

Documentation, Definitions and Scope of Report

Definitions:

State's Tipped Minimum Wages are Grouped by **Wage Category** as follows:

1. **Near Federal Minimum (Fed Min) Wage**
 - i. Hourly is less than \$3
2. **Marginal Raise**
 - ii. Higher than \$3 but less than 50% of the Standard Minimum Wage
3. **Comparable Minimum Wage**
 - iii. Between 50% and 99% of the Standard Minimum Wage
4. **Same Minimum Wage**
 - iv. Same Minimum wage for All Employees

"**All Occupations**" data is the average of All Employee across ALL fields of work, not just restaurants.

Sources:

DC Tipped Wage:

<https://www.dwt.com/blogs/employment-labor-and-benefits/2024/02/dc-minimum-wage-increases-july-1-2024#>

States Tip Min Wage:

<https://www.paycor.com/resource-center/articles/minimum-wage-tipped-employees-by-state/>

State's Regular Min Wage:

<https://www.dol.gov/agencies/whd/state/minimum-wage/tipped#foot1>

Income by Occupation:

<https://data.bls.gov/oes/#/occGeo/One%20occupation%20for%20multiple%20geographical%20areas>

Census Data - # of Restaurants per State:

[https://data.census.gov/table?q=restaurant%20ECNSVY&g=010XX00US,\\$0400000](https://data.census.gov/table?q=restaurant%20ECNSVY&g=010XX00US,$0400000)

All Sectors: County Business Patterns, including ZIP Code Business Patterns, by Legal Form of Organization and Employment Size Class for the U.S., States, and Selected Geographies: 2021

Survey/Program: Economic Surveys

Ballot Question #5 of Massachusetts proposes the following changes in Tipped Employee's hourly wage.

The law would gradually increase the minimum hourly wage an employer must pay a tipped worker, over the course of five years, on the following schedule:

- 64% of the state minimum wage on January 1, 2025
- 73% of the state minimum wage on January 1, 2026
- 82% of the state minimum wage on January 1, 2027
- 91% of the state minimum wage on January 1, 2028
- 100% of the state minimum wage on January 1, 2029

The aim of this report is to see how wage increases effects the following:

- Total Number of Restaurants
- COVID Recovery - Total Employment Recovery Rate
- COVID Recovery - Cook Employment
- COVID Recovery - Cook Wages
- Cook Wages by Wage Category
- Bartenders and Waiters Wages by Wage Category
- COVID Recovery - Bartenders and Waiters Wages
- Annual Salary Difference in Bartenders and Waiters by percentile of Wage Earners.

The final page will contain the conclusions of this case study.

- I decided to make this report to get an honest view on the consequences of raising the minimum wage of tipped employees. I believed that it would be an overall benefit for business, and want to be completely transparent with my bias.
- There should also be a link to a git repo containing all raw data.

Number of Restaurants Per Year

2016 - 2022 Census Data

The tables on the right are listed in order from highest to lowest average growth rate.

Ranked:

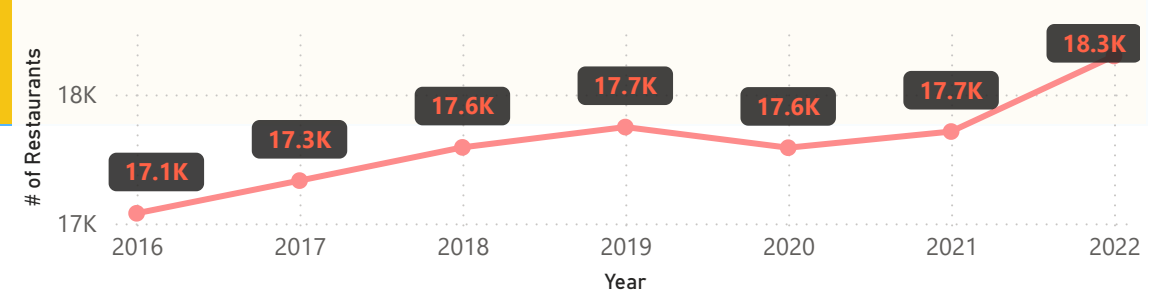
1. Near Federal (Fed) Minimum (Min.) Wage (Hourly < \$3)
2. Comparable Minimum Wage (Higher than \$3 but less than 50% of the Standard Minimum Wage)
3. Marginal Raise (Between 50% and 99% of the Standard Minimum Wage)
4. Same Minimum Wage (Hourly Wage = Standard Min. Wage)

Key Take-Aways:

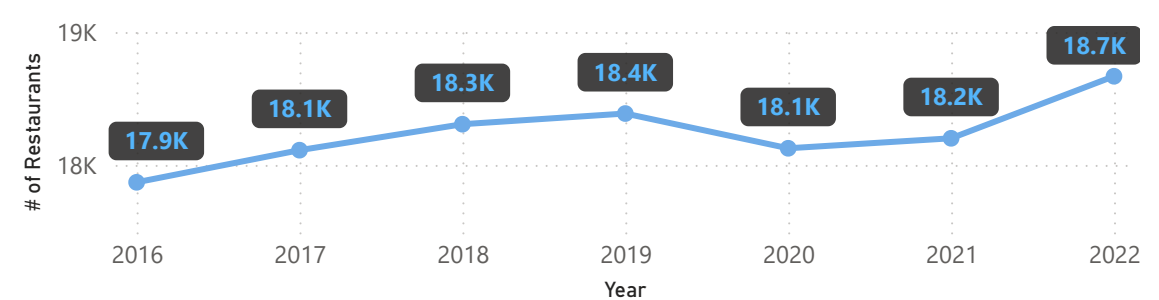
- Every state took a significant hit in number of open restaurants in 2020 because of COVID.
- States that pay Near Fed Min closed less stores and have had the highest recovery rate.
- States with a Marginal Raise, Comparable Wages, and states with the Same minimum wage recovered at roughly the same rate. (within %0.6 from highest to lowest in listed order)

Wage Range	2017	2018	2019	2020	2021	2022	Total
Near Fed Minimum	1.53%	0.97%	0.39%	-1.36%	0.79%	2.96%	0.88%
Same	2.15%	0.68%	0.14%	-2.62%	-0.17%	2.34%	0.42%
Marginal Raise	1.52%	1.29%	-0.36%	-2.55%	0.06%	2.51%	0.41%
Comparable	1.08%	0.70%	-0.15%	-2.32%	-0.19%	1.90%	0.17%

