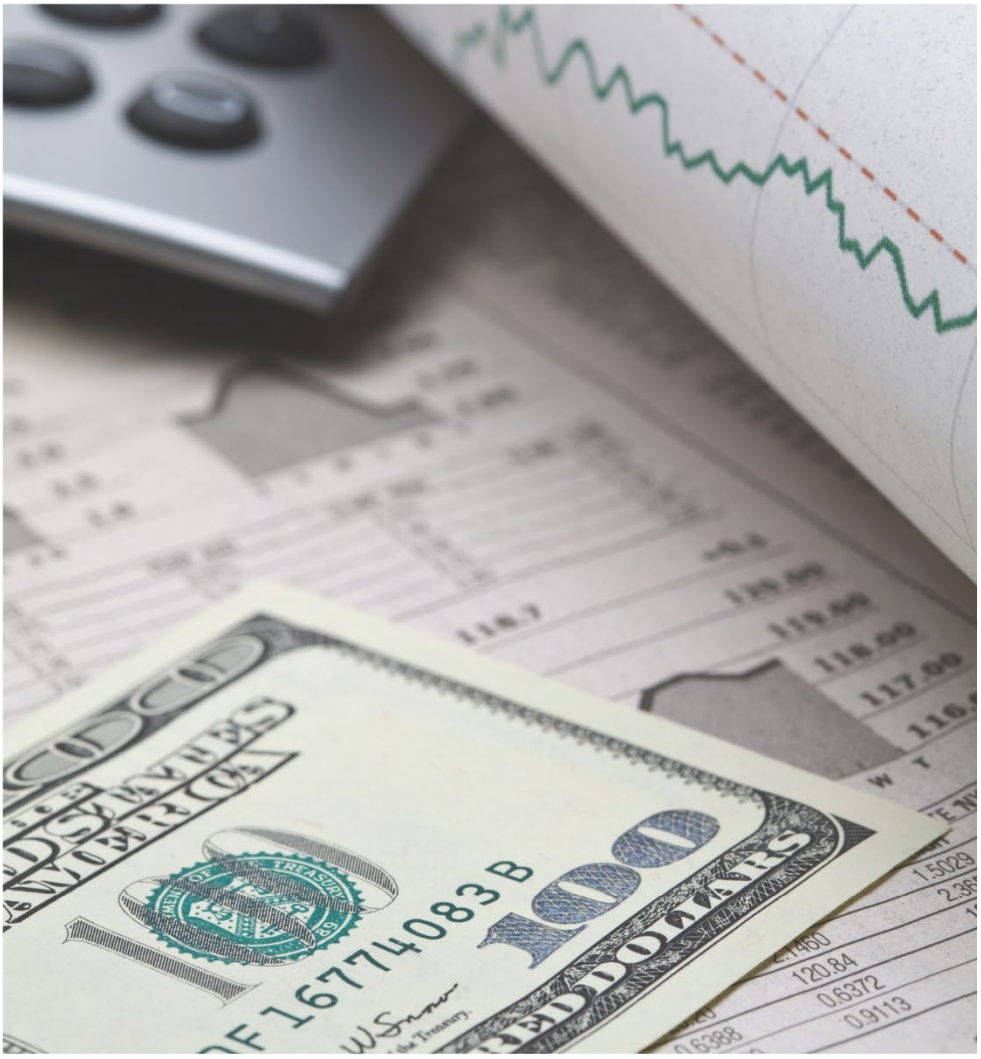
2019 ANNUAL WASHINGTON WAGE REPORT

Employment and hours
Median hourly wage trends
Wage distribution
Jobs by wage range
Hourly wages by county
Wages by demographics



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Washington Wage Report, 2019

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Washington Wage Report, 2019

Introduction

This report is usually included in the Employment Security Department's annual Labor Market and Economic Report. However, the analysis was delayed this year due to workload issues related to the COVID-19 pandemic. Please note that all data in this report has been adjusted for inflation to 2019 constant dollars, except where explicitly noted.

The ten-year expansion that began in the depths of the Great Recession back in 2009 ended up coming to an end in early 2020 with the advent of the COVID-19 pandemic. This report analyzes trends in wages in the state and its counties over that decade, including new data for 2019. For a longer-term perspective, data going back to 1990 is also included.

Two data sets were used in this report. For trends in hourly wage rates, the state's quarterly wage files were used. These files include the wages earned, hours worked, and employer for every non-federal employee in the state, for every quarter (three-month period) going back to 1990. Each quarterly file has over three million records. The quarterly wage files allow us to determine the hourly wage for each job, and from there to calculate the median and average hourly wage, average wage by decile (e.g., the lowest-paid ten percent of jobs), and the number of jobs in different wage ranges (e.g., below $15 per hour). Data is available by county and industry, but there is no information on the demographics of workers.

The second data source was the Local Employment Dynamics (LED) database, a partnership of the Census Bureau and the states. The LED provides a wealth of data, including an average monthly wage for each quarter going back to 1990 by county, industry, and demographics like gender, age, race, ethnicity and education.

Highlights of the findings:

- In 2019, employment increased by 2.1 percent, while hours worked increase by 2.6 percent. The average work week increased slightly to 32.4 hours per week. There has been little change in the average work week over the last dozen years.
- The average hourly wage increased by 3.5 percent to $40.05, while the median hourly wage was up 2.5 percent to $27.08. The gap between average and median has grown consistently over the past three decades as wage inequality has grown.
- Hourly wages in Washington, as measured by the quarterly wage files, are significantly higher and have grown significantly faster than measures of hourly wages based on surveys from the Bureau of Labor Statistics.
- Wage inequality decreased slightly in 2019. The median hourly wage and the average hourly wage for the lowest-paid decile (ten percent of jobs) both increased slightly more than the average hourly wage for the highest-paid decile. Wages were still substantially more unequal than they were in 1990.
- Median and average hourly wages varied considerably by industry and county. For example, the median hourly wage for the childcare industry – now recognized for how essential it has always been – was only $14.64 per hour. Another industry with essential workers, grocery stores, had a somewhat higher median of $16.45. In contrast, the median hourly wage for the prepackaged software industry was $91.90 per hour. King County again had the highest median hourly wage at $35.01 per hour, while Okanogan had the lowest, at $17.32 per hour.

- The number of high-wage jobs (here defined as those paying $54.00 per hour or more) continued to increase faster than jobs in lower wage categories in 2019.
- In 2019, average wages differed substantially by gender, race, ethnicity, age and education. For example, the average for jobs held by women was only 65 percent of the average for jobs held by men. The average wage for jobs held by Latinx workers was 69 percent of the average for all workers; for jobs held by Pacific Islanders, the ratio was 71 percent, and for jobs held by African Americans, 75 percent. These disparities have existed for decades, and in some cases have worsened.

