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	December 2018	December 2019	December 2020	Level	Percent	Level	Percent
Other services	271	249	195	-22	-8.1	-54	-21.7
Government	624	716	610	92	14.7	-106	-14.8
Federal	105	88	89	-17	-16.2	1	1.1
State and local	519	628	521	109	21.0	-107	-17.0
Education	220	216	196	-4	-1.8	-20	-9.3
Excluding education	299	412	325	113	37.8	-87	-21.1
Region							
Northeast	1,123	1,061	1,029	-62	-5.5	-32	-3.0
South	2,544	2,263	2,394	-281	-11.0	131	5.8
Midwest	1,598	1,253	1,294	-345	-21.6	41	3.3
West	1,484	1,461	1,315	-23	-1.5	-146	-10.0

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Job openings by industry

During 2020, the monthly job openings level for 5 of the 19 industries reached series highs. The top industries highlight the employer industries during the COVID-19 pandemic that could seamlessly shift employees to work remotely or employer industries that are considered essential services that needed to remain open. The top three industries with the most job openings were professional and business services, at 1.5 million in December 2020; healthcare and social assistance, at 1.3 million in October 2020; and state and local government education, at 270,000 in January 2020. (See table 2.)

Table 2. Monthly series highs, by industry and region, seasonally adjusted, 2020

Industry and region	Industry and region data element	Month	Level
Industry			
Nondurable goods	Job openings	November	263,000
Professional and business services	Job openings	December	1.5 million
Healthcare and social assistance	Job openings	October	1.3 million
Arts, entertainment, and recreation	Job openings	January	158,000
State and local government education	Job openings	January	270,000
Construction	Hires	May	724,000
Durable goods	Hires	May	370,000
Nondurable goods	Hires	May	269,000
Wholesale trade	Hires	May	228,000

See footnotes at end of table.

Table 2. Monthly series highs, by industry and region, seasonally adjusted, 2020

Industry and region	Industry and region data element	Month	Level
Retail trade	Hires	May	1.0 million
Transportation, warehousing, and utilities	Hires	November	421,000
Real estate and rental and leasing	Hires	July	131,000
Professional and business services	Hires	August	1.4 million
Healthcare and social assistance	Hires	May	1.1 million
Accommodation and food services	Hires	June	1.9 million
Other services	Hires	May	646,000
Mining and logging	Total separations	April	68,000
Construction	Total separations	April	820,000
Durable goods	Total separations	April	542,000
Nondurable goods	Total separations	March	358,000
Wholesale trade	Total separations	March	335,000
Retail trade	Total separations	March	1.8 million
Transportation, warehousing, and utilities	Total separations	March	602,000
Information	Total separations	March	246,000
Real estate and rental and leasing	Total separations	March	203,000
Professional and business services	Total separations	March	1.9 million
Educational services	Total separations	March	371,000
Healthcare and social assistance	Total separations	March	1.7 million
Arts, entertainment, and recreation	Total separations	March	665,000
Accommodation and food services	Total separations	March	5.0 million
Other services	Total separations	March	965,000
State and local government education	Total separations	March	294,000
State and local government, excluding education	Total separations	April	248,000
Retail trade	Quits	January	594,000
Transportation, warehousing, and utilities	Quits	December	170,000
Healthcare and social assistance	Quits	October	467,000
State and local government education	Quits	July	147,000
Mining and logging	Layoffs and discharges	April	61,000
Construction	Layoffs and discharges	April	713,000
Durable goods	Layoffs and discharges	April	483,000
Nondurable goods	Layoffs and discharges	March	277,000
Wholesale trade	Layoffs and discharges	April	257,000
Retail trade	Layoffs and discharges	March	1.4 million
Transportation, warehousing, and utilities	Layoffs and discharges	March	443,000
Information	Layoffs and discharges	March	196,000
Real estate and rental and leasing	Layoffs and discharges	April	176,000
Professional and business services	Layoffs and discharges	March	1.3 million
Educational services	Layoffs and discharges	March	320,000
Healthcare and social assistance	Layoffs and discharges	March	1.2 million
Arts, entertainment, and recreation	Layoffs and discharges	March	618,000
Accommodation and food services	Layoffs and discharges	March	4.6 million
Other services	Layoffs and discharges	March	895,000
State and local government education	Layoffs and discharges	March	137,000
State and local government, excluding education	Layoffs and discharges	April	151,000
Professional and business services	Other separations	April	114,000
State and local government education	Other separations	July	52,000

See footnotes at end of table.

Table 2. Monthly series highs, by industry and region, seasonally adjusted, 2020

Industry and region	Industry and region data element	Month	Level
Region			
West	Job openings	January	1.7 million
Northeast	Hires	June	1.4 million
South	Hires	May	2.9 million
Midwest	Hires	May	1.9 million
West	Hires	May	2.2 million
Northeast	Total separations	March	3.3 million
South	Total separations	March	5.4 million
Midwest	Total separations	March	3.8 million
West	Total separations	March	3.8 million
Northeast	Layoffs and discharges	March	2.8 million
South	Layoffs and discharges	March	4.1 million
Midwest	Layoffs and discharges	March	3.1 million
West	Layoffs and discharges	March	3.1 million

Source: U.S. Bureau of Labor Statistics.

Monthly job openings increased over the year from December 2019 to December 2020 in 8 of the 19 industry groups for which data are published. The largest over-the-year increases in job openings occurred in nondurable goods manufacturing (+32.6 percent); professional and business services (+23.9 percent); and durable goods manufacturing (+22.8 percent). Eleven of the nineteen industries showed job opening declines from December 2019 to December 2020. Industries with the largest declines were arts, entertainment, and recreation (−68.4 percent); real estate and rental and leasing (−34.4 percent); and information (−26.2 percent). (See table 1.)

Job openings by region

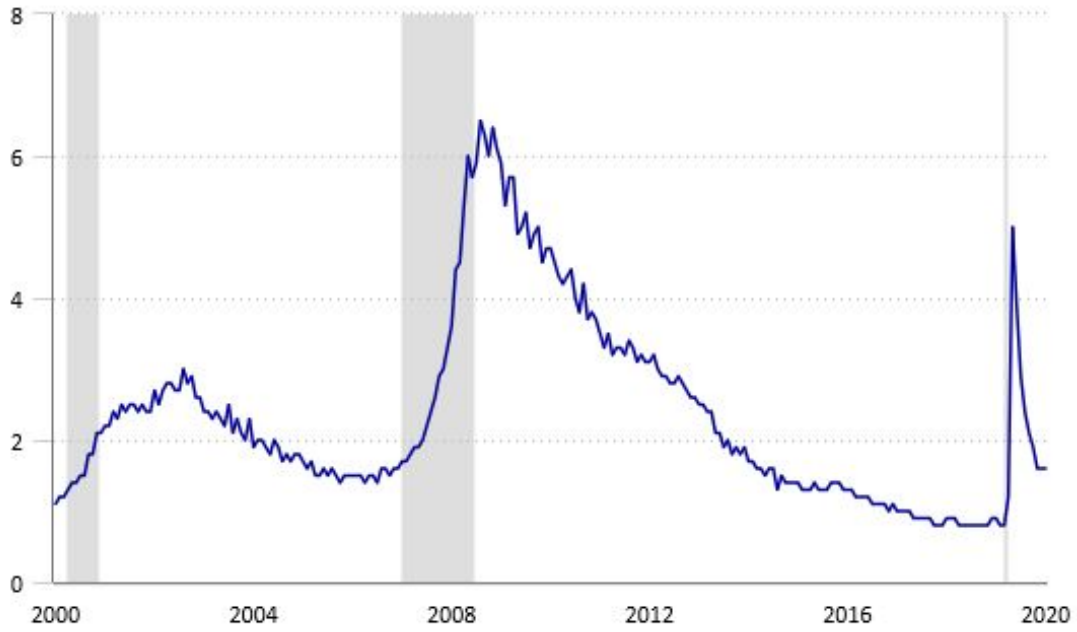
The West region was the only region to experience a monthly series high in job openings, with a level of 1.7 million in January 2020. (See table 2.) Two of the four census regions experienced increases in the number of job openings from December 2019 to December 2020. The South region had an increase of 5.8 percent and the Midwest region increased by 3.3 percent. The West region had the largest over-the-year decline in job openings at 10.0 percent. The Northeast region also experienced a decline of 3.0 percent. (See table 1.)

