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The Underground Construction Economy in New Jersey

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ABOUT THE RESEARCHERS

Oliver Cooke, PhD, is an Associate Professor of Economics at Stockton University and the author of the *South Jersey Economic Review,* a semi-annual analysis of economic data and trends that reveal the state of the economy in the region surrounding Atlantic City and the southern end of New Jersey. His areas of interest include urban/regional economics, economic history, political economy, and macroeconomics. Dr. Cooke conducted the quantitative analysis.

John Froonjian, EdD, Senior Research Associate with the William J. Hughes Center for Public Policy at Stockton University. He manages the Stockton Polling Institute, an academic public opinion research center, in addition to conducting research. He is an experienced qualitative research interviewer with more than 30 years of prior experience as a journalist. He is currently enrolled in the Organizational Leadership EdD program at Stockton. Dr. Froonjian researched government regulatory activities and conducted the qualitative interviews with people in the construction industry.

Gavin C. Rozzi has worked as an independent journalist, web developer and technology consultant. Since 2016, he has written about politics and public affairs in Ocean County. He received the Excellence in Local News Award for his work developing a statewide public records research website from Montclair University in 2019. He obtained his BA in Political Science from Stockton University in 2018. Mr. Rozzi helped research regulatory activities and labor legislation.

SUMMARY OF KEY FINDINGS

As stated in our original report, none of the individual findings presented here constitute definitive proof of the existence of a significant underground construction sector in New Jersey. At the same time, taken as a collective body of evidence, we continue to believe our findings indicate underground activity in New Jersey's construction sector. Unexplained differences between New Jersey and other comparable states in construction worker productivity, payroll size, average pay and employment numbers may suggest the presence of underground activity. The most salient of these findings include:

- Construction companies that follow the law are forced to compete with contractors who use off-the-books labor, misclassify employees as independent contractors, and avoid paying taxes and social insurance costs.
- Real construction output per payroll construction worker in New Jersey totaled $114,158 in 2017. This was higher than in New York ($97,812), Pennsylvania ($100,518), and Maryland ($85,859). Nationally, this figure was $89,554.
- The number of payroll construction employees per residential housing unit authorized in New Jersey is considerably below that in several neighboring states. While this difference is long-standing, it has increased in recent years. In 2010, there were 10 payroll construction employees per residential housing unit authorized in New Jersey, compared to an average of 13 in Maryland, New York, and Pennsylvania. Last year, this difference equaled 5.5 (5.7 in New Jersey vs. 11.2 in the set of benchmark states analyzed).
- The difference between two estimates of New Jersey's total construction employment—from the U.S. Bureau of Labor Statistics' and the U.S. Census Bureau —remained significant in 2017. While much of this difference can be explained, a sizable portion remains unexplained. The difference in New Jersey, moreover, is considerably larger than in several neighboring states including New York, Pennsylvania, and Maryland.
- While New Jersey's construction workers are paid relatively well compared to their counterparts in surrounding states, real hourly wages in New Jersey's construction sector declined significantly (-7.6 percent) between early 2007 and late 2015, whereas they rose in several neighboring states (on average by 5.3 percent). And, although real hourly construction wages in New Jersey rebounded somewhat over the past three years (while they declined in New York and Pennsylvania), they remain below their 2007 levels. Those in neighboring states are higher than in 2007.

Additional highlights of this updated report include:

- The construction sector added nearly $18 billion to New Jersey's economy in 2017, accounting for 3.3 percent of the state's gross domestic product (GDP).
- Associated General Contractors of America research indicated that construction payroll employment in New Jersey declined in 2018. However, the U.S. Department of Labor's revised employment estimates, released after the AGC report, show that New Jersey construction payroll employment increased last year.

- Despite last year's 1.3 percent increase in construction payroll employment (to 158,000), New Jersey has regained only 63 percent of the construction jobs lost during the Great Recession. While this is better than Pennsylvania (44 percent), it lags Maryland (87 percent), and New York (174 percent).
- Our updated analysis estimates a range value of $7.9-$17.7 billion for the size of New Jersey's total underground economy in 2017. These values are equal to 1.3 and 2.9 percent of the state's 2017 GDP.
- Under conservative assumptions, our updated analysis estimates a range value of $293-$654 million for the size of New Jersey's underground construction sector in 2017. Under less conservative assumptions, this range value increases to $586 million to $1.3 billion. The average of the midpoints of these two ranges equals $710 million. This figure represents 3.2 percent of 2017 construction sector output, 5.6 percent of our estimated value of New Jersey's total underground economy, and 0.12 percent of total state GDP.
- Under conservative assumptions, our updated analysis estimates that 8,370 payroll construction workers in New Jersey were misclassified in 2017. Under less conservative assumptions, this figure increases to 17,670. This higher figure would constitute 11.4 percent of total New Jersey payroll construction employment. (As we note, research on misclassification in the construction sector in other states suggests that misclassification rates may be higher than 40 percent. Thus, even our high-end estimate may be conservative.)
- Lost state income taxes not being paid to the state because of underground activity is estimated to be about $721,000 in off-the-books employment, although a less conservative methodology would put it at a high of $5.7 million. Caution is urged concerning the uncertainty of these estimates because of methodology changes involving the data on which they are based.
- Lost state income taxes are estimated at approximately $12.1 million from employment of misclassified workers.
- Under conservative assumptions, our updated analysis indicates that misclassification in the state's construction sector costs the state between $1.1-$4.4 million in unpaid unemployment insurance taxes. Under less conservative assumptions, this range increases to $3.5-$7.4 million. A mid-range of estimates conservatively projects that $2.8 to $5.5 million in 2017 in unemployment insurance goes unpaid.
- Our updated analysis estimates that approximately 21,200 New Jersey construction workers work "off-the-books." We estimate that the total wages associated with these off-the-books workers based on an $11-per-hour pay rate equal approximately $280 million. A less-conservative estimate based on a $15-per-hour rate puts the estimated off-the-books wages at $382 million.
- Summing our estimates for off-the-books construction workers (21,200) and misclassified construction workers (13,000 is the average of our low- and high-end estimates) yields 34,200 New Jersey construction workers likely involved in some way

in the state's underground construction sector. This represents approximately 13 percent of statewide residential construction employment in 2017.

- About 10,000 companies are registered to work on public construction projects put out in New Jersey by nearly 600 school districts, 565 municipalities and county and state agencies. The N.J. Department of Labor and Workforce Development (NJLWD) had 20 general enforcement field staff in 2017-18, compared to 30 in 2013-14. Field staff conducted 5,136 inspections and assessed $2.6 million in penalties in 2014-15. In 2017-18, the number of inspections had declined to 3,994 and penalties declined to $2.2 million, according to NJLWD data. Because those penalties fund inspection staff, more inspections could fund increased funding for staff. NJLWD officials did not respond to repeated requests from the researchers to explain the apparent decline in enforcement numbers.
- In 2014-15, the NJLWD had 14 field staffers dedicated to prevailing wage violations. Staff conducted 844 inspections in 2014-15 and assessed $525,900 in penalties. Despite the number of field staff increasing to 18 in 2017-18, the number of inspections declined to 587 and penalties declined to $415,300. NJLWD officials did not respond to repeated requests from the researchers to explain the apparent decline in enforcement numbers.
- Analysis of national data provided by the U.S. Department of Labor, which cannot be directly compared with New Jersey state data, shows the number of compliance actions completed on federal construction projects in New Jersey ranged widely between 84 and 138 a year in 2010-12. The numbers according to data analysis was 70 in 2013, 65 in 2014 and 57 in 2015. One explanation for the seeming decline in activity is that cases opened in the later years may still be pending.
- Research shows that other states have more aggressive policies than New Jersey in battling the underground economy, particularly misclassification. However, New Jersey has taken some action since our 2016 report. Recommendations that New Jersey coordinate enforcement action with the USDOL and from a task force to attack misclassification were adopted by Gov. Phil Murphy. Other recommendations based on best practices form other states include updating the legal definition of independent contractors and pushing for tougher laws, penalties, enforcement and prosecution.

As explained in the original report and repeated here, while we believe our estimates are likely conservative in nature, we underscore that a significant level of uncertainty surrounds them. As is widely remarked in the underground economy literature, the very nature of the underground economy implies that all attempts to estimate its size—regardless of the methodological approach used—reflect a host of often strong theoretical and empirical assumptions, many of which are not terribly robust. Thus, any policy-making that uses such estimates (including ours) as inputs should tread lightly and recognize the significant margins of error that characterize such estimates.

EXECUTIVE SUMMARY

The William J. Hughes Center for Public Policy was contracted to study the underground commercial construction economy in the state of New Jersey in 2016 for the Bricklayers and Allied Craftworkers Labor Management Committee of New Jersey, the Carpenter Contractor Trust, Associated Construction Contractors of New Jersey and Masonry Contractors of New Jersey. This research took a multi-pronged approach in exploring policy and best practices, presenting a data-driven analysis of the underground economy in New Jersey, and allowing construction leaders to speak freely about their experiences in the industry. The BACNJ and industry partners ACCNJ, MCNJ, Northeast Regional Council of Carpenters and Operating Engineers Local #825 contracted with the Hughes Center to update its original research in spring 2019. This report contains the updated findings. This report finds that the underground construction economy continues to thrive in New Jersey despite attention resulting from the original report and some steps taken by the state government to address the problem.

The term "underground economy" refers to unreported income, off-the-books work and unpaid taxes from employment or business activity. Labor unions have sounded the alarm that they face unfair competition from underground construction activity that illegally undercuts companies that follow the rules. In addition, the government misses out on tax payments, and social insurance programs such as worker compensation and unemployment insurance go unfunded in the underground economy.

The New Jersey Department of Labor and Workforce Development's Office of Research and Information/Bureau of Labor Market Information reported that in 2018, New Jersey's construction industry averaged 157,300 jobs statewide. In this state, the construction sector includes specialty trade contractors, construction of buildings, and heavy and civil engineering.

New Jersey labor law sets out a number of requirements for construction industry employers. Most businesses must register with the state. Employers must file quarterly reports on wages paid, and the first $33,700 reported are subject to taxes to fund state unemployment insurance, disability insurance, workforce development and family leave. Businesses must maintain specific worker and payroll records for four years. These records can be audited to check whether appropriate wages and taxes are being paid. Most employers are required by the state to carry worker compensation insurance or to have a state-approved self-insurance program to protect workers who are injured on the job. Penalties for failure to provide worker compensation coverage include up to $5,000 for the first 10 days of non-coverage and up to $5,000 for each subsequent 10-day period. In the case of a work-related injury or death, the employer can be liable for medical expenses, temporary disability, permanent disability or dependency benefits as well as potential civil penalties.

Employers are also subject to federal Fair Labor Standards Act requirements as regulated by the U.S. Department of Labor, including the requirement to pay a minimum wage of $7.25 an hour. However, New Jersey's state-mandated minimum wage of $8.85 an hour is higher, and the state's minimum wage will rise to $10 an hour in July 2019. The FLSA requires overtime to be paid at 1.5 times the regular pay rate. Employers are also covered by federal anti-discrimination and equal-opportunity laws.

The "underground economy" is an umbrella term for business behaviors to evade mandatory taxes and employment laws and regulations. The products produced and sold are legal (unlike the "black market"). It is often thought to include three categories.

Misclassification is when a worker is classified as an independent contractor rather than as an employee. They receive a 1099-MISC tax form rather than a W-2 form. They are treated as if they are self-employed. Businesses that misclassify fail to pay mandatory payroll taxes such as Social Security (FICA), Medicare, unemployment insurance, workers compensation and, in New Jersey, paid family leave insurance. Instead, the independent contractor is responsible for these. Businesses that misclassify may also evade labor laws such as minimum and prevailing wages, overtime payments, and laws that protect collective bargaining rights.

Unregulated work is work that escapes regulation by employment and labor laws. Much unregulated work is performed in the home, for example, in the home health care industry. Day laborers in the construction industry are another example. Employers here tend to violate the Fair Labor Standards Act and underpay workers; they may not pay the minimum wage, pay for the full number of hours worked, or pay overtime for work more than 40 hours per week, also called "wage theft."

Working for cash or barter, also called working under the table, is another way of avoiding tax obligations and employment legislation. In this case, there are zero records for employees, not even a 1099-MISC form. It is as if the worker was never there.

One common violation involves pay for government construction or public works projects at the state and federal levels. "Prevailing wages" are minimum pay packages including wages and benefits for workers on publicly funded construction projects. This minimum prevailing rate must be paid to construction workers such as carpenters, plumbers, electricians, equipment operators, and others whether they belong to a union or not. The value of each pay package depends on the type of craft work being done and on the geographic area. The requirement to pay prevailing wage rates is triggered when the cost of a construction project exceeds a set amount. The Davis-Bacon Act applies to public works projects awarded by a federal agency, including military bases. The New Jersey Prevailing Wage Act applies to public construction projects awarded by state, county or municipal governments, school districts or other boards and agencies.

Under the state law, public works contractors must register with the labor department and must pay the prevailing wage to all covered workers. Rates determined by the labor commissioner most be posted where workers have access. If a builder subcontracts out work, the subcontractors must also pay the prevailing wage rate. The contractors and subcontractors must submit certified payroll records showing payment of the rate to the agency that hired them.

Multiple bills regarding the prevailing wage are pending in the state Legislature. One (A108) would grant additional enforcement powers to the NJLWD, including the ability to issue stop-work orders who violate the law. There is a proposal (A2547) that would require for-sale housing projects with at least five units that are financed by loans issued by the New Jersey Housing and Mortgage Finance Agency to pay the prevailing wage for construction workers. Another bill would extend prevailing wage requirements to construction done on a property that

received a tax abatement or exemption approved by certain public bodies. The bill A3964 would extend prevailing wage requirements to cover certain fabrications used in public works projects. One proposal (A4320) would allow the state labor commissioner to bar contractors who knowingly failed to pay prevailing wage from such projects, while another (A4533) would widen the definition of public utility construction work. In the Senate are bills that would expand access to wage records, expand rights for victims of prevailing wage violations and expand protections for prevailing wage whistle blowers (S112). Among bills that would weaken prevailing wage requirements are A727, which would exempt public works contracts issued for Hurricane Sandy recovery work from the prevailing wage law, and S202 which would retract prevailing wage coverage for construction performed by the N.J. Board of Public Utilities.

The state LWD Department investigates complaints concerning the prevailing wage. Violators may face fees and penalties and could be barred from working on future public works projects. Workers also have the option of filing a civil lawsuit to recover wages as well as legal costs and fees.

Supporters of prevailing wage laws argue that they allow construction workers to remain rooted in the middle class and off public assistance rolls. They cycle earnings back into the economy and pay taxes. Others claim that quality may suffer if highly skilled firms that pay living wages are discouraged from bidding against contractors relying on the cheapest labor available. This report also includes interviews with contractors, construction union members and others about how they have been affected by the underground economy.

EXECUTIVE SUMMARY: QUANTIFYING THE UNDERGROUND ECONOMY

The construction sector represents a key component of New Jersey's economy. While the industry's overall contribution to the state's economy has declined during the post-housing crisis and recession, it started to recover in 2012 and rose 8.4 percent and 7.1 percent during the next two years before starting to decline in 2016. The industry's real output in 2017 remained significant at $17.8 billion, or 3.3 percent of New Jersey's real gross domestic product (GDP).

