Payroll Fraud in New York's Construction Industry: Estimating its Prevalence, Severity and Economic Costs

Russell Ormiston
Allegheny College

Mark Erlich
Harvard University

Dale Belman
Michigan State University

July 2021

Payroll Fraud in New York's Construction Industry: Estimating its Prevalence, Severity and Economic Costs

Executive Summary

Introduction

Payroll fraud is a significant and long-standing problem in New York's construction industry. It can take multiple forms, including the intentional misclassification of employees as independent contractors, the hire of workers off-the-books using a cash-only arrangement, and various forms of wage theft such as failure to pay minimum wage and overtime. These unethical practices violate state and federal wage-and-hour laws, and employers' evasion of required contributions to Social Security, Medicare, workers' compensation, and unemployment insurance programs has long represented an enormous source of tax fraud in the state and across the country.

Construction employers' motivation to engage in payroll fraud is straightforward and uncomplicated: it substantially reduces their labor costs. But these actions have a cascade of effects on broader society. Most directly, these actions degrade the standard of living for workers in these jobs and deny them their legally-earned rights to overtime pay, workers' compensation, unemployment insurance and Social Security benefits. Payroll fraud also makes it difficult, if not impossible, for honest and law-abiding contractors to remain in operation in a market where they must compete against firms with significantly lower costs. The exit of "good" employers from the market further degrades working conditions, leading to a "race to the bottom" that represents an existential threat to sustainability of the industry. Finally, payroll fraud harms taxpayers at large, as these actions defund social programs like Social Security and Medicare, lead to higher UI and workers' compensation rates for law-abiding businesses, and puts increased stress on other income-supporting social programs.

The authors of this study have been tasked with estimating the incidence and economic costs of payroll fraud in the construction industry in New York State and the five counties—Bronx, Kings, New York, Queens, and Richmond—that comprise New York City. This task represents a considerable challenge, as estimating the prevalence of payroll fraud in construction—and across the entire labor market—is notoriously difficult. Payroll fraud is effectively a part of the *underground economy*, with these illegal actions specifically kept hidden from the purview of government regulators and data collectors. The lack of *direct* evidence of payroll fraud thereby inhibits economists' ability to accurately assess its prevalence in construction labor markets.

While estimating the extent of payroll fraud is difficult, it is not impossible. Researchers have developed empirical approaches to *indirectly* measure the extent of payroll fraud by comparing employer payroll records and large, nationally-representative worker surveys. Indirect approaches to measuring payroll fraud are imperfect and produce estimates that feature a rather large margin for error. But two recent reports—a 2020 study commissioned

by the United Brotherhood of Carpenters and a 2019 report commissioned by the Attorney General's Office for the District of Columbia—offer the most developed methodologies for assessing (a) the most likely ranges of the number of workers directly affected in New York's construction industry and (b) the corresponding economic costs on workers, taxpayers and law- abiding employers.

This report applies these methodologies to estimate the prevalence and economic costs of payroll fraud—specifically misclassification and off-the-books employment—for New York State and New York City for 2017. The results suggest:

Incidence of Payroll Fraud

- There were between an estimated 75,906 and 125,855 workers who were either misclassified as independent contractors or working off-the-books in the New York State construction industry in 2017. This represents 12.6% to 21.1% of employed individuals who identified as working in the construction industry.

- There were between an estimated 49,452 and 81,994 workers who were in fraudulent employment relationships in NYC's construction industry in 2017. This amounted to 17.6% to 29.3% of the sector's employed workforce.

It is reminded that these estimates are developed from indirect methods of estimation. While this approach is among the most developed in the literature, the authors acknowledge the methodology is akin to the use of a "blunt instrument" and is accompanied by a nontrivial margin of error. Nevertheless, the estimates offered above seem to corroborate with the limited *direct* information about the extent of worker misclassification—but not off-the-books employment—in New York State, specifically a 2007 audit of NYS unemployment insurance records by three researchers at Cornell University. Further, there are methodological reasons that do not preclude the possibility that payroll fraud is even more extensive than the maximum rates highlighted above.

Costs of Payroll Fraud

Assessing the economic costs of worker misclassification is complicated by the fact there are no records to ascertain how much money is actually changing hands in the underground construction economy; a significant portion of the industry functions on a cash-only basis. This is a well-known research problem in analyzing the construction sector; as such, this study relies on a cost methodology developed for these purposes that was advanced in a 2019 report commissioned by the Attorney General for the District of Columbia and authored by economists Dale Belman (Michigan State University) and Aaron Sojourner (University of Minnesota). In effect, the aggregate cost effects of payroll fraud are estimated by multiplying the conservative projection of the number of workers directly affected—75,906 for New York State and 45,492 for New York City—by the presumed average income of these workers. To those ends, this study assumes that these workers would earn the "entry" level wages of workers employed legally in construction occupations in the region

according to the New York State Department of Labor: $35,000 for New York State and $37,500 for New York City.

Table A. Estimated Costs of Payroll Fraud in New York State and New York City Construction Industry, 2017

	New York State	New York City
Baseline Assumptions		
Number of Workers Involved	75,906	49,452
Worker Earnings if Employed Legally	$35,000	$37,500
Direct Effects of Payroll Fraud (in $ millions)		
Overtime and Premium Pay Not Received	$55.3	$38.6
Workers' Compensation Premiums Not Paid	$289.3	$201.9
Unemployment Insurance Fund Shortfall	$49.3	$32.1
Employer Share of FICA Offloaded onto Workers	$203.2	$141.9
Effect of Worker Income Underreporting (in $ millions)		
Social Security & Medicare Shortfall	Min $92.7	Min $64.7
	Max $296.9	Max $208.6
Federal Income Tax Shortfall	Min $28.7	Min $21.7
(using 2019 rate schedule)	Max $108.7	Max $81.6
State Income Tax Shortfall*	Min $15.5	Min $10.0
(using 2019 rate schedules)	Max $55.9	Max $36.0
New York City Income Tax Shortfall#		Min $5.9
(using 2019 rate schedules)		Max $21.0

*Notes: *-Projections only include the number of workers estimated to live in New York State and subject to NYS income tax. The first column features an estimated 70,266 workers, the second column applies 40,024 workers. #-Projection only includes the number of workers (33,082) estimated to live in New York City and subject to NYC income tax.*

Table A reflects the primary reason why employers engage in payroll fraud: it substantially reduces labor costs. Contractors engaging in payroll fraud evade their legal responsibilities to pay for workers' compensation insurance, do not pay contributions to New York's unemployment insurance fund, fail to pay required overtime premiums, and illegally offload the "employer share" of Social Security and Medicare onto the backs of workers. These are the *direct* costs of payroll fraud, and amount to $597.1 million in New York State, including $414.5 million in New York City in 2017. These direct costs include:

- Payroll fraud in the construction industry led to an estimated $289.3 million in unpaid workers' compensation insurance premiums in New York State, including a projected $201.9 million from New York City construction employers.

- Illegal actions in the construction industry resulted in the state unemployment insurance fund experiencing a $49.3 million shortfall statewide; $32.1 million stemmed from the actions of New York City contractors.

- New York State construction employers failed to pay an estimated $55.3 million in required overtime premiums to construction workers in 2017; New York City contractors failed to pay $38.6 million.

- Contractors illegally offloaded $203.2 million in required Social Security and Medicare obligations onto the backs of New York State workers in 2017, including $141.9 million among New York City employers.

While workers bear the brunt of this substantial increase in tax obligations, the failure of employers to properly report employment income and withhold income tax leads to shortfalls in state and federal tax revenues. The lack of documentation from employers incentivizes some workers to evade their tax requirements by either not reporting or underreporting their income to the Internal Revenue Service and state tax agencies. These represent the *indirect* economic costs of payroll fraud. To be clear, income non-reporting and underreporting are the responsibility of the workers, not the employers. But the actions of employers effectively open the door for this to happen.

To estimate the indirect economic costs of payroll fraud, this study estimates the corresponding shortfalls to Social Security, Medicare, and state and federal income tax as a result of non-reporting and underreporting. The ranges of potential outcomes are knowingly wide, attributable to (a) diverse estimates of income underreporting rates and (b) different assumptions about the wage premium that workers may or may not receive to forego their legally-earned benefits.

- Misclassified and off-the-books workers are considered to be "self-employed" and thus legally responsible for both the employee and employer shares of Social Security and Medicare. Because of non-reporting and underreporting by employers and workers, this study projects that between $92.7 million and $296.9 million of this was never collected from workers in New York State. Among New York City workers, this amounts to between $64.7 million and $208.6 million.

- Losses to federal income tax revenues were calculated using 2019 tax schedules to account for tax reform passed in December 2017. Workers in New York State were estimated to underreport between $28.7 million and $108.7 million, while those in New York City were projected to underreport between $21.7 million and $81.6 million. As described in the text, the assumptions underlying income tax calculations are exceedingly conservative, suggesting that these are *lower-bound* estimates of the effects of payroll fraud.

- The income tax shortfall to New York State was estimated on the basis of the projected number of affected workers who both work and reside in the state. Using 2019 state income tax rates and conservative assumptions, this study estimates that aggregate state tax revenues exhibit a $15.5 million to $55.9 million shortfall. Attributable to NYC construction employers, this shortfall is projected to be $10.0 million to $36.0 million.

- New York City income tax losses were also estimated on the basis of the projected number of workers who both work and reside in the five-county region. Again applying 2019 income tax schedules and conservative assumptions, this study

projects that affected workers in New York City underreported between $5.9 million and $21.0 million in NYC income tax.

The economic costs projections provided in this summary suggests that New York City employers account for a substantial majority of the state's aggregate costs of payroll fraud. This may be true. However, note that New York State and New York City estimates were developed separately and the NYC projections use a higher income assumption that increases the relative costs of payroll fraud on a per-worker basis vis-à-vis the rest of the state. As a result of these differing income assumptions, analysts should be cautioned against necessarily calculating the relative costs attributable to New York City employers when compared to the state as a whole.

Policy Recommendations

Payroll fraud in New York's construction industry degrades workers' standard of living, disadvantages law-abiding employers, and imposes a substantial burden on state and city taxpayers. Its prevalence deteriorates working conditions throughout the region, with the resulting "race to the bottom" representing an existential threat to industry sustainability and the middle-class, blue-collar jobs that the sector has long provided. Combating payroll fraud will require a collective effort of policymakers, government regulators, conscientious employers and workers, and media allies.

While these issues are problematic on a national basis, New York is advantaged in combating payroll fraud for a variety of reasons. First, many state and local regulatory agencies—such as the Department of Labor and Attorney Generals' Offices—have a history of pursuing cases. Second, legislators in New Jersey and New York have a history of considering workers' rights issues more so than in many other states. This includes the Construction Fair Play Act that took effect in October 2010 and provides penalties for employers who fail to properly classify their employees. In addition to statewide legislation, policymakers and regulators are encouraged to consider other possible deterrents, including more strategic enforcement, joint-agency task forces, greater use of sweeps and stop work orders, and the engagement of community allies (e.g., worker centers).

Supporting Organizations

CARPENTER CONTRACTOR ALLIANCE OF METROPOLITAN NEW YORK
http://ccametro.com/

The Carpenter Contractor Alliance of Metropolitan New York (CCA Metro) is the leading voice on issues affecting the joint interests of 20,000 carpenters in all crafts represented by the nine local unions of the New York City and Vicinity District Council of Carpenters and the more than 1,000 contractors that employ these carpenters under collective bargaining agreements. CCA Metro utilizes research and engagement with industry and community stakeholders to promote the dependable quality and safety that is delivered by trained, skilled and experienced union carpenters and contractors. We actively support investment in public building and infrastructure, private economic development, and a regulatory climate favorable to growth and responsible employment and contracting policies. Our mission is simple: encourage as much employment and business opportunity as possible for union carpenters and contractors who build the best projects in New York with the highest commitment to local and diverse opportunity.