Job openings and unemployment

One way to analyze job openings and unemployment is to consider the number of unemployed people per job opening. The number of unemployed people per job opening is the ratio of unemployed people, as published by the Current Population Survey, to the number of job openings. To calculate this ratio, we divide the number of unemployed people by the number of job openings. Unemployment and job openings levels generally share an inverse relationship. That is, when the economy enters a period of expansion, the number of unemployed people tends to fall or remain at a low level. During economic expansions, job openings tend to increase or remain high, causing the unemployed people per job opening ratio to decrease. The opposite occurs when the economy enters periods of economic contraction—unemployment increases and job openings decrease, leading to a higher unemployed people per job openings ratio that helps describe the slack in the labor market.[6]

In January and February of 2020, the unemployed people per job openings ratio was 0.8—indicating there were more openings than unemployed jobseekers. This had made 27 consecutive months that the ratio was at or below 1.0—dating back to December 2017. The current recession that began in February 2020 helped end the streak. The unemployed per job openings ratio then increased to 1.2 in March 2020 and peaked in April 2020 at 5.0. In the latter part of the year, the ratio began to decline steadily to 1.6 in October 2020, were it remained through December 2020. From the pre-COVID months to December, there was less demand by employers for job openings than supply of unemployed jobseekers. (See chart 1.) The Great Recession began in December 2007, with an unemployed people per job opening ratio of 1.7. The ratio peaked at 6.5 in July 2009, 1 month after the recession officially ended—an increase of 282 percent.[7] Though this current recession did not reach the same ratio high as during the Great Recession, the sudden rise represented a much larger (525) percentage change in the ratio.

Chart 1. Ratio of unemployed persons to job opening, total nonfarm, seasonally adjusted, December 2000–December 2020



Click legend items to change data display. Hover over chart to view data.
Shaded areas represent recessions as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Population Survey and Job Openings and Labor Turnover Survey.

Hires

Hires, like job openings, are considered a procyclical measurement. Hires showed a similar trend to job openings in 2020, with sharp declines in March and April 2020. The declines were offset by large gains in May, with hires reaching a series high that month and later hires declining to pre-COVID levels. Specifically, hires declined in March by 847,000 and continued to plunge in April by 1.2 million as the country reacted to the COVID-19 pandemic and took steps to contain it. In May 2020, hiring rebounded (+4.3 million) reaching 8.3 million. The total

number of annual hires increased to a level of 73.1 million in 2020 (+4.4 percent), making it the 11th consecutive year that the annual hires level has increased. (See table 3.)

Table 3. Change in level and percentage of annual hires, by industry and region, not seasonally adjusted, December 2018–December 2020 (levels in thousand)

Industry and region	Level by year			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Total	68,596	69,984	73,094	1,388	2.0	3,110	4.4
Industry							
Total private	64,284	65,564	68,899	1,280	2.0	3,335	5.1
Mining and logging	447	303	246	-144	-32.2	-57	-18.8
Construction	4,526	4,987	5,022	461	10.2	35	0.7
Manufacturing	4,391	4,053	4,819	-338	-7.7	766	18.9
Durable goods	2,511	2,272	2,746	-239	-9.5	474	20.9
Nondurable goods	1,879	1,781	2,073	-98	-5.2	292	16.4
Trade, transportation, and utilities	13,673	13,902	15,306	229	1.7	1,404	10.1
Wholesale trade	1,755	1,775	1,843	20	1.1	68	3.8
Retail trade	9,026	9,032	9,836	6	0.1	804	8.9
Transportation, warehousing, and utilities	2,894	3,095	3,629	201	6.9	534	17.3
Information	1,089	1,133	977	44	4.0	-156	-13.8
Financial activities	2,500	2,656	2,704	156	6.2	48	1.8
Finance and insurance	1,636	1,682	1,690	46	2.8	8	0.5
Real estate and rental and leasing	864	973	1,013	109	12.6	40	4.1
Professional and business services	13,749	13,790	13,362	41	0.3	-428	-3.1
Education and health services	8,516	8,665	9,288	149	1.7	623	7.2
Educational services	1,160	1,166	1,081	6	0.5	-85	-7.3
Healthcare and social assistance	7,352	7,499	8,207	147	2.0	708	9.4
Leisure and hospitality	12,798	13,464	13,952	666	5.2	488	3.6
Arts, entertainment, and recreation	2,208	1,992	1,646	-216	-9.8	-346	-17.4
Accommodation and food services	10,587	11,470	12,308	883	8.3	838	7.3
Other services	2,596	2,609	3,223	13	0.5	614	23.5
Government	4,311	4,420	4,193	109	2.5	-227	-5.1
Federal	419	501	907	82	19.6	406	81.0
State and local	3,891	3,918	3,286	27	0.7	-632	-16.1
Education	2,013	2,037	1,647	24	1.2	-390	-19.1
Excluding education	1,879	1,882	1,641	3	0.2	-241	-12.8
Region							
Northeast	10,496	10,864	12,037	368	3.5	1,173	10.8
South	27,315	28,278	27,803	963	3.5	-475	-1.7
Midwest	15,193	14,895	15,904	-298	-2.0	1,009	6.8
West	15,590	15,946	17,350	356	2.3	1,404	8.8

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Hires by industry

Annual hires increased in 12 of 19 industries in 2020 and decreased in 7 industries. The largest percentage increases in the annual hires levels were in federal government (+81.0 percent). The increase was primarily driven by the 2020 Decennial Census and the need to hire additional canvas employees at the U.S. Census Bureau.[8] Other services (+23.5 percent), and durable goods manufacturing (+20.9 percent) also increased. The largest percentage decreases in hires occurred in state and local government education (−19.1 percent); mining and logging (−18.8 percent); and arts, entertainment, and recreation (−17.4 percent). (See table 3.) As the employers around the United States opened up from the COVID-19 restrictions, four industries experienced annual series highs for the level of hires in 2020. The four industries were accommodation and food services (12.3 million); healthcare and social assistance (8.2 million); transportation, warehousing, and utilities (3.6 million); and other services (3.2 million). (See table 4.) To note, these four industries also reached annual series highs for total separations, which was attributed to COVID-19 pandemic.