Employment provides another means of gauging the construction sector's overall contribution to the state's economy, peaking at 175,000 in 2006 (or 4.3 percent of total statewide establishment employment). Construction employment began to decline with the national housing crisis, hitting 129,500 in 2010. This represented a total job loss in the industry of 45,400 (-26 percent). Nationally, construction employment declined by 28 percent over the same period. As of 2015, construction employment remained 27,000 (-15.4 percent) below its 2006 peak. In 2014, wages and salaries paid in New Jersey's construction sector totaled $18.5 billion which represented 7.7 percent of total wages and salaries in the state. improving national and state economies eventually translated into meaningful construction job gains beginning in 2013. The state has continued to record positive, albeit rather modest, jobs gains ever since. In 2018, construction payroll employment in the Garden State expanded by 2,000 (+1.3 percent), increasing the number of construction jobs to nearly 158,000. Thus, the state has regained 63 percent of the construction jobs lost during the Great Recession.

These numbers regarding construction sector employment focus solely on company or payroll employment produced by the U.S. Bureau of Labor Statistics and other agencies. "Residential" or household employment data as from the U.S. Census Bureau's American Community Survey pertain to individuals and relate to where they live. The Census-based estimate of construction employment is considerably higher than the payroll estimate. One reason is because about 54,600 self-employed construction workers show up in these statistics in 2017. Another is because nonprofit or government workers not employed by private companies are also represented. Also, the Census-based numbers show construction workers who live in New Jersey but work in other states.

However, another possible reason for the difference between New Jersey's official payroll construction employment and Census-based employment is underground construction activity in New Jersey. A three-fold increase in this difference between 2005 and 2014 may suggest that New Jersey's underground construction sector grew significantly during those years. The difference declined somewhat in the past three years but in 2017 it remained about three times what it was in 2005. Data show that the monetary value of construction per worker is higher in New Jersey than in other states – 27 percent higher than the national average. This could be another indicator of underground activity in New Jersey's construction sector. Higher-than-average productivity is especially notable in New Jersey's home construction sector.

The Census Bureau's *County Business Patterns* data show nearly 21,400 firms (or establishments) in the state's construction industry in 2016. These establishments employed approximately 155,000 individuals in 2016 and had a collective total annual payroll of $10.8 billion. The average number of employees per construction firm in New Jersey was 7.3, well below the national average of 9.1 as well as averages in Maryland (10.7) and Pennsylvania (8.9). Construction firms with 20 or fewer employees account for 43.2 percent of statewide construction industry employment—a figure well above the national average of 37 percent and the other area states. The average annual payroll per construction firm in New Jersey totaled $504,500, a figure that was below the national average ($533,000). These small firms account for a higher percentage of construction industry employment in New Jersey – a state with higher-than-average productivity per worker – than elsewhere. The trend could suggest use of misclassified independent contractors who are not counted as company employees.

Real average hourly construction wages in 2007 in New Jersey were higher than in surrounding states and much of the country. New Jersey companies pay higher average wages than in other states. However, since 2007 hourly wages have dropped by an eye-popping 7.6 percent. Hourly wages increased 2007-2015 in New York and Pennsylvania and nationally. New Jersey's decline occurred as homebuilding activity has rebounded since 2009. Some could be attributed to a decline in commercial construction (state-level data were not readily available). A significant increase in underground construction activity in New Jersey could also explain some (though not likely all) of the real hourly wage difference. A sharp rise in underground construction hiring in the state, for example, would have likely exerted downward pressure on New Jersey construction workers' real hourly wages. From 2015-2017, real hourly construction wages rose modestly while declining somewhat in the two neighboring states. However, real hourly wages in New Jersey remain below their early 2007 level, while wages in New York and Pennsylvania remain higher than in 2007.

While each individual finding alone does not prove the existence of an underground economy, taken together they present a collective body of evidence that appear to show underground activity in New Jersey's construction sector.

Various researchers have used different methodologies to estimate the size of underground economies in the United States and in other countries. Schneider and Williams estimated that in 2007, underground activity represented 8.4 percent of gross domestic product, or $1.3 trillion. As noted in the 2016 underground economy report, a report by the Organization for Economic Cooperation and Development suggests that many of the methodologies used (including those employed by Schneider and Williams) likely overstate the size of underground economies, prompting Hughes Center researchers to downscale estimates. It should be noted that there is no foolproof method of trying to measure something that by its nature is mostly invisible, and any estimates should not be taken as absolute.

Using the Schneider and Williams model and adjusting for likely overstatement of underground activity, and based on New Jersey's share of national GDP, we can estimate New Jersey's total underground economy at approximately $6.4 billion to $14.2 billion in 2007. Assuming growth similar to the formal economy since 2007, New Jersey's underground economy likely had a range-estimate value of $7.3 billion to $16.3 billion in 2014, approximately 1.3 to 3 percent of the state's nominal GDP of $552 billion in 2014. The updated estimate of the state's total underground economy in 2017 is $7.9 billion to $17.7 billion.

With the construction sector's nominal output of $22.3 billion representing 3.7 percent of the state's GDP of $602 billion in 2017, we can estimate the size of New Jersey's underground construction economy. A conservative estimate, assuming underground activity matches the same share of GDP as the entire sector, is that the underground construction economy ranges from $293 million to $654 million, with a mid-point estimate of $474 million. If we assume that construction has a higher share of underground activity – and there is research to suggest that it does – the estimate ranges from $586 million to $1.3 billion. The average of the upper estimates is $947 million. An average of the two mid-point estimates is $710 million. The estimates for the total and construction underground economies in New Jersey are higher than the estimates in the original 2016 report.

Evidence suggests that the practice of misclassification is widespread and growing. Misclassification is especially relevant because such practices have been found to be rampant in the construction sector. Based on the methodology used in a 2000 U.S. Department of Labor study of misclassification, we originally estimated that 15,800 NJ construction payroll workers were misclassified as independent contractors in 2014. Our updated figure for 2017 puts this figure at 17,670. Depending on the methodology used, the amount of unpaid state unemployment insurance taxes is estimated from $1.1 million to $4.4 million up to a range of $3.5 million to $7.4 million in 2017.

In addition, workers paid "off-the-books" represent another dimension of the underground economy. Unlike misclassification, which produces some documentation (1099-MISCs), "off-the-books" arrangements leave no documentation. Analyzing the numbers of construction workers living in New Jersey compared to companies' payroll workforce, and accounting for

New Jersey residents who work in New York, we estimate that in 2017 approximately 21,000 construction workers were employed off-the-books in New Jersey.

To get a very rough estimate of the total wages this off-the-books activity in the construction sector amounts to, we assume that the average New Jersey off-the-books construction worker works an average of 1,200 hours per year (i.e., 30 hours per week and 40 weeks per year). We estimate the hourly wage based on the low end of the industry's 2017 wage distribution at $11 per hour. Were this the case, total wages for these approximately 21,000 workers would amount to $280 million. This figure would account for approximately 39 percent of underground construction economy activity (which we put at a mid-point estimate $710 million). Using a higher average wage ($15), these wages would amount to $381 million. The lowest wage estimate using the most conservative numbers is $115 million.

Making an estimate of lost income taxes from workers who by their nature are difficult to track becomes even more arbitrary than earlier estimates. Because of that difficulty, policy makers are urged to use caution and acknowledge the uncertainty of these estimates when citing them. This report estimates there are 21,200 off-the-books New Jersey construction workers making $13,200 annually (1,200 hours at $11 per). Assume all of these workers belong to tax-filing units with two-income earners that file jointly and earn an average of $34,000. Based on an ITEP study, this New Jersey family had an effective state income tax rate of 0.1 percent. Thus, it should have paid a total of $34 in personal income taxes if all income were on the books. If every one of the 21,200 off-the-books workers were in this same position, the total dollar value of income taxes lost would be approximately $721,000. A cautionary note: The methodology used in the ITEP study on which our lost income tax estimates are based changed since our 2016 report. Our 2019 estimates should not be compared to our 2016 estimates of unpaid income taxes because of this methodology change. The ITEEP methodology takes 2018 tax law into account but relies on 2015 state income data.

Anecdotal evidence suggests that many underground workers in New Jersey earn more than $11 an hour. Union officials, day laborers and an activist organization told our researchers that underground construction workers in 2016 often earned $20 an hour and worked more than eight hours a day or five days a week. Increasing those workers' hourly wages to $18 and increasing the work week to 36 hours would result in family income of $45,900 if the second worker earned $20,000. That could place such a family in an effective state income tax rate of 1.6 percent for total personal income taxes of $735. If one-third of the 21,200 underground construction workers were in the higher bracket, the total state income taxes going unpaid would be $5.7 million. It should be noted that these estimates apply tax rates to all of the income, while in reality they would apply to taxable income only. Finally, union leaders would argue that the true cost of lost tax revenue should be based on what these workers would earn if strict enforcement required employers to pay legal rates and overtime.

Our midpoint estimate of the number of misclassified construction workers in New Jersey is 13,000. We estimate that misclassified construction workers earn $67,274 but report income of only $47,092. If all of these misclassified construction workers are again members of two-earner families that file taxes jointly and the second worker's annual earnings approximate $20,000, we get families with reported incomes of $67,092. Based on the previously cited ITEP report, such families would pay an average effective income tax rate of 1.6 percent. Combined, these families

with a misclassified worker would pay New Jersey personal income taxes totaling $13.96 million versus $26.1 million if all income were reported. The difference suggests there is $12.1 million in lost personal income tax revenue to the state.

Combined, we estimate $12.8 million in lost state personal income taxes due to misclassification and off-the-books activity in the state's underground construction industry. Using a higher estimate of off-the-books workers working longer weekly hours and earning $18 an hour, the total would be $17.8 million.

Finally, we sum our estimates for off-the-books construction workers (approximately 21,200) and misclassified construction workers (approximately 13,000, which represents the average of our estimates) to arrive at a figure of about 34,200 New Jersey construction workers that are likely to be involved in some way in the state's underground construction industry. This would represent 13.3 percent of total residential construction workers in the state in 2017.

EXECUTIVE SUMMARY: REGULATING NEW JERSEY'S CONSTRUCTION INDUSTRY

The construction industry's activities are regulated at the state level by the N.J. Department of Labor and Workforce Development (NJLWD) and at the federal level by the U.S. Department of Labor (DOL). In New Jersey, the NJLWD receives 7,500-8,000 complaints a year and has about 20 general enforcement field staffers who investigate, reflecting a decline from about 30 between 2013 and 2015. Included in the general enforcement staff have been staff dedicated to investigating misclassification. Between 5,000 and 6,000 state inspections of New Jersey construction sites were conducted 2013-15, but that number declined to nearly 4,000 in 2016-17, according to NJLWD data. Department officials did not respond to repeated requests to explain the apparent decline in enforcement numbers. The NJLWD performs more than 3,000 audits a year to determine if employers are paying unemployment compensation taxes and other taxes in full. The state's enforcement activities resulted in $2.2 million in penalties a year, down from $2.6 million from 2014 to 2016. Those monies fund the budget of the Wage and Hour Division, which does not operate on state revenues.

Another 14 NJLWD field staffers have been dedicated solely to regulating compliance with the state's prevailing wage law in recent years. An additional seven had been hired by 2018-19, but state labor officials said some had resigned, and it was unclear how many had completed training. NJLWD officials did not respond to multiple requests by the researchers to explain the data provided. That staff conducted fewer than 600 job-site inspections on prevailing wage complaints in 2017-18, down from 864 in 2013-14 despite increasing field staff from 14 to 18 that year. The amount of penalties assessed in prevailing wage cases in New Jersey declined from more than $600,000 in 2016-17 to $415,000 in 2017-18. The penalties fund the enforcement activities. Approximately 10,000 companies are registered to perform public construction work done in the state by nearly 600 school districts, 565 municipalities and county and state agencies.

On the federal level, the agency that contracts out construction work is responsible for enforcing provisions of the Davis-Bacon Act requiring payment of set prevailing wage rates and fringe benefits. That agency is also responsible for enforcing the Contract Work Hours and Safety Standards Act, which ensures that overtime is paid at the rate of 1.5 times the regular wage for hours worked in excess of 40 hours a week on qualifying federal construction contracts. Employers must maintain employee payroll records and submit certified payrolls on a weekly basis. Contractors are responsible for making sure subcontractors abide by the law.

In FY 2014, the DOL's Wage and Hour Division nationally had more than 1,000 investigators, completed 29,483 compliance actions, and obtained agreements to pay over $240 million in back wages for more than 270,000 workers. In 2014-15, 42 percent of investigations were initiated by the division. Although the DOL could not provide state-level statistics, analysis of a DOL database of compliance actions dating back to 2007 shows the construction industry accounted for 8 percent of all actions in New Jersey.

The WHD database lists the years in which the first and last findings of fact were made in each case. Analysis shows that in 2010, there were 93 cases in which findings were first made, and 82 cases in which final findings were recorded. After accounting for cases in which both first and last findings were made in 2010, there were 138 distinct WHD cases with findings in 2010. In 2011, there were 84 distinct wage and hour cases with first or last findings in the state. In 2012, there were 98 distinct federal wage and hour cases with findings in New Jersey. The numbers for completed cases for the next three years according to analysis were 70 in 2013, 65 in 2014 and 57 in 2015. The decline is likely explained by cases that were opened in the later years still pending. The totals for all years were well below the hundreds of prevailing wage cases reported each year by the NJLWD. The number of New Jersey cases in the federal database dropped significantly after 2012, possibly suggesting incomplete data, so totals for later years were not computed.

Enforcement actions often start with a complaint to state or federal wage and hour regulators, and construction unions have a vested interest in reporting companies engaged in underground activities. The Northeast Regional Council of Carpenters in New Jersey actively monitors construction sites for evidence of violations. This report provides two examples in which union members observed underground activities at large construction sites and cooperated with the NJLWD to investigate and assess penalties.

EXECUTIVE SUMMARY: MISCLASSIFICATION, BEST PRACTICES

To review, the "underground economy" is an umbrella term for business behaviors to evade mandatory taxes and employment laws and regulations. Misclassification is when a worker is classified as an independent contractor rather than as an employee. They receive a 1099-MISC tax form rather than a W-2 form. They are treated as if they are self-employed. Researchers and policymakers have begun to document the scope of misclassification because it leaves millions of workers uninsured, without benefits and other rights, and without job security. Studies in various states find that 15 to 40 percent of construction workers are misclassified.

New Jersey defines independent contractors by the three-part "ABC test," the most commonly used criteria of the IRS. All three prongs of the ABC test are required to establish that someone is an independent contractor: the individual has been and will continue to be free from control or direction over the performance of that service, both under his contract of service and

in fact; the service is either outside the usual course of the business for which the service is performed, or the service is performed outside of all the places of business of the employer for which the service is performed; and the individual is customarily engaged in an independently established trade, occupation, profession or business.

Beginning in 2011, the U.S. Department of Labor's Wage and Hour Division (WHD) teamed with the U.S. Treasury Department on a multi-agency initiative to develop strategies to reduce employee misclassification. A number of states have signed a federal-state Memorandum of Understanding (MOU) to work in partnership with WHD and the Internal Revenue Service (IRS) on information sharing and coordinated enforcement. New Jersey is notably absent among them. An Advisory Commission on Construction Industry Independent Contractor Reform was formed by Governor Jon Corzine in 2008. It never met and never issued a report.

