BEACON ECONOMICS

California's Minimum Wage And Its Impact On The Rising Cost of Living

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Executive Summary

Over the past decade, California has undergone a significant shift in wage policy, doubling its minimum wage from $8 per hour in 2013 to $16 per hour in 2024, with future increases now indexed to inflation. This unprecedented pace in wage increases contrasts sharply with the historical trend, where the real minimum wage grew only modestly. Additionally, many local jurisdictions have raised wage floors even further, with cities like West Hollywood, San Francisco, and San Jose leading the way. Industry carveouts, such as the $20 per hour minimum for franchise fast-food workers and $18 to $23 for healthcare employees, ripple through the economy, pushing up labor costs across various sectors.

As wages rise, advocates point to enhanced standards of living, but our analysis reveals a grimmer outcome. Although housing costs are largely determined by factors outside minimum wage policy, our regression analysis links higher minimum wages to an increase in the overall cost of living, as measured through regional price parities. Based on our analysis of the price pass-through effects by sector, we expect that this cost increase is particularly evident in restaurants, personal care, and childcare services—industries with a high reliance on low-wage labor, where labor costs make up a substantial share of revenue. As these sectors pass higher labor costs onto consumers, lower-income households bear the brunt of rising prices because they rely more heavily on these essential goods and services.

For instance, this study shows that minimum wage hikes since 2013 have increased household costs by an estimated $300 to over $1,000 annually in regions like Fresno, Riverside, and San Francisco. If Proposition 32 passes, raising the minimum wage to $18 statewide, households could see further cost increases of around $100 to $300 annually. And lower-wage regions would feel the greatest impact. In Fresno, cost-of-living increases could represent up to 1.7% of household income annually, compared to 0.8% in San Francisco. These regional differences are not accounted for in California's statewide wage policy, disproportionately straining lower-wage, lower-cost areas, and adding to their financial burdens. While minimum wage policies aim to benefit low-income workers, the economic costs undercut these intended gains by driving up living costs.

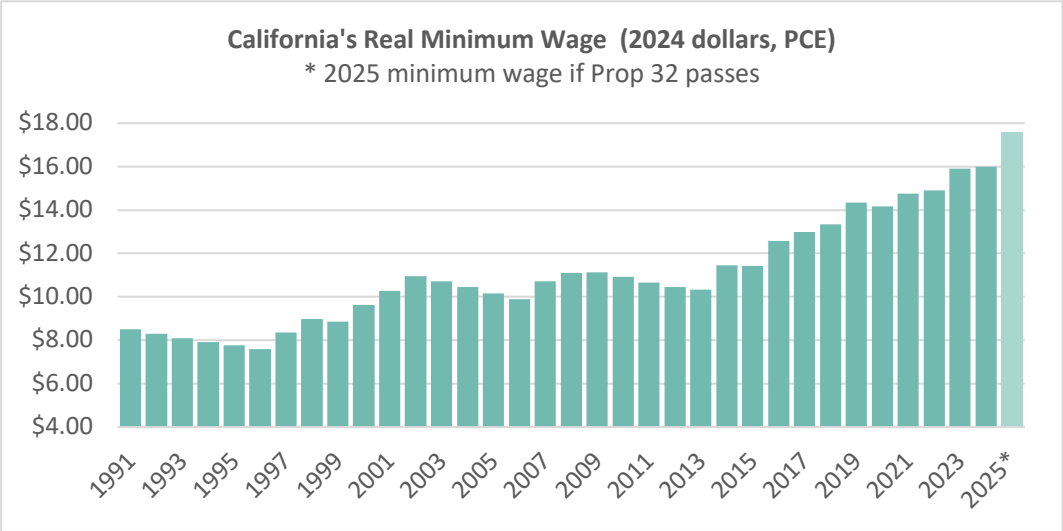
California's wage policy reflects an ambitious effort to uplift workers, but as wage floors continue to rise, so too do the risks of economic distortion. Policymakers may need to explore alternative methods of supporting low-income families that avoid unintended consequences such as rising consumer prices. A more balanced and data-driven strategy will help foster a thriving economy that supports all Californians.

California's Minimum Wage Experiment

In just over a decade, California has doubled its minimum wage, moving from $8 per hour in 2013 to $16 per hour in 2024, with future hikes now indexed to inflation by law. This marks a sharp departure from historical trends: between 1991 and 2013, the real (inflation-adjusted) minimum wage grew only about 1% per year, increasing from $8 per hour to $10 per hour.[1] Since 2013, however, the real minimum wage has increased at four times that pace, rising 4% per year and reaching a level 60% higher than a decade ago. Adjusted for inflation, California's minimum wage now sits at an all-time high relative to prices.

And California's one-size-fits-all approach is only part of the story. Many local jurisdictions have set even higher minimums, with West Hollywood leading at $19.08 per hour, followed closely by Berkeley and San Francisco at $18.07, and cities such as San Jose, Santa Rosa, Pasadena, Santa Monica, San Diego, and Los Angeles all between $16.78 and $17.55.[2] This patchwork of wage floors highlights not just regional differences in cost of living but also the intensifying pace of wage regulation in California—a trend unprecedented in both speed and scale.

Figure 1.



Source: U.S. Bureau of Economic Analysis, U.S. Department of Labor

[1] This calculation uses the PCE deflator from the Bureau of Economic Analysis, which is the standard measure for estimating real GDP growth and, therefore, ideal for assessing the real spending power of nominal incomes. By contrast, the more commonly used CPI deflator tends to overstate inflation by about 0.5% annually, which can significantly distort our understanding of long-term real income trends.

[2] https://laborcenter.berkeley.edu/california-city-and-county-minimum-wage-rates-archive/

More worrisome is the new wave of industry carveouts, like the recent $20 per hour minimum for franchise fast-food workers and the $18 to $23 range for healthcare employees. In Los Angeles, airport workers now earn a minimum of $19.28 per hour, or $25.23 if health benefits aren't provided.[3] It's important to keep in mind that these minimums affect more than entry-level roles: by law, the minimum salary for full-time exempt employees must be twice the minimum wage. Statewide, this means an exempt worker's minimum salary is currently $66,560 annually, set to rise to $68,640 on January 1, 2025. For sectors with higher minimums, the baseline for exempt employees is even greater—at franchise fast-food establishments, an exempt employee must be paid $83,200 per year, which is 25% higher than the state's median full-time earnings. These escalating wage floors ripple through the economy, pushing up the baseline for salaries across various sectors.

Amazingly, even as businesses statewide are still attempting to grapple with recent wage hikes, advocates continue pushing for even higher minimum wages. Proposition 32 on the current November ballot is proposing a minimum wage increase to $18 per hour in California, and if it passes, it would raise the real minimum wage by another 10%. In some areas, the push for rapid wage growth is even more pronounced. For example, there is an ongoing effort to increase the minimum wage for hotel workers to $30 per hour in Los Angeles and $25 per hour in San Diego. And discussions are emerging about potentially raising the franchise fast-food minimum wage above its recent $20 per hour benchmark.

