The Workplace Justice Lab @ RU
DATA BRIEF | March 2022

Informing Strategic Enforcement Practices: Claims and Compliance with Oregon's Minimum Wage

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Introduction

The state of Oregon has been a national leader in providing progressive labor standards to its constituents for over a century. Enacting one of the nation's first minimum wage laws in 1913, Oregon's wage has for decades been amongst the highest in the nation. Most recently, Oregon lawmakers passed SB 1532 in 2016, creating three separate state minimum wage schedules that raise the wage to $12.50 (in "nonurban" counties), $13.50 (in "standard" counties), and $14.75 (in the Portland metro area) by 2022 and indexed to inflation thereafter.

The Oregon Bureau of Labor & Industries (BOLI) has been engaging with the Workplace Justice Lab@Rutgers University (WJL@RU) since 2020 in an effort to optimize resources and maximize the impact of its enforcement efforts. Understanding that studies in other jurisdictions have demonstrated a mismatch between a) industries with the highest complaint rates and b) industries with the highest underlying rates of labor standards violations, BOLI worked with WJL@RU to determine the degree to which wage claims submitted to BOLI align with estimates of minimum wage violations in Oregon. *Our most important finding is that significant numbers of violations of Oregon's minimum wage ordinance are in fact going unreported.* Several industries with the highest estimated violation rates have among the lowest complaint rates according to BOLI data (see Appendix I for more on our analytical approach and Appendix II for more on the CPS-MORG data from which minimum wage violation estimates are derived). We hope that these findings serve as a helpful guide for BOLI as it seeks to optimize resources and maximize impact.

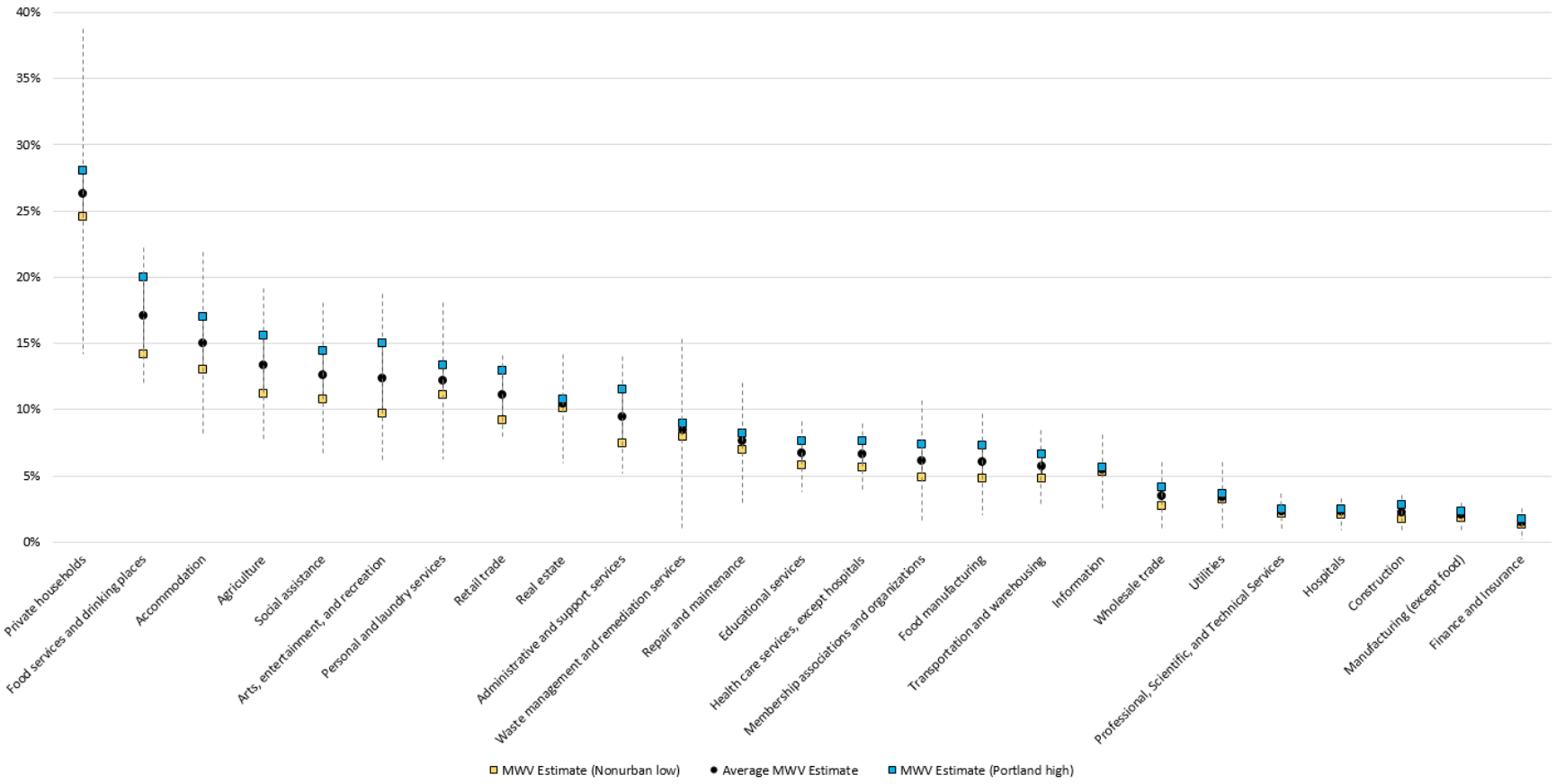
Violation Rates by Industry

Chart 1 below shows estimated minimum wage violation rates for each industry group for which estimates could be derived (see Appendix III for full estimates). [1] Industries with the highest violation rates include private households (26.3%); food services and drinking places (17.1%); accommodation (15.0%); and agriculture (13.4%).