Employment and hours worked

Before looking at wages, let's take a look at employment and hours worked. For the state, 2019 was yet another good year for job growth, although at a slower pace. The total number of jobs covered by unemployment insurance (with the exclusions noted in *Figure 1*) increased by 2.1 percent. This measure is based on average monthly counts of jobs, with full- and part-time work getting equal weight. When jobs were weighted by the number of hours worked (full-time equivalent, or FTE, jobs[1]), job growth was somewhat faster (2.6 percent), indicating that the average work week[2] (the number of hours the average worker works in a week) increased. Over time, there has been little change in the average work week – outside of a dip during the Great Recession – over the past dozen years.

Figure 1. Covered employment vs. FTE employment - Federal employment, NAICS 814 and DSHS/COPES employment excluded
Washington state, 2007 through 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse

Year	Average monthly employment	Percent change	FTE employment	Percent change	Average work week
2007	2,837,182	2.7%	2,294,706	3.3%	32.4
2008	2,858,685	0.8%	2,301,415	0.3%	32.2
2009	2,736,060	-4.3%	2,190,582	-4.8%	32.0
2010	2,695,662	-1.5%	2,160,622	-1.4%	32.1
2011	2,733,272	1.4%	2,193,922	1.5%	32.1
2012	2,783,091	1.8%	2,269,893	3.5%	32.6
2013	2,850,071	2.4%	2,316,485	2.1%	32.5
2014	2,929,093	2.8%	2,381,313	2.8%	32.5
2015	3,018,189	3.0%	2,457,393	3.2%	32.6
2016	3,111,749	3.1%	2,528,274	2.9%	32.5
2017	3,188,685	2.5%	2,603,441	3.0%	32.7
2018	3,266,213	2.4%	2,634,941	1.2%	32.3
2019	3,333,569	2.1%	2,702,952	2.6%	32.4

FTE employment has been stable as a percent of total covered employment, indicating average hours per job has changed over the past dozen years.

[1] In this analysis, jobs are weighted by the number of hours worked, with one full-time equivalent (FTE) job equaling 2,080 hours of work in a typical year. A job that lasts 208 hours, for example, would be counted as 0.1 FTE.

[2] The average work week (AWW) is calculated here as AWW = FTE employment * 40 / covered employment

Average and median hourly wage trends, compared with the U.S.

Figure 2 shows the most recently available data on national and state hourly wages from three different sources.

1. Every month, the Bureau of Labor Statistics (BLS) publishes the average hourly wage for nonfarm private sector employers, based on the average wage for all employers in their monthly survey of employers. As such, it is subject to sample error, and it is not clear whether the pay of corporate officers, typically the highest-paid employees at large corporations, is included. Data is available for the nation, states, territories and metropolitan areas.
2. Averages can be heavily influenced by what's happening at the top of the wage scale, so at the national (but not the state) level, BLS tracks the average hourly wage for production and nonsupervisory workers – those who aren't supervisors or managers.
3. The state's quarterly wage files include hours worked and wages earned for any worker covered by the state unemployment insurance system. There are well over three million records for each quarter. In this analysis, records were weighted by the number of hours worked and converted to full-time equivalent, or FTE, jobs.[3]

According to BLS, the average hourly wage in Washington has averaged 18 percent higher than the comparable national figure over the past decade. The average wage for nonsupervisory workers has been 16 percent lower than the one for all workers but has generally followed the same trend.

Using the same industry base – private sector nonfarm employment – the statewide average hourly wage calculated from the wage file was substantially higher than from the BLS survey. The state median hourly wage (again using the private nonfarm definition) was closer to the BLS average for nonsupervisory workers and trended closely to that measure from 2007 through 2015. This makes sense, since if the average for all workers has been pushed up by more rapid gains among managers, excluding them will make the remainder more similar to the median.

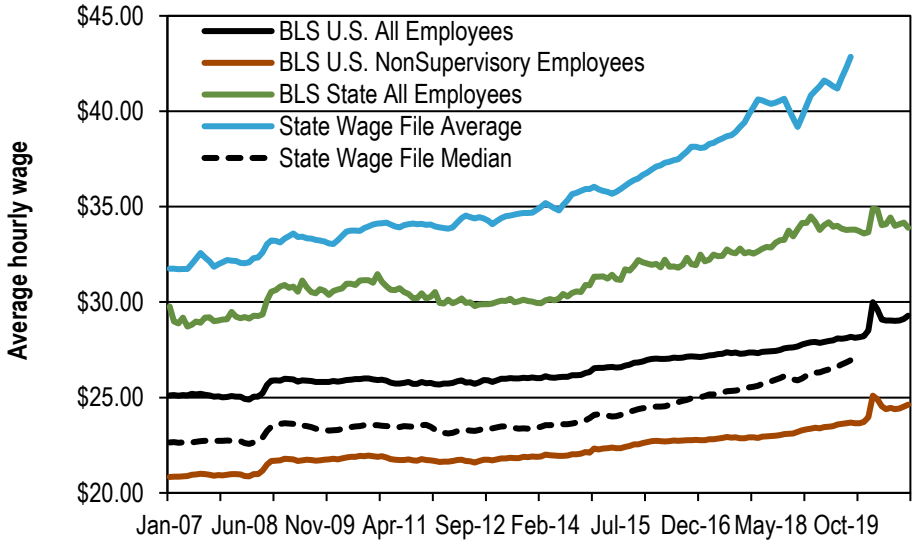
What *Figure 2* does tell us is, first, that regardless of the measure, Washington jobs *on average* have paid significantly more than jobs nationally. Second, while hourly wages began to pick up nationally and in Washington in 2015, gains have been more rapid here through 2019. Using a somewhat long-term perspective, from December 2008 to December 2019, the U.S. all-employees average rose by 9 percent, while the state average, per BLS, grew by 10 percent, and the state average using the wage files rose by 29 percent (which of course raises questions about the accuracy of the BLS data). The U.S. nonsupervisory employee average was up by 9 percent, while the state median calculated from the quarterly wage files increased by 16 percent. For reference, during the same year period, the average realized compensation for CEOs more than doubled.[4]

Note that national data sets show that the average wage jumped early in the COVID-19 recession. The increase was because much of the massive job loss was in lower-wage industries like accommodations and food services. The remaining jobs thus had a higher average.

[3] In most years, one full-time equivalent (FTE) job equals 2,080 hours of work. A job that lasted 208 hours, for example, would be counted as 0.1 FTE.

[4] See this report from the Economic Policy Institute.

Figure 2. Average hourly wage, all private sector nonfarm employees, in 2019 dollars
U.S. and Washington state, January 2007 through December 2020
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse; U.S. Bureau of Labor Statistics



Inflation-adjusted hourly wages have been considerably higher in the state of Washington than nationally and increased at a faster rate through 2019.