Table 4. Annual series highs by industry and region, not seasonally adjusted, 2020, (levels in thousand)

Industry and region	Industry and region data element	Level
Industry		
Transportation, warehousing and Utilities	Hires	3,629
Healthcare and social assistance	Hires	8,207
Accommodation and food services	Hires	12,308
Other Services	Hires	3,223
Healthcare and social assistance	Quits	4,892
State and local government education	Quits	1,270
Wholesale trade	Layoffs and discharges	1,019
Retail trade	Layoffs and discharges	4,410
Transportation, warehousing, and utilities	Layoffs and discharges	1,767
Information	Layoffs and discharges	663
Real estate and rental and leasing	Layoffs and discharges	617
Professional and business services	Layoffs and discharges	6,458
Educational services	Layoffs and discharges	914
Healthcare and social assistance	Layoffs and discharges	3,573
Arts, entertainment, and recreation	Layoffs and discharges	1,724
Accommodation and food services	Layoffs and discharges	8,818
Other services	Layoffs and discharges	2,450
State and local government education	Layoffs and discharges	851
Transportation, warehousing, and utilities	Other separations	226
State and local government education	Other separations	438
Wholesale trade	Total separations	2,109
Retail trade	Total separations	10,356
Transportation, warehousing, and utilities	Total separations	3,626
Real estate and rental and leasing	Total separations	1,098
Professional and business services	Total separations	14,016
Education and health services	Total separations	1,466
Educational services	Total separations	8,939
Arts, entertainment, and recreation	Total separations	2,305
Accommodation and food services	Total separations	15,087
Other services	Total separations	3,637

See footnotes at end of table.

Table 4. Annual series highs by industry and region, not seasonally adjusted, 2020, (levels in thousand)

Industry and region	Industry and region data element	Level
State and local government education	Total separations	2,556
State and local government, excluding education	Total separations	1,909
Region		
Northeast	Hires	12,037
Midwest	Hires	15,904
West	Hires	17,350
Northeast	Layoffs and discharges	8,244
South	Layoffs and discharges	13,329
Midwest	Layoffs and discharges	9,136
West	Layoffs and discharges	10,309
Northeast	Total separations	13,914
South	Total separations	30,119
Midwest	Total separations	18,095
West	Total separations	19,370

Source: U.S. Bureau of Labor Statistics.

In 2020, 11 industries experienced seasonally adjusted monthly series highs. Of the 11 industries, 7 industries saw series highs in May 2020. The industries reaching the highest level were healthcare and social assistance (1.1 million), retail trade (1.0 million), and construction (724,000). Three industries saw series highs throughout the summer months. Those industries were accommodation and foods services in June 2020 (1.9 million), real estate and rental and leasing in July 2020 (131,000), and professional and business services in August 2020 (1.4 million). Transportation, warehousing, and utilities experienced a series hires high in November 2020 (421,000). (See table 2.)

Six industries experienced monthly series lows in hires—all in April 2020. These industries include accommodation and food services (395,000), construction (201,000), state and local government, excluding education (79,000), real estate and rental and leasing (41,000), information (37,000), and arts, entertainment, and recreation (31,000). (See table 5.) Out of the six industries, only construction experienced a monthly series high in hires 1month later in May 2020.

Table 5. Monthly series lows by industry and region, seasonally adjusted, 2020

Industry and region	Industry and region data element	Month	Level
Industry			
Construction	Hires	April	201,000
Information	Hires	April	37,000
Real estate and rental and leasing	Hires	April	41,000
Arts, entertainment, and recreation	Hires	April	31,000
Accommodation and food services	Hires	April	395,000
State and local government, excluding education	Hires	April	79,000
Arts, entertainment, and recreation	Total separations	August	44,000
Other services	Total separations	August	86,000
Arts, entertainment, and recreation	Quits	August	11,000

See footnotes at end of table.

Table 5. Monthly series lows by industry and region, seasonally adjusted, 2020

Industry and region	Industry and region data element	Month	Level
Other services	Quits	May	36,000
Wholesale trade	Layoffs and discharges	September	20,000
Arts, entertainment, and recreation	Layoffs and discharges	August	31,000
Other services	Layoffs and discharges	August	15,000
State and local government, excluding education	Layoffs and discharges	August	9,000
Retail trade	Other separations	May	11,000
Educational and services	Other separations	June and July	1,000
Other services	Other separations	June	1,000
Region			
Northeast	Hires	April	558,000
South	Layoffs and discharges	September	502,000

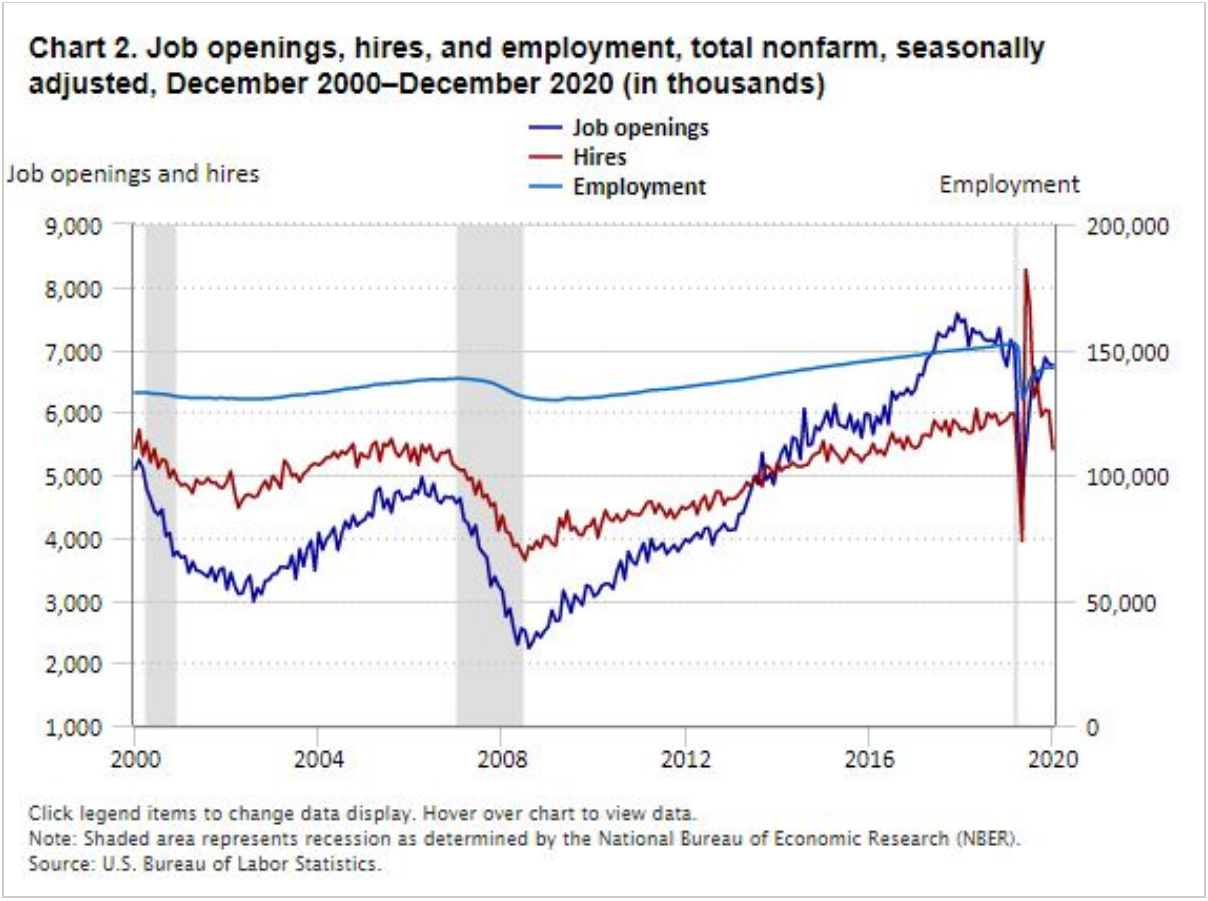
Source: U.S. Bureau of Labor Statistics.