So, who ultimately pays for these rising wage floors? By definition, a dollar increase in one part of the economy means a dollar decrease somewhere else, so higher wages often come at a cost—borne by consumers through higher prices, workers through fewer hours, or owners through reduced profits. These are the unintended consequences economists frequently point out: there's no such thing as a free lunch. The flip side of raising wage floors inevitably includes a mix of reduced hours, fewer available jobs, and higher prices for consumers, as businesses work to manage the additional labor costs—or in some cases, are forced to close down altogether. Policymakers should consider these costs, as they may end up offsetting, or even entirely negating, the intended benefits of the policy. High minimum wages can fail as a social policy tool if they're effectively funded by lower-income families who bear the burden of higher living costs and fewer job opportunities.

Several recent studies making headlines suggest that California's minimum wage increases have, so far, had minimal impact on prices or employment. A 2024 report by Reich & Sosinkiy (2024), for example, suggest that the Fast Act has led to only a small (3.7%) rise in fast-food prices across the state.[4] However, aside from the technical limitations

[3] https://www.lawa.org/-/media/lawa-web/business-opportunities/updated-files/lawa-wage-rates-chart-2023.ashx
[4] https://irle.berkeley.edu/publications/working-papers/sectoral-wage-setting-in-california/

of this study, the real issue is that it attempts to trivialize the broader impact of minimum wage hikes by considering only a narrow slice— both in terms of time range as well as product range—of their economic effect. Studies that focus intensely on a single facet can claim minimal impact because, for that one aspect, the effect may indeed be small. But this approach overlooks the bigger picture, missing the forest for the trees: doubling the state's wage floor over the past decade has increased production costs across multiple sectors, leading to price increases that are then transmitted to other parts of the economy. It's not just about what the Fast Act means for Big Mac prices; it's about how the state's minimum wage policy and other costly labor regulations are affecting California's overall cost of living.

To fully understand the implications of a higher minimum wage, we need to consider the economy as a whole—not just isolated prices or specific sectors. It's important to recognize how sectors interact: price increases in one area can drive prices up in others, creating a ripple effect. And so, given the cyclical and interconnected nature of the economy, higher labor costs inevitably influence every part of the economy to some degree. When we add up the effects, we find that the cumulative effect can be far more significant—and often more negative—than what studies focused on individual sectors might suggest. The story of the minimum wage isn't limited to employment in a single sector but rather, it's about the broader impact across the entire economic landscape.

The data we've examined here and in other reports tells a different story than the recent headlines—California is already facing negative impacts from large minimum wage increases, reflected in rising consumer prices and distortions in the labor market. These issues are likely to worsen in the coming months and years, given the delayed effects of recent increase as well as scheduled increases still to come. In a separate report, Beacon Economics documented the link between California's rising unemployment rate and minimum wage hikes. This report focuses specifically on how the minimum wage affects prices and the overall cost of living, illustrating how Californians are already paying a hefty price for the various labor policies adopted in recent years. Most importantly, the communities that are experiencing the highest increases in their cost of living are in lower income areas.

Proposition 32, along with other newly proposed carveouts, will only exacerbate these issues. Recent evidence shows that the effects of the minimum wage are non-linear—they escalate as the wage floor moves further above its natural equilibrium. California, which has long surpassed the optimal point of wage floor efficiency, urgently needs better, less distortionary, and ultimately less costly ways to support lower-income families.

Raising the wage floor even higher will do little more than shift money laterally within the economy while draining entrepreneurial energy from the broader economy through an ever more burdensome set of regulations.

Prices and Pass-Through Effects

Restaurants are often the focus of minimum wage studies, as this large sector has a high share of entry-level and part-time jobs, making it an easy flashpoint for labor advocates. The sector's size and composition also make it an ideal test ground for economists studying minimum wage effects, and Beacon Economics' 2019 study centered specifically on employment outcomes in this sector. However, it's a mistake to assume that restaurants are the only businesses impacted by a high minimum wage. Any sector employing a large share of entry-level workers will feel the pressure of wage increases, and inevitably, some of these higher labor costs will be passed on to consumers through price hikes. The extent of these price increases largely depends on how much of the sector's total costs come from labor—the greater the share, the more consumers can expect final prices to rise as labor costs go up.

Table 1 shows a selection of California industries from the 2017 Economic Census where we calculate a significant minimum wage pass-through effect on prices. We estimated this impact by considering both the share of lower-paid employees in the labor force as well as the labor cost share of total revenues within each industry. We have divided industries into categories of high, medium, and low pass-through effects. Unsurprisingly, restaurants fall into the high category. But looking across all categories reveals the broad reach of minimum wage increases on the overall cost of living. This list includes a wide number of retail businesses, personal care services, hotels, and amusement venues. Also impacted are parts of healthcare, such as residential care facilities for the elderly and disabled, as well as childcare centers and nursery schools. We can also see the impacts in some transportation sectors, apparel manufacturing, security services and non-profits. Over a quarter of all jobs in California were in these sectors in 2017.

And herein lies the issue. When prices for certain goods and services rise, the effects don't just impact the immediate buyers and sellers. The economy functions as a complex web of interconnections, where changes in costs and demand in one area will inevitably influence prices and demand elsewhere. Since many of these services feed into other parts of the economy through business-to-business transactions, their rising costs drive up prices in these other sectors as well. Moreover, a higher cost of living makes it harder to retain or attract mobile workers to the region, forcing employers to raise their wages, which then further spreads the minimum wage impact. In short, the effect of a minimum wage hike isn't limited to slightly higher prices in one sector; it causes an overall increase in the cost of living. Fully accounting for such an increase means considering the big picture—not just the prices in one or two sectors.

Table 1: Sectors by degree of price pass-through effects

NAICS	Sector Name	2017 Emp
	High Pass-through Effects	
6116	Other schools and instruction	80,389
8121	Personal care services	80,860
7225	Restaurants and other eating places	1,341,445
7139	Other amusement and recreation industries	157,785
6243	Vocational rehabilitation services	29,543
8134	Civic and social organizations	26,677
6244	Child day care services	80,250
4533	Used merchandise stores	19,973
	Medium Pass-through Effects	
4481	Clothing stores	201,949
4854	School and employee bus transportation	13,903
5617	Services to buildings and dwellings	238,225
6233	Retirement and assisted living for elderly	90,658
5616	Investigation and security services	161,769
6232	Residential disability, mental health facilities	55,543
6241	Individual and family services	198,332
4522	Department stores	54,588
7131	Amusement parks and arcades	63,590
8123	Drycleaning and laundry services	35,025
	Lower Pass-through Effects	
6231	Nursing care facilities (skilled nursing facilities)	146,482
4422	Home furnishings stores	30,286
3152	Cut and sew apparel manufacturing	26,676
4539	Other miscellaneous store retailers	31,026
6239	Other residential care facilities	16,004
4851	Urban transit systems	17,244
7211	Traveler accommodation	265,016
4451	Grocery stores	320,639

Source: U.S. Bureau of Labor Statistics

One sector (in Table 1) stands out in particular—used goods stores have a higher pass-through rate than other retail sectors. This is unsurprising given that the used goods are priced lower than new goods, hence labor costs are liable to be a higher share of total revenues. We also know that lower income families in particular are more likely to shop at these stores. In sum, the minimum wage-induced price increases will likely affect goods consumed by lower income families more than those purchased by higher income families—a regressive feature of pass-through effects that's hard to measure but certainly present. This means lower-income families bear the impact of a higher minimum wage more acutely. Again, we can see the regressive nature of minimum wage policies which largely undermines their usefulness and intent at higher levels.

