



# Denver Restaurants and Minimum Wage

A CCLP issue brief

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## Key findings

- Denver’s licensing data for restaurants is unreliable, with a significant number of newly opened restaurants missing from the city’s database. This makes it difficult to use licensing data as a metric for restaurant industry health.
- Long-term trends in BLS data show Denver’s restaurant industry has remained stable, with fluctuations aligning more closely with broader economic trends rather than local wage policies. Recent routine revisions to the establishment data by BLS appear to have led to a decline in establishments across all industries in Colorado, including in Denver in the second and third quarters of 2024.
- Unemployment insurance claims in the food and accommodation sector in Colorado over the past few years do not indicate widespread job losses, contradicting claims of mass closures and job losses. If restaurant losses led to 20,000 people in Denver losing their jobs, we would expect to see that reflected in increased unemployment insurance claims, but the data do not support this.
- Denver continues to have nearly 50% more full-service restaurants per capita than the United States, a sign of continued resilience in the industry.
- These findings align with economic research on the minimum wage, which suggests the effects of local governments raising their minimum wages. Sudden declines in establishments are only evident in QCEW data from the most recent quarters of 2024, suggesting other factors (such as data revisions by BLS or increased food prices) and not Denver’s higher minimum wage.

## Introduction

No one set of data is perfect, but a careful look at multiple sources undercuts the suggestions (a) that there have been mass closures of restaurants, or (b) that Denver minimum wage has caused restaurant closures. In this brief, we examine recent and longer-term trends in Denver’s restaurant industry to show that the recent losses seen in data from the Bureau of Labor Statistics are not due to Denver’s higher minimum wage.

The effect of the minimum wage on employment is one of the most studied topics in economics. Research suggests that increasing the wage does not lead to widespread employment losses or business closures, even in the restaurant industry.<sup>1</sup> The effect of the minimum wage on prices is also minimal — a 2016 study found a 10% increase in the minimum wage leads to just a 0.36% increase in restaurant prices (a \$16.00 menu item would see a \$0.16 increase).<sup>2</sup> On the other hand, negative framings of the minimum wage often neglect its positive impacts on worker incomes, increased consumer spending, and benefits to employers, such as reduced turnover and greater staff retention.

There is no doubt the minimum wage leads to increased labor costs among employers. However, economic research does not support the assertion that Denver’s higher minimum wage is the cause of the loss of restaurants Denver has seen over in 2024. Denver’s minimum wage has been increasing at a rate greater than the state’s minimum wage since 2020 — so negative impacts of this policy should be evident in the data starting around that time. Despite the effects of the COVID-19 pandemic, we see signs of a strong industry in Denver. We looked at data from Denver’s Department of Excise and Licensing, the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), and unemployment insurance data to better understand how the restaurant industry has fared in Denver over the last few years.

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<sup>1</sup> Hirsch, B. T., Kaufman, B. E., & Zelenska, T. (2011). *Minimum wage channels of adjustment* (IZA Discussion Paper No. 6132). Institute for the Study of Labor (IZA);

Dube, A., Lester, T. W., & Reich, M. (2012). *Minimum wage shocks, employment flows, and labor market frictions* (Working Paper). University of California, Berkeley;

Schmitt, J. (2013). *Why does the minimum wage have no discernible effect on employment?* Center for Economic and Policy Research (CEPR);

Cengiz, D., Dube, A., Lindner, A., & Zipperer, B. (2019). *The effect of minimum wages on low-wage jobs*. *The Quarterly Journal of Economics*, 134(3), 1405-1454; and

Dube, A., & Lindner, A. (2021). *City limits: What do local-area minimum wages do?* *Journal of Economic Perspectives*, 35(1), 27-50.