INSTITUTE FOR CONSTRUCTION ECONOMIC RESEARCH (ICERES)
http://iceres.org/

The construction industry and its stakeholders face pressing long term issues regarding workforce sustainability, safety, productivity and integration of technology. The Institute for Construction Economic Research (ICERES) supports high quality research with the goal of finding and disseminating pragmatic solutions to these and other construction issues. The Institute for Construction Economic Research undertakes non-partisan research on issues facing the industry, collaborating with existing construction researchers and attracting new investigators into the field of construction research. The Institute also works to develop a network of researchers with ongoing programs on construction issues. In addition to its work in supporting research, the Institute disseminates this research with a working paper series, a web presence, and conferences.

About the Authors

Russell Ormiston, Allegheny College
Dr. Ormiston is an associate professor of economics at Allegheny College and the current president of the Institute for Construction Economic Research (ICERES). Dr. Ormiston has co-authored book chapters on workplace conditions in the residential construction industry and academic and professional articles on the economic and social impacts of prevailing wage laws and project labor agreements.

Mark Erlich, Harvard University
Mr. Erlich spent 42 years working with the Carpenters, rising from a member of Carpenters Local 40 in 1975 to become the Executive Secretary-Treasurer of the New England Regional Council of Carpenters until his retirement in 2017. The author of two books, Mr. Erlich is now an active researcher and writer on misclassification and the underground economy as a Wertheim Fellow at Harvard University's Labor and Worklife Program.

Dale Belman, Michigan State University
Dr. Belman represents one of the nation's leading academic economists on labor issues in the construction industry. A professor in the School of Labor Relations and Human Resources at Michigan State University, Dr. Belman is the founder and former president of ICERES. During his esteemed academic career, Dr. Belman has written scores of journal articles and book chapters on labor and employment issues, and has frequently testified on these concerns in federal and state legislative proceedings.

Acknowledgements

The authors wish to thank Paul Fernandes and the late Mark Lieberman at the Carpenter Contractor Alliance of Metropolitan New York, representatives at the New York Compensation Insurance Rating Board, and Julie Brockman of ICERES for their insight and support in developing this study.

Payroll Fraud in New York's Construction Industry: Estimating its Prevalence, Severity and Economic Costs

Introduction

Payroll fraud is a significant problem in our society. It can take multiple forms, including the intentional misclassification of employees as independent contractors, the hire of workers off-the-books using a cash-only arrangement, and various forms of wage theft such as failure to pay minimum wage and overtime. These unethical and illegal practices constitute both tax and insurance fraud as employers that engage in these practices fail to pay legally mandated state and federal tax as well as workers' compensation insurance obligations.

There is nothing new about the issue. Employers have been misclassifying workers for decades. In the construction industry, as an example, the approach became common in the 1980s and has continued to the present. Employers in other industries—hospitality, restaurants, clerical services, professional services, retail, landscaping, home care, janitorial, and throughout the gig economy—have followed suit. The motivation has been straightforward and uncomplicated. Construction employers that incorrectly label their workers as independent contractors or pay them off-the-books are able to substantially reduce their labor costs and gain a considerable financial advantage over their law-abiding, responsible rivals in a highly competitive industry.

While there are legitimate independent contractors and sole proprietors in construction, this and similar past studies focus on that substantial part of the workforce that function as employees but are misclassified by their employers as independent contractors or receive off-the-books payments. Payroll fraud has consequences across a broad number of categories:

- Federal and state governments lose considerable revenues from taxes that would have been paid had the workers had been properly treated as employees. These include income taxes and Social Security and Medicare payroll taxes (due to underreporting of income by misclassified employees), as well as unemployment insurance taxes.

- Workers lose basic rights associated with the status of an employee. These include legal entitlements to receive minimum wage, overtime payments, unemployment insurance in case of layoff, workers' compensation insurance in case of an on-the-job injury, anti-discrimination protections, and the right to form a union and collectively bargain.

- Responsible businesses that classify their workforce as employees operate at a competitive disadvantage with employers that illegally treat their workers as independent contractors. The cost savings associated with misclassification are sufficient that law-abiding firms in highly competitive industries either lose work

opportunities or feel the pressure to consider evading the law in order to compete on what is no longer a level playing field.

- Insurance providers lose premiums necessary to fund the workers' compensation insurance system.

- All taxpayers are negatively impacted because their payments make up for the lost revenues and effectively subsidize those who cheat the system.

This study will estimate the incidence and economic costs of payroll fraud in the construction industry in New York State and New York City (as defined by the counties of Bronx, Kings, New York, Queens, and Richmond). As will be outlined in this report, determining the number of workers involved is particularly difficult with publicly-available data given that these actions are a part of the *underground economy* and therefore not captured through economists' usual means of analyzing the labor market. However, this study relies on two recent reports—a 2020 study commissioned by the United Brotherhood of Carpenters and a 2019 report commissioned by the Attorney General's Office for the District of Columbia—that provide the most developed methodologies for assessing the number of workers directly affected in the construction industry and the economic costs on workers, taxpayers, and law-abiding employers.

Empirical Analysis

Introduction

To assess the effects of payroll fraud, the authors of this study have been tasked with estimating the number of workers directly affected and its economic costs in New York's construction industry. This is a considerable challenge. Payroll fraud, like any other part of the underground economy, often leaves no paper trail and is never reported to state and federal taxation bureaus. Unfortunately for researchers, contractors' attempts to conceal their illegal actions from regulators for fear of civil or criminal charges simultaneously hide evidence of their activities from government agencies responsible for data collection. Payroll fraud is also not queried in any of the nationally-representative worker surveys that researchers typically rely upon when studying workplace outcomes. As a result, the lack of *direct* evidence of payroll fraud represents a substantial limitation for researchers interested in evaluating its incidence and costs.

While estimating the scope of payroll fraud is challenging, it is not impossible. A number of studies over the last 15 years have developed *indirect* methods of estimation that offer considerable promise in evaluating the likely ranges of the number of workers directly affected and the economic costs that result. This is led by a comprehensive 2020 report commissioned by the United Brotherhood of Carpenters and written by the three authors of the current study.[1] This UBC report not only summarizes all previous literature, but also

[1] Ormiston, Russell, Dale Belman and Mark Erlich. 2020. "An Empirical Methodology to Estimate the Incidence and Costs of Payroll Fraud in the Construction Industry."

develops an empirical methodology to indirectly estimate the incidence and economic costs of payroll fraud on a state-by-state and region-by-region basis. That statistical approach will serve as the empirical backbone of the analysis of payroll fraud in New York's construction industry.

Prior Research

The current report is fortunate to be complemented by two prior studies of payroll fraud in New York's construction industry.[2] While these studies are a bit dated, they serve as critical benchmarks for this analysis given the imprecision involved with indirect estimation methods. First, a 2007 report authored by the Fiscal Policy Institute used an *indirect* approach to estimate that there were approximately 50,000 construction workers in New York City who were either misclassified or working off-the-books as of 2005.[3] These estimates were also published by James Parrott of FPI in the conference proceedings of the 2011 Labor and Employment Relations Association annual meeting.[4]

A second 2007 report by three researchers at Cornell University audited New York State unemployment insurance records, revealing that an average of 45,474 of the state's construction workforce was misclassified as independent contractors annually between 2002 and 2005; while the report suggested that this amounted to 14.8% of industry employment, this proportion failed to include the self-employed.[5] The estimated number of misclassified workers is an important result. State UI audits offer some of the most direct evidence of payroll fraud in the construction industry, even if they often fail to recognize off-the-books employment and completely ignore contractors who do file payroll records with the state. Conversations with industry stakeholders suggest that misclassification using 1099-MISC forms may have held steady or even possibly declined since 2007 as employers have increasingly foregone the use of 1099-MISC forms for independent contractors and have instead used entirely off-the-books arrangements.

Finally, analyses of payroll fraud in New York State are bolstered by annual reports by the Joint Enforcement Task Force on Employee Misclassification that were published between 2008 and 2015.[6] While these analyses do not provide overall estimates of the scope of payroll

[2] A third potentially relevant study from 2009 surveyed 250+ urban residential construction workers in New York City, Chicago and Los Angeles, determining that 70.5% experienced overtime violations and 12.7% suffered minimum wage violations. For more, see: Bernhardt, Annette, Ruth Milkman, Nik Theodore, Douglas Heckathorn, Mirabei Auer, James DeFillipis, Ana Luz Gonzalez, Victor Narro, Jason Perelshteyn, Diana Polson, and Michael Spiller. 2009. "*Broken Laws, Unprotected Workers: Violations of Employment and Labor Laws in America's Cities*," Chicago: Center for Urban Economic Development, University of Illinois; New York: National Law Employment Law Project; Los Angeles: UCLA Institute for Research on Labor and Employment.

[3] Fiscal Policy Institute. 2007. "Building Up New York, Tearing Down Job Quality: Taxpayer Impact of Worsening Employment Practices in New York City's Construction Industry."

[4] Parrott, James. 2011. "Employee Misclassification in New York Construction—Economic and Fiscal Costs," Proceedings of the 63rd Annual Meeting of the Labor and Employment Relations Association.

[5] Donahue, Linda H., James Ryan Lamare, and Fred B. Kotler. 2007. "The Cost of Worker Misclassification in New York State," Digital Commons at Cornell University, School of Industrial and Labor Relations.

[6] These reports are available at the New York State Department of Labor web site: https://dol.ny.gov/employer-misclassification-workers.

fraud in the New York construction industry, these reports reflect that state regulators identified tens of thousands of cases of employee misclassification across all industries (construction included) each year, amounting to hundreds of millions of dollars in unreported wages. Considering these are only the cases that state regulators caught, it reflects the likelihood that payroll fraud is an enormous influence in many sectors of the labor market.

Estimating the Incidence of Payroll Fraud

As outlined above, economists have little *direct* evidence when it comes to assessing the scope of payroll fraud. These actions occur outside the purview of government regulators and data collectors, and large-scale national household surveys do not directly query workers about the legality of their employment relationship. But researchers have increasingly utilized an indirect approach to illuminate the contours of its presence in the labor market. This report follows this well-worn path, directly applying the methodology developed in 2020 UBC report to estimate the incidence of payroll fraud in New York's construction industry.

Starting with an analysis of New York State, the primary basis for this *indirect* analysis is a comparison of two numbers. The first is an estimate of *total construction employment* as produced from large-scale, nationally representative worker surveys as administrated by the U.S. Census Bureau. The second number is *legal wage-and-salary employment* as procured from analyses of employers' payroll records submitted to the state unemployment insurance agency and aggregated by the U.S. Department of Labor. The difference between total employment and legal wage-and-salary employment offers critical insight into the extent of illegality. While the gap between these two numbers will include law-abiding self-employed workers, it will also include two important groups who also do not show up on employer payrolls: misclassified and off-the-books workers. How the analysis isolates legal from illegal in this group will be discussed later in the report.

To estimate total construction employment in New York's construction industry, the starting point of the analysis will be an examination of data from the 2017 American Community Survey. Administered by the U.S. Census Bureau, the ACS represents the most extensive annual household survey in the country, with over 3.5 million Americans annually asked to participate.[7] Because of its size and its administration by the Census, the ACS is considered the gold standard for estimating demographics and labor force behavior on an annual basis in the United States. As presented in Table 1, the results of the 2017 ACS reflect that 551,537 employed New York residents identified construction as the industry of their primary job.[8]

While this number is the starting point to calculate total employment, it requires two additional considerations. First, the ACS only queries workers about their *primary* job during

[7] For more information on the ACS, see: https://www.census.gov/programs-surveys/acs/.

[8] ACS data used in this study was drawn from the 2017 ACS 1-Year Estimates at the following site: https://data.census.gov/cedsci/table?q=workers%20by%20industry&g=0400000US36&table=B24070&tid=ACSDT1Y2017.B24070&t=Industry&vintage=2018&lastDisplayedRow=161&hidePreview=true&y=2017.

the week that the survey is administered. However, some workers hold second jobs in the construction industry that must also be counted. While the ACS does not offer this information, analysis of a similar household survey—the Current Population Survey—reveals that second jobs in construction added an additional 1.964% jobs on a national basis in 2017.[9] Applying this number to New York, it suggests that second jobs would increase the total number of jobs by 10,835.[10]

Finally, the results of the American Community Survey are based on workers' state of *residence*, not their state of *work*. While many New York residents cross state lines to work, a substantially larger number of other states' residents cross *into* New York to work. Since this study's goal is to examine the construction industry *in New York*, this report must adjust for the net inflow or outflow of residents working in the construction industry. Fortunately, the 2017 ACS does provide information on people's state of work. The authors' analysis of the underlying ACS data suggests a net inflow of 31,982 construction workers into New York State in 2017.[11] As reflected in Table 1, summing the three data points provided so far yields an estimated total construction employment in New York State of 594,354.