The pass-through effect will impact local prices more where initial wages are lower, as California mandates the same minimum wage statewide, regardless of regional wage baselines. Table 2 shows average annual earnings for childcare services in different parts of the state, using the 2017 Economic Census data. In the Bay Area, a higher cost of living and tight labor markets have already pushed up the earnings for people in this critical sector. In contrast, regions with lower living costs, such as Fresno and the Inland Empire, naturally pay less. But since the $16 minimum wage applies equally across all these regions, we can expect a more substantial increase in labor costs—and therefore in prices—in lower-cost areas. This regional dispersion of relative price changes is regressive, as it places a larger burden on lower-income regions. It also provides a good empirical basis for testing overall pass-through effects, as regions with lower initial costs of living should see proportionately more inflation driven by minimum wage hikes.

Table 2: NAICS 6244: Child Daycare Facilities

County	Emp	Annual Earnings (2017)
Riverside	2,794	$19,326
San Bernardino	2,416	$20,131
Sacramento	3,252	$23,442
Fresno	2,066	$24,105
Santa Cruz	594	$24,160
Sonoma	883	$24,232
Orange	6,588	$24,746
San Joaquin	1,184	$24,950
Ventura	1,548	$25,258
San Diego	6,933	$26,222
Los Angeles	19,794	$26,895
Contra Costa	3,171	$27,645
Alameda	5,724	$29,539
San Mateo	2,842	$31,158
Santa Clara	6,165	$31,516
San Francisco	3,976	$32,318

Source: U.S. Bureau of Labor Statistics

To assess the impact of minimum wages on the cost of living, we turn to the Bureau of Economic Analysis Regional Price Parity (RPP) data.[5] RPPs measure the differences in price levels across states or metropolitan areas for a given year and are expressed as a percentage of the overall national price level. In 2022, the latest data available,

[5] https://www.bea.gov/system/files/methodologies/Methodology-for-Regional-Price-Parities_0.pdf

California had the highest RPP of any state at 112.5 (see Table 3 for RPP changes from 2013 to 2022). This means that the average family in California pays 12.5% more for the same basket of goods than the average American. Hawaii follows at 110.8, and Washington at 109.8. The data also provides breakouts for housing, utilities, services, and goods. Not surprisingly, housing and utilities are the biggest drivers, with Californians paying 60% and 47% more for these than the average American, respectively.

Table 3: California Regional Price Parity Data

California	2013	2022	Growth
RPPs: All items	109.6	112.5	2.6%
RPPs: Goods	104.3	108.3	3.9%
RPPs: Services: Housing	155.7	160.2	2.8%
RPPs: Services: Utilities	121.4	147.1	21.1%
RPPs: Services: Other	101.7	103.8	2.0%

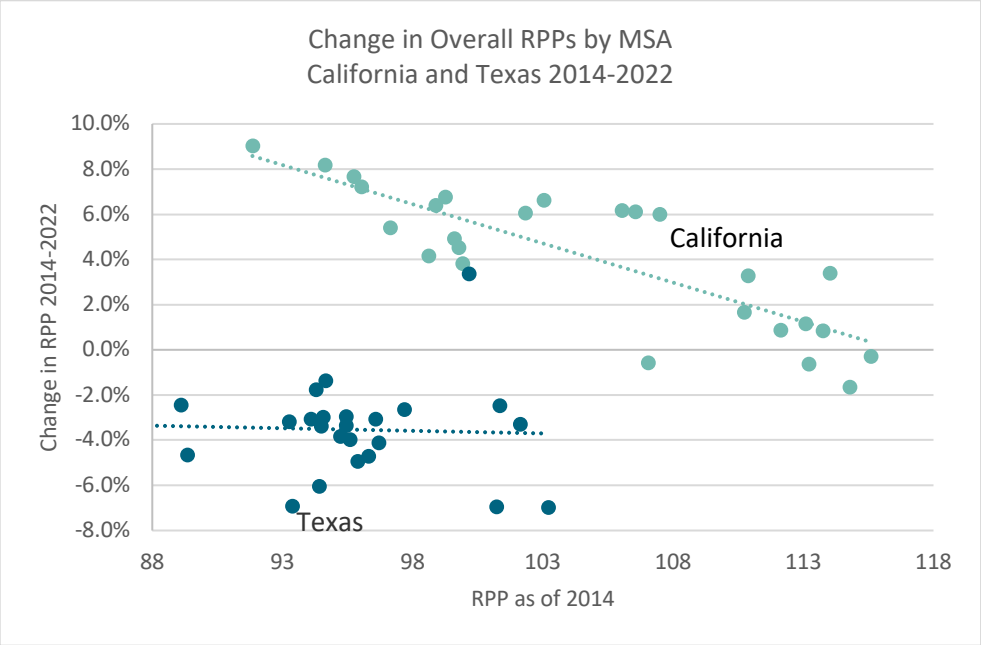
Source: U.S. Bureau of Economic Analysis

Given that the average Californian household spends around $80,000 annually on goods and services (some of which are government-provided), this implies Californians pay roughly $10,000 more each year than the average American for the same basket of products. We can't state that this is entirely due to recent increases in the minimum wage—California is expensive for a host of other reasons as well, including housing and labor shortages. Still, it's notable that prices across the board have been rising faster in California than in other parts of the United States, affecting not just housing but also goods and services unrelated to the housing sector.

The story becomes more compelling when we track cost-of-living changes across California over time. Figures 2 through 5 illustrate the relationship between the initial RPP and the change in RPP from 2014 to 2022 across various metropolitan areas in both Texas and California. It turns out that the largest increases in the cost of living have occurred in California's lower-cost regions—typically inland areas such as Fresno, the Inland Empire, and Sacramento. This pattern extends to both goods and services, suggesting (though not conclusively) a minimum wage effect.