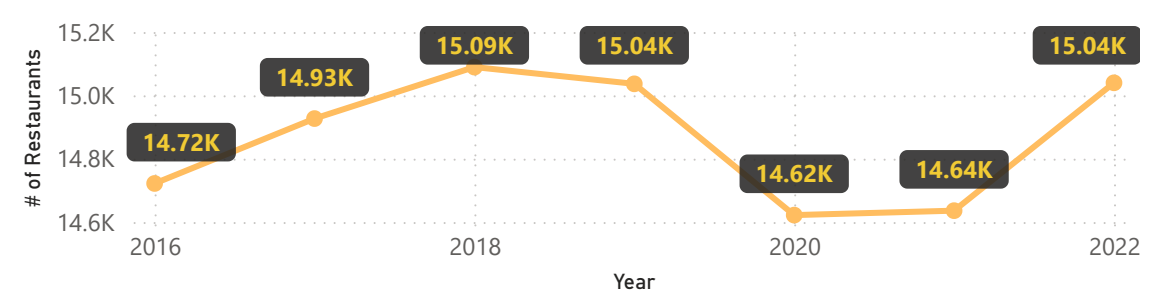
Wage Category ● Near Fed Minimum



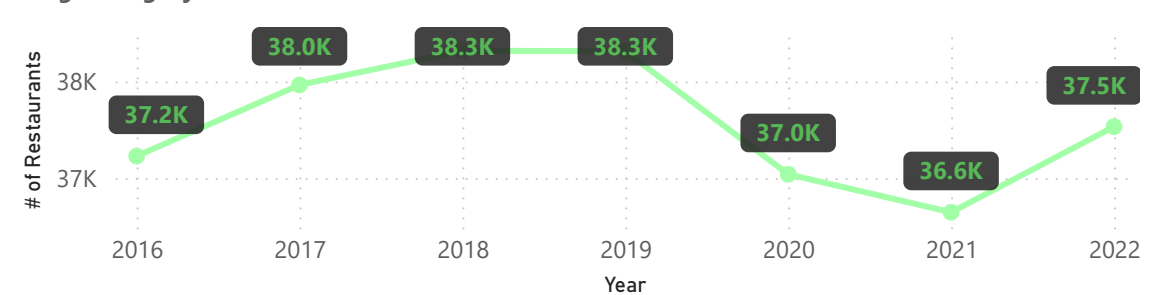
Wage Category ● Comparable



Wage Category ● Marginal Raise



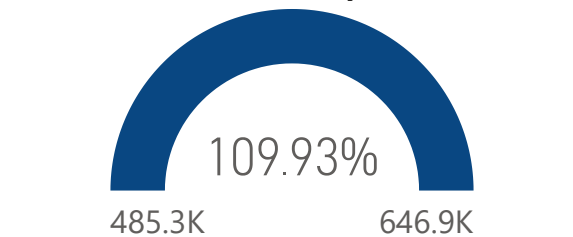
Wage Category ● Same



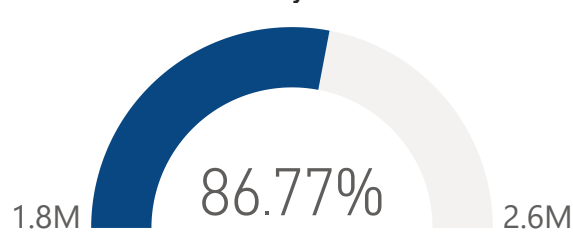
Covid Recovery - 2021 - '23 Job Recovery

Minimum = Number of Employees in 2021, Max = Number of Employees in 2019 (Pre Lockdown), Displayed Value = Number of Employees in 2023

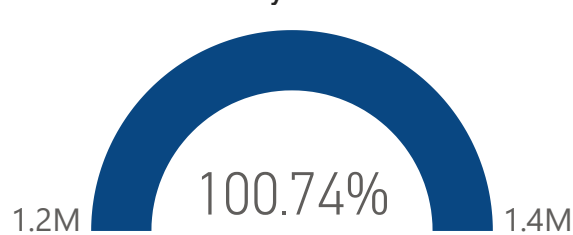
Bartender Job Recovery



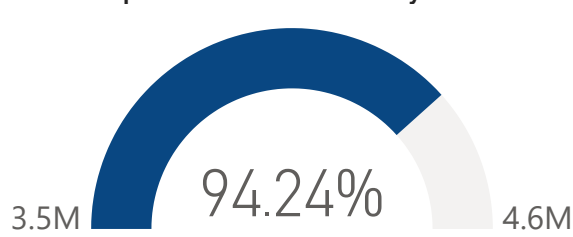
Waiter Job Recovery



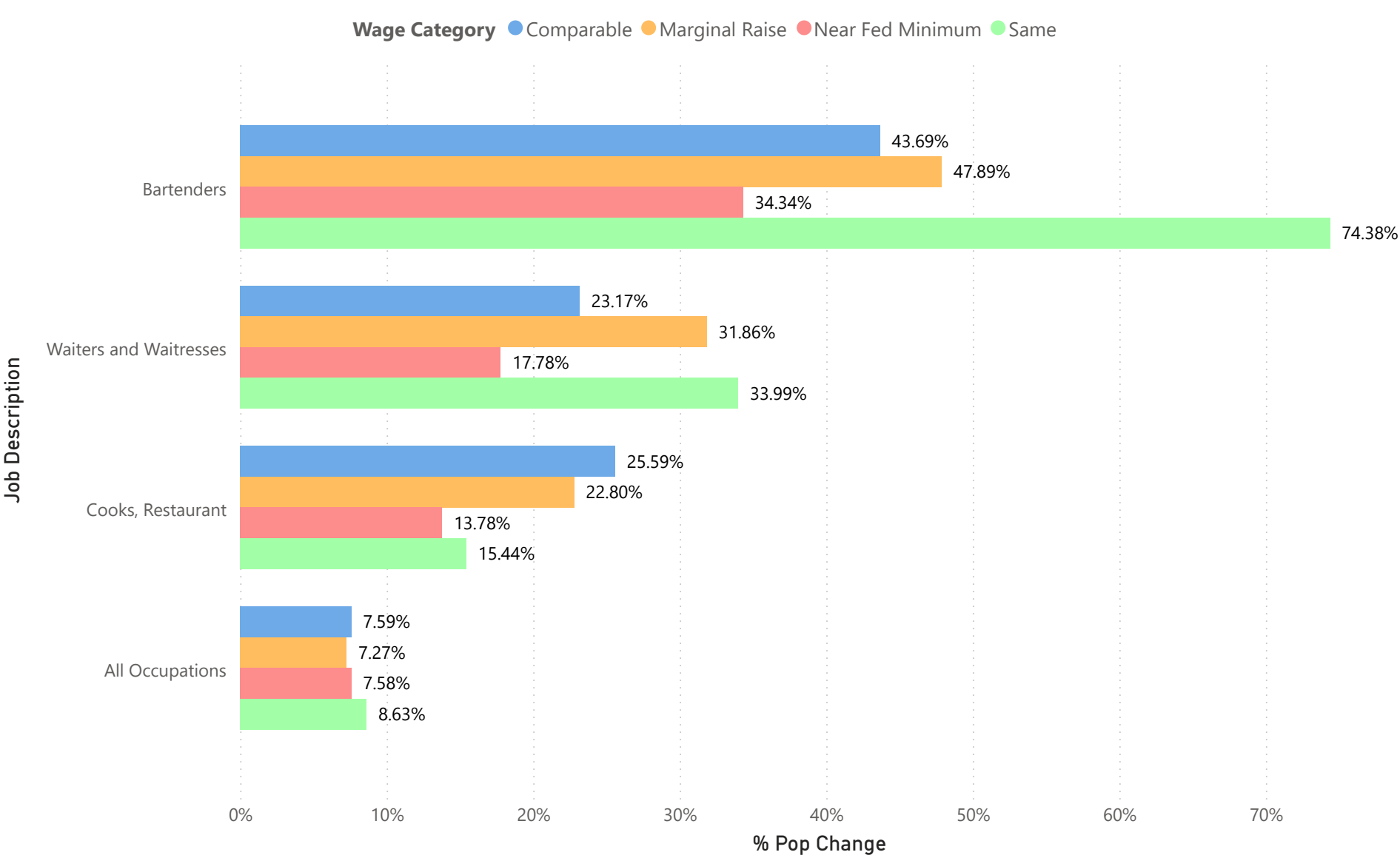
Cook Job Recovery



All Occupation Job Recovery

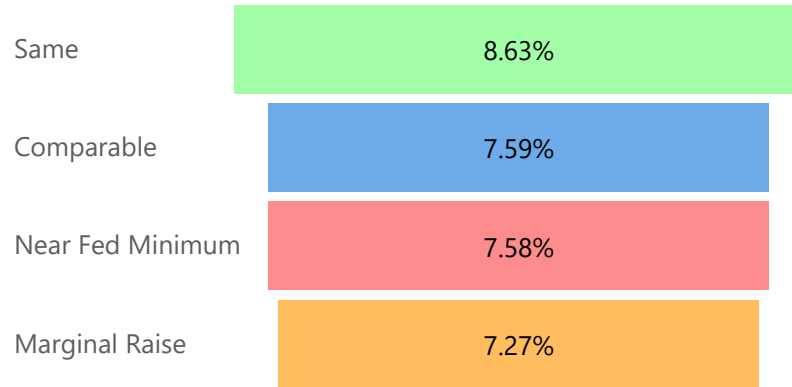


Worker Population Since Covid (2021) (Only Cooks vs All Occupations)