To put these numbers into perspective, we estimate that over one in four Oregonians employed in private households—i.e., domestic workers—have experienced a minimum

[1] It is important to note that these estimates are for the entirety of Oregon. While it is technically possible to derive estimates by individual county and thus account for the three state minimum wage schedules, the lack of data at the county-level renders these estimates inaccurate and ultimately useless. In order to provide the most meaningful information possible using available resources, we have chosen to calculate minimum wage violation estimates using an "upper/lower bound" method, using the lowest applicable minimum wage within certain areas of the state—i.e., the "nonurban counties" rate—and the highest applicable minimum wage, i.e., the Portland metro rate. By deriving both estimates, we can create a potential range of estimated violations for each industry group for which we may be confident the true number of violations falls somewhere within. We believe this method still reveals important variance in estimated violation rates across industries that may begin to inform proactive enforcement strategies and investigatory efforts. See Appendix II for more on how we derived these estimates.

Chart 1. Estimated Minimum Wage Violation Rates by Industry, Oregon, 2010-2020



Note: The dotted lines represent the upper and lower bounds of the 95 percent confidence intervals for each point estimate (for more on CPS methodology, see Appendix III).

wage violation. Likewise, roughly one in every six workers in food services (e.g., fast food workers, cooks, dishwashers, bartenders, waiters and waitresses) and one in seven workers in accommodation (e.g., housekeepers, clerks, wait staff) and agriculture (e.g., farmworkers and laborers) have faced a minimum wage violation. While these industries have a history of exemption from labor standards after being partially or completely left out of major New Deal labor and employment legislation,[2] these workers today are largely covered under the state's minimum wage laws. It should further be noted that, based on BOLI claim data, many of the employers with the most claims filed against them come from these industries. Of the 35 employers that had ten or more wage claims filed against them, more than half worked in food services (14) or agriculture (6).[3]

Those with the lowest estimated violation rates include finance and insurance (1.5%); manufacturing (2.1%, excludes food manufacturing); construction (2.3%); hospitals (2.3%); and professional, scientific and technical services (2.3%).

Complaint Rates by Industry

The following tables compare the minimum wage violation estimates presented in Chart 1 above with relative wage claims to BOLI (i.e., claims per 10,000 industry workers in Oregon).[4] **Table 1** compares industries with the *highest* levels of complaints to those with the highest estimated violation rates (see Appendix IV for more information on complaints by industry). Industries with the highest levels of relative complaints include repair and maintenance (95/10,000 workers); food services and drinking places (92); personal and laundry services (89); construction (76); and agriculture (59).

[2] See Sean Farhang and Ira Katznelson, "The Southern Imposition: Congress and Labor in the New Deal and Fair Deal," *Studies in American Political Development* 19, no. 1 (2005): 1-30.

[3] We intend to write an additional memo that provides further information on these claims and employers; see Appendix V for more information on these employers.

[4] Complaints per 10,000 workers is calculated by, for each industry: (1) dividing total industry complaints to BOLI by average annual industry employment (QCEW) for the study period; and (3) multiplying the calculated complaint rate by 10,000.

Table 1. Highest Complaint and Violation Rates by Industry, Oregon, 2010-2020

Highest Complaint Rates

Industry	Claims per 10,000 workers
Repair and maintenance	95
Food services and drinking places	92
Personal and laundry services	89
Construction	76
Agriculture	59
Utilities	50
Transportation and warehousing	49
Accommodation	43
Administrative and support services	39
Arts, entertainment, and recreation	36

Highest Violation Rates

Industry	Estimated violations per 10,000 workers
Private households	2628
Food services and drinking places	1709
Accommodation	1500
Agriculture	1339
Social assistance	1261
Arts, entertainment, and recreation	1235
Personal and laundry services	1223
Retail trade	1108
Real estate	1045
Administrative and support services	948

Table 2 meanwhile compares industries with the *lowest* levels of complaints to those with the lowest estimated violation rates. Five industries had relative rates of under 10 complaints per 10,000 workers: hospitals (1); educational services (3); wholesale trade (6); finance and insurance (8); and social assistance (9).

Table 2. Lowest Complaint and Violation Rates by Industry, Oregon, 2010-2020

Lowest Complaint Rates

Industry	Claims per 10,000 workers
Hospitals	1
Educational services	3
Wholesale trade	6
Finance and insurance	8
Social assistance	9
Manufacturing (except food)	11
Membership associations and organizations	11
Professional, scientific, and technical services	12
Food manufacturing	12
Waste management and remediation services	12

Lowest Violation Rates

Industry	Estimated violations per 10,000 workers
Finance and insurance	151
Manufacturing (except food)	206
Construction	226
Hospitals	227
Professional and technical services	231
Utilities	342
Wholesale trade	344
Information	547
Transportation and warehousing	572
Food manufacturing	602

Comparing Violation and Complaint rates

Using the above violation estimates and complaint data, we can begin to fill in the 2 x 2 matrix in **Table 3** below (see Appendix I for more on our analytical approach). The most "dysfunctional" industries are listed in quadrant 2; these are the industries that, while having relatively high estimated levels of minimum wage violations, have registered a low number of complaints to BOLI. These industries include private households; social assistance; and retail trade. The estimates presented here suggest that BOLI currently receives one complaint for roughly every 151 violations occurring in private households; 135 violations in the social assistance industry; and 55 violations happening in retail trade within Oregon. While we estimate that over one in four domestic workers employed in Oregon have faced minimum wage violations—meaning around 2,400 domestic workers facing violations—BOLI received a total of only 16 complaints from these workers.