Hires by region

The Northeast region had the highest percentage increase in annual hires in 2020, rising 10.8 percent. Annual hires also increased in the West region (+8.8 percent) and Midwest region (+6.8 percent). The South region was the only region to experience a decline in annual hires in 2020 (−1.7 percent). In 2019, both the Northeast and the South regions increased by 3.5 percent in annual hires, followed by the West region at 2.3 percent. In 2019, the Midwest region was the only region to experience a decline of 2.0 percent in annual hires. (See table 3.) In 2020, all four regions experienced series high in monthly hires. Of the four regions, the South (2.9 million), West (2.2 million) and Midwest (1.9 million) experienced their series high in monthly hires in May 2020. The Northeast region followed in June 2020 with a series high in monthly hires at 1.4 million. (See table 2.)

Hires and job openings

Leading up to the COVID-19 recession, the trend occurring was that job openings were outpacing hires; which signaled an increase demand for labor. In January 2020, job openings were at a level of 7.2 million. The decline in job openings in March 2020 was likely related to the fact that job openings are a stock measure, meant to capture job openings activity on the last business day of the month. Mid-March is also when many of the COVID-19 lockdown orders began. JOLTS hires and the Current Employment Statistics employment figures experienced declines in March; however, the larger decline in those measures was not experienced until April 2020. Job openings experienced their largest decline in April 2020, with a 1.2 million decrease. The declines were offset by immediate gains in both job openings and hires, with hires reaching a series high of 8.3 million in May 2020. The large spike and series high caused hires to briefly outpace job openings in May and June 2020. Hires have since declined and returned to the levels seen around the fall and winter of 2016. Job openings have returned to levels close to that of January 2020, with a difference of a little over 400,000 job openings. (See chart 2.)



Total separations

In 2020, the COVID-19 pandemic affected both employees and employers as measured by JOLTS total separations data. The year began flat in January and February 2020, with 5.7 million total separations before the effect of the COVID-19 pandemic shutdowns took place in March 2020. In March 2020, total separations soared to an all-time series high at 16.3 million; however, over the next 2 months, total separations quickly reset back to pre-COVID-19 levels. JOLTS annual data show that the annual number of total separations reached its highest level in series history. It increased 20 percent from December 2019 to December 2020, rising from 68.0 million to 81.5 million. (See table 7.) The level of total separations has grown annually for 10 consecutive years, with the most recent year increase largely due to the influence of the COVID-19 pandemic.

Table 6. Change in level and percentage of annual total separations, by industry and region, not seasonally adjusted, December 2018–December 2020 (levels in thousand)

Industry and region	Level by year			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent

See footnotes at end of table.

Table 6. Change in level and percentage of annual total separations, by industry and region, not seasonally adjusted, December 2018–December 2020 (levels in thousand)

Industry and region	Level by year			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Total	66,201	67,993	81,493	1,792	2.7	13,500	19.9
Industry							
Total private	62,062	63,785	76,187	1,723	2.8	12,402	19.4
Mining and logging	394	353	336	-41	-10.4	-17	-4.8
Construction	4,216	4,867	4,985	651	15.4	118	2.4
Manufacturing	4,124	4,048	5,391	-76	-1.8	1,343	33.2
Durable goods	2,291	2,300	3,166	9	0.4	866	37.7
Nondurable goods	1,832	1,747	2,223	-85	-4.6	476	27.2
Trade, transportation, and utilities	13,508	13,707	16,093	199	1.5	2,386	17.4
Wholesale trade	1,715	1,746	2,109	31	1.8	363	20.8
Retail trade	9,159	9,119	10,356	-40	-0.4	1,237	13.6
Transportation, warehousing, and utilities	2,635	2,843	3,626	208	7.9	783	27.5
Information	1,057	1,103	1,207	46	4.4	104	9.4
Financial activities	2,336	2,491	2,728	155	6.6	237	9.5
Finance and insurance	1,532	1,584	1,630	52	3.4	46	2.9
Real estate and rental and leasing	803	906	1,098	103	12.8	192	21.2
Professional and business services	13,293	13,509	14,016	216	1.6	507	3.8
Education and health services	8,030	8,062	10,406	32	0.4	2,344	29.1
Educational services	1,126	1,115	1,466	-11	-1.0	351	31.5
Healthcare and social assistance	6,904	6,947	8,939	43	0.6	1,992	28.7
Leisure and hospitality	12,542	13,105	17,389	563	4.5	4,284	32.7
Arts, entertainment, and recreation	2,108	1,937	2,305	-171	-8.1	368	19.0
Accommodation and food services	10,434	11,170	15,087	736	7.1	3,917	35.1
Other services	2,565	2,541	3,637	-24	-0.9	1,096	43.1
Government	4,135	4,206	5,306	71	1.7	1,100	26.2
Federal	401	468	844	67	16.7	376	80.3
State and local	3,735	3,736	4,463	1	0.0	727	19.5
Education	1,928	1,924	2,556	-4	-0.2	632	32.8
Excluding education	1,807	1,813	1,909	6	0.3	96	5.3
Region							
Northeast	10,087	10,389	13,914	302	3.0	3,525	33.9
South	26,298	27,007	30,119	709	2.7	3,112	11.5
Midwest	14,622	14,396	18,095	-226	-1.5	3,699	25.7
West	15,194	16,197	19,370	1,003	6.6	3,173	19.6

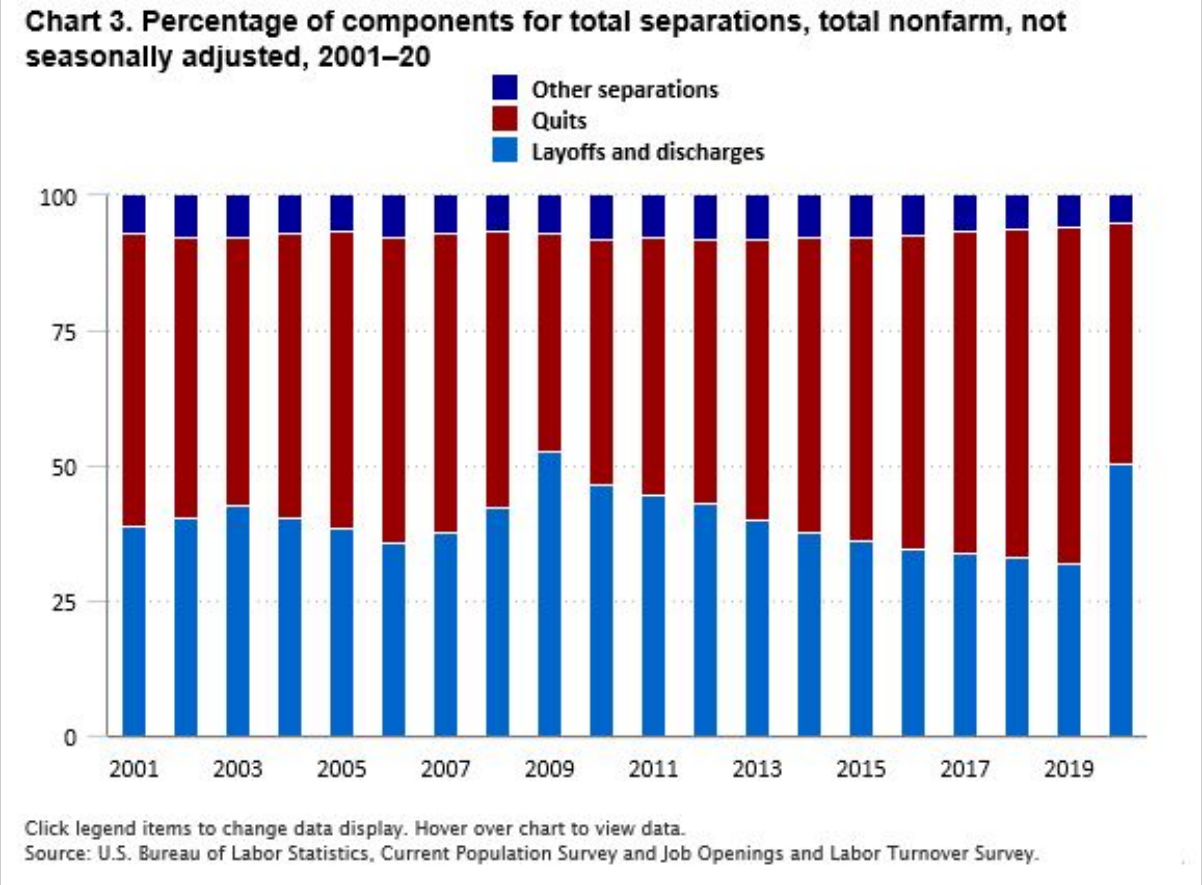
Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Total separations include quits, layoffs and discharges, and other separations. Each of these data elements has its own unique trend and cyclical movements that were affected by the COVID-19 pandemic. Quits are procyclical, which means that the number of quits typically rises when the economy expands and declines when the economy contracts. In normal economic conditions, a higher level, of quits generally indicates workers are willing to leave