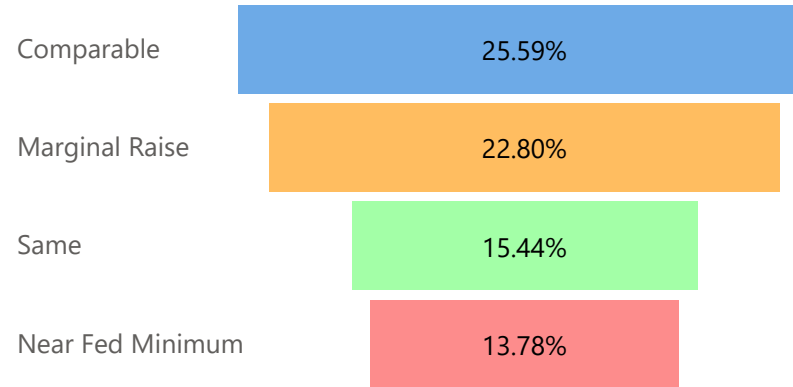


Covid Recovery - 2021 - '23 Employment, Cooks

AVG Employees Since Covid (2021), All Occupations



AVG Employees Since Covid (2021), Cooks



Key Take-Aways:

- Cooks experienced faster employment recovery across all states compared to the average for all occupations.
- Wage recovery for cooks was significantly stronger in states where waiters and bartenders earned higher minimum wages.

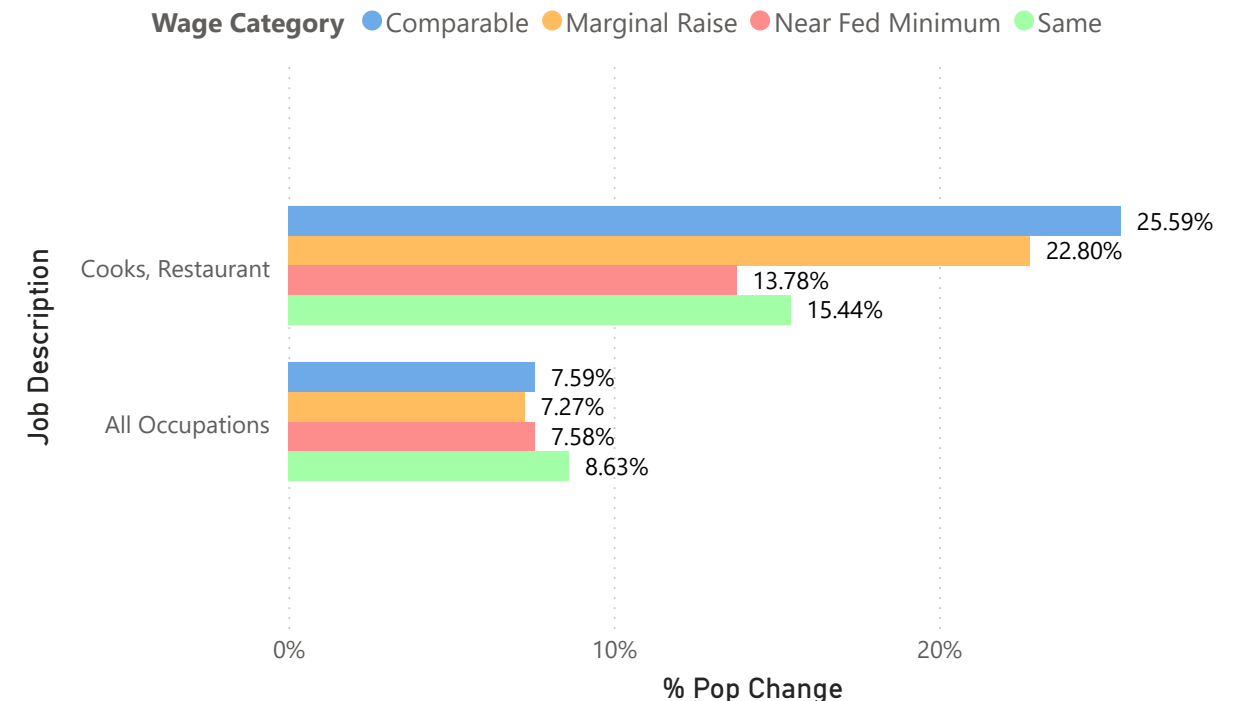
The recovery for Cooks Wages between 2021 - 2023 was as follows:

1. States with comparable tip wages: **11.81%** higher recovery.
2. States with marginal wage increases: **10.99%** higher recovery.
3. States with the same minimum wage: **1.66%** higher recovery.

All figures are compared to states with tipped wages near the federal minimum wage.

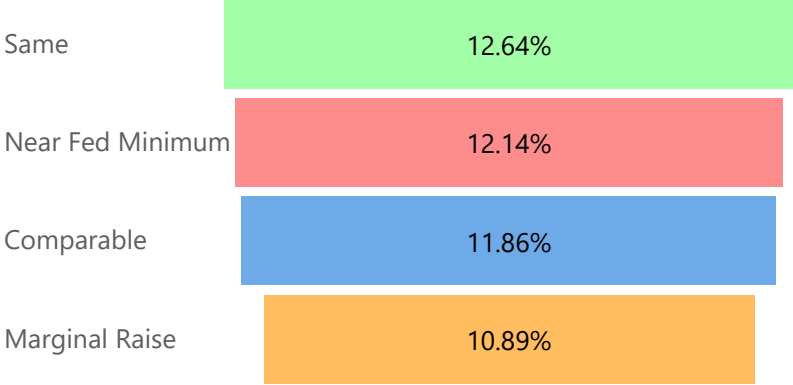
Job Description Region	All Occupations			Cooks, Restaurant		
	2021 Employees	2023 Employees	% Pop Change	2021 Employees	2023 Employees	% Pop Change
1						
CT	1,573,560	1,660,330	5.51%	10,280	14,430	40.37%
MA	3,394,470	3,643,450	7.33%	25,720	31,620	22.94%
ME	592,000	621,750	5.03%	3,380	5,250	55.33%
NH	635,220	675,150	6.29%	5,480	6,520	18.98%
RI	457,720	488,220	6.66%	5,920	7,030	16.39%
VT	283,990	300,760	5.91%	1,900	2,780	31.58%
2						
NJ	3,850,220	4,202,170	9.14%	21,280	26,690	25.42%
NY	8,669,050	9,392,830	8.35%	58,540	67,870	15.94%
3						
DC	661,960	701,840	6.02%	2,940	6,960	136.73%
DE	435,600	469,280	7.73%	4,090	5,720	39.85%
MD	2,546,000	2,677,430	5.16%	17,120	20,660	20.68%
PA	5,583,410	5,948,490	6.54%	42,830	54,980	28.37%
VA	2,752,220	2,881,120	4.69%	27,800	30,210	27.15%

Worker Population Since Covid (2021), Cooks vs All Occupations

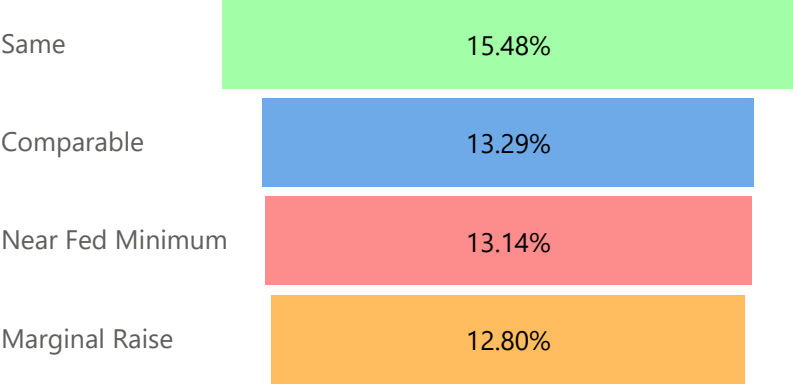


Covid Recovery - 2021 - '23 Wages, Cooks

Wage Recovered Since Covid (2021) (All Occupations)



Wage Recovered Since Covid (2021) (Only Cooks)



Key Take-Aways:

- Across all states, cooks experienced a faster wage recovery compared to the average for all occupations.
- While not all wage increases for tipped employees had a positive effect on cook wages, a clear trend emerges: states with closer pay parity tend to correlate with higher wage recovery for cooks.