Policies to reduce the size of the underground economy in the construction industry require cooperation among various state agencies, the federal government, labor unions, employer trade associations, and employers. Best practices in other states can be categorized into five areas**:**

1. Measuring the problem and making it a policy priority
2. Updating the legal definition of independent contractor
3. Enhancing enforcement mechanisms
4. Developing or augmenting education campaigns for consumers and employers
5. Increasing cooperation with the federal government and nearby state governments.

Based on the review of best practices in other states, we outline 15 policy recommendations for the State of New Jersey. Recommendations #1 through #4 are related to the structure and functions of state government entities that have duties related to employee misclassification. Recommendations #5 and #6 deal with the definition of independent contractor. Recommendations #7 through #9 call for increased education. The final five recommendations deal with enforcement issues. Recommendations #1 and #2 were enacted in New Jersey during 2018.

Recommendation #1 (ENACTED). The Commissioner of the New Jersey Department of Labor and Workforce Development should sign an MOU with the Wage and Hour Division of the U.S. Department of Labor to collaborate to reduce misclassification. **The NJLWD and USDOL signed a memorandum of understanding to cooperate on the enforcement of labor laws on Aug. 10, 2018. See Appendix A.**

Recommendation #2 (ENACTED). The New Jersey Legislature and governor should create a joint interagency Task Force dedicated to investigating, reporting and prosecuting employee misclassification. **Gov. Phil Murphy issued Executive Order No. 25 establishing a state Task Force on Employee Misclassification on May 3, 2018. See Appendix B.**

Recommendation #3. New Jersey state government should restructure as necessary to ensure greater information sharing among state agencies to reduce employee misclassification.

Recommendation #4. New Jersey should utilize a one-stop (single entry) portal for businesses to interact with various state agencies, and to handle business registration, licensing, etc.

Recommendation #5. New Jersey government should review its laws and update its definition of independent contractor to model other states such as Washington, Minnesota, and especially New York State, a neighboring state.

Recommendation #6. Since commercial and construction businesses often operate across state lines, New Jersey should work collaboratively with other states and the U.S. government to review state and federal laws and regulations to conform legal definitions of who is a covered worker for unemployment, wage and hours laws, health and safety, etc.

Recommendation #7. New Jersey should embark on a statewide education campaign on employee misclassification in cooperation with trade associations and labor unions. Further, the State should offer seminars and webinars to assist businesses.

Recommendation #8. New Jersey should design a dedicated inter-agency website on employee misclassification. It should be accessible to employers and consumers through a simple, one-click url. Ideally, the website should be maintained by the joint Task Force (see Recommendation #1).

Recommendation #9. New Jersey should publicize data on completed enforcement action and include names of past violators.

Recommendation #10. New Jersey should create and staff a tip line so that businesses and consumers may offer tips of suspicious hiring practices confidentially.

Recommendation #11. New Jersey government should work with industry and employer associations and labor unions on voluntary audit programs within industry. New Jersey should not just rely on the current audit and inspection process.

Recommendation #12. New Jersey should step up efforts to monitor social media for employers seeking workers and construction workers seeking jobs, as this will offer clues for audits and investigations.

Recommendation #13. New Jersey should step up enforcement under existing law, e.g. stop work orders, other penalties and fines, business revocation. Further, New Jersey should ensure that enforcement is fully funded and staffed.

Recommendation #14. New Jersey should conduct a thorough review of current laws and enforcement to increase the costs of avoiding the law. For example, New Jersey should consider: not merely work stoppage orders but asset seizure laws; higher fines than paying back wages and insurance premiums; progressive penalties for repeat offenders; revoking licenses; holding contractors and corporate officers legally responsible for actions of subcontractors; and working with other neighboring states to prevent offenders from relocating to nearby states.

Recommendation #15. New Jersey State government should set an example by ensuring that its own contracts that are awarded to the “lowest responsible bidder” are not low because laws and regulations are being evaded or fudged through subcontracting.

Introduction

A recurring theme emerges in conversations with people involved in the construction industry in New Jersey. They say they are proud that construction work has provided them with middle class status. Their work allows them to support their families and contribute to the greater good through tax payments and self-sufficiency. But that pride is tempered by fear and anger that their ability to make a living is being taken away. They believe it is being eroded by forces that are unfair and becoming more widespread. They see unscrupulous competitors ignoring the rules, gaining unfair advantage by exploiting vulnerable laborers, and threatening their very way of life. The threat seeks to operate "underground," out of view of government regulators and contractors who do follow the law. But opponents say the effects of the underground economy are visible, tangible, and damaging. People in construction, especially in organized labor unions, say they are losing contracts and income, that the state and federal governments are losing tax revenues, and the foundation of a fair bidding process is being undermined.

The underground economy afflicts many industries and occupations, especially traditionally low-paying industries. Researchers, union leadership, and elected officials believe the construction sector and its employees are particularly vulnerable (Washington State Department of Labor and Industries 2014, 2013 and 2010; League of United Latin American Citizens 2013; and New Hampshire Joint Agency Task Force 2011; Cooke, Figart & Froonjian, 2016). The term "underground economy" refers to unreported income and unpaid taxes attributed to: treating company employees as contracted help, thereby evading tax obligations; work being done for less pay than mandated or without benefits; and/or "under the table" cash transactions[1] (United States Department of Labor 2015). These activities are also referred to as the "shadow" or "gray" economy. Aside from personal financial impacts, the governmental consequences associated with the underground economy range from lost federal, state, and local tax dollars to unfunded social insurance benefits for workers to violations of the law.

The New Jersey Department of Labor and Workforce Development's Office of Research and Information/Bureau of Labor Market Information reported that in 2018, New Jersey's construction industry averaged 157,350 jobs statewide. In this state, the construction sector includes specialty trade contractors, construction of buildings, and heavy and civil engineering. According to the bureau, the average construction occupation salary was $65,000 in 2018.

While contractors try to keep illegal activities underground, the practice has become so pervasive that union officials report it is not difficult to confirm suspicions merely by talking to workers at construction job sites. A number of researchers have documented the effects. Economist Edgar Feige, citing a large amount of cash coursing through the economy, notes that even though the number of Americans working and household income declined during the recent recession, consumption and retail sales have grown. He attributes that to the underground

[1] Plumer suggests all off-the-books economic activity constitute underground economics. However, Hammersburg distinguishes the gray from the "black market" economy which is defined by piracy and counterfeiting (Hammersburg 2014; Plumer 2013). This project is concerned with non-black market, construction activities that are off the books, misclassify workers or violate prevailing wage laws.

economy (Surowiecki, 2013). Analysis by Erlich and Grabelsky (2005) support construction workers' feelings that their socio-economic status is declining. They cite years of anti-union activity by big business and pressure from underground laborers as having hurt all workers, especially open shops in the U.S. South, Gulf Coast and Rocky Mountain states, as average hourly earnings in all construction declined 18 percent from 1973 to 2002.

> "Construction workers—union and non-union, alike—now tend to work harder, for less money, and under harsher conditions. As a result of the rise of the … broad-based attack on labor, building tradesmen, once in the upper echelon of American workers, have seen their occupations slip to the low status job that is more characteristic of construction workers in other parts of the world" (Ehrlich, 2005).

The impact is felt by government at the federal level. Feige and Cebula estimate that "18-19 percent of total reportable income is not properly reported to the IRS," creating a "tax gap" approaching $500 billion (Feige and Cebula 2011). In the post-recession economy, New Jersey was ranked eighth among the states in terms of percentage of U.S. total GDP with a 3.2 percent share, or $550 billion (United States Bureau of Economic Analysis 2015). Wiseman estimates that the 2008 pre-recession level "shadow" economy in New Jersey was approximately 6.52 percent of the state GDP (Wiseman 2013).

Against this backdrop, the William J. Hughes Center for Public Policy has studied the underground commercial construction economy in the state of New Jersey for The Bricklayers and Allied Craftworkers Administrative District Council of New Jersey and the Northeast Regional Council of Carpenters. This report aims to address the following research topics:

- Outline the responsibilities employers have to workers, state and federal governments with regard to reporting, taxation, wages, and social insurance for New Jersey construction employees and how the construction economy is regulated in the state of New Jersey
- Explain what prevailing wage rates for the construction sector are and why they are they important to New Jersey workers
- Quantify the scope and effect of the underground construction economy in New Jersey
- To identify best practices that have been implemented to combat underground construction economies, particularly the practice of misclassification, in other states.
- And to gain a sense of how legitimate construction industry players feel about the underground economy and how it affects their lives and professions

This research takes a multi-pronged approach that: documents the regulatory process, employer obligations and practices in other states through literature reviews; analyzes data to estimate the scope and effect of the underground construction economy in New Jersey; and uses qualitative interviews to take the pulse of leaders in the construction industry, particularly among union members.

Future projects in this area could include research questions, surveys and/or fieldwork that focus explicitly on construction trade categories, undocumented construction laborers, and/or the union leadership's desire for coalition building. The scope of this project is narrowly defined in order to provide the clients with a strong research foundation that will meet the desired outcomes

including increased public awareness and evidence to support union leadership in their efforts to combat underground commercial construction.

EMPLOYER RESPONSIBILITIES

New Jersey labor law sets a low threshold for requiring employers to pay into the state unemployment compensation and temporary disability programs. A business that employs one or more individuals and pays $1,000 or more in wages during a calendar year must register with the state Treasury's Division of Revenue. The division forwards the registration form to the state Department of Labor and Workforce Development, which determines if the company is liable.

Such a determination triggers a requirement for employers to file quarterly reports, including a report on wages paid. The first $33,700 reported are subject to taxes to fund state unemployment insurance, disability insurance, workforce development and family leave. New employers are assigned set tax rates for the first three years in business. Afterward, the state assigns a calculated rate based on employment experience. While the tax rates for these programs are higher for employers than for their employees, both are required to pay into the funds[2].

TABLE. NEW EMPLOYER TAX RATES IN EFFECT THE FIRST THREE YEARS

Period	Unemployment insurance	Disability insurance	Workforce Development	Family leave
07/01/18 to 06/30/19	2.68%	0.50%	0.12%	0.00%

Every entity that employs one or more people, whether it be permanently, temporarily or part-time, must maintain worker and payroll records and keep them for four years. This requirement is in place even if the company is not covered by the unemployment compensation law. It must keep the following records for each worker:

- Full name, address, and Social Security number;
- The date hired, rehired, or returned to work after temporary layoff;
- The date separated from employment and the reason for such separation;
- The number of base weeks and wages;
- Total remuneration paid, showing payments of cash or other types of compensation.

In additions, employers must maintain the following payroll records:

- Each employee's full name and the days of the week in which work was performed for pay;
- The beginning and ending dates of each pay period;
- The total amount of wages paid to each employee in each pay period;

[2] http://lwd.dol.state.nj.us/labor/ea/content/eafaq.html

- The total remuneration paid to all such individuals combined, separately by money and other remuneration in each pay period and in all pay periods within each quarter[3].

All employers not covered by federal programs are required by the state to carry worker compensation insurance or to have a state-approved self-insurance program to protect workers who are injured on the job. This includes employers based outside of New Jersey and government agencies. The worker compensation requirement applies to corporations, partnerships, limited liability companies and some sole-proprietor businesses with one or more employees excluding the owner. Family businesses are exempt from the unemployment compensation law if the only employee(s): are parents employed by a child; are children under the age of 18 employed by a parent; or is the spouse of a sole proprietor.

Penalties for failure to provide worker compensation coverage include up to $5,000 for the first 10 days of non-coverage and up to $5,000 for each subsequent 10-day period. Violation of the law is considered a disorderly persons offense, although it could be a crime of the fourth degree if found to be willful. In the case of a work-related injury or death, the employer can be liable for medical expenses, temporary disability, permanent disability or dependency benefits as well as potential civil penalties.

Employers are also subject to federal Fair Labor Standards Act requirements as regulated by the U.S. Department of Labor, including the requirement to pay a minimum wage of $7.25 an hour. However, New Jersey's state-mandated minimum wage of $8.85 an hour is higher, and the state's minimum wage will rise to $10 an hour in July 2019. The FLSA also requires overtime to be paid at 1.5 times the regular pay rate. Employers are also covered by federal anti-discrimination and equal-opportunity laws. The DOL also administers the federal prevailing wage law for public construction contracts[4].

UNDERGROUND ACTIVITIES

The "underground economy" is an umbrella term for business behaviors to evade mandatory taxes and employment laws and regulations. The products produced and sold are legal (unlike the "black market"). It is often thought to include three categories:

1. Misclassification
2. Unregulated work
3. Work for cash or barter

Definitions of the three terms are important in order to estimate the scope of the underground economy and the remedies for it.

[3] http://lwd.dol.state.nj.us/labor/handbook/chap1/chap1sec1employerresponsibilites.html#top

[4] https://www.dol.gov/general/aboutdol/majorlaws

Misclassification is when a worker is classified as an independent contractor rather than as an employee. They receive a 1099-MISC tax form rather than a W-2 form. They are treated as if they are self-employed. According to one recent study (Carré, 2015), businesses that misclassify fail to pay mandatory payroll taxes such as Social Security (FICA), Medicare, unemployment insurance, and workers compensation. In New Jersey, it would also include paid family leave insurance. Instead, the independent contractor is responsible for these. Businesses that misclassify may also evade labor laws such as minimum and prevailing wages, overtime payments, and laws that protect collective bargaining rights. Misclassified employees could also be subjected to unsafe working conditions, violations of occupational health and safety regulations, and uncovered by workplace anti-discrimination laws.

Unregulated work is work that is not covered by employment and labor laws. It overlaps with misclassification. Much unregulated work is performed in the home, for example, in the home health care industry. It also occurs frequently in the restaurant industry. Day laborers in the construction industry would be another example of unregulated work. Employers here tend to violate the Fair Labor Standards Act (FLSA) and underpay workers; they may not pay the minimum wage, pay for the full number of hours worked, or pay overtime for work more than 40 hours per week, also called "wage theft."

Working for cash or barter, also called working under the table, is another way of avoiding tax obligations and employment legislation. In this case, there are zero records for employees, not even a 1099-MISC form. It is as if the worker was never there.

PREVAILING WAGE RATES

One requirement that is violated in underground economy activities is found in government construction or public works projects at both the state and federal levels. People outside of labor or construction may not be familiar with the term "prevailing wage." If not, they probably do not understand why workers and labor leaders consider prevailing wage rates to be so important.

In short, prevailing wages are minimum pay packages including wages and benefits for workers on publicly funded construction projects. This minimum prevailing rate must be paid to construction workers such as carpenters, plumbers, electricians, equipment operators, and others whether they belong to a union or not. The value of each pay package depends on the type of craft work being done and on the geographic area of New Jersey. The requirement to pay prevailing wage rates is triggered when the cost of a construction project exceeds a set amount.

Both the federal government and New Jersey have laws governing prevailing wages. New Jersey became the sixth state to adopt a prevailing wage law in 1913. (A summary of current state legislative activity regarding prevailing wage follows this section.) The federal Davis-Bacon Act was passed in 1931 to require prevailing local wage rates to be paid on federal public projects. U.S. Rep. Robert Bacon, a New York Republican, led the charge after he was outraged that a contract to build a veterans hospital in his district was awarded to an Alabama contractor who paid low wages (Mihelic, 2016). The act was passed with bipartisan support and little opposition. But the law did not establish how prevailing wage rates would be set. Congress

amended the act four years later to authorize the Labor Secretary to establish a rate-setting method.