<sup>2</sup> MacDonald, D., & Nilsson, E. (2016). *The effects of increasing the minimum wage on prices: Analyzing the incidence of policy design and context* (Upjohn Institute Working Paper No. 16-260). W.E. Upjohn Institute for Employment Research

## Denver licensing data is unreliable

Denver licensing data is provably unreliable, calling into question the alleged 20% drop in restaurants seen in Denver over the past year or so. This is not something we would expect to see suddenly if Denver’s higher minimum wage was the sole factor. Because Denver’s minimum wage has been increasing since 2020, a sudden drop in 2024 suggests other factors are at play. Many factors can help explain this, but maybe most significantly: there’s a lot of churn in the industry — old restaurants close, new ones open — and it’s a major omission that Denver’s license database is missing a number of new restaurants. In a list of restaurants that opened in 2023 – restaurants that are new, but not so new that many would still lack a license. Of the first 20 we confirmed are still open, the license database lacked 55% of these still-operating restaurants.

Still-operating restaurants sampled from a list of 2023 openings:	20
- <b>With</b> an active license:	9 (45%)
- <b>Without</b> an active license:	11 (55%)

Source: Denver Department of Excise and Licensing Data

Although anecdotal, our findings are also supported by reporting in *Westword*’s tracking of restaurant openings and closures in the Denver metropolitan area.<sup>3</sup> Based on this list, which may have missed some restaurant openings and closures, we estimate that Denver saw a net increase of 85 restaurants (160 openings and 75 closures) in 2024. While we would not rely on this data on its own, it is notable that this reporting supports our assessment and does not align with the claim that Denver has seen a 20% decrease in the number of restaurants in the city.

## Long-term QCEW trends show a stable industry

The US Bureau of Labor Statistics (BLS) tracks the number of jobs, enterprises and wages in the US, states, and counties through its Quarterly Census of Employment and Wages (QCEW) program. This data draws from unemployment insurance data to cover over 95% of all employers in the United States. While it provides us with valuable insights into the economic health of our state, or a particular industry, there are some important aspects of how the data is organized to keep in mind.

Most importantly, there is no one single category of “restaurant” in the economic data reported by state and federal government agencies. The North American Industry Classification System (NAICS) uses a series of codes from 2-digits to 6-digits to classify industries in the United States. Most

<sup>3</sup>Martin, Molly. “Restaurant Roll Call: Every Opening and Closing in 2024.” *Westword*. January 1, 2025. <https://www.westword.com/restaurants/every-denver-restaurant-opening-and-closing-2024-22947294>.

businesses we would identify as restaurants are found within the Accommodation and Food Services sector (NAICS 72). This is wonky, but important to understanding how to interpret the data from BLS and other federal and state government sources.

This larger sector is further divided into accommodation (721) and [food services and drinking places \(722\)](#). Since local minimum wage tip offsets are only available to food and beverage workers, it is likely that most businesses and workers affected by Denver's minimum wage fall into this larger category. NAICS 722 can be further subdivided into [special food services \(7223\)](#), drinking places (7224) and restaurants and other eating places (7225). Within 7225 are [full-service restaurants \(722511\)](#), [limited-service restaurants \(722513\)](#), [cafeterias, grill buffets, and buffets \(722514\)](#) and [snack and nonalcoholic beverage bars \(722515\)](#).