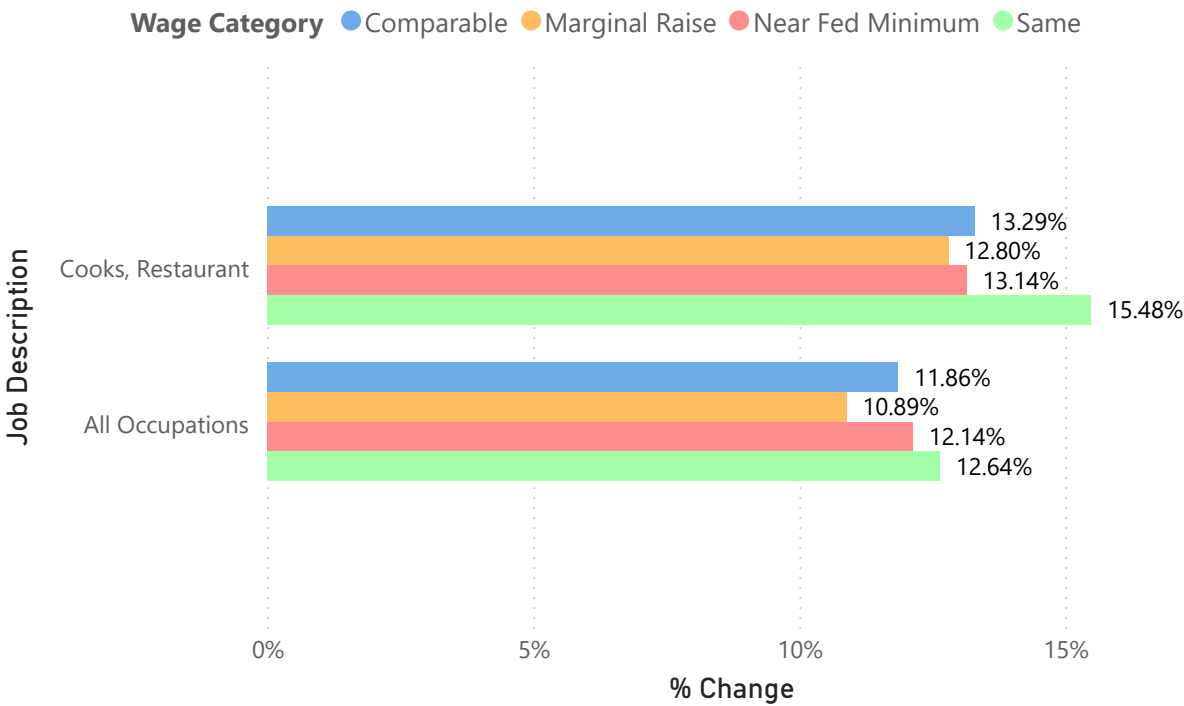
Wage recovery for cooks between 2021 and 2023 showed the following trends:

1. States with the same wage: **2.34%** higher recovery than Min.
2. States with comparable wages: **0.15%** higher recovery than Min
3. States with marginal raised wage : **-0.34%** Lower than Min.

All figures are compared to states with tipped wages near the federal minimum wage.

Job Description Region	All Occupations			Cooks, Restaurant		
	2021 Annual	2023 Annual	% Change	2021 Annual	2023 Annual	% Change
1						
CT	\$66,130	\$73,740	11.51%	\$36,430	\$38,540	5.79%
MA	\$72,940	\$80,330	10.13%	\$36,980	\$43,420	17.41%
ME	\$53,230	\$60,000	12.72%	\$34,820	\$41,060	17.92%
NH	\$59,270	\$66,110	11.54%	\$36,030	\$39,310	9.10%
RI	\$62,120	\$66,610	7.23%	\$32,750	\$39,350	20.15%
VT	\$55,450	\$62,780	13.22%	\$38,600	\$42,390	9.82%
2						
NJ	\$67,120	\$73,980	10.22%	\$36,520	\$39,600	8.43%
NY	\$70,460	\$78,620	11.58%	\$36,240	\$41,950	15.76%
3						
DC	\$98,370	\$106,230	7.99%	\$40,380	\$41,570	2.95%
DE	\$59,820	\$65,990	10.31%	\$31,820	\$33,990	6.82%
MD	\$65,900	\$73,620	11.71%	\$33,070	\$37,190	12.46%
PA	\$55,490	\$61,920	11.59%	\$29,280	\$32,560	11.20%
VA	\$62,330	\$70,050	12.39%	\$29,180	\$34,600	18.57%

Wage Recovered Since Covid (2021), Cooks vs All Occupations



Average Wage for Cooks by State



ST	Minimum Wage	Tipped Minimum Wage
AL	\$7.25	\$2.13
GA	\$7.25	\$2.13
IN	\$7.25	\$2.13
KS	\$7.25	\$2.13
KY	\$7.25	\$2.13
LA	\$7.25	\$2.13
MS	\$7.25	\$2.13
NC	\$7.25	\$2.13
OK	\$7.25	\$2.13
SC	\$7.25	\$2.13
TN	\$7.25	\$2.13
TX	\$7.25	\$2.13
UT	\$7.25	\$2.13
WY	\$7.25	\$2.13
NE	\$12.00	\$2.13
VA	\$12.00	\$2.13
DE	\$13.25	\$2.23
WI	\$7.25	\$2.33
WV	\$8.75	\$2.62
AR	\$11.00	\$2.63
PA	\$7.25	\$2.83

ST	Minimum Wage	Tipped Minimum Wage
NM	\$12.00	\$3.00
NH	\$7.25	\$3.27
ID	\$7.25	\$3.35
MD	\$15.00	\$3.63
RI	\$14.00	\$3.89
MI	\$10.33	\$3.93
NJ	\$15.13	\$5.26
CT	\$15.69	\$6.38
MA	\$15.00	\$6.75

ST	Minimum Wage	Tipped Minimum Wage
IA	\$7.25	\$4.35
ND	\$7.25	\$4.86
OH	\$10.45	\$5.25
SD	\$11.20	\$5.60
MO	\$12.30	\$6.15
VT	\$13.67	\$6.84
ME	\$14.15	\$7.08
IL	\$14.00	\$8.40
MN	\$10.85	\$8.85
FL	\$13.00	\$8.98
DC	\$17.00	\$10.00
AZ	\$14.35	\$11.35
CO	\$14.42	\$11.40
HI	\$14.00	\$12.75