Table 1. Estimating Total Construction Employment in New York State, 2017

New York Residents (2017 ACS)		
Wage-and-Salary Jobs (A)	435,701	
Self-Employed Jobs (B)	115,836	
Total Jobs for New York Residents (A+B)		551,537
Number of Second Jobs (estimate)		10,835
Inflow & Outflow of Workers		
Residents from Other States Working in NYS (C)	41,550	
New Yorkers Working in Other States (D)	9,568	
Net Inflow/Outflow of Workers into/out of NYS (C–D)		31,982
Total Construction Employment in New York State		**594,354**

Source: 2017 American Community Survey (1-Year Sample).

[9] For more on the Current Population Survey, its compatibility to the ACS, and issues of second jobs, see: Ormiston, Russell, Dale Belman and Mark Erlich. 2020. "An Empirical Methodology to Estimate the Incidence and Costs of Payroll Fraud in the Construction Industry."

[10] It is recognized that the authors are applying a national proportion to state-level data. However, the CPS does not have a large enough sample size to produce reliable estimates of state-level data on second jobs. Without evidence suggesting that multiple job-holding is statistically different in New York when compared to other states, the authors believe that the application of the national rate is appropriate.

[11] ACS microdata sets for this study were extracted at ipums.org, a service provided by the Institute for Social Research and Data Innovation at the University of Minnesota.

The results of Table 1 provide the estimated number of construction jobs in New York State in 2017 as reported by workers. But not all of these were necessarily legal employment relationships. To determine how many of these were *legal wage-and-salary jobs*, this study incorporates data from employer payroll records submitted to the Unemployment Insurance Division of the New York State Department of Labor.[12] Since all state UI programs feature federal oversight, the U.S. Department of Labor aggregates payroll records and publishes industry totals by state, county, and metropolitan area.[13] The Bureau of Economic Analysis augments this data to develop more complete estimates of legal employment; this includes reviewing additional administrative records, adjusting for reporting errors, and including workers who are in legitimate jobs that are not covered by state UI programs.[14]

The BEA reports that there were 397,706 legal wage-and-salary jobs in New York State's construction industry in 2017.[15] When compared to the estimate of *total* construction employment in the state in Table 1, the results suggest that there an estimated 196,648 jobs that do not show up on employer payrolls. Part of this total is comprised of legitimate, law-abiding self-employed construction workers, a long-time defining feature of the industry. But this total is also composed of workers misclassified as independent contractors and other workers who are hired using cash-only arrangements.[16]

---

[12] Aggregate payroll records by industry for New York State are available through the state's Department of Labor at: https://labor.ny.gov/stats/cesemp.asp.

[13] To examine employer payroll records using the Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) program, see the QCEW Data Viewer at:
https://data.bls.gov/cew/apps/data_views/data_views.htm

[14] For more on the BEA methodology, see: Bureau of Economic Analysis. 2019. "State Personal Income and Employment: Concepts, Data Sources, and Statistical Methods."

[15] This estimate is derived from data series SAEMP27, representing employment by industry by state, accessible via BEA's regional accounts data located: https://www.bea.gov/data/employment/employment-by-state.

[16] The calculations offered in this section omit two potential counterbalancing adjustments that, on net, likely lead this study to undercount the number of workers affected by payroll fraud. These were omitted because (a) some data is not available at the county-level (necessary for NYC calculations), (b) the authors desired to use the same statistical approach for both NYS and NYC estimates in order to provide an apples-to-apples comparison, and (c) the authors' stated commitment to maintaining conservative assumptions when encountering statistical uncertainty. First, the Pew Research Center has identified that national household surveys—such as the ACS— undercount the number of unauthorized immigrants in a region; their most recent estimates suggest that the immigrant population is 2% to 3% higher after adjusting for this undercount. If factored into the analysis, the net result of this potential adjustment would be to increase total employment by 5,966 workers; this estimate is generated by multiplying the foreign-born population of New York State from the ACS (4,540,381) by 2% and then 6.57%, or the proportion of foreign-born non-citizens who are employed in construction. Second, the total presented for legal wage-and-salary jobs by the BEA does not include construction jobs provided by temporary help agencies (which represents legal employment). While there is no reliable data on the number of temp-agency workers operating in the construction *industry*, data from the Bureau of Labor Statistics suggests that there were 2,070 workers in construction *occupations* operating legally through New York State employment services companies in 2017. Omitting both adjustments leads this study to likely undercount the amount of payroll fraud in the NYS construction industry; while data on employment services is not available on a county-level basis to assess the effects for NYC, it is expected that this omission also leads to an underestimate of payroll fraud in the five-county region. For more, see: https://www.bls.gov/oes;
https://www.pewresearch.org/hispanic/2018/11/27/unauthorized-immigration-estimate-methodology;

Trying to separate out the legal from the illegal among these 196,648 jobs is where things get empirically murky. Unfortunately, there simply is no perfect way of isolating the degree of illegality among these nearly 200,000 workers with publicly-available data that currently exists. Among the methods that have been explored, analyzing the *number* of tax returns to proxy legal self-employment is woefully insufficient. First, it assumes that every person who files a tax return is operating entirely above board; conversations with industry stakeholders—and simple common sense—suggest that this is not true. As a result, this approach substantially underestimates the amount of illegal activity in construction markets. As outlined in the 2020 UBC report, applying this approach led to estimates of illegality on a national basis that were so low as to be clearly contradicted by numerous state UI audit studies that represent the best direct evidence researchers have of illegal activity in the construction industry.[17]

Another potential approach was identified by James Parrott in his 2011 analysis of New York's construction industry.[18] He suggested that the incidence of payroll fraud in the sector represented the difference between the number of jobs on employer payrolls and the number of workers who claimed *to be employees* on household surveys. The assumption here is that misclassified and off-the-books workers see themselves as employees and would answer as such on household surveys, thereby representing the overage of presumed employees compared to available jobs. This approach is laudable and was an important advancement in estimating the incidence of payroll fraud. However, the authors of the current study—as detailed in the 2020 UBC report—suspect that this approach undercounts the degree of illegality in the industry.[19] In particular, it assumes that every worker who identifies themselves as "self-employed" on household surveys is operating entirely above board. That seems highly unlikely, and the assumption is contradicted by a 2016 study in the academic journal *Public Budgeting and Finance*.[20]

This study takes a different approach in projecting the degree of illegality among the 196,648 jobs in question. First, it is recognized that all workers not on official employer payrolls are technically considered to be self-employed under U.S. tax law. To those ends, this report estimates illegality by applying the methodology developed in the 2020 UBC study: the use of estimated income underreporting rates by self-employed construction workers as published in IRS reports and IRS-sponsored research. While imperfect, the authors contend

---

https://data.census.gov/cedsci/table?q=immigrants&g=0400000US36&tid=ACSDP1Y2017.DP02&hidePreview=true.

[17] For more, see: Ormiston, Russell, Dale Belman and Mark Erlich. 2020. "An Empirical Methodology to Estimate the Incidence and Costs of Payroll Fraud in the Construction Industry."

[18] Parrott, James. 2011. "Employee Misclassification in New York Construction—Economic and Fiscal Costs," Proceedings of the 63rd Annual Meeting of the Labor and Employment Relations Association.

[19] Using data from the current study, this method would compare the number of employees (435,701; from Table 1) to the number of jobs (397,706) to estimate that payroll fraud affected 37,995 workers in New York State's construction industry in 2017. While this may seem reasonable, the authors' analysis of other states' data reveal that this approach may lead to *negative* estimates of the number of the number of misclassified and off-the-books workers.

[20] Alm, James, and Brian Erard. 2016. "Using Public Information to Estimate Self-Employment Earnings of Informal Suppliers," *Public Budgeting & Finance*, 36(1), 22-46.

that income underreporting rates represent the best available proxy for illegal activity. After all, worker misclassification and off-the-books arrangements are, for the most part, efforts on the part of employers to conceal payments to workers and evade taxes due to the government. To be clear, the decision to report—or not report—income on tax returns is the responsibility of the worker. But employers who rely on cash-only payments—without tax documentation—effectively open the door for income underreporting.

While the 2020 UBC report offers a full accounting of the pros and cons of this approach, the proposed relationship between income underreporting and illegal employment arrangements is consistent with research by the Internal Revenue Service. According to a 2016 IRS report, only 1% of wages and salaries across all industries were misreported on income tax forms.[21] In other words, those in legal jobs—featuring detailed documentation in the form of W-2s—feature scant levels of income underreporting. Meanwhile, the IRS report suggested that 64% of nonfarm proprietor income—which is subject to "little to no information reporting"—is underreported on tax forms. Given this outcome, one should expect off-the-books arrangements to be strongly correlated with higher degrees of income underreporting in the industry.

From a methodological perspective, the use of income underreporting rates is also preferable to the number of tax filings. First, this approach relaxes the assumption that every tax filer is operating entirely within the bounds of the law. As such, this method incorporates workers who may operate legally in some transactions—reporting those to the IRS—but may also do business on the side in other transactions. This would theoretically include wage-and-salary employees who do work on the side, as well as sole proprietors who report income documented on 1099-MISC forms but fail to report cash-only payments. Further, while not an explicit count of workers themselves, the use of income underreporting rates is an estimation of the proportionality of illegal activity in the market that weights flagrant abuses far greater than workers who complete an occasional side job for a neighbor.

The use of income underreporting rates to proxy illegal employment practices is hardly perfect; even the 2020 UBC report deems it a "blunt instrument" to measure illegality.[22] But given the more extreme flaws of other possible approaches available via publicly available data, the authors offer it as their most preferred method to gauge illegality among the 196,648 New York State construction jobs in question. To identify the most appropriate income underreporting rates to use, the UBC study triangulates various IRS reports and IRS-sponsored research with what little direct evidence economists have with regards to payroll fraud in the construction industry (e.g., UI audit studies).[23] The analysis concluded that the

[21] For more, see: Internal Revenue Service. 2016. "Federal Tax Compliance Research: Tax Gap Estimates for Tax Years 2008-2010." IRS Publication 1415.

[22] The primary concern of using income underreporting rates is that just because a worker pays their taxes does not necessarily mean that they were operating legally. For instance, a misclassified worker may dutifully pay their taxes despite the fact that they employment situation was illegal under the eyes of state and federal labor law.

[23] In terms of research papers, a 2016 study in *Public Budgeting and Finance* compared how much money self-employed construction workers claimed to earn on household surveys (where they were more likely to be honest) against how much income those workers reported on their tax forms submitted to the IRS. As outlined

most appropriate income underreporting rates for self-employed construction workers were between 38.6% and 64.0%. This is knowingly a wide range, but the lack of direct evidence about the degree of illegality compel the authors to not unnecessarily narrow the range any further. Finally, the UBC work acknowledges methodological concerns that do not preclude the possibility that payroll fraud is even more extensive than this top-line estimate even if such an outcome cannot be confirmed.[24]

Applying these presumed rates of illegality to the 196,648 jobs in question, this approach suggests that between 75,906 and 125,855 workers were engaged in payroll fraud in the New York State construction industry in 2017. These results seem reasonable in light of other data points on payroll fraud. First and foremost, the only direct evidence of payroll fraud in New York State's construction industry—the 2007 UI audit study conducted by Cornell researchers—revealed that there was an average of 45,474 workers misclassified as independent contractors annually between 2002 and 2005. The construction industry has grown since that time, with employer payrolls increasing from 335,701 in 2005 to 397,706 in 2018, however conversations with industry stakeholders suggest that misclassification (i.e., giving workers 1099-MISC forms) may have held flat or declined over time as more and more contractors have simply moved to cash-only arrangements.[25] Industry stakeholders also suggest that off-the-books employment is just as prevalent as misclassification, and some studies have hypothesized that cash-only arrangements may be more than twice that of misclassification.[26] Aligning the 2007 UI audit study with these approximate trends, and it would seem the provided range in this study (75,906 to 125,855) may be reasonable if not a bit conservative.[27]

---

in the 2020 UBC report, there could be many ways to deduce varying degrees of illegality in this method. For instance, a substantial amount of self-employment income was reported to the IRS, but as W-2 wages; should that be considered an innocuous error or a sign of illegality? Further, there is other academic research that shows that self-employed workers underreport their income on household surveys due to similar concerns of being caught engaging in illegal activity. For the underlying report, see: Alm, James, and Brian Erard. 2016. "Using Public Information to Estimate Self-Employment Earnings of Informal Suppliers," *Public Budgeting & Finance*, 36(1), 22-46.