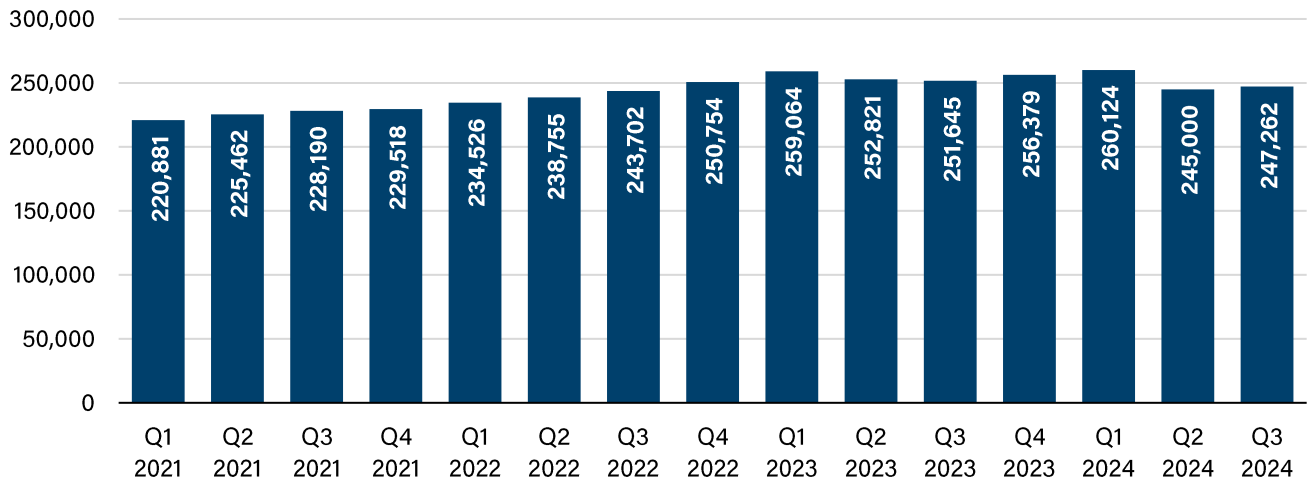
It is important to be aware of which industry the data from QCEW is referring to, as we may see different trends when looking at the full-service restaurant industry (NAICS 722511) rather than the larger food services and drinking places (NAICS 722). Also, establishments are routinely evaluated and recategorized by BLS based on their primary economic activity — changes in business models, such as moving from full-service to limited-service could appear as business closures in the data for full-service restaurants, when BLS just re-assigned the business to a different NAICS classification.

Another important aspect of the QCEW data is that the Bureau of Labor Statistics routinely reviews establishments included in their data to ensure they are still open and operating. This ensures their data is accurate and continues to reflect the economic realities of our state and counties. Because Colorado's 2024 data included a belated purge of businesses that closed in prior years, the 2021-22 gains (in all industries, not just restaurants) are likely overstated. Some closures from those years were not purged until 2024, and the 2023-24 losses are likely overstated since they include the belated purges of full-service restaurants that closed in prior years.

As evidence that this purge took place and should influence how we interpret the changes we see in full-service restaurant establishments, there is a noticeable drop in establishments across all industries in Colorado and in Denver in the second and third quarters of 2024. This is similar to the decline in full-service restaurants in Denver. As the charts below show, Colorado lost 15,124 establishments in all industries between Q1 and Q2 of 2024 — this 5.8% decline across Colorado is almost certainly not a result of Denver's higher minimum wage. Denver saw a 7.4% decline between these same quarters. Full-service restaurants (722511) experienced a 7.9% decline in establishments— not as severe when compared to the decline seen in Denver across all industries.

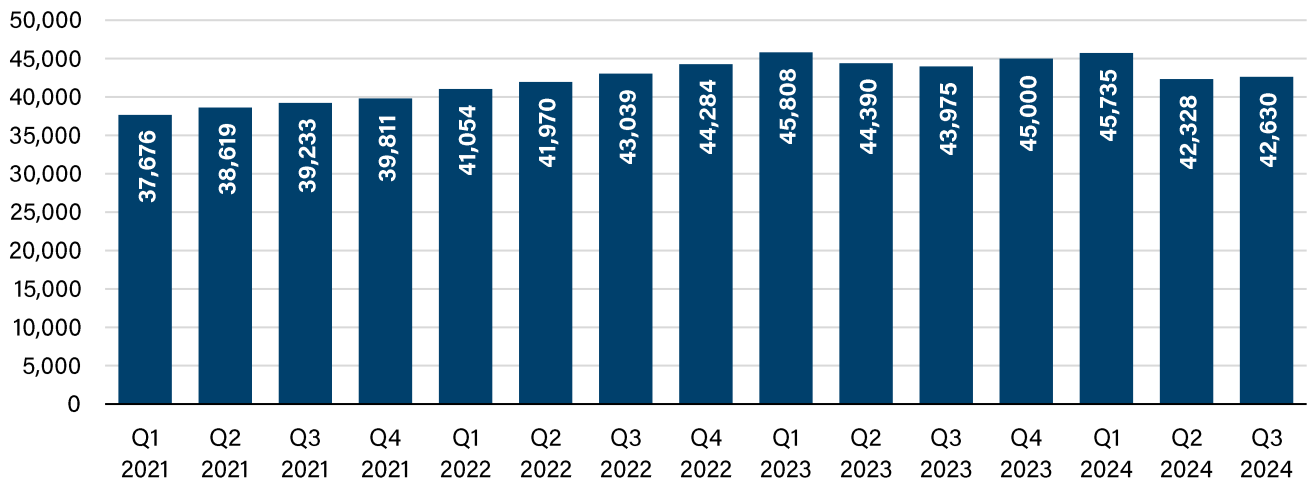
Although its practices may create confusion, purging establishments from the QCEW data is imperative for BLS and the Colorado Department of Labor and Employment to maintain the quality and accuracy of the valuable labor market data they publish.