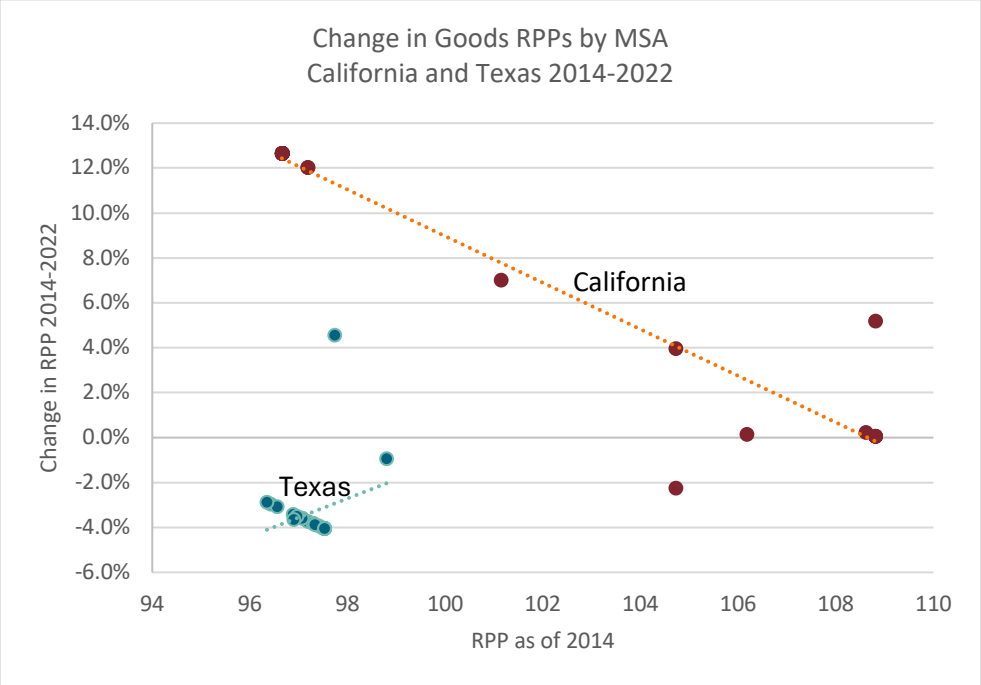
There are a couple of other patterns worth noting. First, a similar pattern is not seen in Texas. Why would the cost-of-living rise in lower-income parts of California but not Texas? Again, changes in state labor laws are one potential culprit. Another possible explanation could be housing costs, which can affect other areas of the economy as well. However, when we look at relative housing cost patterns, we don't see a strong relationship between the initial cost of living and the increase in RPPs for housing over this time frame—housing costs have indeed risen in California, but proportionately across regions. It doesn't appear that housing costs are driving these changes.

Figure 2.



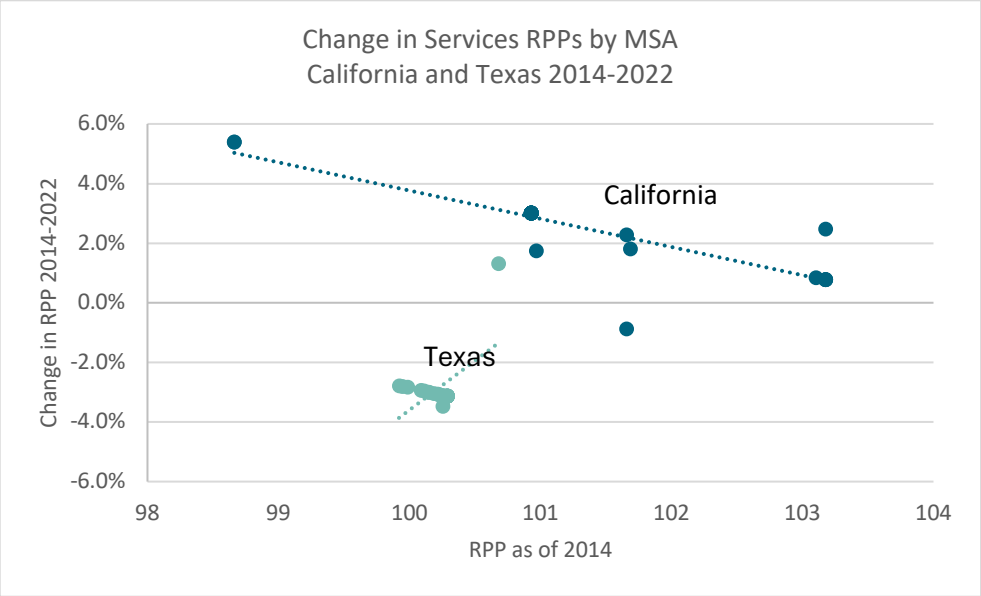
Source: U.S. Bureau of Economic Analysis

Figure 3.



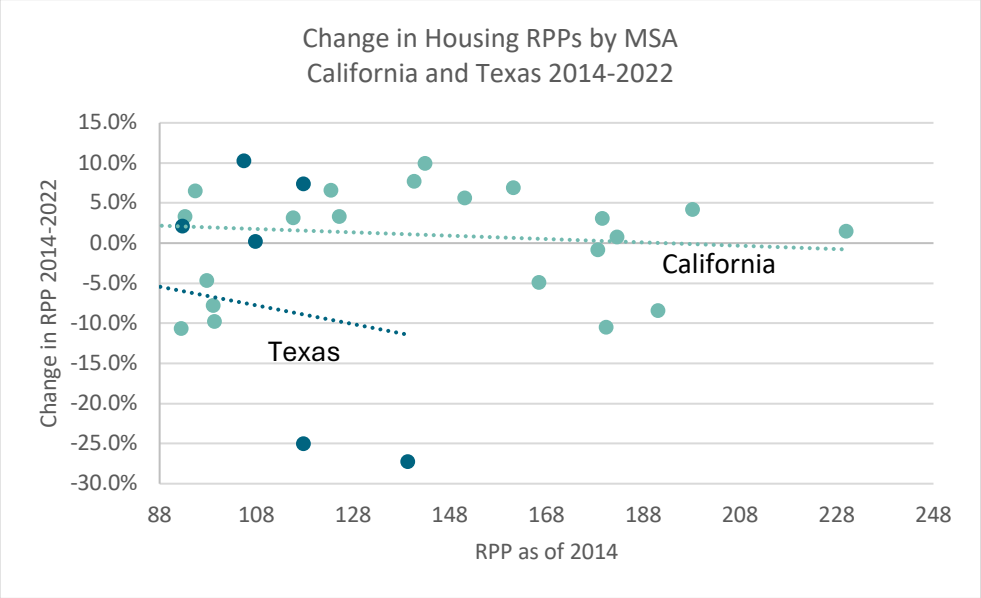
Source: U.S. Bureau of Economic Analysis

Figure 4.



Source: U.S. Bureau of Economic Analysis

Figure 5.



Source: U.S. Bureau of Economic Analysis

Regression Analysis

Such simplistic cross-sectional analyses are fraught with omitted variable biases. To get a clearer picture of the forces correlated with rising costs of living, we need more sophisticated data analysis— in this case, panel regression analysis.