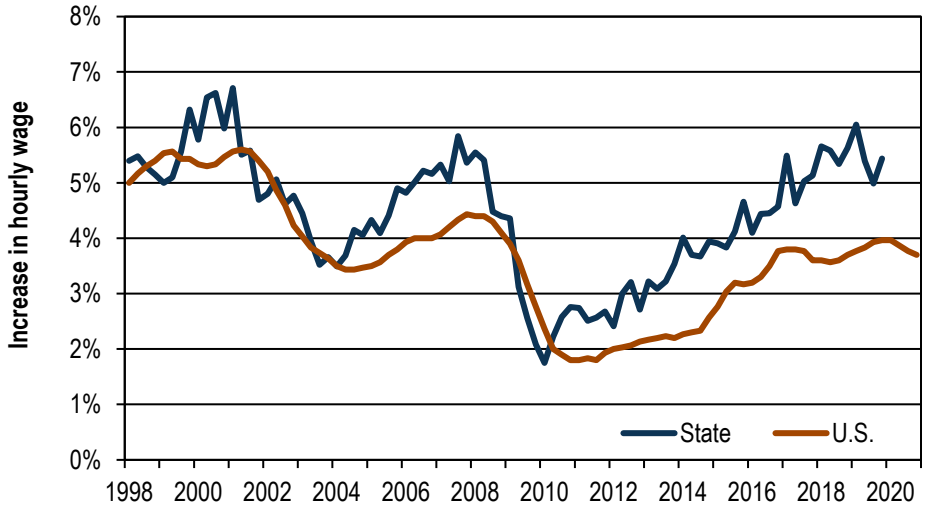
It's important to remember that when we're comparing what employers pay at different time periods, we're talking about a different set of workers in each time period. Some workers from an earlier time period will have withdrawn from the state work force for a variety of reasons – retirement, caring for family members, moving out of state, etc., – while for similar reasons, the later time period will contain workers not in the earlier period. So, if we ask whether average wages have gone up faster in the state than nationally, does this mean that individual workers have (on average) been doing better here as well? The answer is not necessarily. The average may have been pushed up, for example, because new jobs paid above the average. However, it turns out to be true in this case.

The Federal Reserve Bank of Atlanta's Wage Growth Tracker[5] measures the median over-the-year change in hourly wages for nonfarm workers. According to their analysis, the median increase for individual full-time workers' wages ranged from 3.7 percent to 4.0 percent during 2019 – not adjusted for inflation.[6] Using a similar set of workers – individuals who worked at least 1,560 hours (the equivalent of three-quarters of the year) – the figure for Washington was substantially higher (*Figure 3)*, fluctuating around 5.5 percent (4.0 percent if adjusted for inflation). As the Atlanta Fed notes, the individuals in their national data set were somewhat older, more educated, and more likely to work as a professional than the general population, due to the requirement for continuous employment; those same characteristics were likely true for the comparable state data set.

[5] www.frbatlanta.org/chcs/wage-growth-tracker

[6] Adjustment for inflation would have lowered the gain to about 1.8 percent.

Figure 3. Median year-over-year increase in hourly wage for full-time workers, not adjusted for inflation
U.S. and Washington state, 1997 through 2020
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse; Atlanta Federal Reserve Bank, Overall Weighted Series



Incumbent Washington workers have usually enjoyed larger increases in hourly wages than their counterparts around the nation.

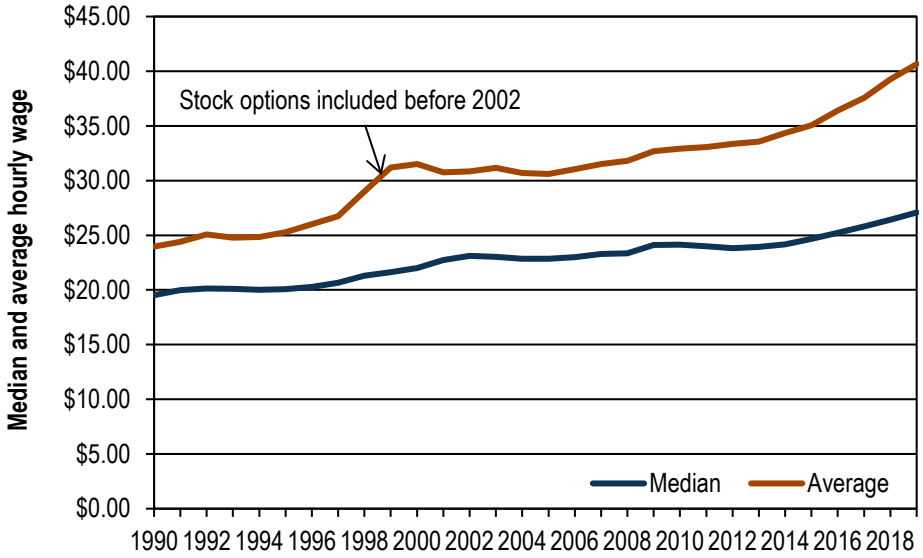
Wage distribution: average hourly wages by decile

Now that we've established that on both a jobs and worker basis, average wage gains were higher in Washington than the nation, let's take a deeper dive to see how equitable those gains were. For this part of the analysis, agricultural employment will be included, along with state and local government, while household employers (NAICS 814) and state-reimbursed home healthcare (part of NAICS 624120) were excluded due to data quality issues.

The median hourly wage is the hourly wage for which half of all hours worked were paid less, and half paid more. The average hourly wage is simply total payroll divided by total hours worked. Because the distribution of wages is unequal, the average will always be higher than the median. As *Figure 4* shows, the median hourly wage has increased for six consecutive years. In 2019, the median rose an inflation-adjusted $0.66 (2.5 percent) to $27.08. It was the fifth year in a row that the percentage change topped 2.0 percent. The average hourly wage climbed even faster, by 3.5 percent, to reach $40.65.

Figure 4 also shows that while both the median and average have been trending upward over the past three decades, the gap between the two has widened considerably. In 1990, the median was 81 percent of the average; by 2019 it was only 67 percent, the lowest on record (going back to 1990). The widening gap indicates that wage inequality has been increasing. Note that during the 1998 to 2002 period, stock options were included as part of wages and heavily influenced the average.

Figure 4. Median and average hourly wage, in 2019 dollars
Washington state, 1990 through 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse



The median hourly wage increased by 2.5 percent in 2019, reaching an all-time high; the average hourly wage increased at 3.5 percent, a faster rate, indicating an increase in wage inequality.

Hourly wages increased across the spectrum in 2019. What was unusual is that the improvement was almost uniform, with lower wage workers faring slightly better than others. The average for the bottom decile – the lowest-paid 10 percent of jobs – increased by 3.6 percent, while the average for the next-lowest decile rose a bit more at 3.8 percent. The averages for the next eight deciles were up between 2.5 and 3.3 percent. Rising wages at the bottom of the labor market were due in part to a low unemployment rate, and in part to the statutory increases in the minimum wage over the past three years, from $9.47 in 2016, to $11.00 in 2017, $11.50 in 2018, and $12.00 in 2019. The last increase from the law passed by voters in 2016 came at the beginning of 2020, when the minimum wage was set at $13.50. Future increases will match the previous year's rate of inflation.