**Colorado Establishments, All Industries**



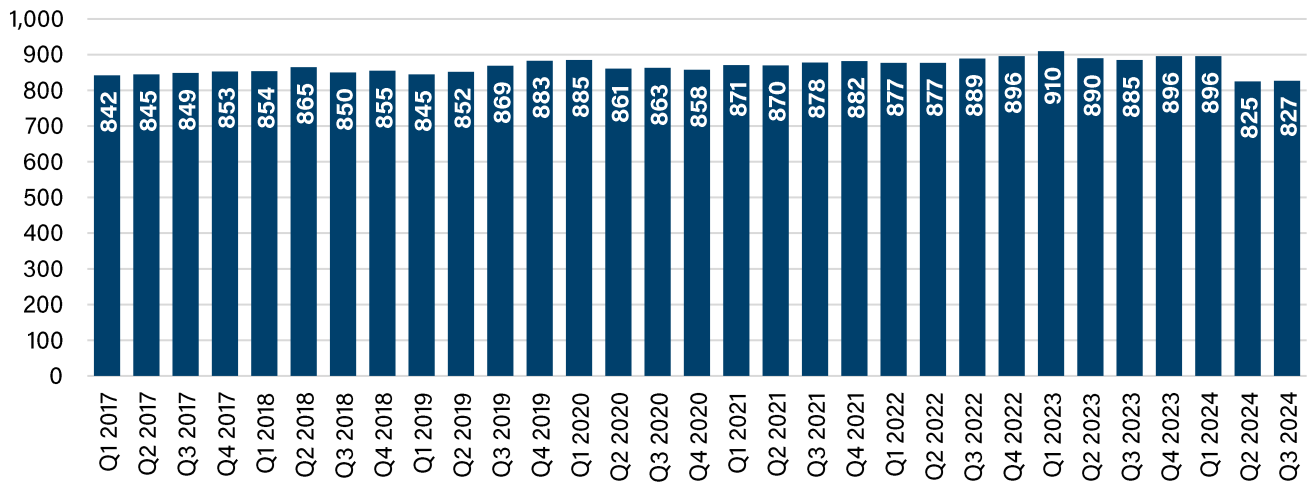
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

**Denver Establishments, All Industries**



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

**Denver Establishments, Full-Service Restaurants (NAICS 722511)**



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

Looking only at state and federal data on the number of businesses<sup>4</sup> show that since the year before COVID-19 (2017-19), the number of full-service restaurants (NAICS 722511) changed minimally in Denver. Since COVID-19, Denver and Colorado saw similar trends in full-service restaurant establishments between 2021 and 2023. If Denver’s minimum wage was the cause for the decline in full-service restaurant establishments during 2024, we would not expect to see similar trends mirrored in Colorado in the years prior. This trend also supports the idea that the declines seen in full-service restaurants in the second and third quarters of 2024 are the results of BLS purging closed establishments still in the data, not wage policies in Denver (or Colorado).