their current employment and are confident in future job prospects. However, during the 2020 COVID-19 pandemic, there were additional factors employee considered such as widespread employee layoffs and business closings, health reasons, and dependent care. This is clear in 2020 with the COVID-19 pandemic negatively influencing the U.S. economy as employees were less willing to leave their current job for a new one. Quits began the year relatively flat, averaging 3.5 million quits in January and February 2020 before declining over the next 2 months to the lowest 2020 level of 2.1 million in April. Over the remaining portion of the year, the quits level gradually increased and by reached pre-COVID levels by December 2020. The annual quits level fell from 42.1 million in 2019 to 36.3 million in 2020 (−13.8 percent). Layoffs and discharges are countercyclical, which means that the number typically rises during economic contractions and falls during economic expansions. In 2020, JOLTS layoffs and discharges data reveal that, at the start of the year, the levels were flat over the first 2 months. Then as the economic recession progressed because of the COVID-19 pandemic, layoffs and discharges spiked to a series high in March 2020. Throughout the spring, the number of layoffs and discharges declined to pre-COVID-19 levels and remained relatively constant for the rest of the year. Annual layoffs and discharges grew to a series high in 2020 because of the economic recession caused by the COVID-19 pandemic. In 2020, monthly other separations remained relatively constant throughout the year; however, when combined for the year, other separations were higher by 4.1 percent.

Chart 3 shows the relationship of the three components to total separations by displaying the percentage of total separations attributed to each type of separation. Quits as a percentage of total separations decreased to 44.6 percent in 2020, the lowest share since 2010. Layoffs and discharges as a percentage of total separations increased to 50.3 percent in 2020, the largest share since 2009. Other separations as a percentage of total separations decreased to 5.1 percent in 2020, the lowest percentage in series history. (See chart 3.)



The number of annual quits declined over the year, from 42.1 million to 36.3 million (–13.8 percent). (See table 7.) The annual quits level decline in 2020 comes after 10 consecutive years of increases in quits. Annual layoffs and discharges increased notably over the year, from 21.9 million in 2019 to 41.0 million in 2020, an increase of 87.7 percent. (See table 8.) The annual level of other separations increased, from 4.0 million in 2019 to 4.2 million in 2020, an increase of 4.1 percent. (See table 9.)

Table 7. Change in level and percentage of annual quits, by industry and region, not seasonally adjusted, December 2018–December 2020 (levels in thousand)

Industry and region	Level			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Total	40,329	42,142	36,318	1,813	4.5	-5,824	-13.8
Industry							
Total private	38,173	39,916	33,883	1,743	4.6	-6,033	-15.1
Mining and logging	245	179	108	-66	-26.9	-71	-39.7
Construction	2,059	2,084	1,614	25	1.2	-470	-22.6
Manufacturing	2,504	2,490	2,356	-14	-0.6	-134	-5.4
Durable goods	1,378	1,396	1,274	18	1.3	-122	-8.7

See footnotes at end of table.

Table 7. Change in level and percentage of annual quits, by industry and region, not seasonally adjusted, December 2018–December 2020 (levels in thousand)

Industry and region	Level			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Nondurable goods	1,127	1,094	1,082	-33	-2.9	-12	-1.1
Trade, transportation, and utilities	8,500	8,907	8,259	407	4.8	-648	-7.3
Wholesale trade	1,069	1,029	1,008	-40	-3.7	-21	-2.0
Retail trade	5,959	6,234	5,613	275	4.6	-621	-10.0
Transportation, warehousing, and utilities	1,474	1,645	1,637	171	11.6	-8	-0.5
Information	566	554	480	-12	-2.1	-74	-13.4
Financial activities	1,406	1,547	1,307	141	10.0	-240	-15.5
Finance and insurance	856	1,005	896	149	17.4	-109	-10.8
Real estate and rental and leasing	550	545	414	-5	-0.9	-131	-24.0
Professional and business services	7,561	7,767	6,740	206	2.7	-1,027	-13.2
Education and health services	5,374	5,532	5,386	158	2.9	-146	-2.6
Educational services	582	648	492	66	11.3	-156	-24.1
Healthcare and social assistance	4,795	4,885	4,892	90	1.9	7	0.1
Leisure and hospitality	8,441	9,220	6,544	779	9.2	-2,676	-29.0
Arts, entertainment, and recreation	918	936	553	18	2.0	-383	-40.9
Accommodation and food services	7,523	8,286	5,993	763	10.1	-2,293	-27.7
Other services	1,514	1,634	1,087	120	7.9	-547	-33.5
Government	2,159	2,226	2,434	67	3.1	208	9.3
Federal	183	208	246	25	13.7	38	18.3
State and local	1,974	2,016	2,190	42	2.1	174	8.6
Education	1,044	1,091	1,270	47	4.5	179	16.4
Excluding education	933	927	921	-6	-0.6	-6	-0.6
Region							
Northeast	5,386	5,700	4,992	314	5.8	-708	-12.4
South	16,466	17,255	15,249	789	4.8	-2,006	-11.6
Midwest	8,989	9,187	8,097	198	2.2	-1,090	-11.9
West	9,488	10,000	7,981	512	5.4	-2,019	-20.2

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Table 8. Change in level and percentage of annual layoffs and discharges by industry and region, not seasonally adjusted, December 2018–Decembber 2020 (levels in thousand)

Industry and region	Level			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Total	21,804	21,851	41,018	47	0.2	19,167	87.7

See footnotes at end of table.