Figure 5. Measuring the wage gap, 2019 dollars
Washington state, 2001 through 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse

Wages	2001	2007	2010	2017	2018	2019	Percent change 2018 to 2019
Median hourly wage	**$22.74**	**$23.28**	**$24.12**	**$25.80**	**$26.42**	**$27.08**	**2.5%**
Average hourly wage for:							
All jobs	**$30.31**	**$31.05**	**$32.45**	**$37.01**	**$38.70**	**$40.05**	**3.5%**
Lowest-paid 10 percent of jobs	$9.84	$10.08	$10.29	$11.70	$12.16	$12.60	3.6%
Second-lowest 10 percent of jobs	$12.51	$12.56	$12.76	$14.46	$14.95	$15.52	3.8%
Third lowest-paid 10 percent of jobs	$15.19	$15.30	$15.70	$16.96	$17.42	$17.94	3.0%
Fourth lowest-paid 10 percent of jobs	$18.02	$18.29	$18.82	$19.96	$20.44	$20.97	2.6%
Fifth lowest-paid 10 percent of jobs	$21.09	$21.52	$22.26	$23.65	$24.24	$24.85	2.5%
Fifth-highest 10 percent of jobs	$24.58	$25.32	$26.40	$28.24	$29.02	$29.77	2.6%
Fourth-highest 10 percent of jobs	$28.97	$30.32	$31.89	$34.45	$35.45	$36.40	2.7%
Third-highest 10 percent of jobs	$34.99	$37.35	$39.79	$43.14	$44.41	$45.65	2.8%
Second-highest 10 percent of jobs	$43.63	$47.73	$51.02	$56.39	$58.31	$60.21	3.3%
Highest-paid 10 percent of jobs	$99.23*	$96.86	$102.43	$127.00	$136.80	$140.40	2.6%
Ratio of highest 10 to lowest 10	10.1	9.6	10.0	10.9	11.2	11.1	NA
Ratio of highest 10 to median	4.4	4.2	4.2	4.9	5.2	5.2	NA
Ratio of median to lowest 10	2.3	2.3	2.3	2.2	2.2	2.1	NA

*Boosted by stock options. Without stock options, the average would have been about $84.00.

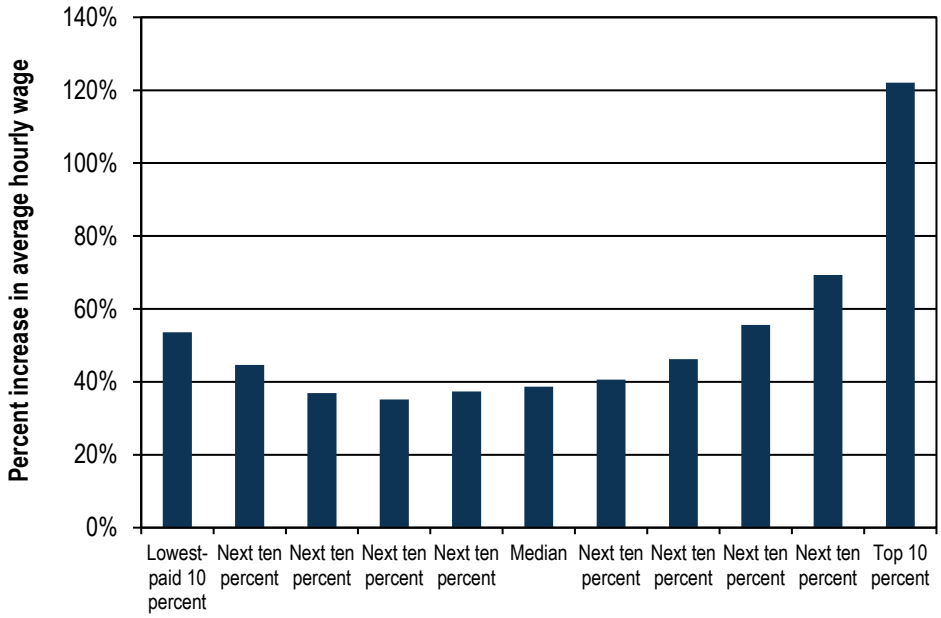
The gap between the highest- and lowest-paid jobs closed slightly from 2018 to 2019.

One way to quantify wage inequality is to compare the average wage for the top 10 percent of jobs to the average wage for the lowest 10 percent of jobs. That ratio was 7.7 in 1990, climbed to 10.0 in 2010 and declined slightly to 11.1 in 2019.[7]

The long-term trend, as shown in *Figure 6*, resembles a lop-sided U shape. From 1990 to 2019, the average hourly wage for the lowest-paid decile was up 54 percent (from $8.21 to $12.60), while the average for the best-paid decile more than doubled (from $63.22 to $140.40, +122 percent). Changes in the middle of the spectrum were smaller in terms of percentage change, with the median increasing by 39 percent, from $19.52 to $27.08.

[7] The upper 10 percent paying jobs does not include many corporate officers (generally the highest-paid employees) and wages do not include income from capital gains nor, since 2002, stock options.

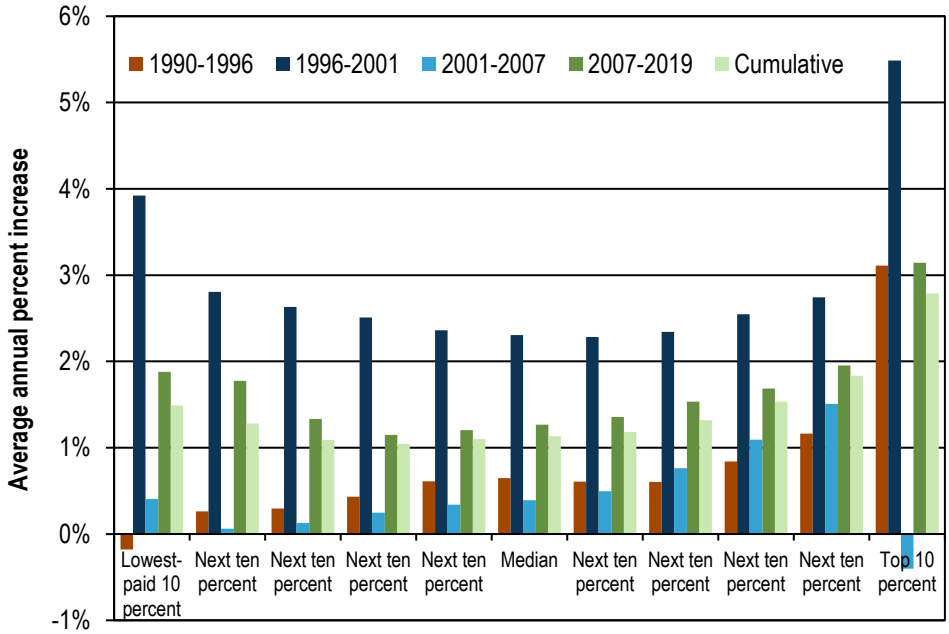
Figure 6. Percent increase in the average hourly wage by decile and median, 2019 dollars
Washington state, 1990 to 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse



Wage gains were low in the 2001 to 2007 period; for 1990 to 2018, the average for the top 10 percent of jobs more than doubled.