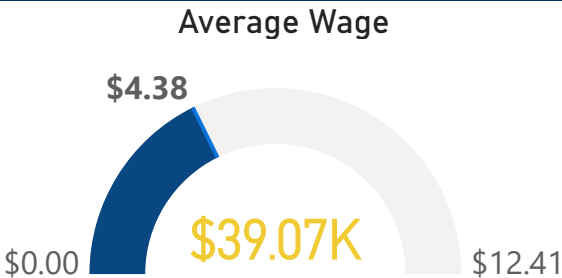
ST	Minimum Wage	Tipped Minimum Wage
MT	\$10.30	\$10.30
AK	\$11.73	\$11.73
NV	\$12.00	\$12.00
OR	\$14.70	\$14.70
NY	\$15.00	\$15.00
CA	\$16.00	\$16.00
WA	\$16.28	\$16.28

- Conclusions:
- States with Tipped Employees making less than \$3 per hour pay their cooks the least.
 - Cooks make \$5,000 more per year on average if tipped employees have a marginal wage increase.
 - Cooks make \$5,400 more per year on average if tipped employees have a comparable wage to the standard minimum.
 - Cooks make \$7,900 more per year on average if tipped employees have a marginal wage.
 - Raising the minimum wage of tipped employees has a positive correlation with increasing cook's wages

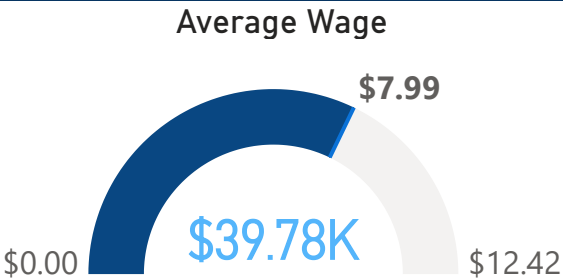
Average Wage for Bartenders and Waiters by State



Near Federal Minimum Wage		
ST	Minimum Wage	Tipped Minimum Wage
AL	\$7.25	\$2.13
GA	\$7.25	\$2.13
IN	\$7.25	\$2.13
KS	\$7.25	\$2.13
KY	\$7.25	\$2.13
LA	\$7.25	\$2.13
MS	\$7.25	\$2.13
NC	\$7.25	\$2.13
OK	\$7.25	\$2.13
SC	\$7.25	\$2.13
TN	\$7.25	\$2.13
TX	\$7.25	\$2.13
UT	\$7.25	\$2.13
WY	\$7.25	\$2.13
NE	\$12.00	\$2.13
VA	\$12.00	\$2.13
DE	\$13.25	\$2.23
WI	\$7.25	\$2.33
WV	\$8.75	\$2.62
AR	\$11.00	\$2.63
PA	\$7.25	\$2.83



Marginal Raise		
ST	Minimum Wage	Tipped Minimum Wage
NM	\$12.00	\$3.00
NH	\$7.25	\$3.27
ID	\$7.25	\$3.35
MD	\$15.00	\$3.63
RI	\$14.00	\$3.89
MI	\$10.33	\$3.93
NJ	\$15.13	\$5.26
CT	\$15.69	\$6.38
MA	\$15.00	\$6.75



Comparable Wage		
ST	Minimum Wage	Tipped Minimum Wage
IA	\$7.25	\$4.35
ND	\$7.25	\$4.86
OH	\$10.45	\$5.25
SD	\$11.20	\$5.60
MO	\$12.30	\$6.15
VT	\$13.67	\$6.84
ME	\$14.15	\$7.08
IL	\$14.00	\$8.40
MN	\$10.85	\$8.85
FL	\$13.00	\$8.98
DC	\$17.00	\$10.00
AZ	\$14.35	\$11.35
CO	\$14.42	\$11.40
HI	\$14.00	\$12.75



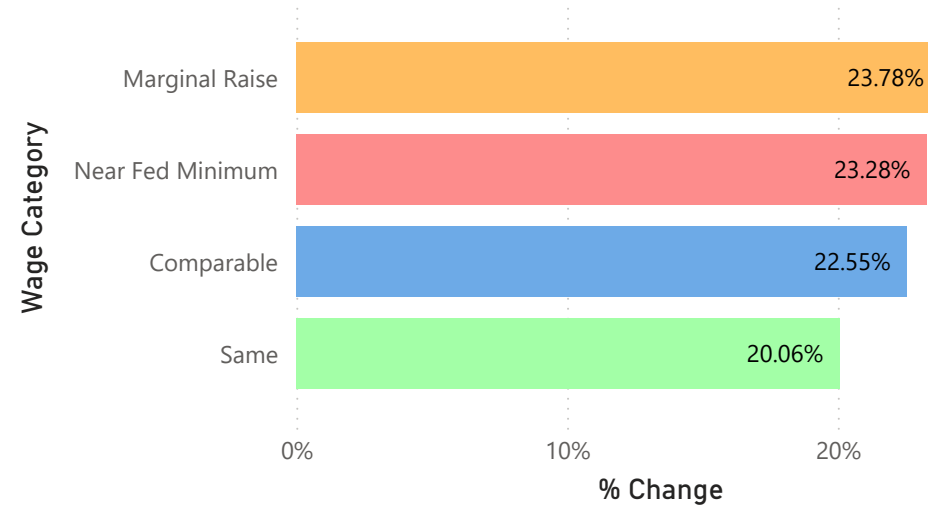
Same Minimum Wage		
ST	Minimum Wage	Tipped Minimum Wage
MT	\$10.30	\$10.30
AK	\$11.73	\$11.73
NV	\$12.00	\$12.00
OR	\$14.70	\$14.70
NY	\$15.00	\$15.00
CA	\$16.00	\$16.00
WA	\$16.28	\$16.28

Conclusions:

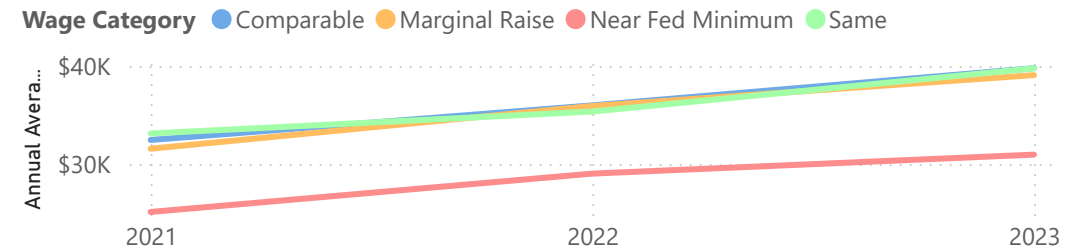
- Tipped Employees in States with Tipped Employees making less than \$3 per hour earn the least.
- Bartenders and Servers make \$8,100 more per year on average if tipped employees have a marginal wage increase.
- Bartenders and Servers make \$8,800 more per year on average if tipped employees have a comparable wage to the standard minimum.
- Bartenders and Servers make \$8,800 more per year on average if tipped employees have a marginal wage.
- Raising the minimum wage of tipped employees has a positive correlation with the average worker's annual salary.

Covid Recovery - 2021 - '23 Wages, Bartenders and Servers

Wage Recovered Since Covid (2021)



Average Annual Wages by Year



Key Take-Aways:

- States with marginal raises for tipped workers saw greater recovery in wage losses from COVID-19 closures.
- Many states with the same or comparable wages are blue states that had longer or more restrictive pandemic lockdowns, which may have strongly influenced recovery trends.
- Workers in states with higher than federal minimum wages consistently earned more before, during, and after the lockdowns.