Table 3. Complaint/Violation Matrix, Oregon

	High violation rate	**Low violation rate**
High complaint rate	***Quadrant 1*** • Food services and drinking places • Agriculture • Personal and laundry services	***Quadrant 3*** • Utilities • Construction
Low complaint rate	***Quadrant 2*** • Private households • Social assistance • Retail trade	***Quadrant 4*** • Manufacturing (except food) • Hospitals • Wholesale trade • Professional, scientific and technical services • Finance and insurance

Social assistance should also be highlighted in this sense. This industry notably includes a number of personal and home care aids—one of the fastest growing occupations in recent years—and child care services, both of which are often cited as having high rates of wage theft. Estimates derived from the CPS-MORG data suggest that nearly 23 percent of Oregonian child care workers[5] and 18 percent of personal and home care aides have experienced minimum wage theft. Likewise, 14 percent of Oregonian retail salespersons

[5] This does not include nannies—or child care workers employed by private households—as these workers are often exempt from Oregon minimum wage laws.

and 23 percent of cashiers—two of the most common occupations in retail trade—have faced a minimum wage violation.

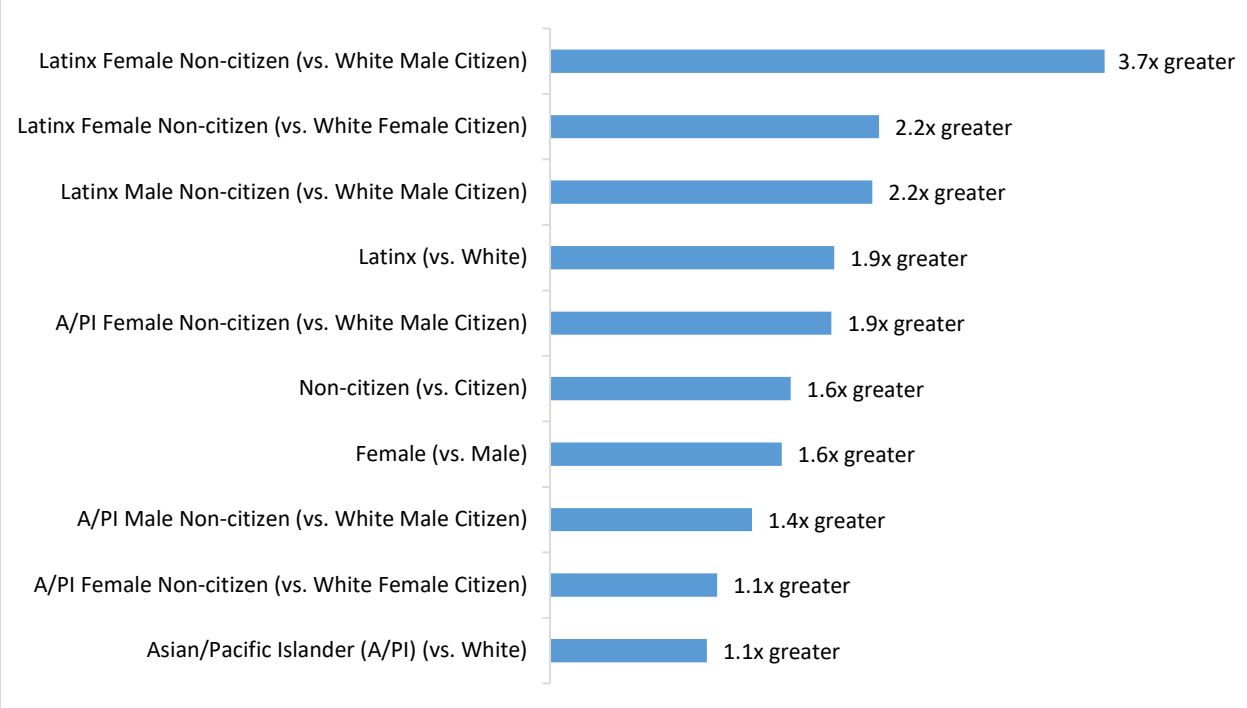
Also important to note are the industries that have high estimated wage violation rates and relatively high levels of complaints (i.e., quadrant 1). These industries include food services and drinking places, agriculture, and personal and laundry services (including, e.g., beauty salons, nail salons, laundromats, spas, and parking services). Although a third of total claims submitted to BOLI from 2010-20 came from these industries, these data suggest that tens of thousands of violations across these industries are still unaccounted for. Given the size of these sectors as noted above—particularly food and drink—and the high levels of estimated violations, it is important that these workers continue to be a key focus of BOLI's enforcement efforts in addition to the "dysfunctional" industries mentioned above.

Importance of Demographic Factors

These data do not tell us exactly *why* some industries have more or fewer complaints and violations. Still, it is worth noting that the industries with the highest estimated violation rates and relatively low complaints tend to employ many women, people of color, and immigrant workers, while industries with lower violation rates often employ more men and/or historically have been more unionized.

Chart 2 below shows the relative probabilities of demographic groups facing minimum wage violations based on analysis of the CPS-MORG data.[6] As shown, females and non-citizens in Oregon are roughly 60 percent more likely to face a minimum wage violation than males or citizens. Latinx Oregonians are nearly twice as likely as White workers to face minimum wage violations. The bottom categories in Chart 2 show the importance of intersectionality to the experience of wage theft. Compared to White male citizens, female Asian/Pacific Islander noncitizens, Latinx male noncitizens, and Latinx female noncitizens are respectively 1.9, 2.2, and 3.7 times more likely to face minimum wage violations.

Chart 2. Probability of Minimum Wage Violation by Demographic Group in Oregon (Relative to Reference Group), 2010-2020



[6] These probabilities reflect the average of estimated probabilities based on both the nonurban counties and Portland metro minimum wage rates, consistent with the reported minimum wage violation estimates in Chart 1.

Conclusion

In sum, comparing BOLI wage claim data with minimum wage violation estimates derived from the CPS-MORG data leads to our conclusion that minimum wage violations continue to go under-reported across the state of Oregon. This issue is particularly vital to address in industries such as domestic work, social assistance, retail trade, and other low-wage service industries where wage theft is pervasive and complaints are few.