To examine the relationship between minimum wages and local costs of living, we use annual data on minimum wage, income, and RPP across metropolitan areas from 2012 to 2022. 6 Some Metropolitan Statistical Areas (MSAs) span multiple states, such as Philadelphia-Camden-Wilmington, which includes Pennsylvania, New Jersey, Delaware, and Maryland. In instances where this is the case, the highest minimum wage in the region is used.[7]

Using two-way fixed effects models (TWFE), we estimate the effect of minimum wages[8] on regional prices across the decade, applying a number of controls on the right-hand side of the equation. As in typical TWFE models, these controls include time fixed effects to account for unobserved common shocks that affect all metropolitan areas simultaneously, as well as region fixed effects to capture time-invariant characteristics unique to each area. Some examples of common shocks that affect all MSAs include the global pandemic and the monetary policy decisions of the Federal Reserve that influence interest rates nationwide.

Since higher local incomes naturally push up living costs due to increased labor costs, we include a control for per capita income. 9 Additionally, we account for inertia in the RPP by including a lagged dependent variable, recognizing that regions with historically high RPPs are more likely to maintain higher RPPs in the future, even without minimum wage hikes. 10 We conduct these regressions for overall RPPs as well as separately for goods, other services, and housing. The patterns across these different measures of the local cost of living are important

[6] The 2023 figures will not be released until December 2024.

[7] As a robustness check the estimation was done using the *minimum* (as opposed to the maximum) among the states. The overall results were largely unaffected between the two estimations.

[8] Scaled relative to the average hourly rate in the MSA. Relative minimum wage is calculated by dividing the minimum by the average wage from personal income statistics based on place of work, divided by 1,500.

[9] Per-capita income represents the MSA's per capita income relative to the national level.

[10] This approach is not without controversy, given the small T dimension and the well-known Nickell bias that can arise in dynamic panel models—a bias that doesn't fade simply by increasing the N. In other words, there's a potential bias in the fixed-effects estimator here. See: Nickell, S. (1981). Biases in dynamic models with fixed effects. Econometrica: Journal of the econometric society, 1417-1426.

for understanding what is happening in the data. Finally, we run the regressions in changes, employing natural logs for all variables.

We also present an additional set of regressions that includes the RPPs for housing and utilities as controls on the right side of the equation for overall RPP, goods RPP, and other services RPP. This second set of regressions aims to account for how local energy and housing costs—which are likely unrelated to minimum wage levels—impact local living costs. The results of these baseline regressions are presented in Table 4.

Table 4: Baseline Two-way Fixed Effects Regressions

	Baseline Results				**Additional Controls**		
	All	**Goods**	**Other**	**Housing**	**Goods**	**Other**	**All**
Rel. MW	0.0249	0.0328	0.0153	0.0287	0.0299	0.00677	0.0119
	[0.00534]	[0.00507]	[0.00524]	[0.0165]	[0.00493]	[0.00480]	[0.00414]
Rel. Inc	0.0431	0.0217	-0.0392	0.382	0.0151	-0.0393	-0.0198
	[0.0132]	[0.0117]	[0.0149]	[0.0529]	[0.0120]	[0.0142]	[0.00991]
Rel. Inc(t-1)	0.0446	0.0371	0.0391	0.168	0.0323	0.0327	0.0125
	[0.0137]	[0.0137]	[0.0143]	[0.0452]	[0.0134]	[0.0135]	[0.00989]
All(t-1)	0.360						0.288
	[0.0217]						[0.0167]
Goods(t-1)		0.631			0.618		
		[0.0204]			[0.0199]		
Other(t-1)			0.492			0.426	
			[0.0185]			[0.0177]	
Housing(t-1)				0.0520			
				[0.0240]			
Housing					0.0206	0.00409	0.172
					[0.00477]	[0.00506]	[0.00388]
Utilities					0.0254	0.0822	0.0858
					[0.00833]	[0.00839]	[0.00664]
Constant	2.966	1.745	2.360	4.305	1.589	2.258	2.110
	[0.101]	[0.0916]	[0.0899]	[0.109]	[0.0988]	[0.0950]	[0.0759]
N	3832	3832	3832	3832	3832	3832	3832
AIC	-20733.0	-20299.1	-19928.3	-10655.7	-20332.7	-20104.9	-23059.9
Adj R2	0.240	0.405	0.279	0.105	0.410	0.312	0.586
F	108.6	169.6	192.3	19.52	157.9	187.3	346.4
Log lik.	10379.5	10162.6	9977.1	5340.9	10181.4	10067.4	11544.9

Standard errors in brackets

The first set of results suggests that as relative minimum wages increase, so does the cost of living—holding other factors constant. This relationship is especially notable in the goods category, where the effect is not only statistically significant but also the largest, underscoring how wage floors can ripple through sectors with high labor cost sensitivity.

However, the relative minimum wage level doesn't show a significant impact on housing costs. Instead, relative incomes have a substantial (relative to other categories) and statistically significant influence on housing expenses. This result aligns intuitively with economic theory, as rising incomes boost demand and purchasing power, pushing housing costs higher.

Table 5: Bias Corrected Estimation

	Baseline Regressions				**Additional Controls**		
	All	**Goods**	**Other**	**Housing**	**Goods**	**Other**	**All**
Rel. MW	0.0193	0.0208	0.0105	0.0235	0.0197	0.00682	0.0103
	[0.00445]	[0.0216]	[0.00344]	[0.0149]	[0.0345]	[0.00405]	[0.00390]
Rel.Inc	0.0386	0.00283	-0.0389	0.379	-0.00399	-0.0401	-0.0217
	[0.0133]	[0.0400]	[0.0154]	[0.0521]	[0.0607]	[0.0144]	[0.00986]
Rel Inc(t-1)	0.0299	0.0278	0.0484	0.109	0.0241	0.0397	0.00665
	[0.0137]	[0.0175]	[0.0154]	[0.0458]	[0.0339]	[0.0140]	[0.00976]
All(t-1)	0.565						0.376
	[0.0296]						[0.0192]
Goods(t-1)		0.902			0.903		
		[0.510]			[0.926]		
Other(t-1)			0.864			0.663	
			[0.0586]			[0.0265]	
Housing(t-1)				0.181			
				[0.0277]			
Housing					0.0179	0.00540	0.172
					[0.0104]	[0.00491]	[0.00392]
Utilities					0.00439	0.0543	0.0785
					[0.0676]	[0.00852]	[0.00651]
Constant	2.015	0.478	0.641	3.704	0.374	1.287	1.738
	[0.137]	[2.371]	[0.267]	[0.125]	[3.954]	[0.116]	[0.0833]
N	3832	3832	3832	3832	3832	3832	3832

The results presented in Table 5 align closely with our baseline regressions, but here we add a bias-corrected estimator to further refine the findings. The direction and significance of coefficients across both sets of estimates are largely consistent with those in our baseline, particularly for overall price levels. It's expected that the minimum wage doesn't have a tractable impact on housing prices, considering housing is chiefly determined by exogenous factors such as supply constraints, zoning regulations, and local demand dynamics. Yet, there still appears to be a meaningful link between relative minimum wages and the overall cost of living. The connection between minimum wages and price levels for goods and other services, however, appears less straightforward, suggesting that factors unique to each sector play a significant role in how these wage changes pass through to final prices.