[24] While the UBC study addresses methodological issues in detail, the use of an *average* income underreporting rate does not preclude the possibility that *every* self-employed construction engages in some underreporting that aggregates to 38.6% to 64.0%. While it is highly unlikely that every worker engages in fraud, this suggestion demonstrates one of the limitations of this methodology.

[25] Data from the Bureau of Economic Analysis: https://www.bea.gov/data/employment/employment-by-state.

[26] Studies of New Jersey and California have attempted to estimate the relative sizes of off-the-books and misclassified workers. However, as outlined in detail in the 2020 UBC report, the authors of the current study will not weigh in on this question as they do not feel that publicly-available data allow for a clear enough distinction between off-the-books workers and misclassified workers in order to evaluate these claims. For more, see: Liu, Yvonne Yen, Daniel Flaming, and Patrick Burns. 2014. "Sinking Underground: The Growing Informal Economy in California Construction" and Cooke, Oliver, Deborah Figart, and John Froonjian. 2016. "The Underground Construction Economy in New Jersey."

[27] There are also methodological reasons to suspect that these results may be conservative. While most of these issues are outlined in more detail in the 2019 UBC report, research by Katherine Abraham (University of Maryland) has shown that household surveys (such as the American Community Survey) typically understate the number of jobs in the economy. In essence, some survey respondents simply fail to acknowledge that a household member works for money. For example, in a 2019 paper by Abraham and Ashley Amaya, it was shown that the Current Population Survey missed 21.9% of informal jobs (including 13.0% of informal work

As a proportion of overall employment, the estimated incidence of payroll fraud in New York State's construction industry is largely consistent with the estimated incidence at the national level identified in the 2020 UBC report. Using the value of total employment in Table 1 (594,354), this suggests that between 12.6% and 21.1% of the state construction industry workforce was engaged in a fraudulent employment relationship in 2017. On a national level, this was estimated to be 12.4% to 20.5% in the UBC study, suggesting that New York State is around the national average. The results for New York State are also consistent with studies of other states that have employed variants of this indirect estimation method, including Tennessee (11% to 21%), New Jersey (16%) and California (16%).[28]

To replicate the analysis for New York City, this study applies the framework described above to estimate the incidence of payroll fraud in the construction industry in Bronx, Kings, New York, Queens, and Richmond Counties. Fortunately, the ACS is large enough to generate construction industry estimates of total employment for the most populous counties in the United States, including the five addressed in this study. Nevertheless, it is reminded that county-level estimates are based on smaller samples of workers who were interviewed when compared to state-level analyses; in other words, projections of total employment at the county level will feature a nontrivial margin of error.[29]

To estimate total employment in New York City's construction industry, Table 2 replicates the earlier approach using ACS data for the five-county region in 2017. The results suggest that there were an estimated 217,293 residents of NYC working in the construction industry at employers located in the five-county region.[30] After adding 4,268 to account for the

lasting more than four hours per week). Findings suggestive that household surveys (such as the ACS) may undercount the number of jobs has a direct effect on the current study; this conclusion would mean that the number of self-reported jobs unaccounted for by payroll records would be substantially larger than the projections in this paper. This would subsequently mean that the indirect method underestimates the gap between worker surveys and employer payroll records, thereby undercounting payroll fraud in the construction industry. However, while her research would support the decision to increase the estimates offered in this study, the authors choose not to make such an adjustment (a) in order to remain true to conservative assumptions in the face of statistical uncertainty and (b) because Abraham's findings are not construction-specific, meaning that the economy-wide average may not be perfectly applicable to construction. For more, see: Abraham, Katherine, and Ashley Amaya. 2019. "Probing for Informal Work Activity," Journal of Official Statistics, 35(3), 487-508; Abraham, Katherine, John C. Haltiwanger, Claire Hou, Kristin Sandusky, and James R. Speltzer. 2020. "Reconciling Survey and Administrative Measures of Self-Employment."

[28] For more, see: Liu, Yvonne Yen, Daniel Flaming, and Patrick Burns. 2014. "Sinking Underground: The Growing Informal Economy in California Construction"; Cooke, Oliver, Deborah Figart, and John Froonjian. 2016. "The Underground Construction Economy in New Jersey"; Canak, William, and Randall Adams. 2010. "Misclassified Construction Employees in Tennessee."

[29] The 2017 American Community Survey features 2,059 individuals who identify as working in the construction industry in the five counties analyzed in this study. Area-wide projections are developed using statistical weights, a common approach for researchers in developing projections from the ACS and all other worker surveys.

[30] The estimates for the construction industry for the five-county region are aggregated from the 2017 one-year sample found here:
https://data.census.gov/cedsci/table?q=workers%20by%20industry&table=B24070&tid=ACSDT1Y2017.B24070&t=Industry&vintage=2018&lastDisplayedRow=161&hidePreview=true&y=2017&g=0500000US36005,36047,36061,36085,36081.

estimated number of second jobs in the industry among workers in the region (an extra 1.964% from national estimates), Table 2 reflects a net inflow of 58,695 workers from outside the five-county region to jobs located in NYC. While this number is larger than the statewide net inflow, it is unsurprising: it is effectively capturing the considerable number of workers who commute from suburban counties to employers located in NYC. Altogether, Table 2 suggests that workers reported 280,256 jobs located in the five-county area that comprise the definition of NYC in this study.

Table 2. Estimating Total Construction Employment in the New York City ("NYC") (Bronx, Kings, New York, Queens and Richmond Counties), 2017

NYC Residents (2017 ACS)		
Wage-and-Salary Jobs (A)	181,029	
Self-Employed Jobs (B)	36,264	
Total Jobs for NYC Residents (A+B)		217,293
Number of Second Jobs (estimate)		4,268
Inflow & Outflow of Workers		
Residents from Outside NYC Working in NYC (C)	72,968	
NYC Residents Working Outside NYC (D)	14,273	
Net Inflow/Outflow of Workers into/out of NYC (C–D)		58,695
Total Construction Employment in New York City		**280,256**

Source: 2017 American Community Survey (1-Year Sample).

As a reminder, the second number needed for these calculations is the number of legal wage-and-salary jobs for New York City. Finding this number is slightly complicated by the fact that the Bureau of Economic Analysis does not publish estimates for wage-and-salary jobs at the county level. However, it is rather straight-forward to build a close approximation of this value by looking at the BEA's underlying source data—the Quarterly Census of Employment and Wages—available via the Bureau of Labor Statistics. The authors' analysis of QCEW data suggests that there were 147,898 private-sector wage-and-salary jobs in the New York City construction industry in 2017.[31] Because the BEA incorporates jobs not covered by state UI programs, this industry-wide estimate is inflated by an additional 2.869%, or the percentage rate of increase of BEA estimates over QCEW estimates for New York State in 2017.[32] This

[31] The Bureau of Labor Statistics shows an entry for construction employees by local government agencies for New York and Queens Counties in 2017, however these values do not meet BLS disclosure standards. Reviewing historical data does not offer much help, as the BLS has never published such numbers for these two counties. As such, it is expected that these sums are relatively small and it is hoped that the BEA adjustment will account for some of these jobs. Nevertheless, the legal wage-and-salary total may slightly undercount the number of jobs because of this. Data from the QCEW can be found at: http://www.bls.gov/cew.

[32] For New York State, the BEA offers 397,706 wage-and-salary jobs while the QCEW suggests 386,615; the BEA therefore represents an increase of 2.869%.

leads to a final projection of 152,141 legal wage-and-salary jobs in the New York City construction industry in 2017.

Comparing the estimates for total employment (Table 2) to that of legal wage-and-salary jobs, this analysis projects that there was an excess of 128,115 jobs identified by workers operating in NYC beyond what was reported by employers in the region. As a reminder, these jobs consist of both legitimate self-employment and those that represent fraudulent employment relationships. To estimate the degree of illegality in this group, this study again applies the range of income underreporting rates (38.6% and 64.0%) to estimate that there were between 49,452 and 81,994 misclassified and off-the-books workers in the construction industry in New York City in 2017. This amounts to 17.6% to 29.3% of the sector's employed workforce.

The estimated proportion of the NYC construction jobs that are held fraudulently is higher than New York State (12.6% to 21.1%) and the national average (12.4% to 20.5%). This is not surprising. Conversations with industry stakeholders have suggested that rates of illegality are higher in urban areas, a finding confirmed by a series of prior reports. Of most importance, the aforementioned 2007 study of the New York City by the Fiscal Policy Institute suggested that one-quarter of NYC's construction workforce were employed fraudulently, an estimate that is within the range offered by this study. Higher rates of illegality in urban areas—30% or more—were suggested in a 2005 report about Los Angeles County, a 2017 study of construction job sites in six major Southern cities, and a forthcoming study of the commercial construction job sites in Washington, D.C.[33] While these other studies would support projected rates of payroll fraud in NYC higher than those reported in the current study, the authors remain steadfast with their conservative assumptions given statistical uncertainty and their appreciation for the gravity of what is being alleged: widespread illegality.

Costs of Payroll Fraud: Introduction

Payroll fraud in the construction industry exists in the construction industry largely due to employers' self-interest in evading legally-required tax contributions and other necessary expenses associated with legal employment. This imposes severe costs on workers and broader society. Payroll fraud defunds critical social programs, robs workers of their legal rights to benefits, and shifts much of employers' tax burden onto the backs of workers and taxpayers at large. This also severely disadvantages honest, law-abiding contractors in the

[33] A 2005 study of Los Angeles County in California projected that nearly 30% of construction workers were employed Informally; see: Flaming, Daniel, Brent Haydamack, and Pascale Joassart. 2005. "Hopeful Workers, Marginal Jobs: LA's Off the Books Labor Force." A 2017 survey of 1,435 construction workers operating in six major cities in the South estimated that 32% were misclassified as independent contractors or working off-the-books; see: Theodore, Nik, Bethany Boggess, Jackie Cornejo, and Emily Timm. 2017. "Build a Better South: Construction Working Conditions in the Southern U.S." A forthcoming study to be published by the Catholic Labor Network surveyed 79 workers at 24 commercial construction sites in Washington, D.C., and discovered nearly half (47%) were a part of the underground construction economy; see: Sinai, Clayton and Ernesto Galeas. Forthcoming. "The Underground Economy and Wage Theft in Washington, D.C.,'s Commercial Construction Sector." Catholic Labor Network.

bidding process for new projects, driving many out of business and further quickening the "race to the bottom" when it comes to employment conditions in many trades.[34]

To project the economic costs attributable to payroll fraud, this study relies on a variant of the methodology advanced in a 2019 report commissioned by the Attorney General for the District of Columbia and authored by economists Dale Belman (Michigan State University) and Aaron Sojourner (University of Minnesota). This approach was applied and further developed in the 2020 report by the current study's authors for the United Brotherhood of Carpenters in projecting the national costs of payroll fraud in the construction industry. The analysis in the current study directly applies the approach outlined in the 2020 UBC report to estimate the economic costs of payroll fraud in the construction industry in New York State and New York City.

The foundation of this empirical approach is to estimate the economic costs per worker affected by payroll fraud in the industry, and then multiply the per-worker cost by the number of workers (i.e., the results of the previous section). Central to this analysis is the recognition that many of the costs of payroll fraud are dependent upon workers' incomes. For instance, employers' obligations for workers' compensation and federal Social Security and Medicare programs represent a percentage of workers' taxable income.