Since 1990, the state has experienced a long expansion in the 1990s, a relatively mild recession in 2001 followed by a short bubble-fueled expansion from 2002 to 2007, a deep recession and the long recovery and expansion that began in 2010. *Figure 7* shows the distribution of wage gains during the past three business cycles, with the first long expansion broken into two phases – 1990 to 1996, when the labor market still had some slack, and 1996 to 2001 when things tightened. From 1990 to 1996, wage increases subdued, except for the highest-paid decile. In fact, wages at the low end declined slightly. From 1996 to 2001, unemployment declined, bottoming out at 4.0 percent in 2000. In addition, voters approved an increase in the minimum wage from $4.90 in 1998 to $5.70 in 1999 and $6.50 in 2000, with the rate indexed to inflation in the following years. Finally, this was also the golden era of stock options. The result was a substantial increase in wages across the spectrum, with higher than average gains at the top and bottom. The median hourly wage, which had only increased by 0.6 percent per year from 1990 to 1996, rose by 2.3 percent over the next five years. The bottom decile almost doubled that with a 3.9 percent average annual gain, while the top decile grew 5.5 percent per year.

Figure 7. Average annual percent increase in the average hourly wage by decile and median, 2019 dollars
Washington state, 1990 to 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse



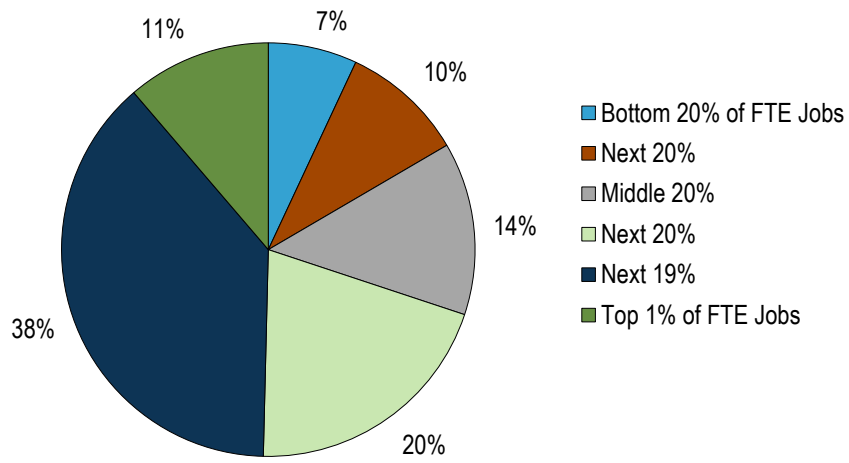
Wage gains were low in the 2001 to 2007 period; for 1990 to 2018, the average for the top 10 percent of jobs more than doubled.

During the 2001 to 2007 cycle, wages were stagnant in the bottom half of the spectrum, with the median wage increasing by only 0.4 percent per year over the five-year period. The lowest decile, supported by the minimum wage, matched that, but between the bottom and the middle gains were considerably less. Wage gains were larger on the upper third of the distribution – except that stock options were removed from the database after 2002, leading to a decline in average wages for the top decile. The next-highest 10 percent of jobs had a 1.5 percent average annual increase, so it is likely that outside of stock options, the top decile rose as well.

The most recent recovery and expansion more closely resembles the late 1990s, especially as the labor market has tightened over the past four years. Since 2007, the average hourly wage for the two lowest-paid deciles rose annually by 1.9 percent and 1.8 percent, respectively. The next five deciles were in the 1.1 to 1.5 percent range. Gains accelerated from there: 1.7 percent, 2.0 percent, and then 3.1 percent for the top decile.

From another angle, as shown in *Figure 8*, the bottom 20 percent of FTE jobs took home 6.9 percent of total payroll in 2019 – down from 7.3 percent in 1990. Meanwhile, the top 20 percent of jobs accrued half of total payroll. The top 1 percent captured 11.3 percent of total wages, up from 7.1 percent in 1990. The share garnered by the next 19 percent also increased by four percentage points. When looking at the higher end of the wage scale, it's important to remember that the unemployment insurance data set does not include many of the highest-paid salaries in the state, since tens of thousands of corporate officers have opted out of the unemployment insurance system.

Figure 8. Share of total payroll earned by quintile of FTE jobs
Washington state, 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse

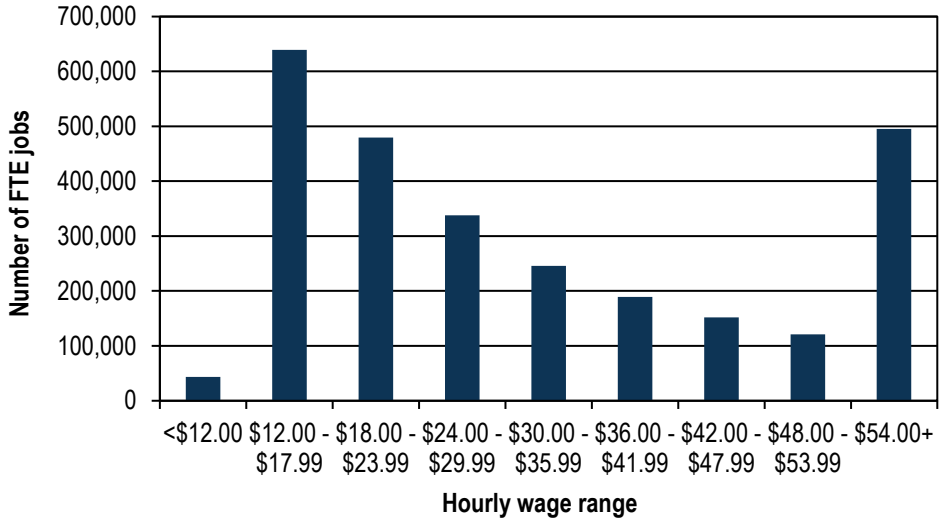


The best-paid 1 percent of FTE jobs were paid more in wages than the lowest-paid 20 percent, and the best-paid 20 percent of FTE jobs earned half the total payroll in the state in 2019.

Hourly wages: jobs by wage range

A different way of presenting wage data – jobs grouped by the range of hourly wage paid in 2019 – is shown in *Figure 9*, with the wage spectrum being divided into nine wage ranges; the first four wage ranges contain the majority of jobs: 1.6 percent paid below $12.00 per hour, 23.6 percent paid from $12.00 to $17.99 per hour, 17.7 percent paid from $18.00 to $23.99 per hour, and 12.5 percent paid from $24.00 to $30.00 per hour. Over 18 percent paid $54.00 per hour or more.

Figure 9. FTE jobs by hourly wage range, 2019 dollars
Washington state, 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse



Over 500,000 jobs had annualized pay in at least six figures in 2018, on an FTE basis.