The Davis-Bacon Act applies to public works projects awarded by a federal agency, including military bases. The New Jersey Prevailing Wage Act applies to public construction projects awarded by state, county or municipal governments, school districts or various boards and agencies. For example, the prevailing wage law would apply when a new school or local road is built or a county sewer system is repaired. The prevailing wage requirement kicks in if a municipal project costs more than $16,263. For any other public agency, the threshold amount is only $2,000.

In New Jersey, the state Commissioner of Labor and Workforce Development (LWD) sets the prevailing wage rate for each type of craft worker in the 21 different counties. The commissioner determines what rate is typically paid for each type of laborer or craft workers in each county. This wage determination includes both wages and fringe benefits. The project contractor is required to pay the prevailing wage, and any sub-contractors are also required to pay it. Contractors and sub-contractors are also required to certify such payroll records to the contracting government agency.

Under the state law, public works contractors must register with the labor department and must pay the prevailing wage to all covered workers. The rates determined by the labor commissioner most be posted where workers have access. If a builder subcontracts out work, the subcontractors must also pay the prevailing wage rate. The contractors and subcontractors must submit certified payroll records showing payment of the rate to the agency that hired them.

The state LWD Department investigates complaints concerning the prevailing wage. These situations may include a contractor misclassifying workers' job titles for which prevailing wages must be paid, including payroll deductions as part of prevailing wage payments, falsifying timesheets or simply ignoring the law (Mihelic, 2016). Violators may face fees and penalties and could be barred from working on future public works projects. Workers also have the option of filing a civil lawsuit to recover wages as well as legal costs and fees.

Some critics oppose prevailing wage laws as undercutting competition, although proponents counter that a prevailing wage levels the playing field among bidders by allowing for comparison of quotes with common labor costs. Critics claim that prevailing wage laws increase project costs, create inefficiency by mandating union work rules and increase costs related to compliance and enforcement (Mihelic, 2016). Supporters of prevailing wage laws argue that they allow construction workers to remain rooted in the middle class and off public assistance rolls. They cycle earnings back into the economy and pay taxes (Mihelic, 2016). Others claim that quality may suffer if highly skilled firms that pay living wages are discouraged from bidding against contractors relying on the cheapest labor available.

A spring 2016 article in *New Jersey Construction* spotlights a recent statistical analysis conducted by researchers Kevin Duncan, Alex Lantsberg and Frank Manzo IV (Mihelic, 2016, pp. 5-7) found that labor accounts for only 23 percent of construction costs, and that 75 percent of peer-reviewed studies on the topic found that construction costs are not affected by prevailing wages. They noted that peer-reviewed studies tended to look at fuel costs, productivity and social program

costs in addition to wages. The researchers reported that repealing prevailing wage laws increases poverty, reduces economic output, results in more contracts going to out-of-state companies and reduces productivity. In addition, they found that workers in prevailing wage states contribute more in taxes and are more likely to have health insurance than those in states without prevailing wage laws.

Research on State Legislation Regarding the Underground Construction Economy
Updated 2019
2018-2019 Legislative session
All legislative data obtained from: ftp://www.njleg.state.nj.us/ag/2018data/
and https://www.njleg.state.nj.us/bills/BillsByKeyword.asp

A108 (Senate companion S2557)
https://www.njleg.state.nj.us/2018/Bills/A0500/108_I1.PDF
Primary sponsor: Asm. Wayne P. DeAngelo (D)
Date proposed: 11/17/2017
Synopsis: This bill would amend state law to grant additional enforcement powers to the Department of Labor and Workforce Development (LWD) to ensure that construction employers pay the prevailing wage. The bill allows LWD to issue stop-work orders against any employer that pays below prevailing wage. The bill authorizes additional enforcement action to be taken after the issuance of a stop work order against employers who do not pay the prevailing wage.

Stop-work orders issued under this bill would force employers to stop work at every site where the violation occurred. The bill authorizes a civil penalty of $5,000 per day against employers that continue work in violation of the order.

Additionally, this bill would authorize the Commissioner of Labor and Workforce Development to require that the employer file reports with the department for a probationary period of up to two years as a condition of being released from the stop work order.

Status update as of 5/1/2019: 2nd reading in Assembly, last date of action 2/25/19 with Assembly floor amendments.

A727 (previously A1307)
https://www.njleg.state.nj.us/2018/Bills/A1000/727_I1.PDF
Primary sponsor: Asm. Gregory McGuckin (R)
Date proposed: 1/9/2018 Last date of action: 1/9/2018
Synopsis: Exempts any public works contracts issued for Hurricane Sandy recovery from the requirements of the New Jersey Prevailing Wage Act. The bill also stipulates the this exemption will not apply if it will jeopardize or result in the loss of any federal funding issued to public agencies for the purposes of Hurricane Sandy recovery.

Status update: 5/1/2019 – still at the committee phase. 1st reading completed 1/9/2018.

A2547
https://www.njleg.state.nj.us/2018/Bills/A3000/2547_I1.PDF
Primary sponsor: Asm. Wayne P. DeAngelo (D) – Deputy Speaker
Date proposed: 2/1/2018 Last date of action: 2/1/2018. Last modified: 4/6/2018
Synopsis: This bill requires for-sale housing projects with at least 5 units that are financed by loans issued by the New Jersey Housing and Mortgage Finance Agency (HMFA) to pay the prevailing wage for construction workers. Currently, the prevailing wage requirement only applies to rental units that are financed with HMFA loans. This bill would extend the prevailing wage requirement to the non-rental housing projects that are financed by the agency, ensuring consistency.

Status update 5/1/2019: No changes or additional action since 2/1/2018

A3073 (previously A858, A1343)
https://www.njleg.state.nj.us/2018/Bills/A3500/3073_I1.PDF
Primary sponsor: Asw. Annette Quijano (D) – Deputy Majority Leader
Date proposed: 2/8/2018 Last date of action: 2/8/2018 Last modified: 2/12/2018
Synopsis: This bill extends prevailing wage requirements to construction workers hired by any business or redeveloper that receives a publicly funded grant under the Grow New Jersey Assistance Program and the Economic Redevelopment and Growth Grant Program. Additionally, the bill stipulates that employees hired to perform building maintenance tasks by businesses or their tenants / subcontractors covered by the bill must also be paid at least prevailing wage.
Status update 5/1/2019: No changes or additional action since 2/8/2018

A3420 (Senate companion S1102)
https://www.njleg.state.nj.us/2018/Bills/A3500/3420_I1.PDF
Primary sponsor: Asw. Eliana Pintor Marin (D)
Date proposed: 2/15/2018 Last date of action: 2/15/2018
Synopsis: This bill would amend New Jersey state law pertaining to public contracts to apply local public contract bid threshold amounts to local pay to play and prevailing wage laws. Under current law, the bid threshold dollar amounts covered by the state Pay-to-play laws and the Prevailing wage act are lower than the bid threshold under the state Local Public Contracts Law. This bill amends the threshold amounts covered by the pay-to-play and prevailing wage laws to make them the same as the amount applicable under the Local Public Contracts Law.
Status update 5/1/2019: No changes or additional action since first reading on 2/15/2018

A3691 (previously A3435, S1162) (Senate companion S867)
https://www.njleg.state.nj.us/2018/Bills/A4000/3691_I1.PDF
Primary sponsor: Asm. Eric Houghtaling (D)Date proposed: 3/13/2018 Last date of action: 3/13/2018
Synopsis: This bill extends state prevailing wage requirements to any work done on a property that receives a tax abatement or exemption approved by a public body. Under the terms of the bill, the prevailing wage requirement will not apply to the properties of nonprofit organizations exempt from taxation, nor will it apply to public works projects done by the New Jersey Economic Development Authority or Casino Reinvestment Development Authority.
Status update 5/1/2019: No changes or additional action since 3/13/2018

A3964 (Senate companion S2454)
https://www.njleg.state.nj.us/2018/Bills/A4000/3964_I1.PDF
Primary sponsor: Asw. Carol Murphy (D)
Date proposed: 3/13/2018 Reported out of Assembly Labor and Appropriations committees. Last date of action: 1/31/2019, substituted by Senate version.
Synopsis: This bill extends the state prevailing wage requirements to cover certain fabrications used in public works projects. This bill does not modify current coverage of custom fabrication, only adds "custom fabrication which is either of components or structures pre-fabricated to specifications for a particular project or 15 of other materials finished into

components without further modification for use in a project or type or classification of a project."

Status update 5/1/2019: Signed into law on 3/18/2019

A4291

https://www.njleg.state.nj.us/2018/Bills/A4500/4291_I1.PDF

Primary sponsor: Asm. Eric Houghtaling (D)

Date proposed: 6/27/2018 Reported out of Assembly Labor Committee on 9/17/2018

Synopsis: This bill expands circumstances in which the prevailing wage must be paid by lowering the threshold for leased property subjected to prevailing wage requirements. This bill requires that prevailing wages be paid for buildings leased by a public body and more than 10,000 square feet in size. This bill also lowers the threshold so that all properties leased by public bodies that are funded by the New Jersey Economic Development Authority are subject to prevailing wage requirements.

Status update 5/1/2019: Passed Assembly on 3/25/2019 (73-6)

A4320 (Senate companion S2860)

https://www.njleg.state.nj.us/2018/Bills/A4500/4320_I1.PDF

Date proposed: 7/30/2018, referred to Assembly labor committee

Primary sponsor: Asm. Wayne DeAngelo (D)

Synopsis: This bill authorizes the Commissioner of Labor and Workforce Development to bar contractors who are found to have knowingly employed subcontractors that failed to pay the prevailing wage and did not report the violation to the commissioner's office.

Status update 5/1/2019: No further action since 7/30/2018

A4533 (Senate companion S3088)

https://www.njleg.state.nj.us/2018/Bills/A5000/4533_I1.PDF

Date proposed: 10/15/2018, referred to Assembly labor committee

Primary sponsor: Asm. Wayne DeAngelo (D)

Synopsis: This bill expands work covered by the prevailing wage requirement by widening the definition of "construction work on a public utility" to include the "replacement" of facilities owned by a public utility and including meters within the definition of "facilities of the public utility." The bill further provides that "leak surveyors, meter work and miscellaneous repairs" are no longer explicitly exempted from the kinds of work covered by the prevailing wage.

Status update 5/1/2019: No further action since 10/15/2018

A4897 (Senate companion S3456)

https://www.njleg.state.nj.us/2018/Bills/A5000/4897_I1.PDF

Primary sponsor: Asw. Yvonne Lopez (D)

Date proposed: 1/17/2019 Last date of action: 1/17/2019 Last modified: 1/25/2019

Synopsis: This bill makes changes to the Local Public Contracts Law that allows longer durations for ferry boat and related facility lease contracts. The bill extends prevailing wage requirements, and requires that the prevailing wage be paid for any construction project authorized under capital improvement contracts passed pursuant to this bill.

Status update 5/1/2019: Passed both houses on 3/14/2019

S202

https://www.njleg.state.nj.us/2018/Bills/S0500/202_I1.PDF

Primary sponsor: Asm. Declan O'Scanlon (R)

Date proposed: 1/9/2019 Last date of action: 1/9/2019

Synopsis: Repeals state law (NJSA 48:2-29.47) that requires the prevailing wage be paid to workers employed in performing any construction financed by the New Jersey Board of Public Utilities.

Status update 5/1/2019: No further action since 1/9/2018

S112 (previously S2339)

https://www.njleg.state.nj.us/2018/Bills/S1500/1112_I1.PDF

Primary sponsor: Sen. Fred F. Madden (D)

Date proposed: 1/25/2018. Reported out of Senate labor committee on 5/21/2018 Last date of action 5/21/2018

Synopsis: This bill strengthens prevailing wage enforcement by requiring employers to make wage records open for inspection to construction worker representatives in the same way that they are required to disclose wages to the Department of Labor and parties to the contract. The bill also directs the commissioner of Labor and Workforce Development to make publicly available a list of organizations that represent laborers and request to be on the list. The bill additionally permits a worker hurt by violation of the prevailing wage law or their representative to file a complaint with the commissioner's office. The bill also subjects employers or any other party who willfully obstructs enforcement of the prevailing wage requirement or fails to make wage records available subject to penalties. The bill also subjects employers to penalties for retaliation against a worker because of their disclosure of lack of compliance with prevailing wage requirements to an organization representing workers. This bill requires that employers reimburse the aggrieved worker two times the losses they incur, including lost wages and benefits along with legal fees and costs of suit if they are found to have unlawfully retaliated against workers who report noncompliance. Lastly, this bill also provides for any person or firm that suffers damages as a result of willful violations of contractors or subcontractors with the prevailing wage may bring a civil lawsuit to recover up to two times the damages together with reasonable costs and attorney's fees.

Status update 5/1/2019: No further action since 5/21/2018

S1889 (Assembly companion A3666)

https://www.njleg.state.nj.us/2018/Bills/S2000/1889_I1.PDF

Primary sponsor: Sen. Troy Singleton (D)

Date proposed: 2/15/2018

Synopsis: Requires every contract that is subject to state prevailing wage requirements to require every worker that is employed under the contract to have completed a registered apprenticeship unless the contractor or subcontractor certifies that the worker is paid less than the journey worker rate.

Status update 5/1/2019: Assembly version signed into law as of 1/31/2019

S2693

https://www.njleg.state.nj.us/2018/Bills/S3000/2693_I1.PDF

Date proposed: 6/11/2018, referred to Senate Labor Committee. Last date of action 6/11/2018

Primary sponsor: Sen. Troy Singleton (D)

Synopsis: This bill requires that residential construction projects that receive financial assistance from any New Jersey state or local public body – but are not covered by any existing state statute requiring the prevailing wage - treat the project as if they received federal funds and apply the federal prevailing wage as determined by the U.S. Department of Labor in accordance with the federal prevailing wage statute, the Davis-Bacon Act.

No further action since 6/11/2018

INTERVIEWS WITH CONSTRUCTION INDUSTRY PEOPLE (2016)

The Hughes Center interviewed a dozen contractors and union members working in New Jersey's construction industry to explore how underground economy issues are affecting them and the industry. This section presents the major themes from those interviews.

Frank Koch was explaining why he and the Northeast Regional Council of Carpenters consider prevailing wage pay rates so important when he was challenged to do a reality check. The prevailing wage is a package of minimum wages and fringe benefits required to be paid to workers on public works projects. Why should the average person, who probably knows very little about prevailing wage, care whether these rates are paid, Koch was asked.

His answer sounded like a defense of the middle class.

"This is a living wage," said Koch, a Carpenters Council representative. "This is a (wage) you need to live in the state of New Jersey and provide for your family, to have kids and a house and a car. These are (pay) numbers with health care figured into it, with an annuity or pension or retirement plan. It's a legitimate number for what it takes to live comfortably in the State of New Jersey and pay taxes. That's what you need to take care of your family and not be a burden on the rest of the public."