There is one glaring problem with this approach: empirical data do not exist on the earnings or work hours of workers directly affected by payroll fraud. As a result, this study must make inferences about these workers' characteristics. In order to develop conservative estimates of the economic costs of payroll fraud, this study relies on two key assumptions. First, this study assumes that these workers work the same amount of annual hours—and overtime—as regular employees. Conversations with industry stakeholders strongly suggest that misclassified and off-the-books workers may work more hours than regular employees in a given week, however the assumption was made because (a) the lack of data on informal workers' hours and (b) the desire to estimate a conservative estimate of lost overtime premiums.

The second important assumption involves workers' earnings. While industry stakeholders report that misclassification and off-the-books practices occur at all parts of the income distribution in the construction sector, it would seem to happen more often among the lower-paid trades.[35] To those ends, this study assumes affected workers would make

[34] There are numerous reasons why payroll fraud has persisted—and seemingly intensified—in the construction industry over the last few decades; while this discussion rests outside the scope of the current report, there are other studies that have addressed these concerns. Among others, see: Belman, Dale, and Russell Ormiston. *Forthcoming*. "Best Practices in the United States Construction Industry," In J. Druker and G. White (Eds.). *Labour in the Construction Industry: An International Perspective*. Routledge; Ormiston, Russell, Dale Belman, Julie Brockman and Matt Hinkel. 2020. "Rebuilding Residential Construction," In P. Osterman (Ed.), *Creating Good Jobs: An Industry-Based Strategy*. MIT Press.

[35] In addition to anecdotal evidence offered by industry stakeholders, the notion that payroll fraud is more prevalent in trades that require lesser skill or training is supported by a number of articles. First, the census of mid-Michigan drywall installers by Carpenters Local 525 of the Michigan Regional Council of Carpenters found that 73% of were either misclassified or working off-the-books. Further, the 2007 study of misclassification in Minnesota found that misclassification rates were highest in roofing and drywall installation and lowest in road

$35,000 if employed legally in New York State and $37,500 if employed legally in New York City. These numbers are extracted from the New York State Department of Labor, which presents these values as the "entry" level earnings for workers in construction occupations in the two respective jurisdictions.[36]

Costs of Payroll Fraud: New York State

As a reminder, the economic costs of payroll fraud established in this study are calculated by multiplying the number of workers involved (from the previous section) by the per-worker cost. In order to develop the per-worker cost estimate, this study relies on similar assumptions, underlying data sources, and empirical approach as used by the Belman and Sojourner analysis. This includes the application of construction-industry data from the Employer Costs for Employee Compensation (ECEC) program administrated by the Bureau of Labor Statistics; these reports offer the national average per-hour rates for all types of worker compensation for workers in the construction sector.[37] This work is complemented with New York-specific tax and contributions schedules where possible.

Following Belman and Sojourner's blueprint, this study starts by decomposing the pay of a worker in New York State, earning $35,000 per year. But this does not equate to the sum that legal employers would have to pay to hire the worker, and it is this difference that represents the cost savings that employers realize upon engaging in payroll fraud. Therefore, this study decomposes the worker's full labor cost as follows:

- *Regular vs. Overtime and Premium Pay:* One of the defining characteristics of legal employment is that employees are entitled to overtime wage rates (i.e., time-and-a-half) if they exceed 40 hours of work in a given week; in contrast, higher rates for overtime are not required for workers misclassified as independent contractors. Further, regular employees are often granted a premium for working on holidays. The starting point of $35,000, however, does not differentiate between regular, overtime

and bridge construction and site preparation. Finally, the 2002 report by an analyst at the U.S. Census Bureau estimated that, in the mid-1990s, the highest rates of illegal employment by occupation were in carpet installation, tile setters, construction helpers, construction laborers, and roofers. In terms of sources, respectively see: Ormiston, Russell, Dale Belman, Julie Brockman and Matt Hinkel. 2020. "Rebuilding Residential Construction," In P. Osterman (Ed.), *Creating Good Jobs: An Industry-Based Strategy*. MIT Press; Office of the Legislative Auditor. 2007. "Misclassification of Employees as Independent Contractors," State of Minnesota; Roemer, Marc. 2002. "Using Administrative Earnings Records to Assess Wage Data Quality in the March Current Population Survey and the Survey of Income and Program Participation," U.S. Census Bureau Staff Paper, Washington, D.C.

[36] The New York Department of Labor calculates "entry" level earnings by calculating the average of the bottom third of wages in each occupation in SOC 47-0000. While it is recognized that these earnings levels are based on *occupation* and not *industry* calculations, it is expected that most workers affected by payroll fraud will work in these trades (as opposed to office workers). For more, see: https://labor.ny.gov/stats/lswage2.asp. Note that the annual earnings values for this study—$35,000 for New York State and $37,500 for New York City—were the values provided when this database was accessed and report was written in February 2020; subsequent updates to the web site at the New York State Department of Labor reflect increases in these values.

[37] This study relies on the ECEC rates for the construction industry from September 2017, available at: https://www.bls.gov/news.release/archives/ecec_12152017.htm.

and premium pay.[38] Fortunately, calculations derived from the ECEC reflect that 2.08% of construction workers' income, on average, is derived from the overtime and premium rates on a national basis (e.g., the "half" in "time-and-a-half").[39] Applying this to the worker in question, this means that $34,272.04 was earned via regular rates with an additional $727.96 earned from overtime and premium pay.

- *Social Security and Medicare:* To be conservative, this study assumes that workers' $35,000 in self-reported earnings represents *gross* annual pay. The employee will then have 7.65% deducted for Social Security and Medicare, a contribution otherwise known as the Federal Insurance Contribution Act (FICA) tax; this amounts to $2,677.50 being taken out of employees' paychecks. The employer will also be required to pay an additional $2,677.50 to cover its share of Social Security and Medicare without it showing up on the employee's pay stub. Removing the employee's share of FICA, this leaves the worker with $32,322.50 in *net* annual pay ($31,650.23 from regular wages, $672.27 in overtime and premium pay).

- *Workers' Compensation:* Correspondence with the New York Compensation Insurance Rating Board reflects that construction carpenters in New York State faced workers' compensation insurance environment in 2017 where the "loss costs" average was $10.89 per $100 in payroll.[40] While insurance companies typically enlarge this cost to contractors to incorporate profit and other expenses, this study will use this rate as contractors' average costs of workers' compensation coverage in order to maintain a conservative estimation strategy. Multiplying this rate by $35,000, this suggests that the employer will pay $3,811.50 in workers' compensation costs to cover this employee.

- *Unemployment Insurance:* The amount that an employer must pay to fulfill its legal obligation to fund their respective UI obligation for each worker varies greatly by the taxable rate (%) and taxable wage base ($) of their respective state programs. In New

[38] This study assumes that workers' self-reported total of $35,000 includes all tax-eligible income payments that find their way on workers' paychecks, including wages and salaries, paid leave, and supplemental pay.

[39] This number is estimated by adding up all tax-eligible income payments made to workers; from the ECEC, this would include the categories of wages and salaries, paid leave, supplemental pay. That sum for September 2017 was $30.29 per hour. Of that, $0.63 per hour was deemed to be from the overtime premium. Dividing $0.63 by $30.29 yields 2.08%.

[40] This number provided to the authors by a representative of the New York Compensation Insurance Rating Board, and was effective as of October 1, 2017. The rates provided for 2019 suggest that loss costs are much higher in some trades, including those—such as carpentry—that are likely to feature a substantial number of misclassified and off-the-books workers. While this suggests that the rates used in this study may be too low, the NYCRIB described that loss costs have been declining since 2017 so this number may be more representative of the full costs of coverage given more current rates. Finally, the NYCRIB acknowledged that contractors could be eligible for two unique adjustments that could lower their costs: a one-year premium adjustment program for policies that are experience rated, satisfies an hourly wage requirement and contains one or more construction classifications; the other is the New York Payroll Limitation Law that applies a maximum payroll limitation for eligible construction classification codes but excludes employees engaged in one- or two-family residential housing. These programs may offset our conservative estimates based on loss costs, however the lack of data on the incidence of their use compels this study to not alter the base loss costs rate.

York State, employers must pay 2.98% of the first $10,900 earned by an employee.[41] However, since UI contributions are experienced rated and construction-specific average rates are not available, Belman and Sojourner propose using twice the industry-wide taxable rate for construction employers (i.e., 5.96%). This leads to a projection that, for New York State, construction employers would contribute $649.64 to state UI funds for workers who were paid $35,000.

- *Tax-Exempt Benefit Costs:* Workers' responses on the American Community Survey do not offer insight into the dollar value associated with employer-provided, tax-exempt fringe benefit costs, which include things like health insurance and pension funding. However, calculations from the ECEC suggest that, on average, construction employers spend $17.47 on these fringe benefits for every $100 paid to the worker on a national basis. While this may be true for the average worker, benefit packages are likely to be much smaller for those workers paid an entry-level wage. As such, this study analyzes differences in the incidence of employer-sponsored health insurance in the ACS to suggest that a more appropriate fringe benefit rate for these workers should be $16.20 for every $100 paid to the worker.[42] Multiplying this rate by $35,000, this implies that employers would spend $5,670.10 in insurance and retirement benefits for this worker.[43]

Aggregating all wages, benefits, taxes and required social contributions, this employee would cost a legally-operating employer in New York State a total of $47,808.74. Of those funds, workers would receive $37,992.60 in after-tax earnings and fringe benefits. The remaining $9,816.14 would be diverted to Social Security, Medicare, workers' compensation and the unemployment insurance program.

The fundamental question from here is: how much would this worker cost an employer if they were classified as an independent contractor or hired in a cash-only arrangement? This question is a bit more complicated than meets the eye. Economic theory would suggest that, in order to entice workers to forego the legally-earned benefits bestowed upon a legal employee, employers would have to pay workers extra per hour in cash; this amounts to what economists call a "wage premium." Conversations with industry stakeholders suggests that this sometimes does happen. But certainly not always. Other times, employers are able to exploit their monopsony power in the labor market—they have the jobs that workers desperately need—and attract and hire enough workers without paying such a premium.

---

[41] State-by-state DOL UI rates for 2017 are located here: https://oui.doleta.gov/unemploy/docs/aetr-2017.pdf.
[42] The rate of $17.47 is deflated by comparing the average rate of employer-sponsored health insurance across the entire industry (61.75%) against the rate for those who earn between $30,000 and $40,000 (57.28%); empirically, the calculation is 17.465*0.5728/0.6175=16.20. To be fair, using the industry-average ratio of $17.47 to calculate the fringe benefit packages of lower-income workers would also have offered validity: the smaller benefit packages would be a product of working with a smaller base income. But this study was compelled to deflate the rate of fringe benefits at the lower-income range to account for the lack of union employers in this income range and for the sake of generating conservative empirical estimates.
[43] This study ignores potential mandatory health insurance costs such as the opt-out of the Affordable Care Act. A vast majority of construction firms do not employ the 50+ employees that would make it legally obligated to comply with the law.

The wage premium paid to workers agreeing to operate in an illegal employment relationship likely differs from employer to employer and from worker to worker. For many employers and workers, there may be no such wage premium at all. Others may see a reasonable sum added to their earnings to incentivize them to work off-the-books. Unfortunately, there are no known data on this presumed value. So for the sake of offering an initial, conservative estimate of the costs of payroll fraud in the construction industry, this study follows the lead of Belman and Sojourner's approach in their 2019 study in first assuming that workers who are employed fraudulently do earn a sizeable premium: the cash value of legal employees' fringe benefits. This would leave the employer to save on labor costs via the (a) denial of overtime and premium pay, (b) avoiding required workers' compensation and unemployment insurance contributions, and (c) shifting its FICA burden to employees.