Figure 10 shows some of the stark differences between wages in different industries. Over 54 percent of all jobs in limited-service eating places (which includes "fast-food" restaurants, coffee bars, buffets) paid below $15.00 per hour. The low wages in childcare services, where almost half (45.3 percent) of jobs paid below $15.00, became an issue during the pandemic when these workers were finally recognized for the essential role they play in the economy. Another set of essential workers, in grocery stores, also had a low median wage ($16.28 per hour), with more than a third earning below $15.00 per hour. Meanwhile, the top five high-wage industries were all tech-related, with 86.4 percent of jobs in software publishing paying in the highest wage category ($54.00 or more). In terms of numbers, five industries accounted for a third of high-wage jobs: pre-packaged software publishing (12 percent), aerospace (7 percent), electronic shopping (6 percent), K-12 public education (6 percent) and computer systems design (5 percent).

Figure 10. High-wage and low-wage industries with at least 10,000 FTE jobs
Washington state, 2019
Source: Employment Security Department/LMEA; Unemployment Insurance Data Warehouse

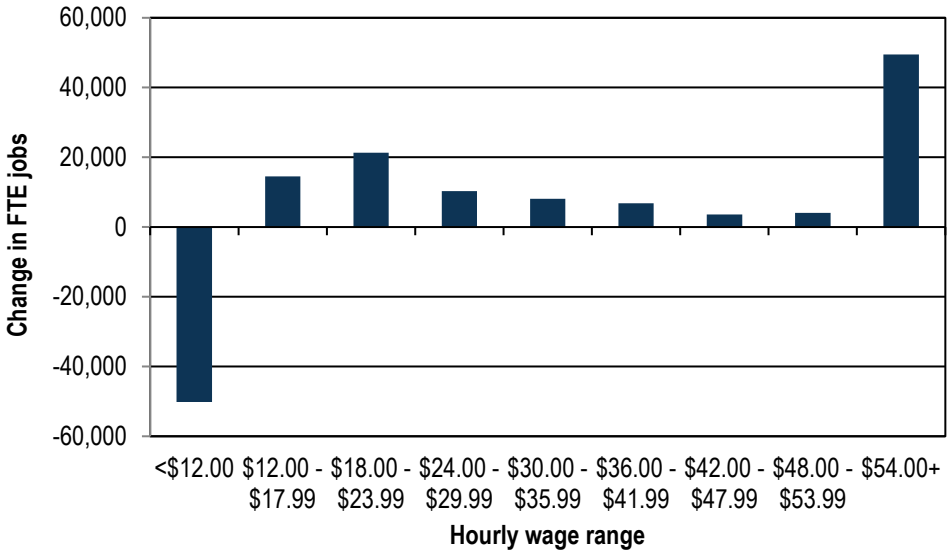
NAICS	Industry	FTE jobs	Median wage	Percent of FTE jobs paying below $15.00	Percent of FTE jobs paying $54.00 or greater
	All industries	**2,702,952**	**$27.08**	**12.4%**	**18.3%**
	Lower-wage industries				
722513-15	Limited-service eating places	65,793	$14.52	54.0%	0.7%
115	Support activities for agriculture and forestry	23,987	$15.01	49.8%	1.6%
6244	Child daycare services	14,710	$15.38	45.3%	0.5%
111	Crop production	52,009	$15.44	40.2%	1.0%
448	Clothing and clothing accessories stores	12,044	$16.14	41.7%	2.5%
453	Miscellaneous store retailers	18,080	$16.20	38.9%	2.7%
445	Food and beverage stores	45,502	$16.93	35.0%	2.3%
623	Nursing and residential care facilities	51,447	$16.98	32.7%	2.2%
721	Accommodation	27,128	$16.99	34.5%	2.4%
452	General merchandise stores	50,942	$17.36	32.1%	2.7%
444	Building material and garden equipment	25,845	$17.93	28.0%	3.6%
	Higher-wage industries				
5112	Software publishers	67,425	$91.90	0.2%	86.4%
519	Other information services	23,475	$81.04	0.4%	76.7%
4541	Electronic shopping and mail-order houses	42,900	$75.92	1.4%	72.7%
518	Internet service providers	12,381	$57.24	2.2%	53.0%
5415	Computer systems design services	53,899	$50.83	1.4%	45.8%
3364	Aerospace product and parts manufacturing	89,158	$49.15	0.6%	40.4%
5417	Scientific research and development services	18,891	$48.65	1.3%	42.1%
523	Securities, commodity contracts, investments	12,595	$45.17	1.9%	41.0%

Over 84 percent of software publishing jobs paid $54.00 or more, while almost 28 percent of FTE jobs in limited-service eating places paid below $12.00 per hour.

Figure 11 shows the difference in the number of jobs in the nine wage ranges between 2018 and 2019. Shifts in number from one year to the next may be due to incumbent workers experiencing a change in their wage rate which pushes them into the next wage range (perhaps due to their employer paying a more competitive wage, or due to a promotion) or to new hires/new jobs being created. Overall, there was larger percentage increase for the highest-wage category in 2019.

- The number of jobs paying below $12.00 per hour declined for the sixth consecutive year by a large amount – this time by 50,133 jobs or 53 percent. Again, the combination of a higher minimum wage and a tight labor market continued to shrink the number of jobs in this pay range. Two industries in particular were impacted in 2019: accommodations and food services (almost -16,000) and retail trade (-12,000).
- In the next seven wage ranges stretching from $12.00 to $17.99 per hour to $48.00 to $53.99 per hour), the number of jobs increased at rates between 2.3 percent and 4.6 percent.
- At the top of the wage distribution, jobs paying $54.00 or more increased by over 49,000 (11.0 percent). Almost every major industry had more high-wage jobs in 2019, including information services (+12,931, in industries like pre-packaged software, telecom and internet service providers), local government (+10,965, mostly in K-12 education as a consequence of the McCleary decision), professional services (+5,430, in all segments, especially computer systems design), retail trade (+5,061, mostly in e-commerce), and construction (+4,427).