Job Description Region	All Occupations			Bartenders			Cooks, Restaurant			Waiters and Waitresses		
	2021 Annual	2023 Annual	% Change	2021 Annual	2023 Annual	% Change	2021 Annual	2023 Annual	% Change	2021 Annual	2023 Annual	% Change
1												
CT	\$66,130	\$73,740	11.51%	\$34,300	\$41,730	21.66%	\$36,430	\$38,540	5.79%	\$34,320	\$41,760	21.68%
MA	\$72,940	\$80,330	10.13%	\$39,900	\$39,350	-1.38%	\$36,980	\$43,420	17.41%	\$37,230	\$40,830	9.67%
ME	\$53,230	\$60,000	12.72%	\$41,500	\$46,410	11.83%	\$34,820	\$41,060	17.92%	\$38,910	\$47,570	22.26%
NH	\$59,270	\$66,110	11.54%	\$30,560	\$35,610	16.52%	\$36,030	\$39,310	9.10%	\$31,980	\$39,070	22.17%
RI	\$62,120	\$66,610	7.23%	\$32,700	\$38,230	16.91%	\$32,750	\$39,350	20.15%	\$27,770	\$41,900	50.88%
VT	\$55,450	\$62,780	13.22%	\$36,890	\$49,540	34.29%	\$38,600	\$42,390	9.82%	\$33,080	\$60,200	81.98%
2												
NJ	\$67,120	\$73,980	10.22%	\$34,090	\$47,660	39.81%	\$36,520	\$39,600	8.43%	\$33,490	\$46,590	39.12%
NY	\$70,460	\$78,620	11.58%	\$43,780	\$56,140	28.23%	\$36,240	\$41,950	15.76%	\$39,710	\$51,040	28.53%
3												
DC	\$98,370	\$106,230	7.99%	\$42,790	\$59,850	39.87%	\$40,380	\$41,570	2.95%	\$48,240	\$51,970	7.73%
DE	\$59,820	\$65,990	10.31%	\$29,200	\$36,700	25.68%	\$31,820	\$33,990	6.82%	\$29,050	\$34,780	19.72%

Bartenders and Waiters Wages - Bottom 10% Earners

Compared to Near
Federal Min Wage

Bartenders

Wage Range	% Difference	2023 Average Wage
Same	31.48%	\$27,004
Comparable	23.47%	\$25,061
Marginal Raise	22.27%	\$25,288
Near Fed Minimum	0.00%	\$18,364

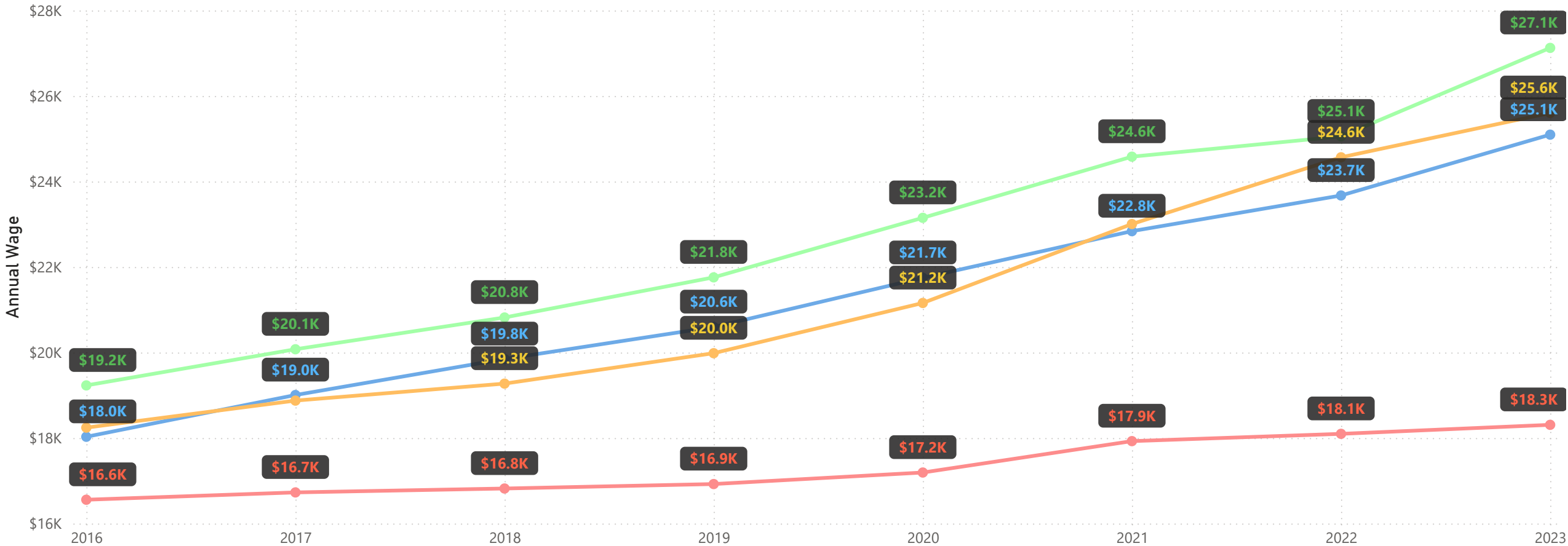
Compared to Near
Federal Min Wage

Waiters and
Waitresses

Wage Range	% Diff	2023 Average Wage
Same	31.21%	\$27,124
Comparable	23.30%	\$25,095
Marginal Raise	23.21%	\$25,603
Near Fed Minimum	0.00%	\$18,308

Waiters

Wage Category ● Comparable ● Marginal Raise ● Near Fed Minimum ● Same



Bartenders and Waiters Wages - Bottom 25% Earners

Compared to Near
Federal Min Wage

Bartenders

Wage Range	% Diff	2023 Average Wage
Same	29.57%	\$28,456
Comparable	23.04%	\$26,647
Marginal Raise	19.80%	\$26,913
Near Fed Minimum	0.00%	\$20,340

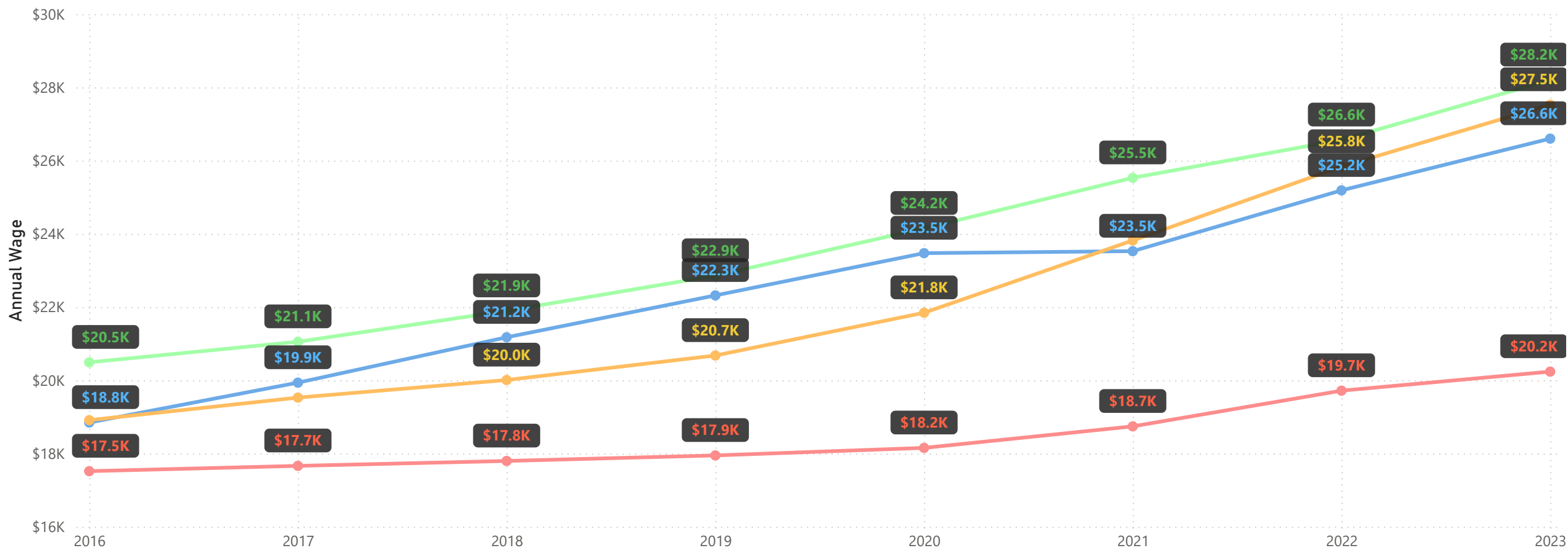
Compared to Near
Federal Min Wage

Waiters and
Waitresses

Wage Range	% Difference	2023 Average Wage
Same	28.58%	\$27,949
Comparable	22.00%	\$26,552
Marginal Raise	21.44%	\$28,141
Near Fed Minimum	0.00%	\$20,133