Table 3. A Comparison of Per-Worker Labor Costs for Legal Employers and Those Engaging in Payroll Fraud in New York State, 2017 (Assuming Legal Earnings = $35,000)

	Legal Employer	Fraudulent Employer w/Premium	Fraudulent Employer w/o Premium
Value to Worker			
Regular Pay	$34,272.04	$34,272.04	$34,272.04
Overtime and Premium Pay	$727.96	$0.00	$0.00
Fringe Benefits / Wage Premium	$5,670.10	$5,670.10	$0.00
Subtotal (1)	$40,670.10	$39,942.13	$34,272.04
LESS: Social Security & Medicare (EE share) (2)	$2,677.50	$6,111.15	$5,243.62
Total – Net Value to Worker	$37,992.60	$33,830.99	$29,028.42
Employer Contributions to Social Insurance			
Social Security & Medicare (ER share)	$2,677.50	$0.00	$0.00
Unemployment Insurance	$649.64	$0.00	$0.00
Workers' Compensation	$3,811.50	$0.00	$0.00
Total – ER Contributions to Social Insurance (3)	$7,138.64	$0.00	$0.00
Totals			
Total Net Value to Worker (1-2)	$37,992.60	$33,830.99	$29,028.42
Total Value to Social Insurance (2+3)	$9,816.14	$6,111.15	$5,243.62
Total Labor Costs (1+3)	$47,808.74	$39,942.13	$34,272.04
Differences from Legal Employer			
Total Labor Cost Differential from Legal		$7,866.60	$13,536.70
% More that Legal Employers Must Pay		19.69%	39.50%

Notes: The worker is responsible for both the employee and employer's share of Social Security and Medicare when working off the books or as an independent contractor. Workers who receive a wage premium—such as the cash value of fringe benefits in the second column—must pay the tax on the premium; in contrast, the fringe benefits (e.g., health insurance) provided by the legal employer in the first column are not subject to tax.

Given these starting conservative assumptions, the first two columns of Table 3 compare the amount and distribution of employers' per-worker labor costs when the firm is operating legally versus when they acting fraudulently but offering workers this premium. The results suggest that a construction employer that is operating legally in New York State must spend

$7,866.60 more on a per-worker basis than one that is operating fraudulently; put another way, per-worker labor costs for the law-abiding firm are 19.69% higher than the one acting illegally.[44] Much of this differential in labor costs is attributable to the elimination of firms' required contributions to social insurance programs, including a shifting of the "employer share" of the Social Security and Medicare tax burden from employers to workers.[45] But it is notable that workers also lose a substantial amount even with the assumed wage premium; including lost overtime and premium pay and now having to pay the employer's share of the tax burden, workers' net compensation declines by $4,161.61 when working for an employer engaging in payroll fraud.

The assumption that these workers receive a substantial wage premium for operating outside a legal employment structure does offer a conservative estimate of per-worker cost savings attributable to payroll fraud. But while a large wage premium may occur in some parts of the industry, our conversations with industry stakeholders suggests that workers more often receive little to no such premium. To those ends, the third column in Table 3 offers a less conservative assumption that workers receive no wage premium for engaging in an illegal employment structure, instead receiving only cash in the form of regular pay. Under this set of circumstances, a construction employer that is operating legally in New York State must spend $13,536.70 more on a per-worker basis than a contractor operating fraudulently. This equates to 39.50% higher per-worker labor costs for the law-abiding firms when compared to illegal firms.[46] Given the lack of wage premium, workers in New York State's construction industry bear the brunt of this arrangement, with their net compensation being $8,964.18 less than that of a legal employee. To be clear, however, not all of this differential represents illegality: the evasion of required social insurance contributions is illegal, but the refusal to pay fringe benefits or a wage premium is not.

Table 3 highlights the respective sources of these cost savings for fraudulent employers and how this leads to reduced net compensation for workers and funding for social programs in New York State. For employers, avoiding legally required contributions to social insurance programs makes up a considerable portion ($7,138.64) of the cost differential. Denial of overtime and premium pay also saves these employers an estimated $727.96 on a per-worker basis; it is again reminded that this assumes that such workers engage in the same amount of overtime as legal employees. Finally, the shifting of the employer share of Social Security and Medicare taxes onto workers also substantially reduces workers' net compensation.

[44] This estimated percentage differs slightly from the findings of Belman and Sojourner in 2019 study, in large part because they did not cap UI contributions based on income level since they were looking only at hourly wage (and not annual earnings).

[45] With a $35,000 assumption, this study estimates that the per-worker labor costs for legal employers is 19.69% higher than firms who operate fraudulently and pay a wage premium to workers who operate as misclassified independent contractors or who work in a cash-only relationship. This is calculated using the earnings of workers in these illegal employment relationships as the denominator. This is not the same as the percent of cash savings using the legal employers' labor costs as the basis of analysis; using that as the denominator, the estimated differential is 16.45%.

[46] When using the labor costs of legal firms as the denominator (instead of those of the fraudulent employers), the cost difference without wage premiums is estimated to be 28.31%, which roughly matches the industry's long-held 30% rule of thumb when it comes to estimating the cost savings attributable to payroll fraud.

The results of Table 3 offer the authors' best estimates of the minimum and maximum per-worker labor cost differential between legal employers and those who misclassify equivalent workers as independent contractors or hire workers using cash-only payments in New York State. To estimate the aggregate cost of payroll fraud in the state's construction industry, this study multiplies the per-worker cost differential by the number of workers directly affected by payroll fraud. Because of the level of uncertainty surrounding the number of workers involved, and the authors' interest in being conservative, this study applies the lower-bound number of workers involved for New York State (i.e., 75,906).

Table 4 presents the projected aggregate annual labor costs of these 75,906 construction workers in New York State on the basis of their employment relationship. The first column presents the aggregate costs of these workers being employed legally. The second and third columns estimate the same totals but under the assumption that workers are employed fraudulently; the second column is conservative and assumes there is a wage premium equal to the cash value of fringe benefits while the third column assumes no wage premium. The results of Table 4 suggest that these 75,906 workers would have cost New York State construction employers $3.63 billion if employed legally. In comparison, employers engaged in fraud spent just $3.03 billion if paying a wage premium and $2.60 billion if not. These results demonstrate that law-breaking employers were able to shave up to an estimated $1.03 billion from their costs by engaging these actions.

To be clear, a part of the presumed $1 billion in labor cost savings represents the failure of employers to provide fringe benefits to workers in the form of health insurance and pension contributions. That does not violate the law. However, employers evading legally-required contributions to state and federal social programs is illegal, and it represents a majority of the savings these employers realize when engaging in payroll fraud. For example, Table 4 projects that payroll fraud in New York State's construction industry led to an estimated $289.3 million in unpaid workers' compensation insurance premiums. A projected $49.3 million due the state's unemployment insurance program was also lost. Finally, a substantial portion of employers' savings was due to its offloading of its obligations to Social Security and Medicare onto the backs of workers; this amounts to $203.2 million in tax obligations transferred from employers to workers. This is because, under these circumstances, workers would technically be considered "self-employed" and thus responsible for both the employee's and employer's share of Social Security and Medicare. This increased tax responsibility comprises a large part of why workers' net value declines so drastically due to payroll fraud.

Table 4. Estimated Aggregate Labor Costs for Legal Employers and Those Engaging in Payroll Fraud, New York State, 2017 (in $ millions) (Assuming Legal Worker Earnings = $35,000)

	Legal Employer	Fraudulent Employer w/Premium	Fraudulent Employer w/o Premium
Illegal Employment			
Number of Workers	75,906	75,906	75,906
Value to Worker			
Regular Pay	$2,601.5	$2,601.5	$2,601.5
Overtime and Premium Pay	$55.3	$0.0	$0.0
Fringe Benefits / Wage Premium	$430.4	$430.4	$0.0
Subtotal (1)	$3,087.1	$3,031.8	$2,601.5
LESS: Social Security & Medicare (EE share) (2)	$203.2	$463.9	$398.0
Total – Net Value to Worker	$2,883.9	$2,568.0	$2,203.4
Employer Contributions to Social Insurance			
Social Security & Medicare (ER share)	$203.2	$0.0	$0.0
Unemployment Insurance	$49.3	$0.0	$0.0
Workers' Compensation	$289.3	$0.0	$0.0
Total – ER Contributions to Social Insurance (3)	$541.9	$0.0	$0.0
Totals			
Total Net Value to Worker (1-2)	$2,883.9	$2,568.0	$2,203.4
Total Value to Social Insurance (2+3)	$745.1	$463.9	$398.0
Total Labor Costs (1+3)	$3,629.0	$3,031.8	$2,601.5
Differences from Legal Employer			
Total Labor Cost Differential from Legal		$597.1	$1,027.5
% More that Legal Employers Must Pay		19.69%	39.50%

Notes: The worker is responsible for both the employee and employer's share of Social Security and Medicare when working off the books or as an independent contractor. Workers who receive a wage premium—such as the cash value of fringe benefits in the second column—must pay the tax on the premium; in contrast, the fringe benefits (e.g., health insurance) provided by the legal employer in the first column are not subject to tax.

While the results offered in Table 4 represent the *direct* costs associated with payroll fraud in New York State's construction industry, there are also *indirect* economic costs. In particular, employers' lack of tax withholding and failure to procure employment documentation open the door to workers to not report or underreport their income to the Internal Revenue Service and the New York State Department of Taxation and Finance. This leads to state and federal income tax shortfalls. Further, while payroll fraud may represent a significant transfer of tax obligations from employers to workers, the lack of documentation allows many workers to simply not pay what is owed; this leads to a substantial shortfall in Social Security and Medicare programs.

Table 5. Minimum and Maximum Estimated Tax Loss in Payroll Fraud, New York State, 2017 (in $ millions) (Assuming Legal Worker Earnings = $35,000)

	Minimum	Maximum
Illegal Employment		
Number of Workers (Total)	75,906	75,906
Number of New York State Residents (Est.)	70,266	70,266
Tax Revenue Shortfalls		
Social Security & Medicare	$92.7	$296.9
Federal Income Tax (2019 tax schedule)	$28.7	$108.7
State Income Tax (2019 tax schedule)	$15.5	$55.9

Note: Social Security, Medicare and federal income tax projections based on the estimated total number of affected workers among New York employers. State income tax projections based on the estimated number of New York State residents employed by those firms. State income tax totals do not include non-resident taxes.

The projections in Table 5 offer a range of the potential tax loss attributable to worker nonpayment and underpayment that is made possible by the lack of employment documentation provided by the employer. To be conservative, this study uses the entire range of potential income underreporting rates among self-employed construction workers that could be gleaned from the 2016 study in *Public Budgeting and Finance* and from IRS reports: 23.3% to 64.0%.[47] This leads to a predictably wide range of potential outcomes for state and federal revenue, but the authors are compelled to adhere to this range in the absence of confirmatory data otherwise.

The results of Table 5 demonstrate that Social Security and Medicare experience the most substantial expected shortfalls due to payroll fraud in the New York State construction industry. Using the $35,000 income assumption for each of the 75,906 affected workers employed by New York State construction employers, it is projected that these programs experience losses between $92.7 million and $296.9 million. In order to consider the effects of tax reform, federal and state income tax obligations were analyzed through the lens of 2019 schedules.[48] Generating exact estimates, however, is practically impossible with publicly-available data given that researchers do not know which specific workers are affected by payroll fraud. As such, the authors must make some assumptions about the characteristics of these workers. First, since marital status dictates workers' standard deduction and tax rates, this study assumes that workers engaged in payroll fraud are married at the same proportion (56.83%) as all construction workers and have one child. In the absence of clear data on spousal income, this study assumes that all workers take the standard deduction and have no other income. This latter assumption is extremely

[47] The lowest rates in this expanded range were not included in the calculation of the incidence of payroll fraud because it produced estimates of the number of workers involved that were so low as to be contradicted by a preponderance of other studies on the issue. That said, the authors include these lower rates here in the absence of confirmatory data otherwise on income underreporting. For more discussion of how these rates were generated, see: Ormiston, Russell, Dale Belman and Mark Erlich. 2020. "An Empirical Methodology to Estimate the Incidence and Costs of Payroll Fraud in the Construction Industry."