Data Notes

- Complaint data from 2010-2020 was provided by BOLI to the authors. A total of 5,511 wage claims were in the received dataset. Because minimum wage claims in many cases cannot be disaggregated from accompanying overtime claims, all claims in which a minimum wage and/or overtime violation were alleged are included in the analysis. After removing 635 claims with a status of "pending" or "no response" that could not be confirmed as pertaining to MW/OT violations, 4,876 claims were included in the above analysis.
- Minimum wage violations and industry employment are estimated using the Current Population Survey's Merged Outgoing Rotation Groups (CPS-MORG) data, 2010-2020, including employees working in Oregon (stfips == 41).
- To better illustrate how violations by industry and occupation overlap, the table in Appendix VI provides examples of high risk occupations employed at the highest levels and/or concentration in each sector.

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About WJL@RU

The workplace justice lab@RU exists to address economic inequality through supporting and strengthening grassroots organizing and democratic governance. We do this through building dynamic communities of learning and practice, carrying out cutting edge research, and offering specialized training and in-depth one-on-one consultations.

At the lab, we go beyond talking about what government should do, to focusing on how government should do it. Through our strengthening labor standards enforcement program, we work to reimagine the public enforcement of workers' rights laws. By proactively targeting the sectors with the worst problems and involving those directly impacted in enforcement, we help agencies realize the intended impact of innovative labor standards legislation.

Appendices

Appendix I. Analytical approach

We replicate the analytic approach used by former Department of Labor (DOL) Wage and Hour Division Administrator David Weil and Amanda Pyles in their 2005 article "Why Complain?".[7] As they explain, regulators typically want to know that the workers who complain are voicing genuine grievances and that the workers who are not being paid what they are legally owed are complaining. That is, regulators wish to minimize both false positives (complaints without violations) and false negatives (violations that go unreported). False negatives are, of course, the most worrisome in complaint-driven regulatory systems, as they likely include the most vulnerable and exploited workers who are fearful of complaining or are unable to complain, and are therefore falling through the cracks. *Quiet* industries should be *compliant* industries, not industries where workers are suffering silently.

Following Weil and Pyles (2005), we conceptualize the relationship between compliance and complaints as a 2 x 2 matrix (Figure 1).

Figure 1. Complaint/Compliance Matrix

	High noncompliance	**Low noncompliance**
High complaint rate	*Quadrant 1* High complaints High violations	*Quadrant 3* High complaints Low violations
Low complaint rate	*Quadrant 2* Low complaints High violations	*Quadrant 4* Low complaints Low violations

Ideally, all workers will be found in quadrants 1 and 4. Those working in industries with high violation rates should have unimpeded access to the complaint process, and complaint rates should be commensurate with violation rates. Likewise, in industries with low violation rates, complaint rates should be equally low. In those two ideal-type quadrants, OLSE's enforcement resources will be well-applied.

Ideally, no workers will be found in quadrant 2—low-complaint industries that are rife with violations—and few workers will be found in quadrant 3—high complaints despite

[7] David Weil and Amanda Pyles, "Why Complain?: Complaints, Compliance, and the Problem of Enforcement in the Us Workplace," *Comp. Lab. L. & Pol'y. J.* 27 (2005).

low violations. The existence of workers in quadrants 2 and 3 would indicate "significant problems in terms of enforcement resources reaching the right workplaces" (Weil and Pyles 2005, 72).

Using the BOLI complaint data in conjunction with estimates generated using CPS-MORG data, we can begin to fill out the 2 x 2 matrix and answer the following questions: "Are industries with the most frequent and severe violations also those that show the highest frequency of worker complaints? Are there industries that we know to be serious violators that [BOLI is] not hearing from? Do investigators spend a disproportionate amount of time on industries that are less egregious violators?" (Weil and Pyles 2005, 71).

Appendix II. CPS data

The actual number of minimum wage violations is unknown. Employer-provided data is not reliable, and state agency data on complaint- and agency-initiated investigations are not necessarily representative of the actual violation rate. Minimum wage violations must therefore be estimated using survey data.

Most useful is the Current Population Survey's Merged Outgoing Rotation Groups (CPS MORG) data, which the WHD uses to identify "priority industries" for investigations and which remains the top choice of every social scientist who has sought to develop national or industry-specific estimates of FLSA noncompliance since the 1970s.[8]

The CPS-MORG data has many advantages: it is gathered via extensive interviews with around 60,000 households per month; it is representative at the state and national levels (unlike other survey data, such as the Survey of Income and Program Participation [SIPP]); and its individual-level responses permit us to estimate earnings and minimum wage violations relatively easily. The biggest downside is measurement error, as with any survey.

It is important to note that these estimates are for the entirety of Oregon. While it is technically possible to derive estimates by individual county and thus account for the three state minimum wage schedules, the lack of data at the county-level renders these estimates inaccurate and ultimately useless. In order to provide the most meaningful information possible using available resources, we have chosen to calculate minimum wage violation estimates using an "upper/lower bound" method, using the lowest applicable minimum wage within certain areas of the state—i.e., the "nonurban counties" rate—and the highest applicable minimum wage, i.e., the Portland metro rate. By deriving both estimates, we can create a potential range of estimated violations for each industry group for which we may be confident the true number of violations falls somewhere within. We believe this method still reveals important variance in estimated violation rates across industries that may begin to inform proactive enforcement strategies and investigatory efforts. The point estimates reported throughout the study are averages of these two estimates.

[8] Orley Ashenfelter and Robert S. Smith, "Compliance with the Minimum Wage Law," *Journal of Political Economy* 87, no. 2 (1979); Ronald G. Ehrenberg and Paul L. Schumann, "Compliance with the overtime pay provisions of the Fair Labor Standards Act," *The Journal of Law and Economics* 25, no. 1 (1982); Brigitte Sellekaerts and Stephen W. Welch, "Noncompliance with the Fair Labor Standards Act: Evidence and Policy Implications," *Labor Studies Journal* 8 (1984); Stephen Trejo, "The effects of overtime pay regulation on worker compensation," *American Economic Review* 81, no. 4 (1991); Stephen Trejo, "Overtime pay, overtime hours, and labor unions," *Journal of Labor Economics* 11, no. 2 (1993); Weil and Pyles 2005; Eastern Research Group, *The Social and Economic Effects of Wage Violations: Estimates for California and New York*, Prepared for the U.S. Department of Labor (Lexington: Eastern Research Group, 2014); Daniel J. Galvin, "Deterring Wage Theft: Alt-Labor, State Politics, and the Policy Determinants of Minimum Wage Compliance," *Perspectives on Politics* 14, no. 2 (2016); David Cooper and Teresa Kroeger, "Employers steal billions from workers' paychecks each year," *Economic Policy Institute*, May 10, 2017, https://www.epi.org/publication/employers-steal-billions-from-workers-paychecks-each-year/.