Table 8. Change in level and percentage of annual layoffs and discharges by industry and region, not seasonally adjusted, December 2018–Decembber 2020 (levels in thousand)

Industry and region	Level			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Industry							
Total private	20,550	20,607	39,081	57	0.3	18,474	89.6
Mining and logging	128	151	206	23	18.0	55	36.4
Construction	2,002	2,583	3,216	581	29.0	633	24.5
Manufacturing	1,370	1,315	2,752	-55	-4.0	1,437	109.3
Durable goods	752	750	1,727	-2	-0.3	977	130.3
Nondurable goods	619	566	1,025	-53	-8.6	459	81.1
Trade, transportation, and utilities	4,174	4,055	7,198	-119	-2.9	3,143	77.5
Wholesale trade	500	614	1,019	114	22.8	405	66.0
Retail trade	2,658	2,420	4,410	-238	-9.0	1,990	82.2
Transportation, warehousing, and utilities	1,013	1,021	1,767	8	0.8	746	73.1
Information	412	463	663	51	12.4	200	43.2
Financial activities	637	639	1,107	2	0.3	468	73.2
Finance and insurance	417	320	489	-97	-23.3	169	52.8
Real estate and rental and leasing	219	320	617	101	46.1	297	92.8
Professional and business services	4,991	5,041	6,458	50	1.0	1,417	28.1
Education and health services	2,102	2,037	4,486	-65	-3.1	2,449	120.2
Educational services	479	402	914	-77	-16.1	512	127.4
Healthcare and social assistance	1,626	1,633	3,573	7	0.4	1,940	118.8
Leisure and hospitality	3,800	3,551	10,541	-249	-6.6	6,990	196.8
Arts, entertainment, and recreation	1,147	967	1,724	-180	-15.7	757	78.3
Accommodation and food services	2,654	2,586	8,818	-68	-2.6	6,232	241.0
Other services	942	769	2,450	-173	-18.4	1,681	218.6
Government	1,253	1,244	1,937	-9	-0.7	693	55.7
Federal	90	123	443	33	36.7	320	260.2
State and local	1,167	1,123	1,496	-44	-3.8	373	33.2
Education	600	543	851	-57	-9.5	308	56.7
Excluding education	565	577	647	12	2.1	70	12.1
Region							
Northeast	3,930	3,968	8,244	38	1.0	4,276	107.8
South	8,353	8,248	13,329	-105	-1.3	5,081	61.6
Midwest	4,788	4,419	9,136	-369	-7.7	4,717	106.7
West	4,733	5,217	10,309	484	10.2	5,092	97.6

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Table 9. Change in level and percentage of annual other separations, by industry and region, not seasonally adjusted, December 2018–December 2020 (levels in thousand)

Industry and region	Level			Change, December 2018 to December 2019		Change, December 2019 to December 2020	
	2018	2019	2020	Level	Percent	Level	Percent
Total	4,066	3,997	4,159	-69	-1.7	162	4.1
Industry							
Total private	3,339	3,262	3,226	-77	-2.3	-36	-1.1
Mining and logging	21	17	19	-4	-19.0	2	11.8
Construction	155	201	155	46	29.7	-46	-22.9
Manufacturing	246	244	283	-2	-0.8	39	16.0
Durable goods	161	154	166	-7	-4.3	12	7.8
Nondurable goods	88	89	117	1	1.1	28	31.5
Trade, transportation, and utilities	835	745	636	-90	-10.8	-109	-14.6
Wholesale trade	146	102	80	-44	-30.1	-22	-21.6
Retail trade	543	466	330	-77	-14.2	-136	-29.2
Transportation, warehousing, and utilities	147	178	226	31	21.1	48	27.0
Information	80	86	63	6	7.5	-23	-26.7
Financial activities	294	305	313	11	3.7	8	2.6
Finance and insurance	256	260	245	4	1.6	-15	-5.8
Real estate and rental and leasing	37	44	68	7	18.9	24	54.5
Professional and business services	745	698	817	-47	-6.3	119	17.0
Education and health services	554	493	532	-61	-11.0	39	7.9
Educational services	68	65	58	-3	-4.4	-7	-10.8
Healthcare and social assistance	484	428	474	-56	-11.6	46	10.7
Leisure and hospitality	303	333	304	30	9.9	-29	-8.7
Arts, entertainment, and recreation	42	36	29	-6	-14.3	-7	-19.4
Accommodation and food services	259	296	274	37	14.3	-22	-7.4
Other services	115	141	101	26	22.6	-40	-28.4
Government	724	736	934	12	1.7	198	26.9
Federal	127	140	156	13	10.2	16	11.4
State and local	595	596	777	1	0.2	181	30.4
Education	284	287	438	3	1.1	151	52.6
Excluding education	310	309	340	-1	-0.3	31	10.0
Region							
Northeast	769	722	668	-47	-6.1	-54	-7.5
South	1,480	1,503	1,549	23	1.6	46	3.1
Midwest	844	794	867	-50	-5.9	73	9.2
West	970	977	1,077	7	0.7	100	10.2

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Components of separations by industry

As mentioned previously, separations are the total number of employees separated from their employer at any time during the reference month. Separations consist of quits, layoffs and discharges, and other separations. This section discusses what happened in 2020 with the components of separations by industry.

Quits

Quits include employees who left their job voluntarily, excluding retirements or transfers to other locations, which are counted as other separations. In 2020, the number of annual quits grew in 3 of 19 industries, while the remaining 16 industries had fewer quits. The largest percentage increases in annual quits levels were in federal government (+18.3 percent), followed by state and local government education (+16.4 percent), and healthcare and social assistance (+0.1 percent). Of note, the increased quits in federal government were primarily driven by changes in employment needed for the 2020 Decennial Census. The largest percentage decreases in annual quits levels were in arts, entertainment, and recreation (−40.9 percent), followed by mining and logging (−39.7 percent), and other services (−33.5 percent). (See table 7.)

Two of nineteen industries reached a series high for the annual level of quits in 2020. These two industries are healthcare and social assistance, at 4.9 million, and state and local government education, at 1.3 million. (See table 4.) Four of nineteen industries reached monthly seasonally adjusted series highs for quits in 2020. Those industries were retail trade, at 594,000 in January; healthcare and social assistance, at 467,000 in October: transportation, warehousing, and utilities, at 170,000 in December: and state and local government education, at 147,000 in July. (See table 2.) Two industries reached monthly seasonally adjusted series lows for quits in 2020: arts, entertainment, and recreation, at 11,000 in August, and other services, at 36,000 in May. (See table 5.)

Layoffs and discharges

As defined earlier, layoffs and discharges include involuntary separations initiated by the employer, including layoffs with no intent to rehire. In 2020, annual layoffs and discharges increased in all 19 industries. The largest percentage increases in annual layoffs and discharges were in federal government (+260.2 percent), accommodation and food services (+241.0 percent), and other services (+218.6 percent). The industries with the lowest percentage increases in annual layoffs and discharges were in state and local government, excluding education (+12.1 percent), construction (+24.5 percent), and professional and business services (+28.1 percent). (See table 7.) Notably, the increase in federal government layoffs and discharges was primarily driven by the 2020 Decennial Census concluding; the widespread increases among other industries were mainly due to the economic recession caused by the COVID-19 pandemic and the efforts to contain it.

Twelve of nineteen industries reached a series high for the annual level of layoffs and discharges. The largest series highs industries were in accommodation and food services, at 8.8 million; professional and business services, at 6.5 million; and retail trade, at 4.4 million. (See table 4.) There were no annual series lows in layoffs and discharges. In 2020, 17 industries reached a series high for monthly layoffs and discharges. The largest series highs among the industries were in accommodation and food services, at 4.6 million in March; retail trade, at 1.4 million in March; and professional and business services, at 1.3 million in March. (See table 2.) As a measure of the effect of the COVID-19 pandemic, all 17 industries monthly series highs occurred in March or April. For monthly layoffs and discharges, four industries reached a series low in 2020. The three lowest monthly layoffs and

discharges were in state and local government, excluding education, at 9,000 in August; other services, at 15,000 in August; and wholesale trade, at 20,000 in September. (See table 5.)