Cost-of-Living Simulations

Drawing on our regression analysis and using average wage data by city from the Bureau of Labor Statistics, we've projected the cumulative impact of minimum wage hikes between 2013 and 2024 across three representative California cities: Fresno, San Francisco, and Riverside (see Table 7). These cities serve as benchmarks for the Central Valley, Bay Area, and Inland Empire regions respectively, providing a clear cross-sectional view of regional economic effects. We have also assessed the potential implications for household cost-of-living if Proposition 32 passes, raising the California minimum wage to $18 per hour.

Our findings suggest that the gradual minimum wage increases over the past decade have led to a household cost-of-living increase ranging from $300 to over $1,000 per year in these areas. If Proposition 32 is implemented, we anticipate an additional cost-of-living rise of about $100 to $300 per household annually. Although these dollar figures may appear similar across regions, as a proportion of household income, the impact is most pronounced in Fresno. This outcome is in-line with our analysis of regional cost-push effects, which suggest that lower-income areas bear a disproportionally larger burden from minimum wage hikes. Households in these regions usually allocate a larger share of their income to sectors with high labor cost pass-through rates—industries with relatively high shares of minimum wage labor and high ratios of labor to revenue.

Specifically, between 2013 and 2024, households in Fresno have experienced a cost-of-living increase equivalent to 0.7% to 1.7% of their income each year. Should Proposition 32 be enacted, we project an additional rise 0.3% per year in their cost of living, further tightening household budgets. By contrast, Riverside households have seen an annual increase of 0.6% to 1.4% over the same period and could expect an additional 0.2% yearly hike if the

proposition passes.[11] San Francisco residents, as expected, will feel the least impact in relative terms: past minimum wage hikes have raised their cost of living by 0.3% to 0.8% per year, with Proposition 32 likely adding another 0.2% annually.

Table 7. Estimated Past and Future Minimum Wage Effects, in Current Value and as a Percentage of Income

		In Current Value			As % of Income	
		2013-24	Prop 32		2013-24	Prop 32
Fresno	High	$1,028	$229	High	1.7%	0.4%
	Low	$442	$98	Low	0.7%	0.2%
San Fran.	High	$704	$275	High	0.8%	0.3%
	Low	$302	$118	Low	0.3%	0.1%
Riverside	High	$988	$214	High	1.4%	0.3%
	Low	$424	$92	Low	0.6%	0.1%

Source: U.S. Bureau of Labor Statistics; U.S. Census

Conclusion

California's minimum wage experiment has been a bold endeavor, doubling wage floors statewide and, in some areas, setting them even higher. While advocates claim that these increases are necessary for raising standards of living, the data reveals a more complex reality.

Minimum wage hikes are creating a ripple effect across California's economy, pushing prices up overall and hitting lower-income households—the very people these policies aim to support—the hardest. These families often rely on more affordable goods, used items, and childcare services, all sectors with a high share of low-wage labor and a labor-to-revenue ratio that makes them particularly sensitive to wage hikes.

[11] These figures represent revised estimates, updated from an earlier draft that relied on preliminary data.

While housing costs are primarily shaped by factors beyond minimum wage policy, our panel regression analysis indicates that rising wage floors are indeed linked to higher regional price parities across the nation. The most pronounced changes are likely to appear in labor-intensive goods and services, where cost impacts are most acute. As wage levels increase uniformly across California without accounting for regional economic differences, the broader effect is an across-the-board rise in the cost of living, placing the greatest financial strain on lower-income communities. While further research is needed on this front, the warning is clear.[12]

Looking ahead, California must recognize that minimum wage policy, particularly at its current pace and scale, has its limitations as a tool for economic uplift. Supporting low-wage workers is essential, but it must be done in such a way that truly benefits them while also protecting the broader economy. A more balanced approach—one that considers additional tools for supporting lower-income families—would serve both workers and communities more effectively. Ultimately, wage policy should be part of a larger strategy that balances fair labor standards with sustainable economic growth, creating a thriving California for all its residents.

[12] The causal link between minimum wage and RPP is understudied. There is however a simple analysis presented by Dube and Lindner (2021) showing that city-specific (presumably higher) minimum wages are related to higher RPPs. Dube, A., & Lindner, A. (2021). City limits: What do local-area minimum wages do?. *Journal of Economic Perspectives*, *35*(1), 27-50.

Appendixes

Employment Effects

The effect of minimum wage hikes on employment has been widely studied for decades, though there are economists that argue both sides here. Using state level data, researchers find that retail employment decreased following minimum wage increases.[13] They also report relatively large adverse effects on total state employment growth, indicating that households and firms consider minimum wages when choosing their location.

A more recent study similar adverse effects, particularly a reduction in hours for Seattle's less experienced workers. Interestingly, the researchers find a non-linear effect from the city's minimum wage hikes.[14] While the initial increase to $11 per hour in 2015 had insignificant effects on employment, the subsequent hike to $13 per hour led to a significant decline in employment.

Numerous studies have also documented the negative effects of minimum wage increases on teen employment specifically, with evidence from North America and Europe dating back to the 1970s. 15 [16] [17] [18] [19] Research shows that higher minimum wages are a key factor influencing changes in the schooling and workforce participation of

[13] Partridge, M. D., & Partridge, J. S. (1999). Do minimum wage hikes reduce employment? State-level evidence from the low-wage retail sector. *Journal of Labor Research*, *20*(3), 393-413.

[14] Ekaterina Jardim & Mark C. Long & Robert Plotnick & Emma van Inwegen & Jacob Vigdor & Hilary Wething, 2022. "Minimum-Wage Increases and Low-Wage Employment: Evidence from Seattle," American Economic Journal: Economic Policy, American Economic Association, vol. 14(2), pages 263-314, May.

[15] Moore, T. G. (1971). The effect of minimum wages on teenage unemployment rates. Journal of Political Economy, 79(4), 897-902.

[16] Neumark, D., & Wascher, W. (1992). Employment effects of minimum and subminimum wages: panel data on state minimum wage laws. ILR Review, 46(1), 55-81.

[17] Neumark, D., Salas, J. I., & Wascher, W. (2014). Revisiting the minimum wage—Employment debate: Throwing out the baby with the bathwater?. Ilr Review, 67(3_suppl), 608-648 or Liu, S., Hyclak, T. J., & Regmi, K. (2016). Impact of the minimum wage on youth labor markets. Labour, 30(1), 18-37.

[18] Sen, A., Rybczynski, K., & Van De Waal, C. (2011). Teen employment, poverty, and the minimum wage: Evidence from Canada. Labour Economics, 18(1), 36-47 and Campolieti, M., Fang, T., & Gunderson, M. (2005). Minimum wage impacts on youth employment transitions, 1993–1999. Canadian Journal of Economics, 38(1), 81-104.