Time Period	Denver Change in F.S. Restaurants (722511)	Colorado Change in F.S. Restaurants (722511)
Q1 2021 to Q1 2024	25 (2.9%)	161 (3.9%)
Q3 2021 to Q3 2024	-51 (-5.8%)	-74 (-1.5%)
Q1 2023 to Q1 2024	-14 (-1.5%)	-43 (-0.8%)
Q3 2023 to Q3 2024	-58 (-6.6%)	-134 (-2.7%)

Source: Bureau of Labor Statistics, QCEW

Other notable observations from the QCEW data include:

- The restaurant industry can be highly cyclical, dependent on discretionary spending, and was especially up and down during the pandemic and the post-pandemic recovery. 2020 saw losses after a year of growth in 2019. Denver saw gains in 2021-2022, followed by losses in 2023-2024. Short-term ups and downs (e.g., 1-2 years) can be less reliable than longer term trends, like the

<sup>4</sup> The Quarterly Census of Employment and Wages (QCEW) data program cooperatively operated by the federal Bureau of Labor Statistics and the Colorado Office of Labor Market Information; see [Appendix A](#).

2019-2024 period that averages out the effects of the pre- and post-pandemic swings, the business cycle, and data updates like the recent one in 2024.<sup>5</sup>

- One reason full-service restaurants (722511) are essentially flat is a shift within the sector: fast-casual restaurants are growing at a slightly faster pace.<sup>6</sup> The growth difference between full-service and fast-casual is modest — on the order of 1% per year — but enough to make a difference over a span of years. Full-service restaurants represented about 37% of food services and drinking places (722) establishments in Denver in 2024. Looking only at data for full-service restaurant misses these kinds of industry trends that help provide additional context to this issue. It also ignores the trends we see in other food services and drinking places (722) establishments that employ tipped workers, like bars.
- Notably, full-service restaurants (722511) in Denver grew by more, not less, when Denver's minimum wage rose by a greater amount. Full-service restaurants over 2020-22 (the years of *above-inflation* minimum wage increases in Denver) grew and then decreased over 2023-24 (the years of *inflation-only* minimum wage increases). This isn't persuasive evidence that higher minimum wage increases lead to greater restaurant growth. But it undercuts claims that Denver's minimum wage increases caused restaurant closures — if the minimum wage was driving restaurants to close, then why do we only see a reduction in establishments in 2024?

Ultimately, ups and downs matter less than their net effect — and our analysis of data from QCEW show Denver has almost 50% more full-service restaurants per capita (3.1 per 1000 population) than the United States (2.1), Colorado (2.2), and Colorado's other large counties (2.2 on average, ranging from 1.9 to 2.5)<sup>7</sup>. This high per capita rate suggests an industry that is still an important part of Denver's economy despite years of state and local minimum wage increases.

## Unemployment insurance data does not indicate mass closures

Unemployment insurance (UI) data corroborate the idea that there's been no mass closures of restaurants in Denver. If there really are 20% fewer restaurants, as some have claimed, we'd expect to see an increase in UI claims, especially in the accommodation and food services sector (72). But we don't. Since the end of the COVID-19 pandemic, this sector has seen a lower share of UI claims than we

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<sup>5</sup> Because Colorado's 2024 data included a belated purge of businesses that closed in prior years: the '21-22 gains (in all industries, not just restaurants) likely are overstated (because some closures from those years weren't purged until '24), and the '23-24 losses likely are overstated (because they include the belated purges of those that closed in prior years.)

<sup>6</sup> Most fast-casual restaurants would likely fall under the limited-service restaurants (NAICS 722513) category.

<sup>7</sup> See [Appendix A](#) for more details.



would expect given its share of the state’s workforce. The share of state UI claims made up by workers from the accommodation and food services sector (72) was smaller in 2024 than in 2022 or 2019; and just slightly above the share in 2023.<sup>8</sup>

**Data shows that, other than the pandemic years (2020-2021, when layoffs spiked), the food & accommodations sector has had less than its proportional share of UI claims:**

Year	% of CO jobs in the sector	% of Colo. UI claims in the sector
2019	8.7%	6.4%
2020	7.4%	18.7%
2021	8.0%	10.1%
2022	8.4%	6.8%
2023	8.5%	5.4%
2024	8.3%	5.9%
<b>Average, excluding '20-'21</b>	The sector has had <b>8.5%</b> of Colorado's <b>jobs</b>	The sector has had <b>6.1%</b> of Colorado's <b>UI claims</b>

Source: US Department of Labor, Characteristics of the Insured Unemployed

While this data covers the larger accommodation and food services sector (72), and reflects UI claims across the state, we would almost certainly expect to see a sudden increase of 20,000 unemployed workers in this data. To put that loss of employment in context, QCEW data indicate Denver lost 15,000 workers in the full-service restaurant industry between March and April 2020. This would mean the city has seen a loss of full-service restaurant jobs in excess of those experienced during the start of the COVID-19 pandemic.