[48] Per-worker tax estimates derived from looking at breakdowns from the Tax Foundation: https://taxfoundation.org/2019-tax-brackets and https://taxfoundation.org/state-individual-income-tax-rates-and-brackets-for-2020/.

conservative, and suggests that the estimated resulting income tax revenue losses approximate *lower-bound* projections.[49] With these caveats in mind, the results suggest that payroll fraud in New York State's construction industry led to federal income losses of $28.7 million to $108.7 million using the 2019 tax schedule.

Estimating the corresponding loss in New York State tax revenue is complicated by the fact that some of the 75,906 workers affected by payroll fraud while working for NYS construction employers do not live in the state; because of data limitations, this study does not include New York State taxes due by non-residents. To estimate the proportion of workers who are New York residents, this study used data from the 2017 American Community Survey that suggests that 92.57% of construction workers employed by NYS firms also live in the state. As a result, this proportion is multiplied by the number of workers affected; the results suggest 70,266 of these workers reside in New York State and thus are subject to the state's income tax.[50] Using the same income and demographic assumptions above and using the 2019 state income tax schedule, Table 5 suggests that payroll fraud resulted in an estimated $15.5 million to $55.9 million shortfall in New York State income tax. As a reminder, however, these estimates are *lower-bound* projections of income tax losses due to the conservative nature of the assumptions applied. Finally, it should be highlighted that income underreporting and nonreporting represent the responsibility of *workers* even if these activities are made possible by employers' failure to withhold tax and provide employment documentation.

Costs of Payroll Fraud: New York City

Estimating the economic costs of payroll fraud for the five counties that comprise New York City follows the same step-by-step approach as outlined above, albeit using a slightly higher per-worker income level ($37,500). Since the process of calculating per-worker costs are identical to that presented earlier, Table 6 offers the estimated aggregate totals of labor costs and social insurance contributions for the New York City construction industry under the same three assumptions: (a) a worker is paid legally, (b) a worker is paid illegally but provided a wage premium equal to the cash value of fringe benefits, and (c) a worker is paid illegally but provided no wage premium. In the absence of confirmatory data, this study once again uses the minimum number (49,452) of the estimated range of the number of workers affected by payroll fraud in order to generate conservative, lower-bound estimates of the social costs.

The results of Table 6 suggest that while legal employment should have cost Greater NYC construction firms $2.55 billion for these nearly 50,000 workers, payroll fraud allowed them to illegally reduce labor costs by anywhere from $414.5 million (with wage premium) to $729.3 million (without wage premium). Excluding the nonpayment of fringe benefits—

[49] One counterbalance to the conservative nature of estimated federal income tax losses is that this study does not consider potential earned income tax credit (EITC) benefits.

[50] This assumes that workers affected by payroll fraud follow the same residence and commuting patterns as regular employees. While it could be argued that workers affected by payroll fraud may be more likely to be local—thus suggesting that the number of in-state workers used in this study could be an underestimate—the absence of any data on this issue compels the authors to rely on the overall industry average for all workers.

which is not illegal—the projections in Table 6 suggest that payroll fraud allowed New York City construction firms to reduce labor costs by over $400 million in 2017. The most substantial savings was the evasion of workers' compensation insurance premiums, amounting to slightly over $200 million. Employers also evaded an estimated $32.1 million in contributions to the New York State unemployment insurance program. Further, NYC firms avoided $38.6 million in overtime premiums—a conservative estimate given how overtime is addressed in this study—and offloaded $141.9 million in Social Security and Medicare obligations onto the backs of NYC workers.

Table 6. Estimated Aggregate Labor Costs for Legal Employers and Those Engaging in Payroll Fraud, New York City, 2017 (in $ millions) (Assuming Legal Worker Earnings = $37,500)

	Legal Employer	Fraudulent Employer w/Premium	Fraudulent Employer w/o Premium
Illegal Employment			
Number of Workers	49,452	49,452	49,452
Value to Worker			
Regular Pay	$1,815.9	$1,815.9	$1,815.9
Overtime and Premium Pay	$38.6	$0.0	$0.0
Fringe Benefits / Wage Premium	$314.8	$314.8	$0.0
Subtotal (1)	$2,169.3	$2,130.7	$1,815.9
LESS: Social Security & Medicare (EE share) (2)	$141.9	$326.0	$277.8
Total – Net Value to Worker	$2,027.4	$1,804.7	$1,538.0
Employer Contributions to Social Insurance			
Social Security & Medicare (ER share)	$141.9	$0.0	$0.0
Unemployment Insurance	$32.1	$0.0	$0.0
Workers' Compensation	$201.9	$0.0	$0.0
Total – ER Contributions to Social Insurance (3)	$375.9	$0.0	$0.0
Totals			
Total Net Value to Worker (1-2)	$2,027.4	$1,804.7	$1,538.0
Total Value to Social Insurance (2+3)	$517.8	$326.0	$277.8
Total Labor Costs (1+3)	$2,545.2	$2,130.7	$1,815.9
Differences from Legal Employer			
Total Labor Cost Differential from Legal		$414.5	$729.3
% More that Legal Employers Must Pay		19.45%	40.16%

Notes: The worker is responsible for both the employee and employer's share of Social Security and Medicare when working off the books or as an independent contractor. Workers who receive a wage premium—such as the cash value of fringe benefits in the second column—must pay the tax on the premium; in contrast, the fringe benefits (e.g., health insurance) provided by the legal employer in the first column are not subject to tax.

In addition to these direct costs, there are also the indirect costs of payroll fraud attributable to worker nonreporting and underreporting on income taxes. To those ends, Table 7 presents projections of revenue shortfalls for Social Security and Medicare, as well as federal, state and New York City income taxes. This process again uses a wide range of income underreporting rates (23.3% to 64.0%) and 2019 tax schedules. The results offer that income underreporting led to shortfalls in Social Security and Medicare ranging between $64.7 million and $208.6 million. In terms of income tax shortfalls, the IRS lost between $21.7 million and $81.6 million in revenue to payroll fraud in NYC's construction industry.

Projecting New York State and New York City income tax losses requires that the number of workers affected be categorized on the basis of where they reside and, thus, are required to pay income tax; this is necessary given that data limitations necessitate excluding non-resident taxes due. Using data from 2017 American Community Survey, it is estimated that 87.98% of construction workers employed by New York City contractors live in New York State; that equates to 40,024 workers in the analysis presented in Table 7. Using the 2019 NYS income tax schedule and continuing to apply conservative assumptions about workers' family income, the results of Table 7 suggest that payroll fraud among NYC contractors indirectly led to between $10.0 million and $36.0 million in state income tax revenue lost. To extend the analysis to NYC income tax shortfalls, data from the 2017 ACS suggests that 72.72% of construction workers employed by NYC firms are residents of New York City; this equates to 33,082 NYC residents affected by payroll fraud by NYC construction employers. Using 2019 income tax schedule and conservative income assumptions, the analysis suggests that payroll fraud by NYC construction employers led to a loss of $5.9 million to $21.0 million in local income tax.[51] As a reminder, the assumptions underlying the tax methodology applied in this study make these all lower-bound estimates of tax losses.

Table 7. Minimum and Maximum Estimated Tax Loss in Payroll Fraud, New York City, 2017 (in $ millions) (Assuming Legal Worker Earnings = $37,500)

	Minimum	Maximum
Illegal Employment		
Number of Workers (Total)	45,492	45,492
Number of New York State Residents (Est.)	40,024	40,024
Number of New York City Residents (Est.)	33,082	33,082
Tax Revenue Shortfalls		
Social Security & Medicare	$64.7	$208.6
Federal Income Tax (2019 tax schedule)	$21.7	$81.6
State Income Tax (2019 tax schedule)	$10.0	$36.0
NYC Income Tax (2019 tax schedule)	$5.9	$21.0

Note: Social Security, Medicare and federal income tax projections based on the estimated total number of affected workers among New York City employers. State income tax projections based on the estimated number of New York State residents employed by those firms. NYC income tax projections based on the estimated number of New York City residents employed by those employers. State and local taxes calculated for residents only.

Discussion

The authors of this study were tasked with estimating the incidence and economic costs attributable to payroll fraud in New York's construction industry. Directly applying the methodology developed in a 2020 study for the United Brotherhood of Carpenters, the authors project that there were roughly 75,000 to 125,000 construction workers who were

[51] New York City taxes calculated on a per-worker basis by the authors via analyses of 2019 income tax forms, schedules and rates as listed at http://www.tax.ny.gov. The authors followed the same assumptions outlined in calculating New York State taxes in the previous section: workers are married at the same rate as legal employees (56.83%), have one child, and no other family income.

either misclassified or working off-the-books in New York State in 2017, with a majority—between 49,000 to 82,000—working at employers located in the five counties that comprise New York City. Payroll fraud robs workers of their legally-earned benefits, disadvantages law-abiding employers, and effectively steals money from taxpayers. As outlined in this study, the economic costs of these actions represents a transfer of hundreds of millions of dollars from workers and taxpayers to illegal employers in the construction industry and the contractors and project owners who hire them.

This study has applied the authors' preferred methodologies to estimate the incidence and cost of payroll fraud. To be clear, however, publicly-available data does not offer *direct* evidence of it occurring. Instead, researchers using such data can only approximate this via *indirect* approaches which, combined with the limitations of publicly-available data, amounts to estimating the incidence of payroll fraud using "blunt instruments." As a result, the authors acknowledge the rather wide range of potential projections of payroll fraud in the region. This impacts the estimated social costs of payroll fraud presented in Tables 4 and 6, as the authors assume the most conservative estimates of the number of workers (75,906 for NYS and 49,452 for NYC) who are misclassified or are working off-the-books. Had the authors applied more aggressive estimates of the incidence of payroll fraud, the projected economic costs presented in this study would certainly have been much higher.

In addition to the *number* of workers involved, the authors also recognize that data restrictions limit the ability of this study to estimate the full and true social costs of payroll fraud. For instance, legal employers must adhere to regulations imposed by the Occupational Safety and Health Administration. While this may be in the best interest of workers, it nevertheless imposes a substantial cost on legal employers that is often evaded by contractors operating fraudulently. However, since there is no known credible estimate for the cost that this imposes on legally-operating employers, it is not included in this analysis.

A second means by which fraudulent employers reduce labor cost that is not captured in the methodology is wage theft. There are anecdotal reports of rampant wage theft among off-the-books workers in the construction industry, especially among the most vulnerable workers (e.g., undocumented laborers); as an example, see the 2015 report by Tom Juravich, Essie Ablavsky and Jake Williams.[52] However, while anecdotal reports are plentiful, there are no known estimates for its extent in the national or state construction industry. For the sake of generating conservative estimates, the results in this study assumed there was no wage theft among fraudulent workers. But if this report instead assumed that 5% of wages from fraudulent employers were not paid to workers, the cost impact would be enormous. For example, within the five counties of NYC, an assumption of 5% wage theft and a $37,500 average worker income would allow construction employers to illegally reduce labor costs by an additional $83.6 million to $98.0 million. Not only would workers be severely harmed, but wage theft also disadvantages law-abiding employers; the cost differential between legal and illegal employers with the onset of 5% wage theft in the New York City MSA increases

[52] For more, see; Juravich, Tom, Essie Ablavsky, and Jake Williams. 2015. "The Epidemic of Wage Theft in Residential Construction in Massachusetts," UMass-Amherst Working Paper Series.

from 19.45% to 25.74% (with wage premium) and 40.16% to 47.54% (without) when using the illegal employers' labor costs as the denominator.

One area that is unaddressed in this report is the fact that misclassified and off-the-books workers do not receive fringe benefits—such as health insurance and retirement contributions—like regular wage-and-salary employees. To be clear, not paying workers fringe benefits is entirely legal and, therefore, not considered to be a part of the economic costs of payroll fraud in this study. But the degradation of labor market conditions due to payroll fraud has undoubtedly led to a decline in the viability of employer-sponsored health insurance in many trades. This not only has devastating effects on New Yorkers and their families, but it also burdens social programs and the broader health care system at large.

Finally, the cost section of this report is built following the blueprint established by Belman and Sojourner in their 2019 report. To be clear, the extension of this approach to analyze per-worker annual labor costs implicitly assumes an apples-to-apples comparison of misclassified and off-the-books workers to legal employees. This presumption is partially supported by evidence suggesting that, on average, employees and the self-employed work roughly the same amount in a given year.[53] Making apples-to-apples comparisons between workers in an economic fashion requires some consideration of potential wage premiums paid to non-payroll workers given potential arbitrage in labor markets for equally-skilled workers.