In proposing this research on the underground construction economy in New Jersey, the Hughes Center for Public Policy considered it important to go beyond facts and statistics and to portray the issues in human terms. How do illegal or improper practices affect real people? What do union members who work in construction have to say about the issues? The Hughes Center conducted a dozen qualitative interviews to find out. Members of carpenter, masonry and heavy construction unions and contractors were interviewed with a standard set of questions. They were also given leeway to express their feelings, and the Hughes Center is withholding the identity of a few to allow them to speak freely. In addition, two laborers who work underground were also interviewed.

These interviews, the highlights of which are summarized here, reveal frustration with an underground system that workers feel is jeopardizing their livelihoods. They say the illegal exploitation of cheap labor creates an unfair advantage that is hurting legitimate businesses and cheating all New Jersey taxpayers who pay their fair share. More than anything, the construction industry representatives want better enforcement of the laws already in place. That, they said, would restore fairness to public works contracting.

One masonry contractor with 20 years' experience said it is unfair when a contractor pays the prevailing wage rate, worker compensation and unemployment taxes and benefits and a competitor under-bids the project by ignoring the laws. "I feel cheated when that happens. I submit a fair bid based on the documents, and here's a guy pocketing the money that's supposed to be paid to the workers. You can't feel good about that," the contractor said. "It affects our industry. … When times are lean, it affects guys like me because we can't get the work. I can't

get the jobs and can't give them to guys who would turn around and then spend the money to drive the economy."

General contractor Mark Hall of Hall Construction in Monmouth County has worked on major projects including the Wildwood Convention Center and the Hoboken Ferry Terminal. He said abiding by prevailing wage rules has not hurt his business. "I have no problems with prevailing wage. That provides a tremendous benefit and standard of living for our employees."

Matt Capece, who represents the United Brotherhood of Carpenters and Joiners of America, has tracked the underground economy since 1989. He believes that off-the-books underground employment is having a devastating effect. And the improper practices are growing more and more sophisticated. He said labor brokers, also called coyotes, will provide off-the-books bulk labor for specialty subcontracts. The broker provides a buffer for higher-tier contractors. This is "not small scale," Capece said, noting that a broker may have hundreds of workers available and can send them all over the country.

One large-project masonry contractor said disreputable contractors use inner-city check-cashing outlets to conduct much of their business in cash. He said one check-cashing outlet processed $440 million over about four years before being discovered after a contractor was robbed of more than a quarter-million dollars in cash. The contractor said no paper trail is created by these contractors or their laborers. "You can't trace these people who are cheating because there are no real records. It's like they don't exist," he said.

"This is a very dangerous and shameful trend in the construction industry," Capece said about off-the-books employment. "You're marginalizing law-abiding employers. Workers end up on the bench, end up being unemployed because their bosses are under-bid. When you can shave up to 35 percent off your labor costs by evading the law, you gain a significant competitive advantage. Employers face a double indignity. You lose work, employees collect unemployment, and then you see your taxes and worker comp costs go up. Which makes them even less competitive."

Others also estimated that underground contractors save about 30 percent of a project's cost by evading taxes. Sean said he pays about 18 percent in taxes and unemployment and worker compensation insurance, plus another 12 percent in Social Security or FICA payments. "By converting to cash, you're eliminating that 30 percent. When I'm bidding against someone like this, they can beat my bid by 30 percent," the large-project masonry contractor said. Another concrete contractor who does everything "by the book" said he bids mostly government work because the prevailing wage laws are more likely to be enforced. But he still finds himself significantly under-bid. "The Labor Department needs more people. It's coming to the point I can only do these kinds of jobs. I'm big enough that I have resources. Smaller companies fall away because the competition is cheating. A good guy who wants to do everything by the book is put out of business. His bid will always be 30 percent higher."

Capece said a trend of treating workers like individual contractors instead of employees is causing long-term damage to the construction industry itself. "Why would anyone want to work in the construction industry? It's dangerous, you'll get no worker comp. You're expected to pay your Social Security taxes. You're typically paid less money. It's lowering conditions."

The masonry contractor echoed others in saying the prevailing wage laws are important because they create an equal playing field. When all of the contractors who bid on a public job have to pay the same rate, legitimate companies stand a better chance to win the contract because of their experience and record. One block and concrete contractor with 32 years in the business said underground contractors who pay cash not only cheat the system but jeopardize safety. He said underpaid laborers are unlikely to have much experience doing work the right way. He added that many laborers are undocumented immigrants who speak little English, and the language barrier makes it harder to train them on safety issues. "Safety is a big issue," he said. "These workers know next to nothing about safety. It's due to a lack of experience and a lack of communication." Capece pointed to a New York Times investigation[5] in 2015 that the number of construction injuries and fatalities far outpaced the rate of new construction during a two-year building boom. And most of the accidents involved immigrant labor.

Andrew Bulakowski, a Council of Carpenters representative, said the illegal work activities create a cost to the public as well. "It defrauds the economy," he said, noting that workers paid the legal rate would circulate more money and boost consumption. But the underground contractors also avoid paying into the worker compensation system and the unemployment insurance fund. When a worker gets injured, the public at large is funding charity care treatment. Bulakowski said some employers get a worker compensation policy only long enough to win the bid, then cancel it. Or they get a policy covering only a few workers when they have many more laborers being paid under the table. Matt Capece said: "It's not in the general consciousness, but they're paying a price for it. They're paying more taxes. Roads and bridges go unrepaired. There's more uncompensated care in the hospitals. We have to shine an antiseptic light on the illegal practices taking hold in the construction industry."

The carpenters union attempts to police public works job sites and report violations when they find them. Bulakowski was certain that a project rebuilding the Seaside Heights Boardwalk after Superstorm Sandy was using undocumented laborers who did not receive prevailing wage. "I was there on almost a daily basis with paperwork, taking photographs. There was an average of 32 to 34 undocumented Brazilian workers there. When they turned in their certified payroll, they listed two carpenters and eight laborers," Bulakowski said. "The state Department of Labor was very aggressive in their investigation." The state assessed back wages and penalties.

Two of the construction union members discussed ways that they can tell the prevailing wage rate is not being paid on a job. "It's easy. I just talk to people and they will tell you what they're getting paid," Frank Koch said. "I'll walk into a school project and say, 'Hey, guys. Good to see you. How does it feel to be making 45 bucks an hour?' And they'll say it's great. But that tells me they're making less than the prevailing wage. Once I get that out of them, I can go to the enforcement people." The concrete contractor has a simpler way. "I drive by at 5:00 p.m. If they're still working, they're not paying prevailing wage because that would be premium time and they're not going to pay (overtime). Or you see them working Saturday. Even union contractors are not going to pay overtime," he said.

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[5] Chen, D. W. (2015, November 26). *Safety Lapses and Deaths Amid a Building Boom in New York.* Retrieved from The New York Times: http://www.nytimes.com/2015/11/27/nyregion/rise-in-new-york-construction-deaths-strikes-the-poor-and-undocumented.html?_r=0

Union officials said their activities help all construction workers, not just union workers. Robert Boyce, another Council of Carpenters representative, said his people try to talk laborers who are being exploited to speak up so that they could be paid fairly. But he said many are undocumented and they fear being deported. Boyce said that his union will send people undercover to work on projects and see if wage and hour laws are being followed. Three of his people worked on a Brandywine Assisted Living construction project in Camden County in 2013. Prevailing wage did not apply because it was a private project. But they found that subcontractors were paying in cash, not deducting taxes, not paying unemployment or worker compensation taxes and even paid one worker less than minimum wage.

On Broad Street in Freehold, Monmouth County, the parking lot of a small grocery store serves as an unofficial muster zone for off-the-books day laborers. Despite a "No Loitering" sign, about two dozen men stood around the property on the morning of June 2, 2016. A white pickup truck pulled into the lot. "Who wants to work today?" a man in the driver's seat called out to a group of laborers. "How much?" one asked. "A hundred-twenty dollars for the day," the contractor said. "Okay," the laborer replied, and climbed into the back of the truck. A grassy section off nearby county Route 522 is another zone in which laborers gather each morning in hopes of getting picked by a contractor to work for the day. While most of the day laborers work on home remodeling or jobs smaller than public works projects, their experiences are similar to what others in the underground construction economy report, and they illustrate the safety issues they face.

Manuel, 49, an immigrant from Guatemala, does whatever kind of construction work he can find. Flecks of white paint cover his sleeveless shirt. He started out earning $10 an hour. But after 12 years of working at day labor, he makes mostly $20 an hour for a 10-hour day. However, he is always paid in cash. "My boss doesn't take taxes out," Manuel said. On occasion people who hired him have refused to pay. One homeowner complained about his work and called the police after Manuel demanded his pay. Manuel said he left after a policeman threatened to arrest him. He said he had been painting inside a house the Sunday prior to this interview. He said the room was cluttered with furniture and that he had asked to clean it out, but was told to just paint the walls. Manuel said a lamp he was working by began to spark, and a mattress and blanket on the floor caught fire. He said he fled the house as fire engulfed the room, damaging the house.

Jesus, 36, is an immigrant from Mexico City who "does a little of everything" in construction. He said he has been in the United States for 13 years. Jesus has worked exclusively for the same contractor for the past six years, but he is not considered an employee. He said he is paid $150 a day in cash with no taxes deducted. He said he knows his boss does not pay taxes or worker compensation. Some time ago, he was using a jackhammer in a basement on a job in Connecticut. He said large metal sheets were being held up by rusty cross bars, which broke. He said he sustained two broken ribs in the accident. But instead of bringing him to the hospital or calling an ambulance, the contractor brought Jesus back to Freehold at the end of the day, Jesus said. He went to the hospital on his own. "The boss paid nothing," he said. "I still don't know today if he has any insurance." But Jesus still has a job. Rita Dentino, an activist who runs a day laborer services program called CASA Freehold, said sometimes workers who become injured are simply fired.

The large-project masonry contractor praised the work ethic of many of the immigrant laborers. But he said their presence does little to help the state's economy or government finances. Their wages paid in cash provide little or no tax revenue. Most do not own property or have a bank account, and even their presence is hard to track. Much of their pay is sent out of the country to families rather than circulated back into the economy. Mark Hall agreed: "They're not buying furniture or washing machines. They send it to their own countries."

Union members and contractors were unanimous when asked what they would do if they could change anything regarding the underground economy. All said they would increase enforcement. Koch said the state Department of Labor and Workforce Development does "a great job," but that there are still many violations that inspectors cannot get to, especially in smaller jobs. Koch and Bulakowski said enforcement is not as strong at the federal level. They noted that the state program is funded through penalties and fees assessed in enforcement actions, providing an incentive for the department to monitor violations aggressively. "Enforcement is everything. If you are going to get caught stealing, you're not going to steal," Bulakowski said. "You know if we are going to find out that you're a fraud, you're not going to be a fraud."

The masonry contractor, said he doesn't think any current enforcement efforts are enough. "If I could, I would beef up monitoring. When they do enforce it, it's like a slap on the wrist. … I was involved in a sizable job where the contractor got caught flat-out falsifying paperwork on hours and who was working. The state slapped him with a $5,000 fine and said don't do it again. And this has happened four or five times," he said. Capece called for enforcement to be beefed up at all levels and for cases to be referred for criminal prosecution. "Criminal cases need to be brought against all the players, including upper tier and specialty contractors," he said. "That has to happen if the construction industry is going to begin to correct itself."

The problem is especially acute at the municipal level because of a lack of knowledge among town clerks and purchasing offices and because there is strong pressure to do jobs cheaply, said Waters, the utilities infrastructure contractor. He said the large number of smaller jobs done at the local level add up to massive amount of work. Waters said he does not see enforcement happening on these jobs. "If people called up the department of labor, they would be inundated. People would realize how much of the underground economy is happening at the municipal level," Waters said. "It would be staggering. The state is missing out on revenue and taxes." Contractor Hall said: "Especially on the smaller jobs, the state really doesn't have enough people to investigate." Robert Gaines, director of state Division of Wage and Hour Compliance, notes that there are about 1,000 municipal governments and school boards doing construction and 10,000 companies registered to do the work. The division has 25 field staff dedicated to inspections. "You would always like to have more staff to cover more projects," Gaines said. "Work is going on all over. There's no way to get to all of the jobs out there. That's why it's important to rely on the eyes and ears of others."

Hall said he would support debarring any contractor caught in violation immediately. He said he would be willing to pay a higher contractor registration fee if the money funded more hour and wage investigators. "I would police those contractors who bid the work so cheap. Check the records. Verify daily job reports. See if the number on the payroll is the number on the site. I hope change comes. If it doesn't, I fear the cheaters will depress the whole industry."

QUANTIFYING THE UNDERGROUND ECONOMY IN NEW JERSEY

Oliver Cooke, PhD, an Associate Professor of Economics at Stockton University, has updated the original analysis he conducted in 2016 on quantifying the underground economy in New Jersey, particularly in the state's construction sector. Dr. Cooke's updated numbers and discussion are delineated and appended at the end of each of the following original sections of his 2016 work.

I. Overview of New Jersey's Construction Sector

A data-driven analysis of the underground economy in New Jersey; major points in **bold**

A. Output, Employment, and Wages

The construction sector represents a key component of New Jersey's economy. While the industry's overall contribution to the state's economy has declined over the last several years (as has been the case for most states' construction industries during the post-housing crisis and Great Recession era), the industry's real output in 2014 (the last year for which state-level GDP estimates are available) remained significant. The construction industry's real output totaled $17.7 billion in 2014, or 3.5 percent of New Jersey's real gross domestic product. (Figures 1 and 2)

Employment provides another means of gauging the construction sector's overall contribution to the state's economy. Figure 3 shows total construction employment for New Jersey during the last twenty years, as well as its share of total statewide employment.

As shown, total construction employment in New Jersey increased steadily over the course of the late 1990s in tandem with the robust national economic expansion that occurred during that time. After declining modestly amid the short-lived national recession in the early 2000s, construction employment in the state resumed its advance over the next several years before eventually peaking at 175,000 in 2006 (or 4.3 percent of total statewide establishment employment). Construction employment began to decline precipitously over the ensuing years in tandem with the national housing crisis (which began in 2006) and the eventual onset of the Great Recession (in late 2007) and the financial crisis (in late 2008).

Total employment in the state's construction industry eventually declined to 129,500 in 2010. This represented a total job loss in the industry of 45,400 (-26 percent) from peak to trough. (Nationally, construction employment declined by 28 percent over the same period.) Since then, construction employment has grown at a rate that is largely in line with the national rate of construction job growth. As of last year, employment in the state's construction industry remained 27,000 (-15.4 percent) below its 2006 peak. Despite its post-housing crisis and Great Recession decline, employment in the sector continued to account for 3.7 percent of statewide employment.

Figure 4 benchmarks New Jersey construction employment's share of total employment against several other surrounding states' and the nation's. As shown, New Jersey's construction sector has tended to be small (as measured by this metric) relative to these other states' (save

New York). New Jersey's construction employment accounted for 3.8 percent of total statewide employment on average over the last twenty years. Nationally, this figure was 4.9 percent.

Figure 5 benchmarks the state's rate of construction employment growth since the mid-1990s. In particular, it compares New Jersey's annual rate of job growth in construction with the nation's and several other neighboring states'. Over the period shown, the state's annual rate of job growth averaged 0.9 percent. This rate was moderately above Maryland's and Pennsylvania's and just slightly below New York's and the nation's.