Other separations

In 2020, annual other separations increased in 10 of 19 industries, with 9 industries having fewer annual other separations than in the previous year. The largest percentage increase in annual other separations were in real estate and rental and leasing (+54.5 percent), state and local government education (+52.6 percent), and nondurable goods manufacturing (+31.5 percent). The industries with the largest percentage declines in annual other separations were in retail trade (−29.2 percent), other services (−28.4 percent), and information (−26.7 percent). (See table 8.) Two of nineteen industries reached a series high for the annual level of other separations: state and local government education, and transportation, warehousing, and utilities at 438,000 and 226,000, respectively. Two of nineteen industries reached series lows in the annual level of other separations: wholesale trade and retail trade at 80,000 and 330,000, respectively. (See table 4.) There were two monthly seasonally adjusted series highs in other separations: professional and business services at 114,000 in April, and state and local government education at 52,000 in July. Three of nineteen industries had monthly seasonally adjusted series lows in other separations: educational services at 1,000 in June and July, other services at 1,000 in June, and retail trade at 11,000 in May. (See table 2 and 5.)

Components of separations by region

The U.S. regions were affected by the COVID-19 pandemic at different rates and levels. This section describes the differences with the components of separations among the regions in 2020.

Northeast region

In 2020, the Northeast region had an annual level of 13.9 million total separations, an increase of 33.9 percent and the highest increase of all the regions. The Northeast region quits level decreased to 5.0 million (−12.4 percent), the lowest level of the regions. For layoffs and discharges, the Northeast region rose notably to 8.2 million, the largest percentage (+107.7 percent) increase of the four regions. The Northeast region other separations level declined to 668,000, the only percentage (−7.5 percent) decline of the four regions.

South region

In the South region, the annual level of total separations rose to 30.1 million, the lowest percentage (+11.5 percent) increase of the regions. Within total separations, the quits level fell to 15.3 million for the South region, the largest percentage decline (−11.6 percent) of the regions. The South region layoffs and discharges level rose to 13.3 million, the lowest percentage increase (+61.6 percent) of the regions, and the other separations level rose to 1.5 million, increasing over the year (+3.1 percent).

Midwest region

In the Midwest region, the annual total separations level rose to 18.1 million (+25.7 percent). Within total separations, there were 8.1 million (−11.9 percent) quits in the Midwest region and 9.1 million (+106.7 percent) layoffs and discharges. Other separations rose to 867,000 (+ 9.2 percent).

West region

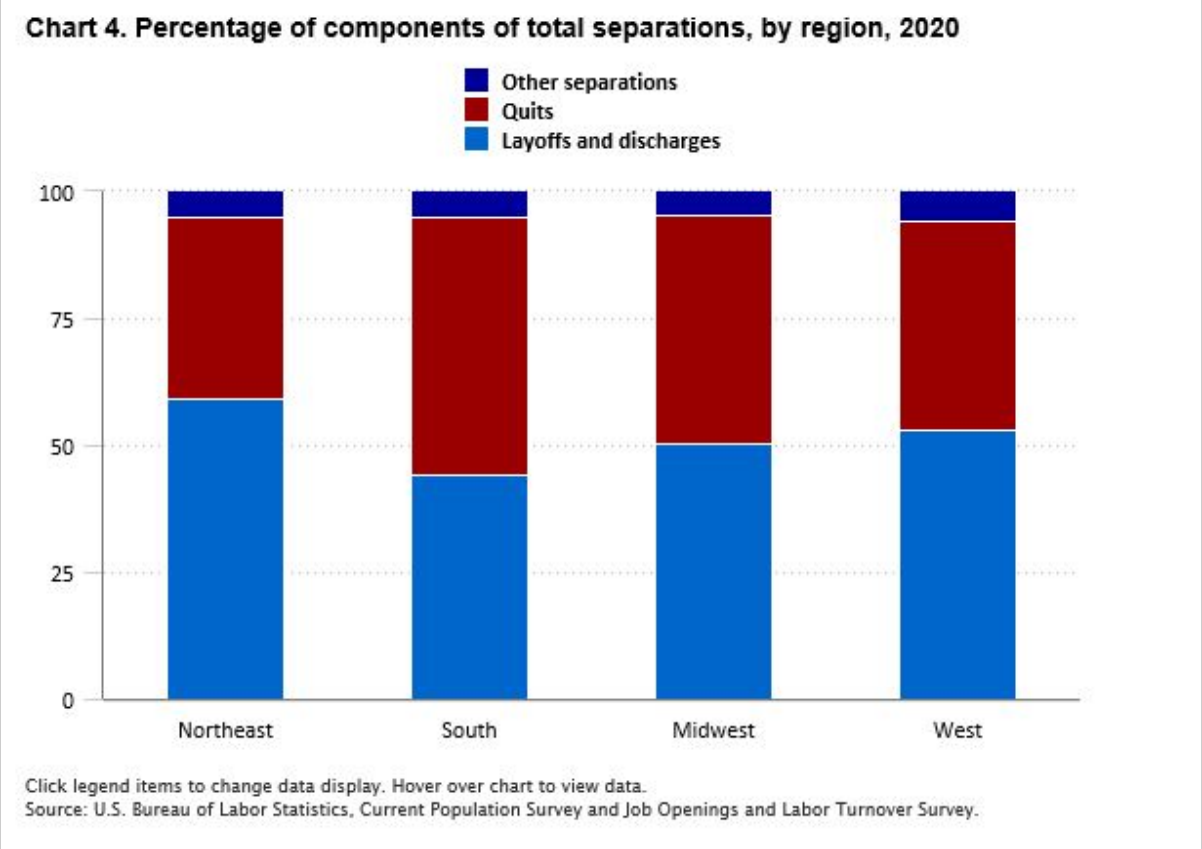
The West region had an annual total separations level increase of 19.4 million (+19.6 percent). Within total separations in the West region, the quits level decreased to 8.0 million, the largest percentage (−20.2 percent) decrease among the regions. The layoffs and discharges level rose to 10.3 million (+97.6 percent), and the other separations level rose to 1.1 million, the largest percentage increase (+10.2 percent) of the regions. (See tables 6, 7, 8, and 9.)

Separations for the regions

With annual total separations and layoffs and discharges, all four regions saw series highs in 2020. (See table 4.) The Northeast region reached a series low with other separations. All four regions reached a monthly series high for total separation in March 2020. The Northeast region total separations level reached a monthly series high of 3.3 million, the South region total separations level reached a monthly series high of 5.4 million, and the Midwest and West regions both reached a monthly series high of 3.8 million. All four regions reached a monthly series high for layoffs and discharges in March 2020. The Northeast region layoffs and discharges level reached a series high of 2.8 million, the South region total separations level reached a series high of 4.1 million, and the Midwest and West regions both reached a series high of 3.1 million. None of the four regions reached monthly series highs for quits and other separations. (See table 2 and 4.)