Figure 11. Change in FTE jobs by hourly wage range, 2019 dollars
Washington state, 2018 to 2019
Source: Employment Security Department/LMEA, Unemployment Insurance Data Warehouse

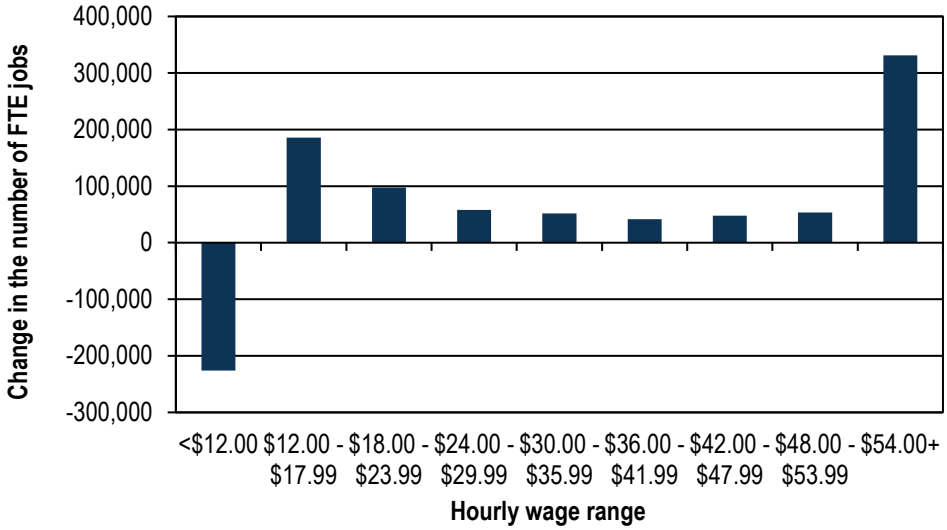


More jobs on the high end, fewer on the low end, in 2019.

Figures 12 and *13* provide a longer-term look at the total change and percentage change in jobs in the nine wage ranges going back to 2001. During that time, the number of high-wage jobs ($54.00 and higher) grew by 202 percent. While many of these net new jobs were in industries well-known for higher-wage jobs (e.g., software, healthcare, electronic shopping, aerospace and computer systems design), other industries like information services excluding software, K-12 education, local government excluding education and wholesale trade were also major sources.

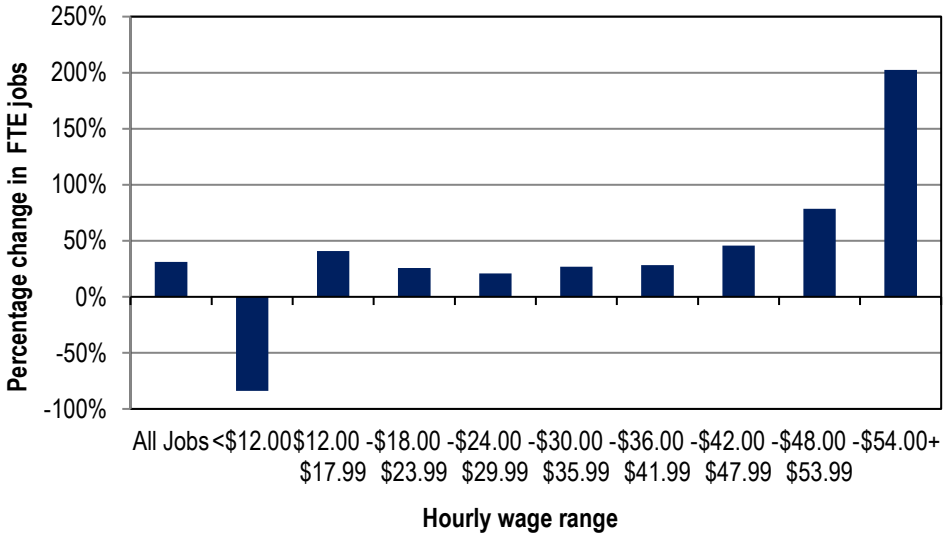
In summary, wages improved in 2019 with across-the-board gains and continued to grow faster than the national average. The median hourly wage hit an all-time high. Wage gains were slightly higher in terms of percentage change at the higher end and at the lower end. The result was an increase in wage inequality. Since 2001, there has been a marked shift towards higher-wage jobs. While total FTE employment grew by 29 percent, the number of jobs paying below $42.00 per hour increased by 12 percent, while jobs paying above that mark grew much faster at 118 percent.

Figure 12. Change in FTE Employment by hourly wage range, 2019 dollars
Washington state, 2001 to 2019
Source: Employment Security Department/LMEA; Unemployment Insurance Data Warehouse



Employment growth over the past sixteen years was heavily weighted on the higher end of the wage scale.

Figure 13. Percentage change in FTE Employment by hourly wage range, in 2019 dollars
Washington state, 2001 to 2019
Source: Employment Security Department/LMEA; Unemployment Insurance Data Warehouse

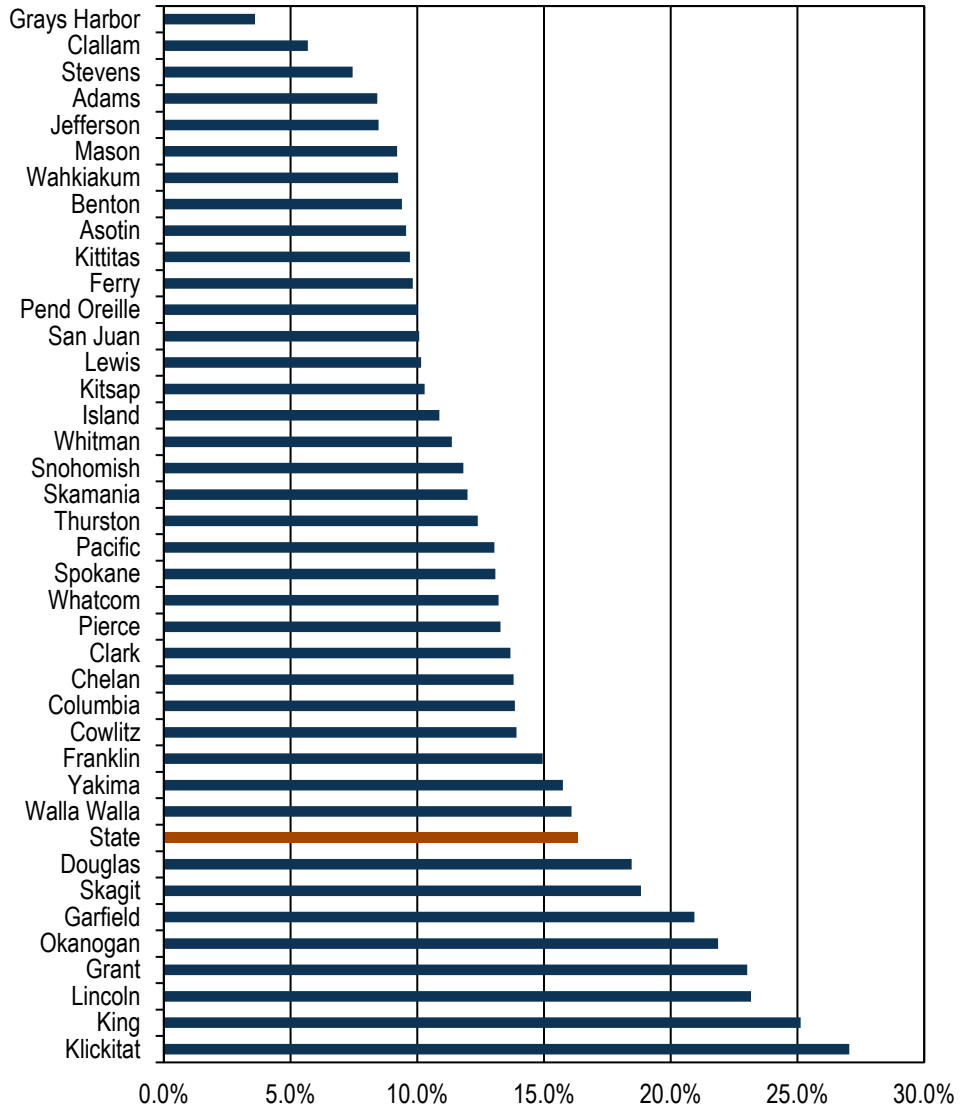


The number of high-wage jobs tripled from 2001 to 2019, while jobs paying below $12 per hour almost disappeared.