The methodological approach we have employed here is fully consistent with previous research.[9] A few key methodological points to keep in mind:

First, we calculate hourly wages using the National Bureau of Economic Research (NBER)'s "earnwke" variable, which includes overtime, tips, and commissions (OTC) for both hourly and nonhourly workers.[10] Wage estimates are therefore conservative over-estimates that effectively downward-bias the estimated minimum wage violation rates. This is preferable to the alternative, however, which excludes OTC for hourly workers while including it for nonhourly workers (for whom different sources of wages are not distinguished). Efforts to estimate and subtract OTC from nonhourly workers adds unknown quantities of additional measurement error to this key variable, and is not recommended.[11]

To account for potential data sensitivity and minor rounding errors biasing the data, a minimum wage violation is defined here as a case in which the calculated hourly wage was at least $.25 lower than the applicable minimum wage. As discussed above, we obtained two sets of estimates using the Oregon minimum wage schedules for (a) the Portland metro area and (b) "nonurban" counties. These estimates amount to an upper and lower bound, respectively, of the range within which true levels of minimum wage violations for each industry lie.

CPS-MORG data from the years 2010 through 2020 were used to develop the minimum wage violation estimates. Data was limited to respondents who were currently employed at the time of the survey. Several classes of workers that are exempt from the Oregon minimum wage were removed from the data, including federal government workers; outside salespersons; taxicab drivers; and nannies (i.e., child care workers working in private households). Some exemptions were unable to be accounted for given the structure of the data, including some agricultural workers;[12] "casual" (i.e., "irregular and intermittent")[13] domestic work; salaried professionals; camp counselors; golf caddies; and ski patrollers. Given that these exemptions apply to a very limited number of workers, we do not expect their inclusion to significantly impact relative violation rates.

To correct for measurement error, I follow ERG (2014), Galvin (2016), and Cooper and Kroeger (2017) and exclude all observations of workers not specifying hourly/nonhourly status or usual hours worked, observations of nonhourly workers with weekly earnings less than $10, and all observations of workers with hourly wages less than $1.

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[9] In particular, Galvin (2016); Eastern Research Group (2014); and Cooper and Kroeger (2017).

[10] See National Bureau of Economic Research (NBER) CPS Labor Extracts 1979-2006, https://data.nber.org/morg/docs/cpsx.pdf. See also Cooper and Kroeger (2017)'s preference for this method of estimating wages.

[11] Eastern Research Group (2014).

[12] "If the employer did not employ more than 500 piece rate work days in any calendar quarter of the preceding calendar year, the employer's hand harvesters and pruning laborers who are paid on a piece rate basis are exempt from minimum wage for the entire following year." Oregon BOLI, "Minimum wage and overtime in agriculture," https://www.oregon.gov/boli/employers/Pages/minimum-wage-and-overtime-in-agriculture.aspx

[13] Oregon BOLI, "Domestic Workers," https://www.oregon.gov/boli/workers/Pages/domestic-workers.aspx

In several cases, related industries were combined into a larger group to account for a lack of data within the subindustry categories. All manufacturing subindustries except for food manufacturing are combined here into "manufacturing (except food)"; food manufacturing both (a) is one of the largest manufacturing subindustries and (b) has a particular history of wage violations, and thus was analyzed separately here. Additionally, "agriculture" and "forestry, logging, fishing, hunting, and trapping" were combined into a single "agriculture" category; "finance" and "insurance" were combined into a single "finance and insurance" category; and all "information" subindustries—including publishing, motion picture and sound recording, broadcasting, telecommunications, and internet service providers—were aggregated into a single "information" category. Minimum wage violation estimates for "rental and leasing services" were found to be non-significant, and were thus excluded from the analysis (note: "rental and leasing services" accounts for 0.31 percent of employment in Oregon).

Finally, a note on measurement error in the CPS data. There is reason to believe that the measurement error in the CPS may actually bias *downward* the estimates of minimum wage violations reported below.[14] First, despite going to great lengths to reach them, both Latinx households and undocumented immigrants are underrepresented in the CPS.[15] Because workers in these groups are at higher risk of experiencing minimum wage violations, the estimates of violations reported here should in this sense be considered conservative estimates.[16] Second, in Bollinger's study of measurement error in the CPS, he finds a "high overreporting of income for low-income men" driven by "about 10% of the reporters who grossly overreport their income," thus potentially biasing estimates downward even further.[17] Third, CPS data have a shortage of low-wage workers and an excess of high-wage workers relative to comparable survey data like SIPP; one effect of this imbalance could be to underestimate minimum wage violations.[18] Roemer does find that the CPS reaches more "underground" workers than other large-scale surveys and is less biased than alternatives.[19] These considerations notwithstanding, the fact that measurement error surely exists recommends using caution when working with the point estimates reported.

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[14] For an excellent discussion of the advantages and limitations of using the CPS data to estimate minimum wage violations given the existence of measurement error and other issues, see Eastern Research Group (2014), Appendix B.