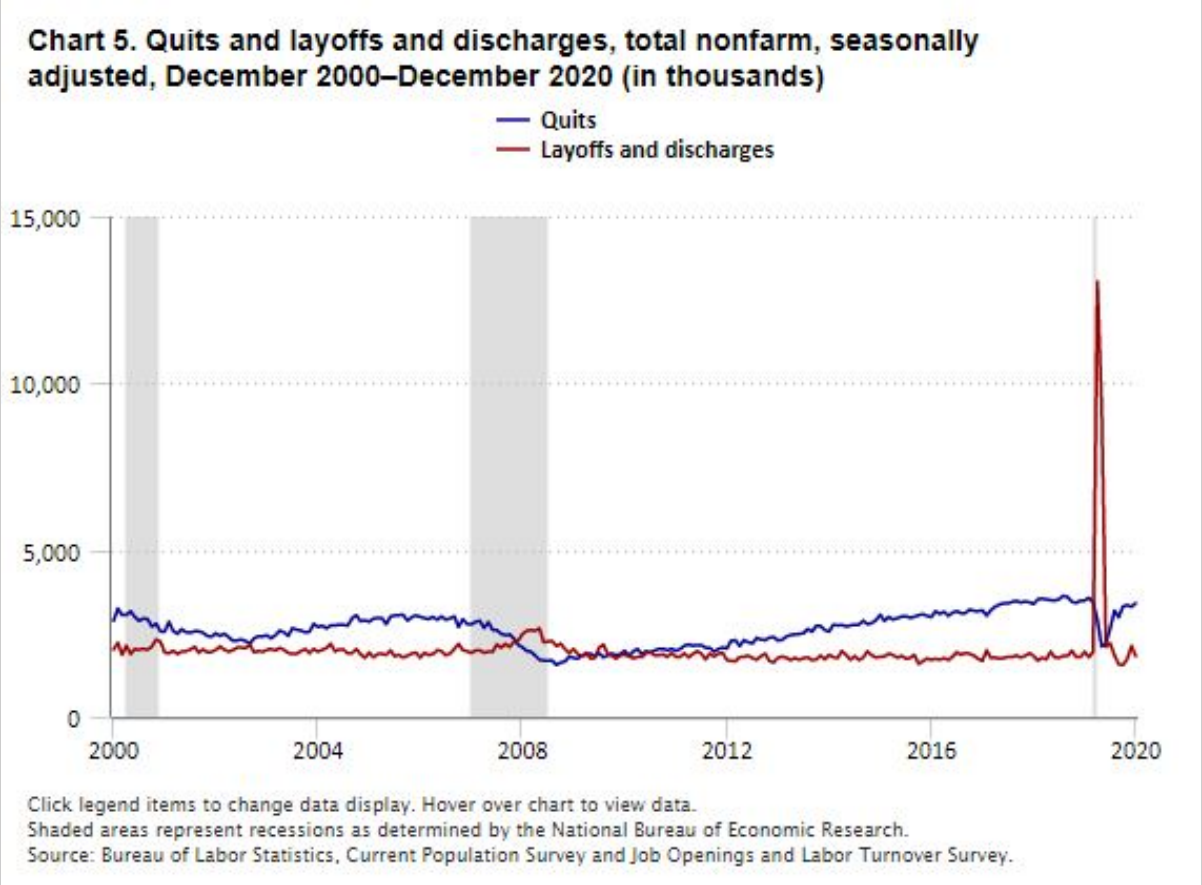
The South region was the only region that reached a monthly series low for layoffs and discharges, with a level of 502,000 in September 2020. No region reached a series low in total separations, quits, and other separations. (See tables 5.)

An analysis of each region by the components as a percentage of total separations illustrates the different characteristics of the JOLTS data at the regional level. The Northeast region had the smallest percentage of quits within total separations, at 35.9 percent in 2020. The South region experienced the highest percentage of quits, at 50.6 percent. In 2020, the Northeast region had the largest percentage of layoff and discharges within total separations, at 59.2 percent. The South region had the lowest percentage of layoffs and discharges, at 44.3 percent. The West region had the highest percentage of other separations, at 5.6 percent, while the Northeast and Midwest regions had the lowest percentage, at 4.8 percent. (See chart 4.)



Quits compared with layoffs and discharges

Over the period from July 2011 to February 2020, there were 104 consecutive months in which the monthly quits level exceeded the monthly layoffs and discharges level. During this period, the gap between the level of quits and the level of layoffs and discharges continued to widen. This growing gap is attributable to a persistent rise in the number of quits while the number of layoffs and discharges remained flat. However, with the onset of the pandemic, this persistent trend of quits exceeding layoffs and discharges reversed suddenly. In March 2020, layoffs and discharges exceeded quits by 10.1 million. This large gap was caused by a sharp increase in layoffs and discharges and a substantial decline in quits. In April 2020, the gap narrowed slightly to 7.2 million. In May, the pattern of quits exceeding layoffs and discharges returned to pre-COVID pandemic levels and remained over the rest of the year. (See chart 5.)



Summary

JOLTS 2020 data reflect the effects, efforts to mitigate, and the recovery of the U.S. labor market caused by the COVID-19 pandemic. Many establishments either closed or operated on a limited capacity because of the COVID-19 pandemic. At the start of 2020, the job openings level trended higher until the COVID-19 pandemic affected the U.S. economy in March 2020. Although job openings declined early in the year, job openings slowly trended up by the end of the year. In 2020, the number of hires reached a series high after the notable declines in March and April; however, by the end of 2020, the number of hires decreased to pre-COVID-19 levels. The number of total separations also reached a series high in 2020. This was mainly attributed to the large rise in layoff and discharges, which also rose to a series high. Total separations gradually trended back toward pre-COVID-19 levels later in the year.

SUGGESTED CITATION

Larry Akinyooye and Eric Nezamis, "As the COVID-19 pandemic affects the nation, hires and turnover reach record highs in 2020," *Monthly Labor Review,* U.S. Bureau of Labor Statistics, June 2021, https://doi.org/10.21916/mlr.2021.11.

NOTES

[1] JOLTS produces monthly data on job openings, hires, quits, layoffs and discharges, and other separations from a sample of approximately 21,000 establishments. This sample consists of establishments from all 50 states, the District of Columbia, and all nonfarm industries as classified by the North American Industry Classification System (NAICS). The JOLTS sample allows publication of data by four census regions and by select two-digit NAICS codes. For more information on the program's concepts and methodology, see "Job Openings and Labor Turnover Survey: *Handbook of Methods* (Washington, DC: U.S. Bureau of Labor Statistics, July 13, 2020), https://www.bls.gov/opub/hom/jlt/home.htm. See also the JOLTS page on the BLS website, at https://www.bls.gov/jlt/. All annual data are not seasonally adjusted, and all monthly data are seasonally adjusted. Over-the-year changes are calculated from December of the previous year through December of the reference year.

[2] JOLTS estimates are produced by region for the Northeast, the South, the Midwest, and the West.

[3] According to the finance and investment education website *Investopedia*, procyclical "refers to a condition of a positive correlation between the value of a good, a service, or an economic indicator and the overall state of the economy. In other words, the value of the good, service, or indicator tends to move in the same direction as the economy, growing when the economy grows and declining when the economy declines." For more information, see Akhilesh Ganti, "Procyclic," *Investopedia*, updated March 4, 2021, http://www.investopedia.com/terms/p/procyclical.asp.

[4] For more information, see "What Principal Federal Economic Indicators (PFEIs) are published by the U.S. Bureau of Labor Statistics?" *News Room—Frequently Asked Questions* (U.S. Bureau of Labor Statistics, December 29, 2016), https://www.bls.gov/newsroom/faqs.htm. For more on the background, see "Statistical Policy Directive No. 3: Compilation, Release, and Evaluation of Principal Federal Economic Indicators," *Federal Register*, vol. 50, no. 186, September 25, 1985. For more on the concepts of leading, coincident, and lagging economic indicators, see "Description of components" (The Conference Board, February 6, 2012), https://www.conference-board.org/data/bci/index.cfm?id=2160.

[5] BLS considers job openings a stock measure and does not produce job openings annual totals.

[6] Countercyclical is a condition of negative correlation in which the value of the good, service or indicator moves "in the opposite direction of the overall economic cycle: rising when the economy is weakening, and falling when the economy is strengthening." For more information, see InvestorWords, http://www.investorwords.com/1166/countercyclical.html.

[7] The National Bureau of Economic Research is the official arbiter of the beginning and ending dates of U.S. business cycle expansions and contractions. For more information, see "U.S. Business cycle dating" (Cambridge, MA: National Bureau of Economic Research, September 20, 2010), http://www.nber.org/cycles/.

[8] The large increase in annual hires for the federal government was largely the result of the hiring of temporary Census 2020 workers in late summer 2019.

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