Median hourly wage by county

The median hourly wage increased in all but three counties in 2019. Sixteen counties (up from seven in 2018) saw their median increase by at least 3.0 percent, led by Columbia County's 6.3 percent gain Kittitas (4.9 percent), King (4.7 percent), Klickitat (4.7 percent), Garfield (4.4 percent), Lewis (4.4 percent), Cowlitz (4.2 percent), Thurston (4.1 percent), Stevens (3.0 percent) and Asotin (3.0 percent). Only Jefferson (-1.2 percent), Asotin (-0.4 percent) and Adams (slightly negative but rounding to zero) suffered a decline. County median wages ranged from King ($35.01 per hour) to Okanogan ($17.32 per hour). Over the longer term, since 2007, Klickitat had the largest increase in the median wage (+27 percent). All counties had an increase over that time period, as shown in *Figures 6 through 18*.

Figure 14. Change in median hourly wage range, 2019 dollars
Washington state and its counties, 2007 to 2019
Source: Employment Security Department/LMEA; Unemployment Insurance Data Warehouse



The median hourly wage increased in every county from 2007 to 2019, ranging from 3.6 percent in Grays Harbor to 27.0 percent in Klickitat County.

Average monthly wages by worker demographics

The Longitudinal Employment-Household Dynamics (LEHD) program is a partnership between the U.S. Census Bureau and states in which Census adds demographic detail to state employment databases. One of the program's products is the Local Employment Dynamics (LED) database, which provides employment data and average monthly wage by industry and county with three demographic breakouts: age group by gender (although only male and female are available); education by gender (for those aged 30 and above); and race by ethnicity (Hispanic/non-Hispanic).

LED data is based on the quarterly wage files, and so does not correspond exactly to monthly employment estimates from the Quarterly Census of Employment and Wages (QCEW). Calculating an average wage is problematic on a quarterly basis because the number of hours worked by a particular worker with a particular employer can vary tremendously, from as little as one hour, up to 520 hours (equivalent to working eight hours a day, five days a week) or more depending upon overtime. LED solves this problem in part by identifying "full-quarter" jobs – jobs which exist not only in the quarter being analyzed, but in the previous and subsequent quarters as well. The presumption is that the job provided steady work (whether part time or full time) throughout the quarter, and so an average monthly wage – total quarterly earnings divided by three – would be representative. Note that because shorter-term jobs, which generally are lower paid, are not included, the averages shown are significantly higher than the average wage for all jobs.

As shown in *Figure 15*:

- The average monthly wage for full-quarter jobs held by women ($4,772) was 78.0 percent of the average for all jobs. The ratio of the average for women vs. the average for men was 64.5 percent. This was only modestly higher than the 60.7 percent from 1991.
- The average monthly wage for jobs held by African American, Indigenous, Pacific Islander, and multi-racial workers was significantly below the average for all jobs. Wages for African American and Indigenous workers have grown slower than the average for all workers.
- The average for jobs held by Asian American workers was substantially higher than the average for all jobs. It should be noted that this racial group, like all others, is very diverse, with some members whose families have been here for many generations to some (like Syrian war refugees) who have only recently arrived in this country. There is likely a more unequal distribution of wages within this group than any other.
- The average for Latinx workers was the lowest for any racial/ethnic group.
- The peak age for earnings was the 45 to 54 age group. Average wages increase with age, before dropping somewhat above the age of 54, probably because higher-wage workers can afford to retire earlier.
- The wage premium for graduating with a four-year degree (or more) has increased since 1991, but more so before 2005 than in the past 14 years.

Figure 15. Demographic wage gaps, 2019 dollars
Washington state, 1991, 2005 and 2019
Source: Local Employment Dynamics database/Census Bureau, states. Calculations by ESD/LMEA.

Wages	1991	Percent of average for all jobs	2005	Percent of average for all jobs	2019	Percent of average for all jobs
All jobs	**$3,592**	**100.0%**	**$4,476**	**100.0%**	**$6,116**	**100.0%**
By gender:						
Female	$2,682	74.7%	$3,477	77.7%	$4,772	78.0%
Male	$4,415	122.9%	$5,437	121.5%	$7,395	120.9%
By race:						
African American	$3,062	85.3%	$3,587	80.1%	$4,585	75.0%
Indigenous	$2,756	76.7%	$3,300	73.7%	$4,910	80.3%
Asian American	$3,155	87.9%	$4,456	99.5%	$8,100	132.5%
Pacific Islander	$2,698	75.1%	$3,224	72.0%	$4,344	71.0%
Multi-racial	$2,936	81.7%	$3,633	81.2%	$4,966	81.2%
White	$3,654	101.7%	$4,567	102%	$6,034	98.7%
By ethnicity:						
Latinx*	$2,528	66.0%	$3,075	68.7%	$4,228	69.1%
Non-Latinx	$3,612	100.6%	$4,583	102.4%	$6,352	103.9%
By age:						
14-18	$702	19.5%	$875	19.6%	$970	15.9%
19-21	$1,509	42.0%	$1,599	35.7%	$1,954	32.0%
22-24	$2,302	64.1%	$2,449	54.7%	$3,284	53.7%
25-34	$3,320	92.4%	$4,021	89.8%	$5,285	86.4%
35-44	$4,211	117.3%	$5,179	115.7%	$7,082	115.8%
45-54	$4,453	124.0%	$5,307	118.6%	$7,664	125.3%
55-64	$4,075	113.5%	$4,988	111.4%	$6,671	109.1%
65+	$2,132	59.4%	$2,810	62.8%	$4,487	73.4%
By educational attainment:						
Did not finish high school	$2,620	72.9%	$2,857	63.8%	$4,571	74.7%
High school diploma/GED	$3,171	88.3%	$3,621	80.9%	$5,105	83.5%
Some college/AA	$3,629	101.0%	$4,300	96.1%	$5,737	93.8%
Bachelor's or higher	$5,115	142.4%	$6,603	147.5%	$9,055	148.1%
Under age 30	$1,704	47.4%	$1,883	42.1%	$2,481	40.6%

*The 1992 wage was used for jobs held by Latinx workers, because 1991 was an anomaly.

Data for full-quarter jobs show that there are significant differences between the average wage for workers by gender, race, ethnicity, age and education.