Waiters

Wage Category ● Comparable ● Marginal Raise ● Near Fed Minimum ● Same



Bartenders and Waiters Wages - Average Earners

Compared to Near
Federal Min Wage

Bartenders

Wage Range	% Difference	2023 Average Wage
Same	31.52%	\$34,091
Comparable	26.84%	\$33,476
Marginal Raise	16.73%	\$31,036
Near Fed Minimum	0.00%	\$26,062

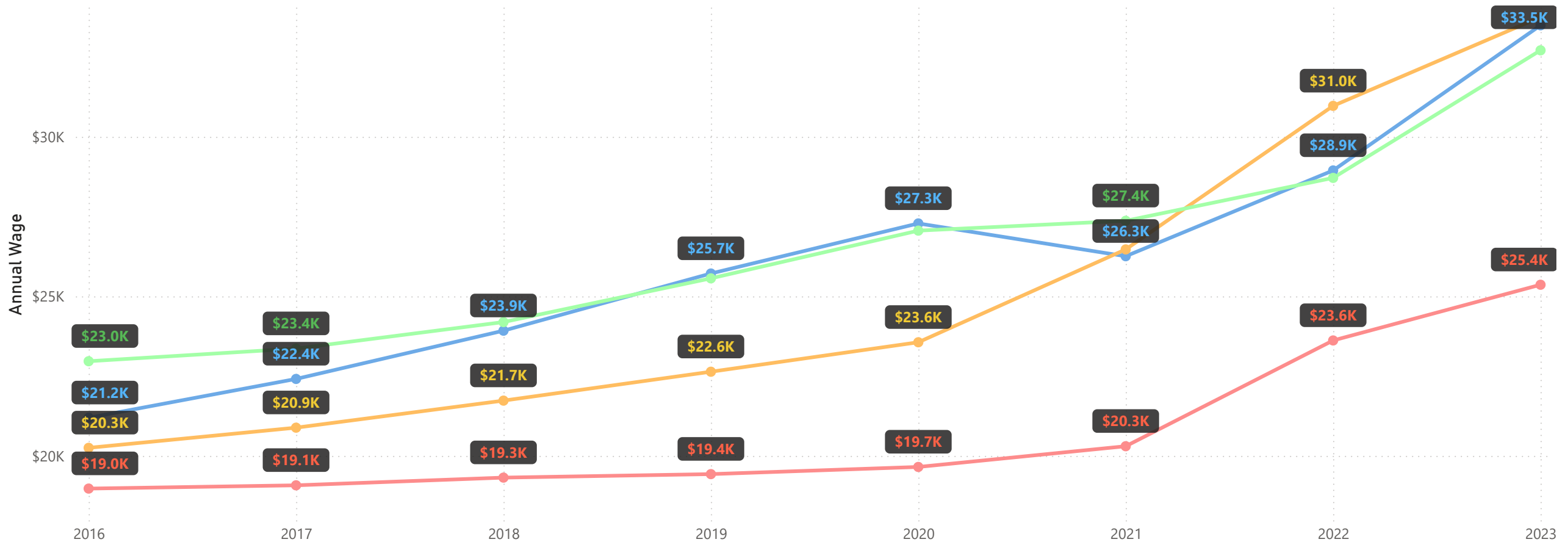
Compared to Near
Federal Min Wage

Waiters and
Waitresses

Wage Range	% Difference	2023 Average Wage
Same	27.88%	\$32,710
Comparable	26.24%	\$33,494
Marginal Raise	20.83%	\$33,751
Near Fed Minimum	0.00%	\$25,363

Waiters

Wage Category ● Comparable ● Marginal Raise ● Near Fed Minimum ● Same



Bartenders and Waiters Wages - Top 25% Earners

Compared to Near
Federal Min Wage

Bartenders

Wage Range	% Difference	2023 Average Wage
Comparable	31.03%	\$46,489
Same	30.36%	\$45,443
Marginal Raise	16.49%	\$43,062
Near Fed Minimum	0.00%	\$37,480

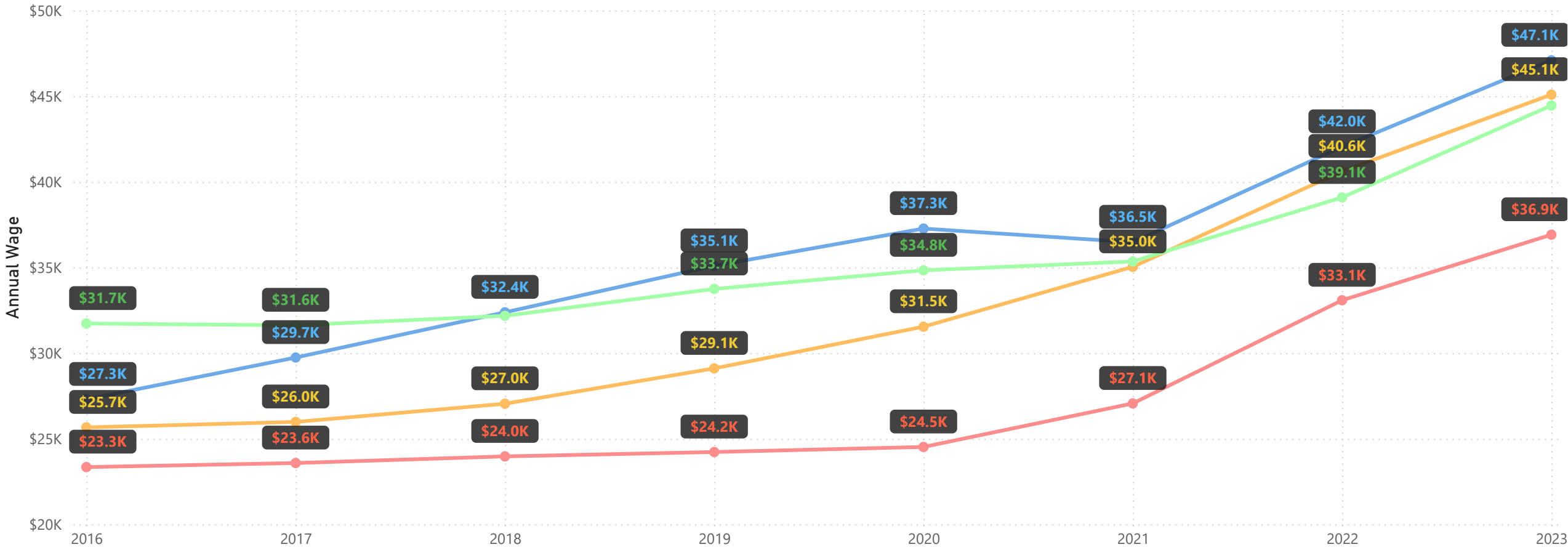
Compared to Near
Federal Min Wage

Waiters and
Waitresses

Wage Range	% Diff	2023 Average Wage
Comparable	34.29%	\$47,695
Same	30.82%	\$43,464
Marginal Raise	23.92%	\$47,114
Near Fed Minimum	0.00%	\$36,346