[15] As Bernhardt et al. (2009) write: ". . . standard surveying techniques—phone interviews or census-style door-to-door interviews—rarely are able to fully capture the population that we are most interested in: low-wage workers who may be hard to identify from official databases, who may be vulnerable because of their immigration status, or who are reluctant to take part in a survey because they fear retaliation from their employers. Trust is also an issue when asking for the details about a worker's job, the wages they receive, whether they are paid off the books or not, and their personal background." Annette Bernhardt et al., *Broken Laws, Unprotected Workers: Violations of Employment and Labor Laws in America's Cities* (New York: National Employment Law Project), 56.

[16] Bernhardt et al. (2009); Eastern Research Group (2014).

[17] Christopher R. Bollinger, "Measurement error in the Current Population Survey: A nonparametric look," *Journal of Labor Economics* 16, no. 3 (1998).

[18] Marc Roemer, *Using administrative earnings records to assess wage data quality in the March Current Population Survey and the Survey of Income and Program Participation* (Washington, DC: Center for Economic Studies, US Census Bureau, 2002); Eastern Research Group (2014).

[19] Roemer 2002.

Appendix III. Estimated Minimum Wage Violations Rates by Industry (with confidence intervals), Oregon, 2010-2020

Industry	Nonurban Counties (95% CI)	Portland Metro (95% CI)
Accommodation	**13.0%** (8.3, 17.7)	**17.0%** (11.9, 22.1)
Administrative and support services	**7.5%** (5.4, 9.5)	**11.5%** (9.0, 14.0)
Agriculture	**11.2%** (7.9, 14.4)	**15.6%** (12.1, 19.2)
Arts, entertainment, and recreation	**9.7%** (6.3, 13.1)	**15.0%** (11.0, 19.1)
Construction	**1.7%** (0.9, 2.6)	**2.8%** (1.7, 3.8)
Educational services	**5.8%** (4.6, 6.9)	**7.6%** (6.3, 9.0)
Finance and Insurance	**1.3%** (0.5, 2.1)	**1.7%** (0.8, 2.6)
Food manufacturing	**4.8%** (2.5, 7.0)	**7.3%** (4.5, 10.0)
Food services and drinking places	**14.2%** (12.2, 16.2)	**20.0%** (17.7, 22.3)
Health care services, except hospitals	**5.6%** (4.5, 6.8)	**7.6%** (6.2, 9.0)
Hospitals	**2.1%** (1.1, 3.0)	**2.5%** (1.4, 3.5)
Information	**5.3%** (2.8, 7.9)	**5.6%** (3.0, 8.2)
Manufacturing (except food)	**1.8%** (1.2, 2.3)	**2.3%** (1.7, 3.0)
Membership associations and organizations	**4.9%** (2.0, 7.8)	**7.4%** (4.0, 10.7)
Personal and laundry services	**11.1%** (6.6, 15.7)	**13.3%** (8.4, 18.2)
Private households	**24.5%** (14.6, 34.5)	**28.0%** (17.5, 38.5)
Professional, Scientific, and Technical Services	**2.1%** (1.4, 2.8)	**2.5%** (1.7, 3.3)
Real estate	**10.1%** (6.2, 14.1)	**10.8%** (6.7, 14.9)
Repair and maintenance	**7.0%** (3.6, 10.4)	**8.2%** (4.5, 11.8)
Retail trade	**9.2%** (8.0, 10.4)	**12.9%** (11.5, 14.4)
Social assistance	**10.8%** (7.1, 14.5)	**14.4%** (10.4, 18.4)
Transportation and warehousing	**4.8%** (3.1, 6.5)	**6.6%** (4.6, 8.6)
Utilities	**3.2%** (0.9, 5.6)	**3.6%** (1.1, 6.1)
Waste management and remediation services	**8.0%** (1.5, 14.4)	**8.9%** (2.2, 15.5)
Wholesale trade	**2.7%** (1.4, 4.0)	**4.2%** (2.5, 5.8)

Appendix IV. Select statistics by industry, Oregon, 2010-2020

Industry	Average MWV Estimate	Percent of total OR employment	Complaints	Complaints/ 10,000 workers	Violations/ 10,000 workers
Private households	**26.28%**	0.57%	16	17	2628
Food services and drinking places	**17.09%**	8.60%	1270	92	1709
Accommodation	**15.00%**	1.66%	114	43	1500
Agriculture	**13.39%**	3.04%	292	59	1339
Social assistance	**12.61%**	3.59%	54	9	1261
Arts, entertainment, and recreation	**12.35%**	1.79%	103	36	1235
Personal and laundry services	**12.23%**	0.86%	123	89	1223
Retail trade	**11.08%**	12.28%	399	20	1108
Real estate	**10.45%**	1.33%	47	22	1045
Administrative and support services	**9.48%**	5.63%	350	39	948
Waste management and remediation services	**8.43%**	0.35%	7	12	843
Repair and maintenance	**7.58%**	1.08%	165	95	758
Educational services	**6.68%**	8.83%	36	3	668
Health care services, except hospitals	**6.62%**	8.23%	294	22	662
Membership associations and organizations	**6.14%**	1.82%	33	11	614
Food manufacturing	**6.02%**	1.69%	33	12	602
Transportation and warehousing	**5.72%**	3.71%	293	49	572
Information	**5.47%**	2.16%	50	14	547
Wholesale trade	**3.44%**	4.60%	42	6	344
Utilities	**3.42%**	0.29%	23	50	342
Professional, Scientific, and Technical Services	**2.31%**	5.45%	102	12	231
Hospitals	**2.27%**	3.63%	7	1	227
Construction	**2.26%**	5.70%	698	76	226
Manufacturing (except food)	**2.06%**	9.55%	168	11	206
Finance and Insurance	**1.51%**	3.54%	47	8	151