Figure 6 shows the construction sector's share of total statewide wages and salaries, and thus provide another means of assessing its overall importance to the state's economy. In 2014, wages and salaries paid in New Jersey's construction sector totaled $18.5 billion which represented 7.7 percent of total wages and salaries in the state. As shown, the construction sector's share of total wages and salaries in New Jersey has tended to be lower than in several surrounding states (excluding New York).

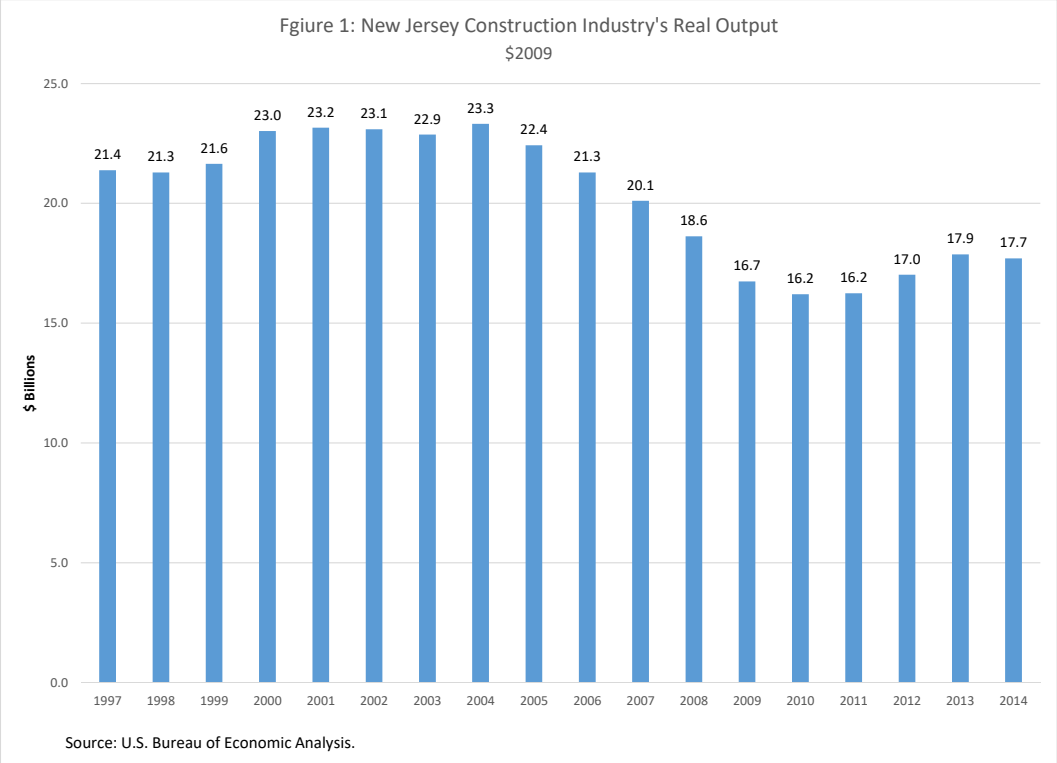
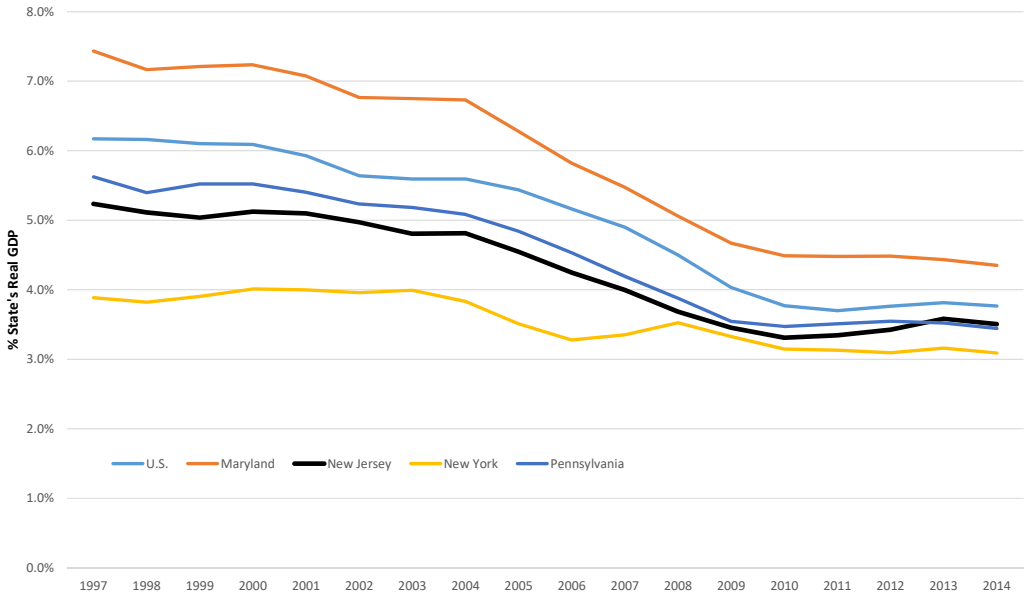
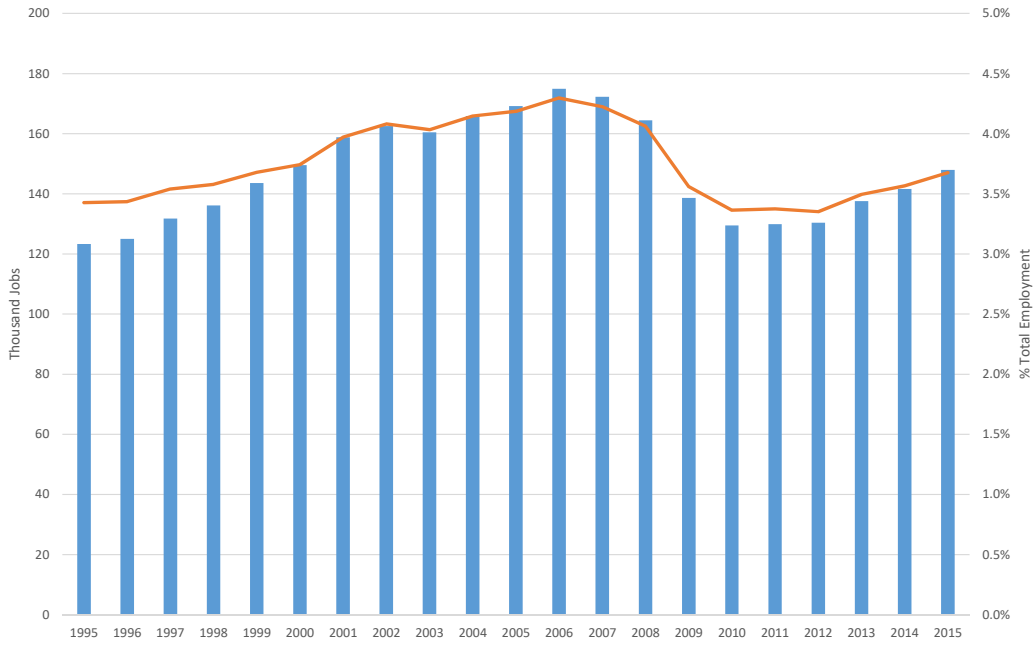


Figure 2: Construction Industry's Share of State Gross Domestic Product, New Jersey, Selected States and the U.S.
1997 to 2014



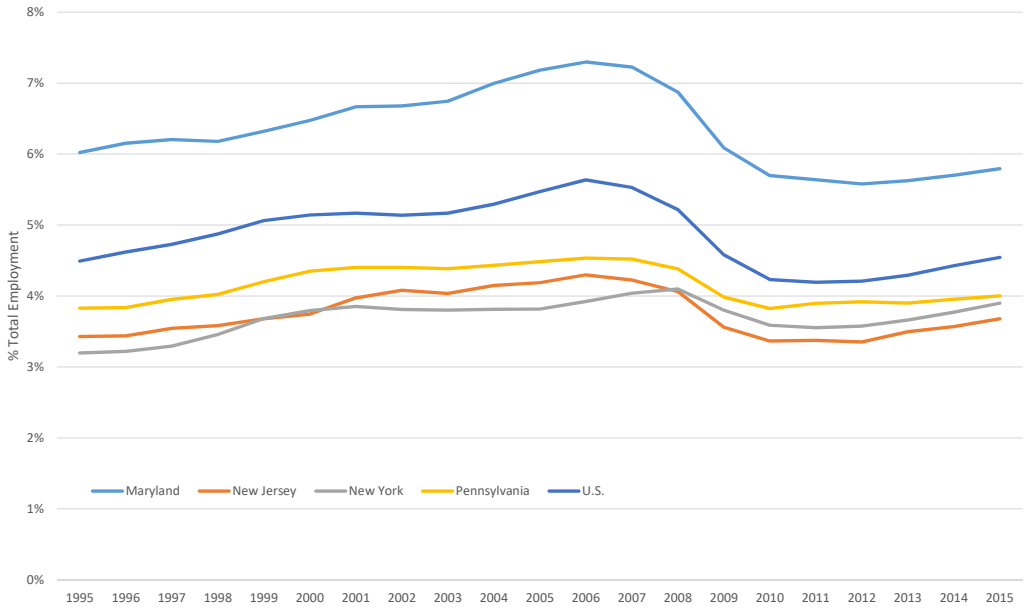
Source: U.S. Bureau of Economic Analysis.

Figure 3: Construction Employment in New Jersey
1995 to 2015



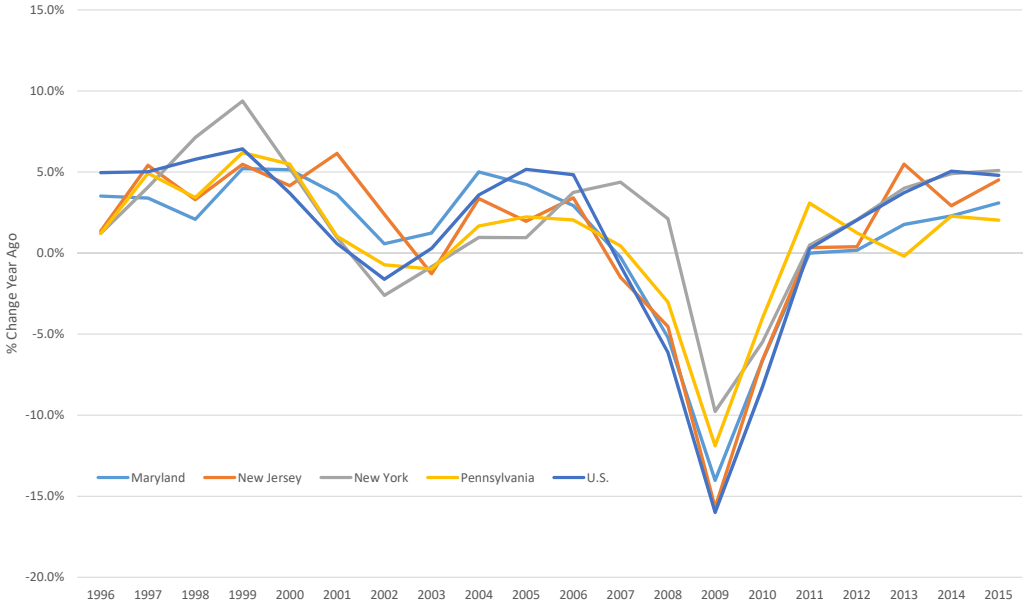
Source: U.S. Bureau of Labor Statistics.

Figure 4: Construction Employment's Share of Total Establishment Employment
Maryland, New Jersey, New York, Pennsylvania, and the U.S.
1990 to 2015

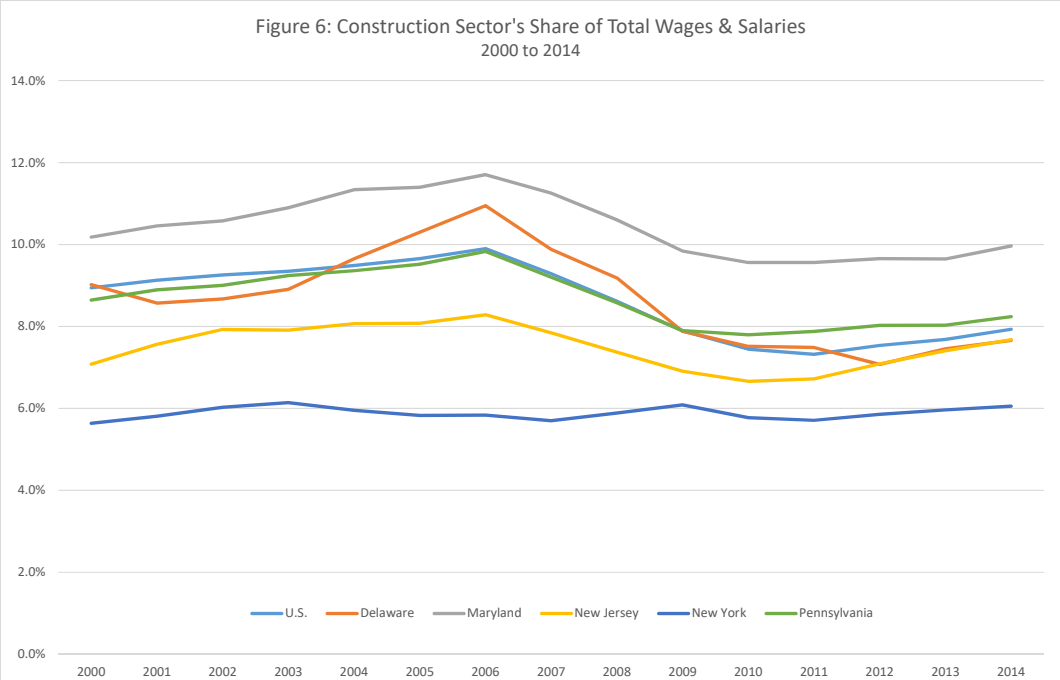


Source: U.S. Bureau of Labor Statistics.

Figure 5: Construction Employment Growth in Maryland, New Jersey, New York, Pennsylvania, and the U.S.
1996 to 2015



Source: U.S. Bureau of Labor Statistics.



Source: U.S. Bureau of Economic Analysis.

Underground Construction – Spring 2019

Update on New Jersey's Construction Sector

Real output in New Jersey's construction sector began to decline significantly in 2006 – the year that marked the onset of the national housing crisis and the ensuing Great Recession of 2008-2010. Between 2006 and 2011, real output in the state's construction sector declined nearly 30 percent. (See Figure 1, p. 3) The sector began to recover in 2012, as real output rose 8.4 percent, and then an additional 7.1 percent in 2013. Since then, however, the sector's rate of growth has slowed markedly. In fact, the construction sector's real output declined in 2016 and 2017 (the latest year for which sector-based gross domestic product (GDP) estimates at the state level are available). Real output totaled $17.8 billion in 2017, compared to $18.1 billion the prior year, and $18.2 billion in 2015. Thus, real output in the construction sector in 2017 remained 18 percent below its 2006 level. As a result, the sector's share of New Jersey's GDP stood at 3.3 percent, down from 4.1 percent in 2006. (Figure 2, **p. 3)**

As Figure 3 **(p. 4)** shows, construction employment in New Jersey declined significantly between 2006 and 2010. Between these years, the construction sector shed over 45,000 jobs (a 26 percent decline). While employment remained depressed for another two years, improving national and state economies eventually translated into meaningful construction job gains beginning in 2013. The state has continued to record positive, albeit rather modest, jobs gains ever since. In 2018, construction payroll employment in the Garden State expanded by 2,000 (+1.3 percent), increasing the number of construction jobs to 158,000. Thus, the state has regained 63 percent of the construction jobs lost during the Great Recession.