Waiters

Wage Category ● Comparable ● Marginal Raise ● Near Fed Minimum ● Same



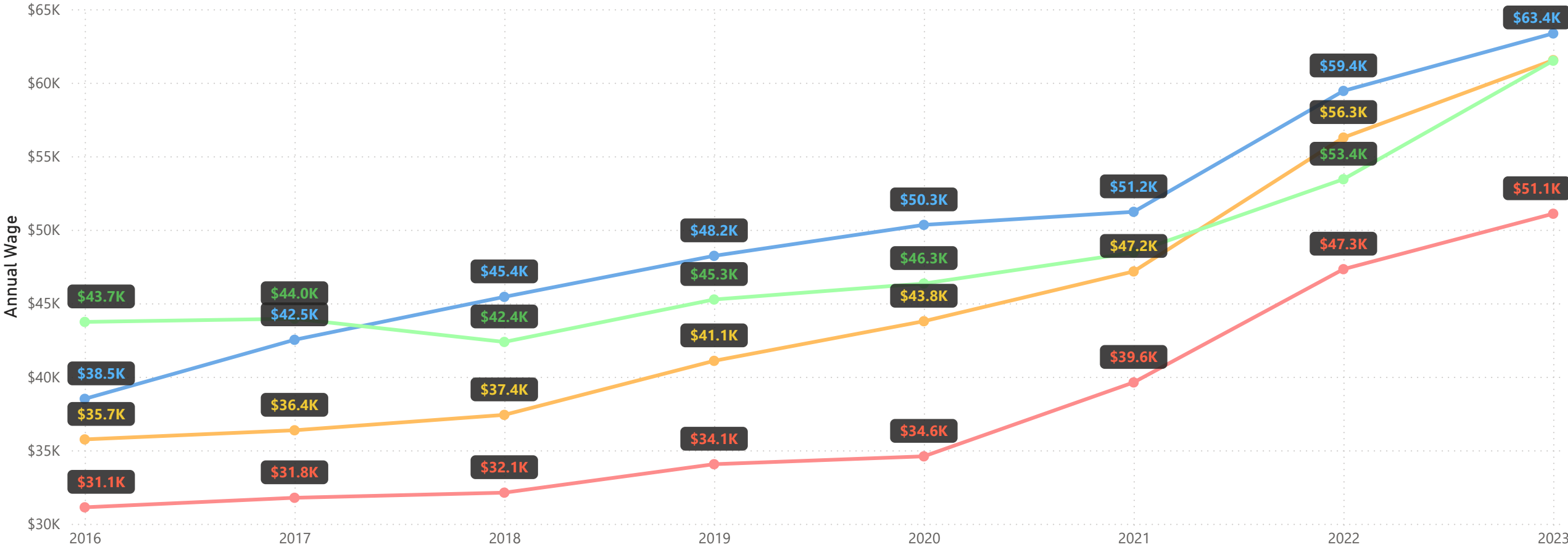
Bartenders and Waiters Wages - Top 10 % Earners

<div>Compared to Near Federal Min Wage</div> <div>Bartenders</div>	Wage Range	% Difference	2023 Average Wage
	Comparable	27.74%	\$64,401
	Same	20.61%	\$60,031
	Marginal Raise	16.30%	\$61,529
	Near Fed Minimum	0.00%	\$52,495

<div>Compared to Near Federal Min Wage</div> <div>Waiters and Waitresses</div>	Wage Range	% Difference	2023 Average Wage
	Comparable	37.23%	\$62,309
	Same	35.32%	\$62,971
	Marginal Raise	22.38%	\$61,546
	Near Fed Minimum	0.00%	\$49,689

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Conclusion

The analysis of the 2016–2022 Census data, combined with wage data from various earning percentiles for bartenders and waiters in 2023, provides clear evidence of the potential side effects of raising the minimum wage for tipped employees in Massachusetts. The data shows significant differences in wage growth for tipped employees across states with different minimum wage policies, particularly in relation to the federal minimum wage.

Impact on the Bottom 10% and 25% Earners:

- Bartenders and Waiters in the bottom 10% and 25% of earners see significant wage increases in states where the tipped wage is closer to the standard minimum wage. For the bottom 10%, bartenders in states with "Same" wages earn 31.48% more than those near the federal minimum wage, while waiters earn 31.21% more. Similarly, in the bottom 25%, bartenders earn 29.57% more and waiters 28.58% more.
- States with marginal wage increases also show wage growth, although less than the "Same" and "Comparable" categories, but still substantially more than states adhering to the federal minimum wage.

Impact on Average Earners:

- The average wage for Bartenders and Waiters follows a similar pattern. Bartenders in states with a "Same" wage policy earn 31.52% more than those near the federal minimum wage, and waiters earn 27.88% more. Those in the "Comparable" wage category similarly experience significant wage growth compared to federal minimum wage workers.
- The wage gap between federal minimum wage earners and those in states with a "Same" or "Comparable" wage policy widens over time, highlighting the longer-term positive effects of higher tipped wages.

Impact on Top 25% and Top 10% Earners:

- The top 25% and top 10% of earners experience the most significant wage increases. Bartenders in the "Comparable" category earn 31.03% and 27.74% more than those near the federal minimum wage in the top 25% and top 10%, respectively. Similarly, those in the "Same" category earn 30.36% more in the top 25% and 20.61% more in the top 10%.
- For waiters, the pattern is similar. In the top 25%, waiters in the "Comparable" and "Same" wage categories earn 34.29% and 30.82% more, respectively. In the top 10%, waiters in the "Comparable" category earn 37.23% more, and those in the "Same" category earn 35.32% more than those near the federal minimum wage.
- This indicates that higher minimum wages for tipped employees lead to more substantial wage growth for top earners, enhancing income equity across all levels.

Broader Trends and Implications:

- Wage growth is clearly faster in states with tipped wage parity or wage policies closer to the standard minimum wage, benefiting both low- and high-income workers.
- This wage data aligns with the trends seen during the recovery from the COVID-19 pandemic. States with marginal raises or wages closer to the federal minimum wage had a faster recovery in terms of business openings, but employees in states with higher tipped wages recovered faster and saw more substantial wage gains in the post-pandemic period.
- The broader trend suggests that increasing the minimum wage for tipped workers in Massachusetts could not only help reduce wage disparities but also positively affect non-tipped workers, such as cooks, who have shown correlated wage gains when tipped wages are increased.

Population Considerations:

- The population size and density of states may also influence how wage increases affect the restaurant and hospitality industry. States with larger populations and higher densities, such as Massachusetts, may see a more pronounced impact from wage changes compared to less populated states. Larger states with bigger urban centers often have a higher concentration of restaurants, leading to greater competition and possibly more dynamic wage adjustments. This can lead to a more noticeable wage growth among tipped employees in these regions, especially in higher-income earners like the top 25% and 10%.
- Therefore, when considering raising the minimum wage for tipped employees, Massachusetts' population size and urbanization should be factored into the expected outcomes.

Conclusion:

- Raising the tipped minimum wage in Massachusetts is likely to result in substantial wage growth for both low- and high-earning employees in the hospitality industry. This change could enhance wage equity, contribute to a more financially stable workforce, and ultimately lead to long-term benefits for both employees and employers.
- While states with lower tipped wages may experience a faster recovery in business openings after economic shocks, the data clearly shows that higher tipped wages lead to more robust and equitable wage growth across all worker categories, from the bottom 10% to the top 10% of earners.
- Additionally, Massachusetts' relatively large population and concentration of urban centers may further amplify the benefits of raising the tipped minimum wage, creating a more sustainable and competitive labor market in the hospitality sector.