Appendix V. Employers with most claims filed against, Oregon, 2010-2020

Name	Claims	Recoded industry	County	Claim Dates
FIZZ & BUBBLE, LLC	**51**	Manufacturing	CLACKAMAS	October-December 2019
LEO GENTRY WHOLESALE NURSERY, INC.	**51**	Agriculture	CLACKAMAS/ MULTNOMAH	January 2014-March 2015
MARITIME SERVICES CORP.	**33**	Construction	HOOD RIVER	July 2012-April 2013
CORDOVA ENTERPRISES, INC.	**30**	Food Services and Drinking Places	JACKSON	February-October 2013
ECOCAB PORTLAND, LLC	**29**	Transportation and Warehousing	MULTNOMAH/ COWLITZ (WA)	February-April 2017
EXHIBITION ENTERPRISES, LLC	**27**	Administrative and Support Services	WASHINGTON	March-June 2014
WONG'S KING RESTAURANT GROUP NO. 4, INC.	**24**	Food Services and Drinking Places	MULTNOMAH	May-September 2020
PACIFIC CARGO SERVICES, LLC	**23**	Transportation and Warehousing	CLACKAMAS/ MULTNOMAH	August-December 2013
G.M.R., INC.	**21**	Food Services and Drinking Places	JACKSON	September-November 2017
GR ROGUEWOOD, LLC	**19**	Manufacturing	JACKSON/ JOSEPHINE/ MULTNOMAH	May 2015-March 2016
MARIA DE JESUS ALBA GRANADOS	**17**	Agriculture	MALHEUR	May-November 2011
HWY 30 ROADHOUSE	**15**	Food Services and Drinking Places	CLATSOP	August-December 2013
NAFT PETROLEUM, INC.	**14**	Wholesale Trade	JACKSON	July 2010-July 2013
BOSS'S BURGERS, LLC	**13**	Food Services and Drinking Places	POLK	July-December 2012
EAT ME, DRINK ME LLC	**13**	Food Services and Drinking Places	MULTNOMAH/ THURSTON (WA)	March 2017-June 2019
FREEZETECH SYSTEMS, LLC	**13**	Agriculture	DESCHUTES/ JACKSON	August 2017
PACWEST CONTRACTING LLC	**13**	Construction	DESCHUTES	March 2012
RC'S SMOKIN STEAKHOUSE LLC	**13**	Food Services and Drinking Places	JACKSON	May-October 2014
HOMETOWN BUFFET, INC., A CORPORATION OF MINNESOTA	**12**	Food Services and Drinking Places	MARION/ WASHINGTON/ BEXAR (TX)	April 2020
HYDRATION TECHNOLOGY INNOVATIONS, LLC	**12**	Utilities	LINN/ MARICOPA (AZ)	March-September 2015
JOHNCONNIE, INC.	**12**	Food Services and Drinking Places	LANE	August-October 2012

SIERRA FARM LABOR CONTRACTOR	**12**	Agriculture	MALHEUR/ DIMMIT (TX)	May 2010-August 2011
CPS RESTAURANTS CORPORATION	**11**	Food Services and Drinking Places	CLACKAMAS/ MULTNOMAH	October 2012-January 2013
HH TREES & TRANSPORTATION LLC	**11**	Agriculture	MARION	December 2017
LOEN NURSERY, INC.	**11**	Agriculture	MARION/ WASHINGTON	September 2017-January 2018
PHOENIX SERVICES, INC.	**11**	Personal and Laundry Services	MULTNOMAH	August-October 2013
RICK BARRETT DRYWALL, INC.	**11**	Construction	CLACKAMAS/ MULTNOMAH	January-November 2010
YAW'S TOP NOTCH, INC.	**11**	Food Services and Drinking Places	MULTNOMAH	February-July 2013
D&M AUTO BROKERS LLC	**10**	Retail Trade	MULTNOMAH	April 2012
FIGARO'S PIZZA OF KLAMATH FALLS	**10**	Food Services and Drinking Places	KLAMATH	February-July 2011
GERMYN'S WALLMASTER SERVICE, INC.	**10**	Administrative and Support Services	LANE	March-October 2015
HENG SHAN BROTHERS RESTAURANT LLC	**10**	Food Services and Drinking Places	CLACKAMAS/ WASHINGTON	June-December 2012
JACK IN THE BOX	**10**	Food Services and Drinking Places	(Various)	June 2010-February 2012
MODERN CONSTRUCTION LLC	**10**	Construction	MARION/ MULTNOMAH	October 2011-August 2013
REVOLUTION FILM GROUP, LLC	**10**	Arts, Entertainment, and Recreation	MULTNOMAH	September 2016-June 2017

Appendix VI. Industry groups and examples of highly represented occupations[20]

Industry	Occupation examples (Occupation code)
Agriculture (NAICS 11)	• Farmworkers and laborers (45-2092) • Logging equipment operators (45-4022) • Agricultural equipment operators (45-2091) • Heavy and tractor-trailer truck drivers (53-3032) • Packers and packagers (53-7064) • Graders and sorters (45-2041)
Construction (NAICS 23)	• Pipelayers, plumbers, pipefitters, and steamfitters (47-2150) • Construction equipment operators (47-2070) • Helpers, construction trades (47-3010) • Painters and paperhangers (47-2140) • Cement masons, concrete finishers, and terrazzo workers (47-2050) • Secretaries and administrative assistants (43-6010) • Driver/sales workers and truck drivers (53-3030)
Manufacturing (NAICS 31-33)	• Metal workers and plastic workers (51-4000) • Assemblers and fabricators (51-2000) • Material moving workers (53-7000) • Installation, maintenance, and repair occupations (49-0000) • Business operations specialists (13-1000) • Inspectors, testers, sorters, samplers, and weighers (51-9061) • Material recording, scheduling, dispatching, and distributing workers (43-5000)
Food manufacturing (NAICS 311)	• Laborers and material movers (53-7060) • Butchers and other meat, poultry, and fish processing workers (51-3020) • Packaging and filling machine operators and tenders (51-9111) • Food batchmakers (51-3092) • Installation, maintenance, and repair occupations (49-0000) • Office and administrative support occupations (43-0000)

[20] Information obtained from the U.S. Bureau of Labor Statistics' Occupational Employment Statistics database: https://www.bls.gov/oes/current/oessrci.htm.