It should be noted that last year's modest growth in payroll construction employment in the state appears to contradict recent Associated General Contractors of America

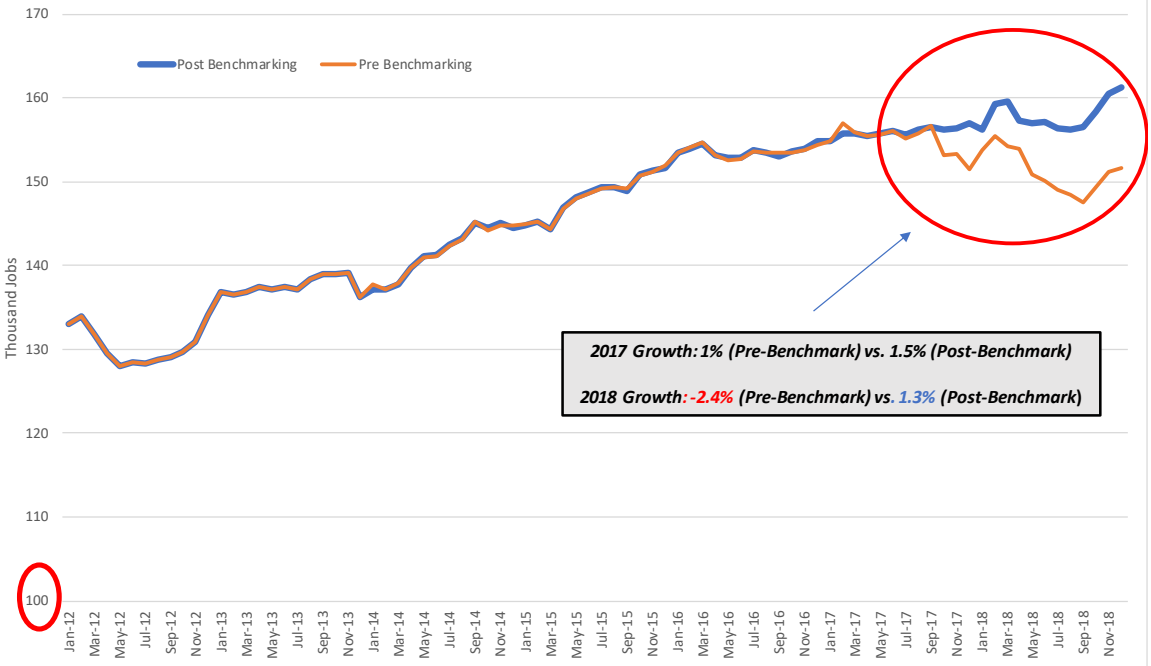
research that indicates that construction payroll employment in New Jersey *declined* significantly in 2018. As the foregoing section explains, the AGC report was published *prior to* the U.S. Bureau of Labor Statistics' recent annual benchmark revision. The revision had a significant impact on the Bureau's estimate of payroll construction employment in New Jersey.

Benchmark revisions are performed every year and are generally released in late February or early March, along with the new year's January employment data. The establishment (or, payroll, or nonfarm) employment estimates are developed each month from a sample of approximately 4,000 New Jersey employers. Each year (as required by the U.S. Bureau of Labor Statistics), the Department of Labor *revises* previous employment estimates (approximately the prior 21 months of estimates) to a benchmark or universe count of employment derived from unemployment insurance records of New Jersey employers. The data collected through unemployment insurance records represent a nearly complete count of employment including, farms, forestry, and fisheries. More than 96% of total wage and salary civilian jobs are counted by the unemployment insurance program because employers are required by law to provide the state a quarterly count of the number of employees covered under unemployment insurance.

The employment estimates produced via the annual benchmark revisions process thus provide a more accurate picture of recent job trends, as they redress limitations inherent in survey sample-based estimation techniques. More specifically, because the sample used to derive the monthly establishment employment estimates tends to *over-represent* large-firm employment, sampling errors can be large in industries dominated by small firms (like construction). An example: A sample of 60 firms used to estimate employment in an area may include 10 large establishments and 50 small ones. Small establishments dominate the sample by a 5 to 1 margin. However, if employment in the 10 large establishments is 8,000 and employment in the small firms is 500, then the large establishments' employment dominates the sample by a ratio of 16 to 1. This problem is often exacerbated near business cycle turning points because the survey does not fully capture small firms that are going out of business during a downturn or the rapid business creation (and, job creation) during a recovery or expansion.

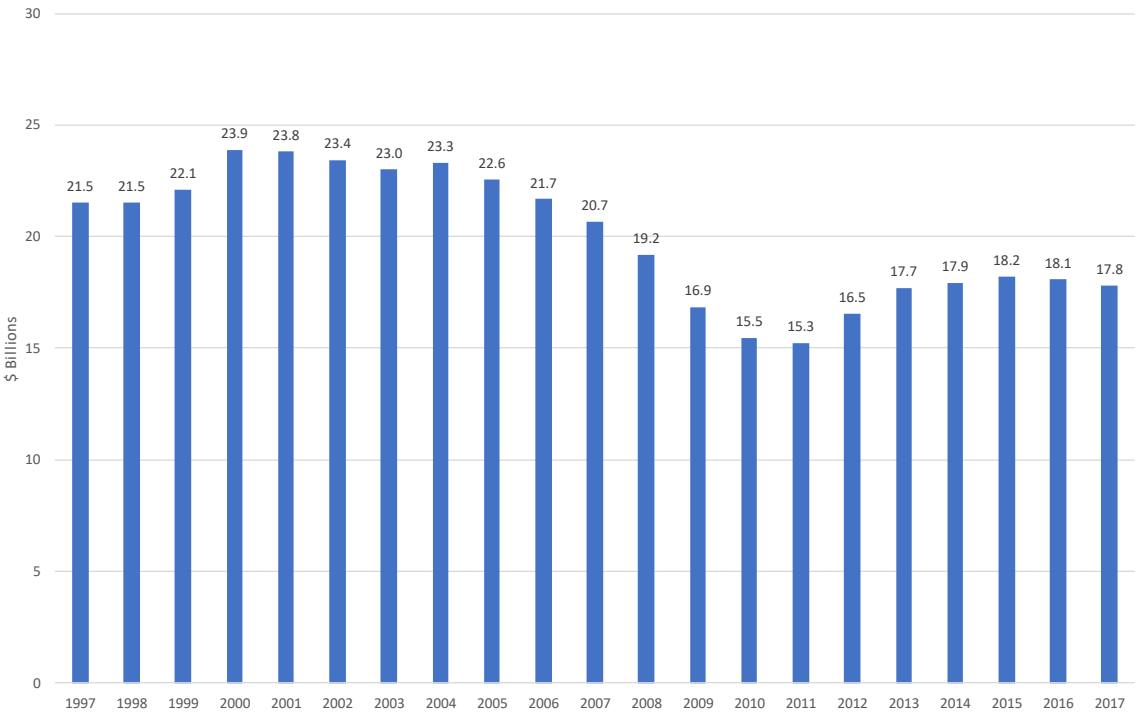
The recently-released 2018 benchmark revisions had a significant impact on the estimate of payroll construction employment in New Jersey. Prior to this year's benchmark revision, 2017 construction employment in New Jersey was estimated at 155,000. The newly revised figure (post the benchmark revision) was 156,000. Similarly, the pre-benchmark 2018 employment estimate was 151,300, while the post-benchmark estimate was 157,900. (Figure A) These revisions changed these two years' rates of construction job growth. While 2017's rate of growth was increased to 1.5 percent from an original estimate of 1 percent. ***Last year's rate of growth was increased to 1.3 percent from an originally estimated -2.4 percent.*** Thus, last year, total construction employment in New Jersey increased by 2,000 compared to an initial (pre-benchmark) estimate of -3,700. As Figure 4 (p. 4) shows, construction employment accounted for 3.8 percent of total nonfarm employment statewide in 2018, compared to 4.1 and 4.3 percent in New York and Pennsylvania.

Figure A: How the U.S. Bureau of Labor Statistics' Annual Benchmark Revisions Affected New Jersey Construction Payroll Employment Estimates 2012 to 2018



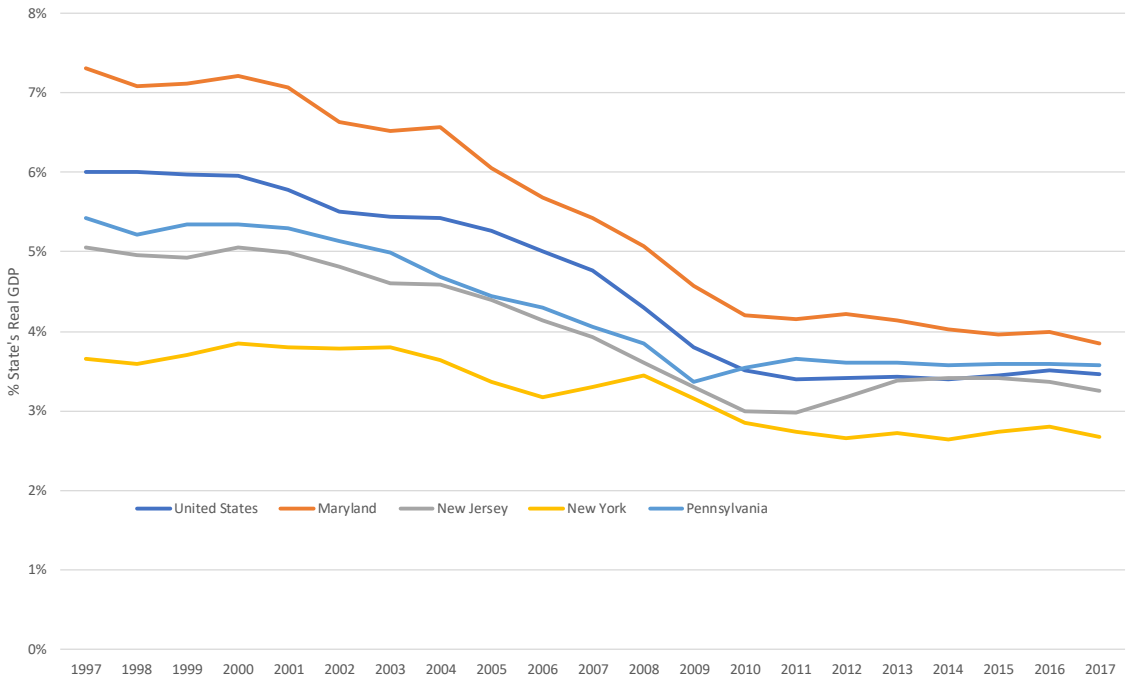
Source: U.S. Bureau of Labor Statistics.

Figure 1: New Jersey Construction Industry's Real Output
$2012



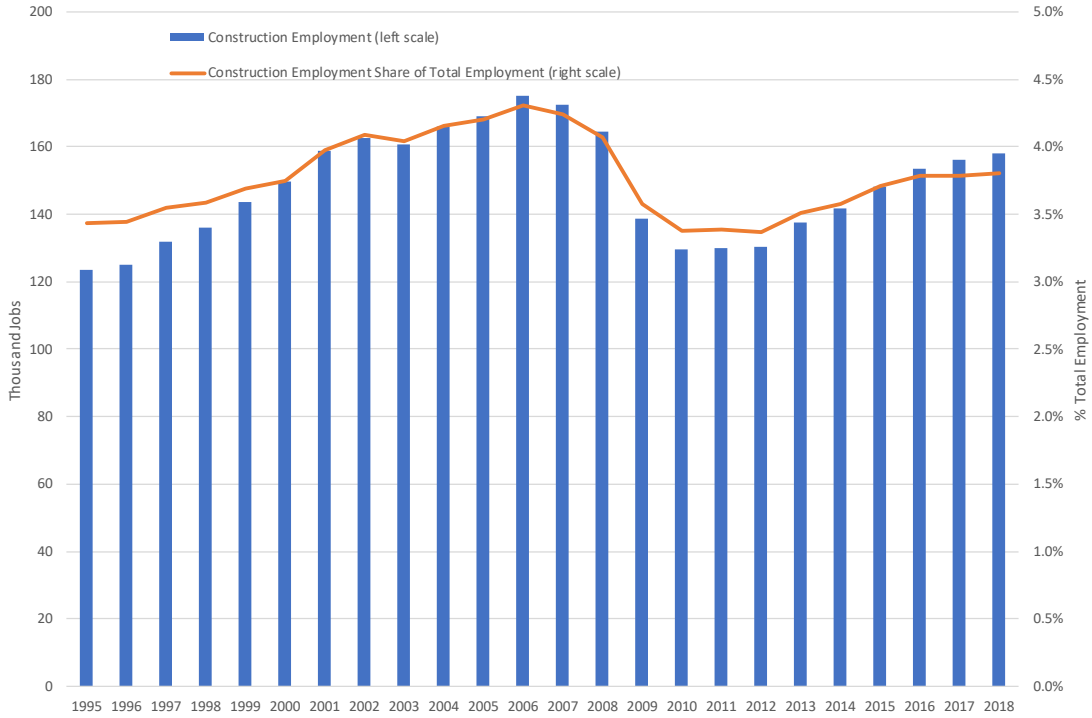
Source: U.S. Bureau of Economic Analysis

Figure 2: Construction Industry's Share of State Gross Domestic Product
New Jersey, Selected States and the U.S.
1997 to 2017