[19] Kreiner, C. T., Reck, D., & Skov, P. E. (2020). Do lower minimum wages for young workers raise their employment? Evidence from a Danish discontinuity. Review of Economics and Statistics, 102(2), 339-354 and Gorry, A. (2013). Minimum wages and youth unemployment. European Economic Review, 64, 57-75.

16-17-year-olds in recent decades.[20] In particular, significant declines in employment have been observed among teens aged 14-18 working in small and medium-sized firms following minimum wage hikes.[21] Additionally, higher wages often lead employers to favor higher-productivity teenagers over those with lower productivity, leaving many displaced teens both out of work and out of school.[22]

We observe similar effects in the restaurant industry, detailed in a 2019 joint white paper with the UC Riverside School of Business Center for Economic Forecasting and Development, titled "*The Minimum Wage: An Analysis of the Impact on the Restaurant Industry.*" While this report focuses specifically on the food service sector, it's a particularly relevant industry for studying employment trends among younger workers, as over one-quarter of U.S. workers under 25 are employed in food service. Using panel data from the U.S. Census Bureau's Quarterly Census of Employment and Wages (QCEW) from 2000-2017, we analyzed the impact of minimum wage increases on employment across 57 metropolitan regions in the U.S. We find that California is losing out on significant gains in employment by imposing minimum wage changes that far exceed the rate of inflation, and that these losses in potential employment disproportionally affect lower-income communities, part-time workers, and low-skilled workers.[23]

We also find that minimum wages have larger one-time impacts on employment growth in limited-service restaurants than they do in full-service restaurants. We calculate an elasticity of approximately -0.05 and -0.03, meaning a 20% real increase in the minimum wage will shave approximately 1% and 0.7% from base employment growth at limited-service and full-service restaurants, respectively, in the year after they are implemented. Additionally, there is an ongoing impact from minimum wages on full-service restaurants, which we don't find in the case of limited-service restaurants—specifically, a 10% potential growth in employment would be reduced to 7%.

[20] Neumark, D., & Shupe, C. (2019). Declining teen employment: minimum wages, returns to schooling, and immigration. Labor Economics, 59, 49-68

[21] Wursten, J., & Reich, M. (2023). Small Businesses and the Minimum Wage. Working paper.

[22] Neumark, D., & Wascher, W. (1995). Minimum wage effects on employment and school enrollment. Journal of Business & Economic Statistics, 13(2), 199-206.

[23] We also find that minimum wages have a negative impact on disabled workers.

Overall, we estimate that over 40,000 restaurant jobs were not created in California between 2013 and 2022 due to the mandated hikes in labor costs. The emphasis here is important as there was positive job growth over this period, something supporters of higher minimum wages are quick to point out. But the idea is simple: jobs not created are the same as jobs lost. Unfortunately, this distinction is easily lost in the sharp rhetoric of policy debates. Most relevant to our discussion in this analysis is our finding that the minimum wage has a statistically significant negative impact on the share of both part-time and low-skilled workers employed by firms in the restaurant industry. Teenagers looking for their first job usually fit into both these categories, as do many disabled people.

In short, while minimum wage increases may not have directly cost restaurant jobs before the pandemic, they did slow industry growth during otherwise boom times in California. This slowdown especially affected the most vulnerable workers, including teenagers seeking their first jobs and many disabled individuals, who are often employed in part-time or low-skilled positions. Ultimately, these well-intentioned policies have a disproportionate impact on those they are meant to help.

In a recent report titled *"The Impact of California's Minimum Wage on Youth Employment,"* we examined these employment issues in greater detail, particularly the ways in which California's rising minimum wage level has affected 16- to 19-year-olds.[24] The unemployment rate for this group has surged from the mid-teens to the mid-twenties over the past two years. This demographic typically feels the impact of higher minimum wages sooner than others, as employers often opt for older workers who can work more hours at higher pay. This trend is especially evident in sectors impacted by the Fast Act, where many teenagers traditionally gain their first work experience. The full effects of the new $20 minimum wage will take time to materialize in labor market outcomes, as shifts in worker substitution and business closures will unfold over the next year or more.

Still, while both the effect on teenage unemployment and slower industry growth are real outcomes of wage hikes, documenting them in isolation risks missing the broader picture. The real issue lies in the cumulative impact of these labor market distortions, which extend well beyond restaurants and teenagers. The high minimum wage is affecting other sectors, including retail, childcare, schools, family services, non-profits, and others, hitting other vulnerable groups such as minorities and those with disabilities. As noted, the state has pushed its minimum wage far outside of historic norms, meaning these distortions are impacting a larger number of industries all the time.

The evidence suggests that California's minimum wage increases are having a noticeable impact on the state's labor market. Over the past two years, as the Fed's stimulus-induced sugar high has faded, the state's unemployment

[24] https://beaconecon.com/impact-of-minimum-wage-on-youth-employment-in-california/

rate has climbed 1.3% from September 2022 to September 2024, compared to just a 0.6% increase nationwide over the same period. This state figure may actually understate the situation, as many of California's MSAs have seen even steeper increases in unemployment, with rates rising as much as 2.3% in areas like Merced. This is happening despite overall solid growth trends in both economic output and the number payroll jobs.

Change in Unemployment Rate by MSA 9-22 to 9-24

Merced	2.3	Modesto	1.9	Fresno	1.8	Vallejo	1.5
El Centro	2.2	Santa Cruz	1.9	Oakland (MD)	1.7	Inland Empire	1.4
Visalia	2.0	Yuba	1.9	Salinas	1.7	San Diego	1.4
Bakersfield	1.9	Chico	1.8	San Jose	1.7	Sacramento	1.4
Hanford	1.9	Madera	1.8	Stockton	1.5	Redding	1.3

Price Effects

While much of the focus has been on how wage hikes affect employment and unemployment, there is also the equally important aspect of their impact on prices, or the pass-through effect. Essentially, when wages rise, businesses often adjust prices to offset their increased costs. This line of research consistently shows that wage hikes drive price increases, especially in industries like restaurants where minimum wage labor is prevalent. Studies in both the U.S. and abroad show that the wage-price elasticity—how much prices increase in response to a wage hike—typically ranges from 0.04% to 0.24%. The exact impact and timing depend on the region and how the wage policy is implemented.

Researchers find that restaurant prices rise quickly in response to minimum wage hikes, with most of the increase happening within two months after the change.[25] Fast-food restaurants, which rely more on minimum wage labor, see larger price jumps. Interestingly, not all menu items get more expensive, restaurants selectively raise prices on certain items by a significant amount. In total, the price increases reflect the wage hike, but they happen strategically across specific products. For example, products whose prices had recently been cut are 20% more likely to see their prices rise after a minimum wage hike as compared to such items in areas without a minimum wage hike.

[25] MacDonald, J. M., & Aaronson, D. (2006). How firms construct price changes: Evidence from restaurant responses to increased minimum wages. *American Journal of Agricultural Economics*, *88*(2), 292-307.