## Conclusion: Minimum wage claims collapse under scrutiny

Interpreting any industry trends requires a careful look at multiple data sources, rather than relying on any single dataset in isolation. The claim that Denver has lost 20% of its restaurants due to higher minimum wages does not hold up under scrutiny. Denver’s licensing data does not measure business openings and closures, is incomplete, and likely missing a significant number of still-operating establishments.

Looking at establishment data from the Bureau of Labor Statistics shows a more complete picture, though imperfect. In that data, we see the long-term trends for the restaurant industry in Denver mirror those in Colorado, despite differences in minimum wages. Additionally, unemployment

<sup>8</sup> Federal labor department data from [ETA 203: Characteristics of the Insured Unemployed](#) (“The ETA 203 report provides information, by state and for the Nation, about the characteristics of Unemployment Insurance (UI) claimants”).

insurance data does not indicate mass closures or layoffs in the restaurant sector over the past year, as claimed.

While labor costs have undoubtedly risen (and not just for restaurants), economic research supports the trends we see in the data. Rather than minimum wage, restaurant industry trends are shaped by factors such as rising prices, broader economic cycles, and post-pandemic market adjustments. The data ultimately show that Denver continues to have an elevated number of restaurants per capita compared to other parts of our state, something we would not expect to see if the city's higher minimum wage was driving restaurants from the city.

Without context, even accurate data can be misinterpreted. While no dataset is perfect, a comprehensive analysis shows that Denver's restaurant industry remains resilient, and minimum wage policy alone does not explain recent fluctuations.

## Appendix A:

**Table 1: Full-Service Restaurants (NAICS 722511): Number of Establishments 2019 - 2024**

Time Period	U.S.	Colo.	Denver	Arapahoe	El Paso	Jefferson	Boulder	Larimer
2019 Q1	247,457	4,788	845	456	426	422	333	290
2019 Q2	249,217	4,839	852	465	435	426	331	285
2019 Q3	251,051	4,912	869	473	437	433	336	290
2019 Q4	252,500	4,944	883	471	442	437	331	288
2020 Q1	251,287	4,955	885	470	445	443	331	290
2020 Q2	247,372	4,893	861	472	446	432	329	284
2020 Q3	248,716	4,903	863	471	455	422	334	282
2020 Q4	250,340	4,911	858	471	458	426	331	286
2021 Q1	248,187	4,924	871	479	456	425	328	288
2021 Q2	250,603	4,966	870	487	471	434	331	290
2021 Q3	253,539	4,955	878	483	476	425	328	291
2021 Q4	255,181	4,947	882	484	474	429	327	282
2022 Q1	254,802	4,962	877	482	470	427	331	283
2022 Q2	256,563	4,972	877	483	471	435	336	282
2022 Q3	258,554	5,019	889	489	476	438	334	282
2022 Q4	260,322	5,088	896	493	487	449	341	285
2023 Q1	259,924	5,159	910	498	496	452	349	286
2023 Q2	261,129	5,069	890	489	486	447	348	286
2023 Q3	263,010	5,015	885	488	481	437	346	282
2023 Q4	264,558	5,096	896	496	489	444	347	284
2024 Q1	264,209	5,130	896	491	490	448	346	285
2024 Q2	266,392	4,888	825	480	475	435	340	277
2024 Q3	267,910	4,881	827	475	469	433	336	283
<b>Full-Service Restaurants per 1,000 population</b>	<b>2.1</b>	<b>2.2</b>	<b>3.1 (#1)</b>	<b>2.1 (#4)</b>	<b>1.9 (#6)</b>	<b>2.1 (#4)</b>	<b>2.5 (#2)</b>	<b>2.2 (#3)</b>

Source: Quarterly Census of Employment and Wages (QCEW), US Bureau of Labor Statistics