This presumed equality between these two sets of workers may deviate, however, for a number of reasons. On one hand, legal employees are likely to be better trained, more educated, and have greater firm-specific and job-specific knowledge and skills that make them more productive. This can implicitly lower legal employers' costs since these workers can presumably finish jobs faster and with fewer mistakes. On the other hand, some off-the-books workers may be unable to secure legal employment (e.g., undocumented laborers) and may not be able to approach the "entry level" among legitimate employers. Further, unencumbered by a permanent legal employment relationship (and experience-rated UI contributions), fraudulent employers may be more likely to jettison workers when there is a lack of work when compared to legal employers, thereby lowering their labor costs. While the factors highlighted in this paragraph work in opposing directions, the absence of data on things like worker productivity and turnover differentials among the two types of employers renders it impossible to sort out their net effect on the results.

Conclusion

Payroll fraud in construction—both the misclassification of employees as independent contractors and the problem of under-the-table cash compensation—is not widely understood, even by industry participants. What was once a proud and significant industry

[53] Using the 2017 American Community Survey, self-employed construction-industry workers who report being employed at the time of the survey report working an average of 47.03 weeks per year and 41.27 hours per week on a national basis. Legal employees report working an average of 47.99 weeks per year and 42.00 hours per week.

that offered millions of blue-collar workers an opportunity to achieve a middle-class lifestyle has devolved, particularly in the private-sector construction market, into a mix of high-waged employment alongside increasingly low-paid trade occupations characterized by wage theft and unsafe working conditions.

The value of this and similar studies is that they can shed light on an otherwise darkened corner of the economy by measuring the prevalence and severity of the problem. However, any report, no matter how comprehensive, will only collect dust on a shelf unless it is accompanied by an education and action plan. It is crucial that the findings be shared with and distributed to a variety of stakeholders in order to address and combat the growth of the underground economy in construction.

Construction Employers. Responsible contractors, particularly in the union sector, operate at a significant disadvantage when bidding against firms that engage in payroll fraud. Contractors that "play by the rules" and treat their workforce as employees bear the legal burden of all tax and insurance obligations. On the other hand, contractors that misclassify or pay cash are able to realize substantial labor cost savings, attributable in part to the high cost of workers' compensation insurance premiums in a dangerous industry. Contractors that cheat therefore distort the level playing field that should determine who wins bids in a highly competitive industry.

As a result, it is crucial that legitimate contractors are well versed in the findings of this report so they can promote a culture of responsible employment practices to the owners who select them and to policy makers who regulate the industry.

Union Members. Unless they previously worked in the non-union sector, many union members are unaware of the employment practices that now characterize portions of non-union construction. Union trades workers are employed in an environment of good wages and benefits and safe working conditions and expect the continuation of those conditions as part and parcel of working under a collective bargaining agreement.

The findings of this report should be widely circulated among the membership—in apprenticeship classes, at union meetings, in publications, and other forms of information dissemination. Union members must become advocates for a strong and responsible industry as part of ensuring their own future security. They need to be active participants in their cities' and towns' civic and political life in order to encourage decent construction standards on projects in their communities. In addition, they should be aware of and support their union's organizing and political programs regarding payroll fraud as well as the hiring of bi-lingual staff who can communicate successfully with victims of payroll fraud.

Legislators and Policymakers. New York's construction industry has one of the nation's clearest statutory standards in determining whether a worker is an employee or an independent contractor. The Construction Fair Play Act took effect in October of 2010 and provides penalties for employers who fail to properly classify their employees. The Act adopts the "ABC" test which presumes a worker to be an employee unless he/she is: a) free from control and direction in performing the job, both under contract and in fact; b)

performing services outside of the usual course of business for the company; and c) engaged in an independently established trade, occupation or business that is similar to the service they perform.

Of all the criteria for employment status in various federal and state statutes, the "ABC" test stands out for its clarity and consistency. While there are legitimate independent contractors in the construction industry (particularly in the single-family residential sector), payroll fraud occurs in those situations where workers do not meet the three-part test yet their employers still classify them illegally as independent contractors. The "ABC" test has recently generated controversy as courts and legislators have sought to apply the standards to gig workers, but there is no comparable confusion within the construction industry. A drywall carpenter who shows up to work in the morning and is assigned a series of tasks and is provided the material with which to accomplish those tasks clearly and unmistakably functions as an employee. The challenge is to sustain a level of enforcement that can carry out the clear intent of the law.

Regulatory Agencies. New York is fortunate in that there are multiple agencies that have taken up the issue of payroll fraud in the construction industry. At the state level, the Department of Labor and the Attorney General's office both have responsibility and a history of developing cases. The New York City Comptroller's office has also taken an active interest as well as District Attorney's offices in the five boroughs of New York City and Nassau, Suffolk, and Westchester counties. The level of interest and the intensity of enforcement activity in all these offices inevitably varies with changes in leadership and the resulting fluctuating degree of political commitment, but it is crucial that union staff develop strong relationships with regulatory agency staff. Given the constant problem of limited funding and short staffing in public agencies, it is also crucial that union staff approach regulators with well-developed cases (witnesses, affidavits, payroll records, work logs, etc.) in order to ensure maximum effectiveness.

A 2019 report from the Harvard Labor and Worklife Program outlined a series of best practices of enforcement policies for state agencies:

- *Strategic enforcement.* Many enforcement agencies are complaint-driven; in other words, agency personnel act when a formal complaint has been registered. In many ways, this approach is not optimally effective because it rarely touches those occupations where workers may be reluctant to file complaints for fear of retribution. Agencies can and should adopt a strategic enforcement philosophy in which they pro-actively seek out violators in those industries that have been documented to be the largest source of employment law abuses. Certainly, construction is one ofthose.

- *Task forces.* Payroll fraud is a violation of multiple laws with enforcement jurisdiction in multiple agencies. For example, the act of misclassification may violate wage and hour laws, unemployment assistance laws, income tax laws, workers' compensation laws, and others that are all under the purview of different state agencies. When an individual case is only handled within the silo of one agency, the potential impact on

the offending employer is less severe. When an inter-agency task force is in place, case information can be shared and the legal liability can be maximized. New York State was one of the first in the country to develop a multi-agency state task force and it has proved to be an effective enforcement mechanism in the past.

- *Sweeps/Stop Work Orders.* When task forces have been most effective, the resources of the multiple agencies are combined to share information and, more important, to put boots on the ground. Agents will develop a plan to target a given industry pro-actively (construction, nail salons, car washes, etc.) and visit worksites at the same time in the same geographical areas. In addition to identifying violations immediately, this approach sends a message to an industry that its practices are under scrutiny. If state law allows for Stop Work Orders, agents conducting a sweep can shut down a given employer or worksite until the violation is cured. In an industry like construction where schedule is paramount, this tactic can be effective and powerful and generate compliance.

- *Cash compensation.* Enforcement agencies need to adjust to new forms of payroll fraud as they occur, in particular, the shift from misclassification to cash compensation. Paying in cash is not technically illegal in itself but the failure to report and the failure to make tax deductions is fraudulent. Thus, the state Department of Taxation and Finance might have as much or more enforcement leverage than the state Department of Labor.

- *Community allies.* There are other groups that have a stake in the well-being of workers in the construction industry, such as worker centers and immigrant advocacy organizations. These connections can be fruitful – both for regulatory agencies and union staff – because victims of wage theft may be more comfortable telling their stories to advocates rather than to organizations that are perceived to be part of our society's official institutions.

- *Media outreach*. Every indictment, settlement and/or conviction of a violator should be publicized. Studies have demonstrated that the public naming of an offending employer has consequences far beyond the individual company. Other firms in the same industry using a similar business model are more likely to consider complying with legal statutes if one of their competitors has been punished. Since the ultimate goal of any law enforcement agency is deterrence, publicity about agency actions can be one of the most effective deterrents.

Media / General Public. The findings of this report will have more impact if they are distributed through the media to the broad public. After all, taxpayers are among the biggest victims of payroll fraud. If the state of New York is losing millions of dollars in tax revenues every year, the average taxpayer is making up for those losses – in effect, subsidizing cheating in the construction industry. Studies like this one can make the case for action. Cracking down on payroll fraud in construction is one of the best and easiest methods of raising revenues without raising taxes. While collective media attention may not always be

attuned to the plight of working people, many reporters remain attentive in human interest stories of exploitation and unjust treatment. There are thousands of individual stories behind the dry numbers in this report. This report should be used in conjunction with the tales that union organizers can provide to spark interest in the media on an issue of significant public policy.

References

Abraham, Katherine, and Ashley Amaya. 2019. "Probing for Informal Work Activity," Journal of Official Statistics, 35(3), 487-508.

Abraham, Katherine, John C. Haltiwanger, Claire Hou, Kristin Sandusky, and James R. Speltzer. 2020. "Reconciling Survey and Administrative Measures of Self-Employment."

Alm, James, and Brian Erard. 2016. "Using Public Information to Estimate Self-Employment Earnings of Informal Suppliers," *Public Budgeting & Finance*, 36(1), 22-46.

Belman, Dale, and Russell Ormiston. *Forthcoming*. "Best Practices in the United States Construction Industry," In J. Druker and G. White (Eds.). *Labour in the Construction Industry: An International Perspective*. Routledge.

Bernhardt, Annette, Ruth Milkman, Nik Theodore, Douglas Heckathorn, Mirabei Auer, James DeFillipis, Ana Luz Gonzalez, Victor Narro, Jason Perelshteyn, Diana Polson, and Michael Spiller. 2009. "*Broken Laws, Unprotected Workers: Violations of Employment and Labor Laws in America's Cities*," Chicago: Center for Urban Economic Development, University of Illinois; New York: National Law Employment Law Project; Los Angeles: UCLA Institute for Research on Labor and Employment.

Donahue, Linda H., James Ryan Lamare, and Fred B. Kotler. 2007. "The Cost of Worker Misclassification in New York State," Digital Commons at Cornell University, School of Industrial and Labor Relations.

Fiscal Policy Institute. 2007. "Building Up New York, Tearing Down Job Quality: Taxpayer Impact of Worsening Employment Practices in New York City's Construction Industry."

Flaming, Daniel, Brent Haydamack, and Pascale Joassart. 2005. "Hopeful Workers, Marginal Jobs: LA's Off the Books Labor Force."

Juravich, Tom, Essie Ablavsky, and Jake Williams. 2015. "The Epidemic of Wage Theft in Residential Construction in Massachusetts," UMass-Amherst Working Paper Series.

Liu, Yvonne Yen, Daniel Flaming, and Patrick Burns. 2014. "Sinking Underground: The Growing Informal Economy in California Construction" and Cooke, Oliver, Deborah Figart, and John Froonjian. 2016. "The Underground Construction Economy in New Jersey."

Ormiston, Russell, Dale Belman and Mark Erlich. 2020. "An Empirical Methodology to Estimate the Incidence and Costs of Payroll Fraud in the Construction Industry."

Ormiston, Russell, Dale Belman, Julie Brockman and Matt Hinkel. 2020. "Rebuilding Residential Construction," In P. Osterman (Ed.), *Creating Good Jobs: An Industry-Based Strategy*. MIT Press.

Parrott, James. 2011. "Employee Misclassification in New York Construction—Economic and Fiscal Costs," Proceedings of the 63rd Annual Meeting of the Labor and Employment Relations Association.

Roemer, Marc. 2002. "Using Administrative Earnings Records to Assess Wage Data Quality in the March Current Population Survey and the Survey of Income and Program Participation," U.S. Census Bureau Staff Paper, Washington, D.C.

Sinai, Clayton and Ernesto Galeas. *Forthcoming*. "The Underground Economy and Wage Theft in Washington, D.C.,'s Commercial Construction Sector." Catholic Labor Network.

Theodore, Nik, Bethany Boggess, Jackie Cornejo, and Emily Timm. 2017. "Build a Better South: Construction Working Conditions in the Southern U.S."