In a study on San Francisco's citywide minimum wage hike, researchers again find that fast-food and table-service restaurants respond differently.[26] While the study does not find employment effects, the researchers do find price effects. San Francisco restaurants raised prices by about 2.8% compared to East Bay counterparts who hadn't increased their minimum wage, though this wasn't statistically significant. For fast-food spots, prices rose by a significant 6.2%.

Using food away from home (FAFH) CPI data from 1978 to 1995, Aaronson estimates a wage-price elasticity of about 0.07 and finds nearly identical results for Canadian price data over the same time.[27] Similarly, researchers find a wage-price elasticity of 0.07 using micro-level restaurant data from 1995–1997, covering two federal minimum wage increases.[28] Both studies suggest a modest but consistent relationship between minimum wage hikes and rising restaurant prices: for every 1% increase in the minimum wage, there is a 0.07% increase in prices.

Another study looks at the effect of minimum wage hikes on restaurant prices in France.[29] The researchers find that both traditional and fast-food restaurants raised prices in response to wage increases, with an elasticity of around 0.10. What's interesting is that the price hikes weren't immediate—they typically took about a year to fully kick in, showing a delayed response to the wage change.

In a 2013 study, researchers use quarterly city-level price data from the Council for Community and Economic Research to estimate the price effects of minimum wage increases on three fast-food items: McDonald's burgers, Pizza Hut pizzas, and KFC fried chicken.[30] The results show a positive price elasticity for burgers and pizzas, indicating that a 1% increase in the minimum wage would raise their prices by 0.09%. For KFC fried chicken, the results are inconclusive, as the standard errors are high.

[26] Dube, A., Naidu, S., & Reich, M. (2007). The economic effects of a citywide minimum wage. *ILR Review*, *60*(4), 522-543.

[27] Aaronson, D. (2001). Price pass-through and the minimum wage. *Review of Economics and statistics*, *83*(1), 158-169.

[28] Aaronson, D., French, E., & MacDonald, J. (2008). The minimum wage, restaurant prices, and labor market structure. *Journal of Human Resources*, *43*(3), 688-720.

[29] Fougère, D., Gautier, E., & Le Bihan, H. (2010). Restaurant prices and the minimum wage. *Journal of Money, Credit and Banking*, *42*(7), 1199-1234.

[30] Basker, E., & Khan, M. T. (2016). Does the minimum wage bite into fast-food prices?. *Journal of Labor Research*, *37*, 129-148.

In another study, researchers find that while minimum wage hikes still raise FAFH prices, the effect is smaller than in previous research.[31] For every 1% increase in the minimum wage, FAFH prices rose by 0.036%, with price adjustments happening immediately. In a more recent study using price and wage data from McDonalds' restaurants, researchers find that there is a 0.14% increase in prices for every 1% increase in the minimum wage, which is a "near-full price pass through of minimum wages."[32]

Other industries also experience pass through costs from minimum wage increases. In a study on Hungary's minimum wage increase, researchers find a positive effect on manufacturing prices.[33] Rather than reducing profits, companies passed the higher labor costs onto consumers. For every 1% increase in wages, manufacturing prices went up by 0.18%. This reinforces the idea that while minimum wage hikes might not impact jobs or profits directly, consumers often bear the cost through small but measurable price increases. Grocery and drug store prices are similarly affected by minimum wage hikes, though not to the same degree as restaurant prices. In a 2022 study using scanner data from 2001 to 2012, researchers find that a 1% increase in minimum wages leads to a 0.036% rise in grocery prices.[34] This paper looks at how minimum wage hikes affect grocery and drug store prices using scanner data from 2001 to 2012. Both low- and high-income households see similar price increases, suggesting consumers, not businesses, bear the cost.

Regression Analysis

In addition to the regressions outlined in the report, we also show our baseline regressions in first differences, detrending all the series.[35] The findings from this exercise, as shown in Table 6, do not differ substantially from our

[31] MacDonald, D., & Nilsson, E. A. (2016). *The effects of increasing the minimum wage on prices: Analyzing the incidence of policy design and context* (No. 16-260). Upjohn Institute Working Paper.

[32] Ashenfelter, O., & Jurajda, Š. (2022). Minimum wages, wages, and price pass-through: The case of McDonald's Restaurants. *Journal of Labor Economics*, *40*(S1), S179-S201.

[33] Harasztosi, P., & Lindner, A. (2019). Who pays for the minimum wage?. *American Economic Review*, *109*(8), 2693-2727.

[34] Renkin, T., Montialoux, C., & Siegenthaler, M. (2022). The pass-through of minimum wages into US retail prices: evidence from supermarket scanner data. *Review of Economics and Statistics*, *104*(5), 890-908.

[35] There are no strict guidelines defining the precise threshold for T when considering unit roots in panel data, but we include these results to provide additional context to our initial estimates.

baseline results. Namely, the relative minimum wage has a positive and significant impact on price levels, but the impact on Goods is not significant.

Table 6: 1st Difference Regressions

	Baseline Results				Additional Controls		
	All	**Goods**	**Other**	**Housing**	**Goods**	**Other**	**All**
Rel. MW	0.0405	0.00537	0.0501	0.134	0.00539	0.0502	0.0216
	[0.00906]	[0.0113]	[0.0114]	[0.0390]	[0.0112]	[0.0114]	[0.00682]
Rel.Inc	0.0118	-0.0321	-0.0277	0.298	-0.0400	-0.0278	-0.0407
	[0.0182]	[0.0171]	[0.0202]	[0.0731]	[0.0178]	[0.0204]	[0.0133]
Rel Inc(t-1)	-0.0314	-0.0620	-0.0594	0.0963	-0.0664	-0.0598	-0.0330
	[0.0185]	[0.0151]	[0.0172]	[0.0804]	[0.0154]	[0.0173]	[0.0110]
All(t-1)	-0.375						-0.132
	[0.0182]						[0.0149]
Goods(t-1)		-0.255			-0.255		
		[0.0242]			[0.0234]		
Other(t-1)			-0.225			-0.225	
			[0.0173]			[0.0173]	
Housing(t-1)				-0.493			
				[0.0169]			
Housing					0.0105	-0.000479	0.160
					[0.00386]	[0.00430]	[0.00338]
Utilities					0.0351	0.00217	0.0355
					[0.0134]	[0.0112]	[0.00806]
Constant	-0.00195	0.00178	-0.00338	-0.00846	0.00170	-0.00339	-0.00113
	[0.000755]	[0.000785]	[0.000648]	[0.00378]	[0.000819]	[0.000645]	[0.000420]
N	3448	3448	3448	3448	3448	3448	3448
AIC	-17840.8	-17733.3	-17047.7	-8379.6	-17757.1	-17043.8	-19968.3
Adj R2	0.152	0.0807	0.0692	0.241	0.0875	0.0686	0.543
F	51.40	31.64	33.52	90.28	30.34	29.30	241.7
LL	8932.4	8878.7	8535.9	4201.8	8892.5	8535.9	9998.2

Standard errors in brackets

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