Wholesale trade (NAICS 42)	• Sales representatives (41-4010) • Laborers and material movers (53-7060) • Driver/sales workers and truck drivers (53-3030)
Retail trade (NAICS 44, 45)	• Retail salespersons (41-2031) • Cashiers (41-2010) • Laborers and material movers (53-7060) • Stockers and order fillers (53-7065) • Driver/sales workers and truck drivers (53-3030) • Counter and rental clerks and parts salespersons (41-2020) • Customer service representatives (43-4051)
Transportation and warehousing (NAICS 48,49)	• Heavy and tractor-trailer truck drivers (53-3032) • Laborers and freight, stock, and material movers, hand (53-7062) • Postal service mail carriers (43-5052) • Light truck drivers (53-3033) • Passenger vehicle drivers, except bus drivers, transit and intercity (53-3058) • Industrial truck and tractor operators (53-7051) • Stockers and order fillers (53-7065) • Flight attendants (53-2031)
Information (NAICS 51)	• Software and web developers, programmers, and testers (15-1250) • Business operations specialists (13-1000) • Sales representatives (41-3000) • Media and communication workers (27-3000) • Radio and telecommunications equipment installers and repairers (49-2020) • Customer service representatives (43-4051) • Actors, producers, and directors (27-2010)
Finance and insurance (NAICS 52)	• Customer service representatives (43-4051) • Tellers (43-3071) • Securities, commodities, and financial services sales agents (41-3031) • Insurance sales agents (41-3021) • Loan officers (13-2072) • Insurance claims and policy processing clerks (43-9041) • Claims adjusters, appraisers, examiners, and investigators (13-1030) • Secretaries and administrative assistants (43-6010)

Real estate (NAICS 531)	• Real estate brokers and sales agents (41-9020) • Property, real estate, and community association managers (11-9141) • Office clerks (43-9061) • Secretaries and administrative assistants (43-6014)
Professional, scientific and technical services (NAICS 54)	• Software developers and software quality assurance analysts and testers (15-1256) • Accountants and auditors (13-2011) • Lawyers (23-1011) • Management analysts (13-1111) • Paralegals and legal assistants (23-2011) • Computer systems analysts (15-1211) • Bookkeeping, accounting, and auditing clerks (43-3031) • Civil engineers (17-2051)
Administrative and support services (NAICS 561)	• Janitors and cleaners, except maids and housekeeping cleaners (37-2011) • Security guards (33-9032) • Laborers and freight, stock, and material movers, hand (53-7062) • Landscaping and groundskeeping workers (37-3011) • Customer service representatives (43-4051) • Office clerks (43-9061) • Packers and packagers (53-7064)
Waste management and remediation services (NAICS 562)	• Refuse and recyclable material collectors (53-7081) • Heavy and tractor-trailer truck drivers (53-3032) • Office and administrative support occupations (43-0000) • Hazardous materials removal workers (47-4041) • Laborers and freight, stock, and material movers, hand (53-7062) • Installation, maintenance, and repair occupations (49-0000) • Construction trades workers (47-2000) • Septic tank servicers and sewer pipe cleaners (47-4071)
Educational services (NAICS 61)	• Elementary and middle school teachers (25-2020) • Teaching assistants (25-9040) • Secondary school teachers (25-2030) • Secretaries and administrative assistants (43-6010) • Special education teachers (25-2050) • Education and childcare administrators (11-9030)

Health care (NAICS 621, 622, 623)	• Registered nurses (29-1141) • Nursing assistants (31-1131) • Medical assistants (31-9092) • Home health and personal care aides (31-1120) • Medical secretaries and administrative assistants (43-6013) • Dental assistants (31-9091)
Social assistance (NAICS 624)	• Home health and personal care aides (31-1120) • Preschool teachers (25-2011) • Childcare workers (39-9011) • Social and human service assistants (21-1093) • Teaching assistants, except postsecondary (25-9045) • Child, family, and school social workers (21-1021)
Arts, entertainment, and recreation (NAICS 71)	• Amusement and recreation attendants (39-3091) • Exercise trainers and group fitness instructors (39-9031) • Food preparation and serving related occupations (35-0000) • Office and administrative support occupations (43-0000) • Arts, design, entertainment, sports, and media occupations (27-0000) • Building and grounds cleaning and maintenance occupations (37-0000)
Accommodation (NAICS 721)	• Maids and housekeeping cleaners (37-2012) • Hotel, motel, and resort desk clerks (43-4081) • Waiters and waitresses (35-3031) • Maintenance and repair workers, general (49-9071) • Cooks (35-2014) • Gambling dealers (39-3011)
Food services and drinking places (NAICS 722)	• Fast food and counter workers (35-3023) • Waiters and waitresses (35-3031) • Cooks (35-2014) • Food preparation workers (35-2021) • Bartenders (35-3011) • Dishwashers (35-9021) • Hosts and hostesses (35-9031) • Cashiers (41-2011) • Dining room and cafeteria attendants and bartender helpers (35-9011) • Driver/sales workers (53-3031)

Repair and maintenance (NAICS 811)	• Automotive service technicians and mechanics (49-3023) • Cleaners of vehicles and equipment (53-7061) • Automotive body and related repairers (49-3021)
Personal and laundry services (NAICS 812)	• Hairdressers, hairstylists, and cosmetologists (39-5012) • Manicurists and pedicurists (39-5092) • Laundry and dry-cleaning workers (51-6011) • Animal caretakers (39-2021) • Parking attendants (53-6021) • Receptionists and information clerks (43-4171) • Massage therapists (31-9011) • Counter and rental clerks (41-2021) • Skincare specialists (39-5094) • Funeral attendants (39-4021) • Morticians, undertakers, and funeral arrangers (39-4031)
Membership associations and organizations (NAICS 813)	• Labor relations specialists (13-1075) • Secretaries and administrative assistants, except legal, medical, and executive (43-6014) • Office clerks (43-9061) • General and operations managers (11-1021)