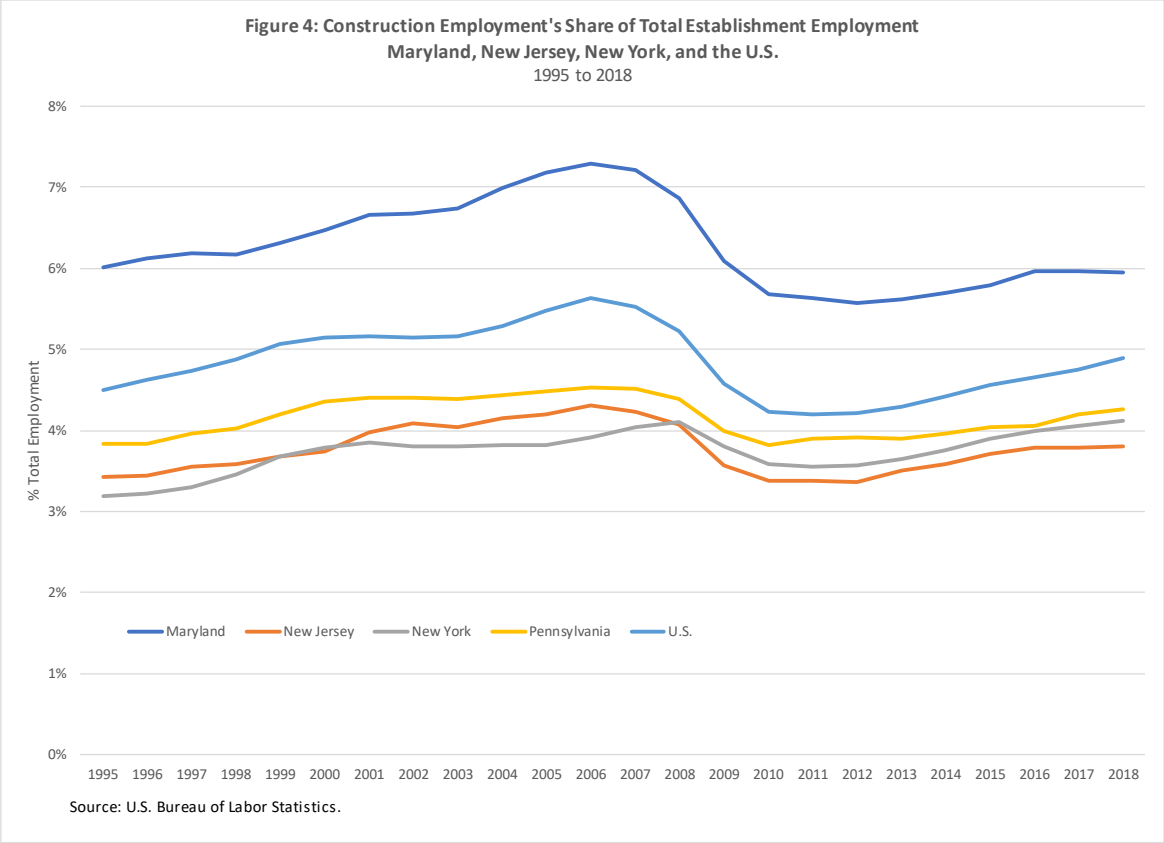


Source: U.S. Bureau of Economic Analysis

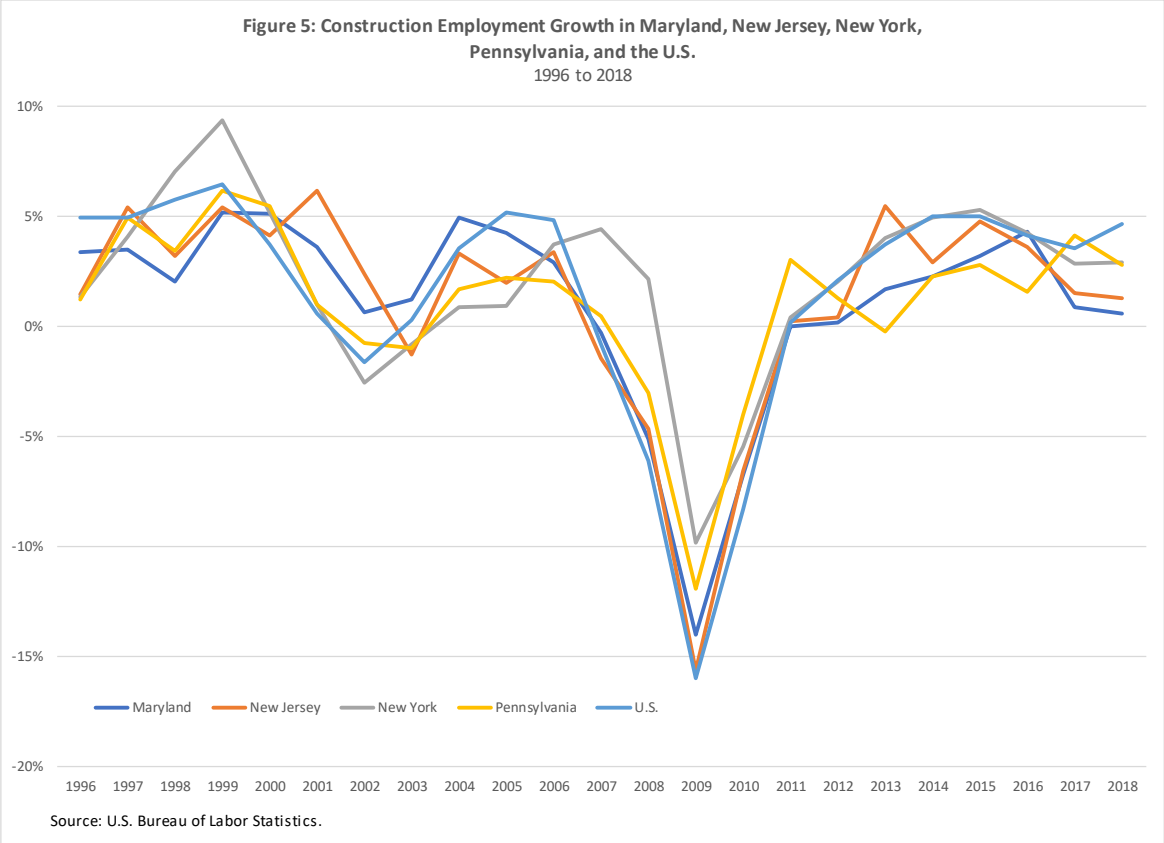
Figure 3: Construction Employment in New Jersey
1995 to 2018



Source: U.S. Bureau of Labor Statistics.



Last year's moderation in the rate of construction job growth in New Jersey (from 1.5 percent to 1.3 percent) was in line with slowdowns in Maryland's and Pennsylvania's rates of construction employment growth. New York's rate of growth last year, at 2.9 percent, remained unchanged, while nationally, the pace of job growth in the construction sector accelerated from 3.6 percent to 4.6 percent. (Figure 5)

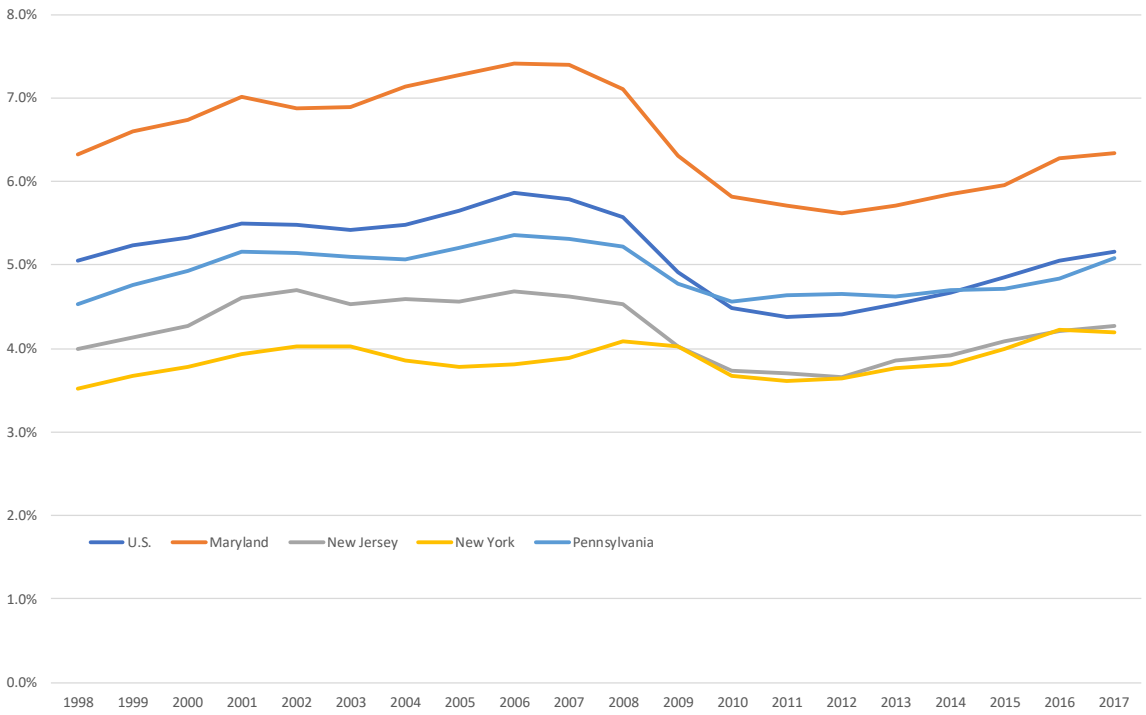


The recovery in the state's construction sector over the past several years has served to lift the construction sector's share of total statewide wages and salaries. Since bottoming out at 3.6 percent in 2012, this share has steadily increased. In 2017 (the last year for which data are available), wages in the construction sector accounted for 4.3 percent of total statewide wages and salaries, slightly higher than their 4.2 percent share in New York. As Figure 6 makes clear, however, these shares in New Jersey and New York are below those in Pennsylvania (5.1 percent) and Maryland (6.3 percent). Nationally, this share stood at 5.2 percent in 2017.

Figure 7 shows total statewide construction employment broken out into sub-sectors. As shown, the specialty trades continue to account for nearly two-thirds of all construction employment in New Jersey.

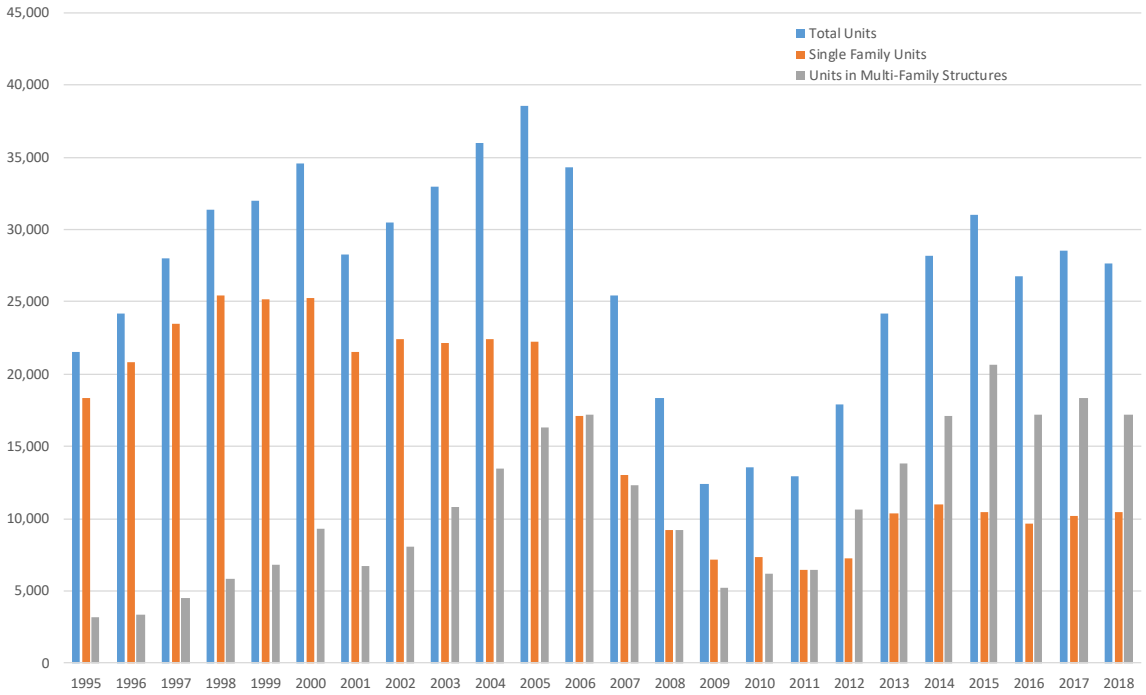
The construction sector's recovery from the housing crisis and Great Recession are clearly visible in Figure 8 (p. 7) which proxies residential homebuilding activity via housing units authorized by permit in New Jersey. As shown, homebuilding activity plummeted between 2005 and 2011 (as the total number of permits declined from 38,000 to 13,000) before stabilizing in 2012. The pace of homebuilding accelerated between 2012 and 2015 before moderating again in 2016. While activity increased again in 2017, as the number of units permitted climbed above 28,000, it declined modestly last year due to a slowdown in the multi-unit segment of the industry.

Figure 6: Construction Sector's Share of Total Wages & Salareis
1998 to 2017

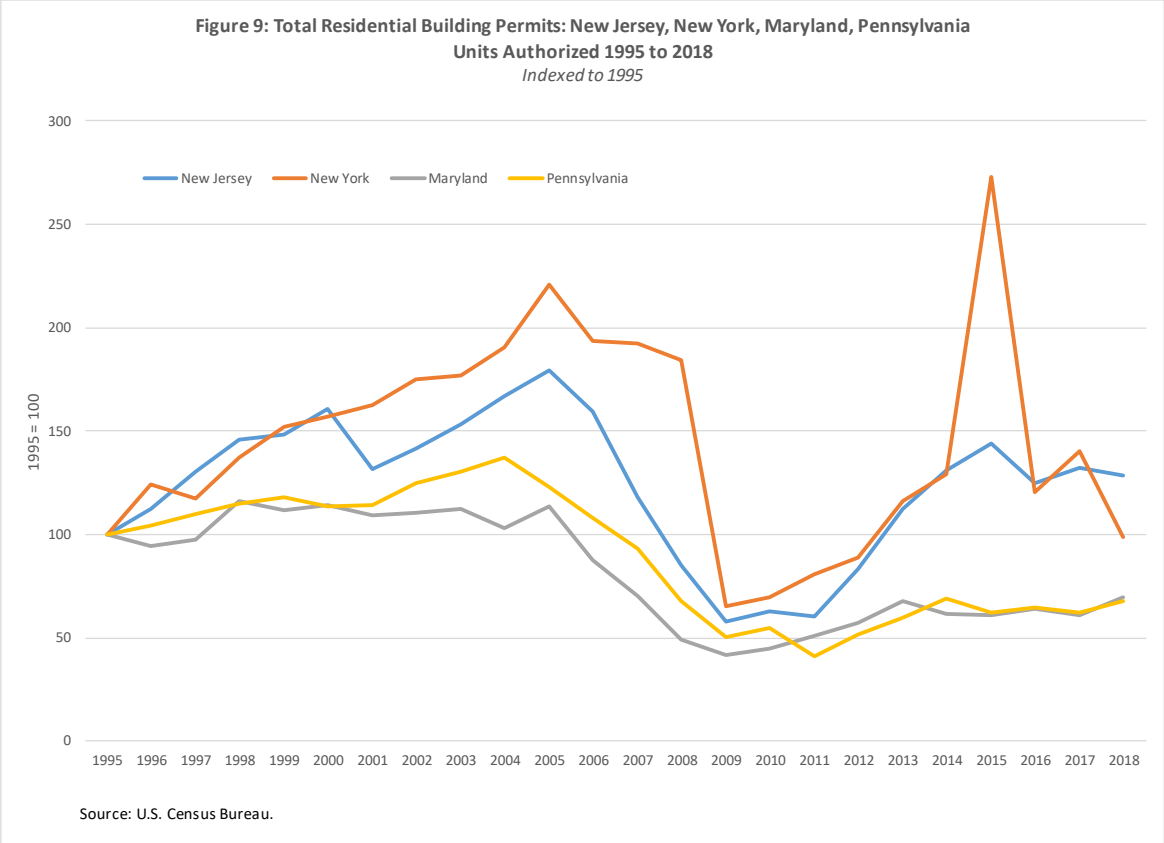


Source: U.S. Bureau of Economic Analysis.

Figure 8: Residential Homebuilding in New Jersey: 1995 to 2018*
Number of Units Authorized by Permit



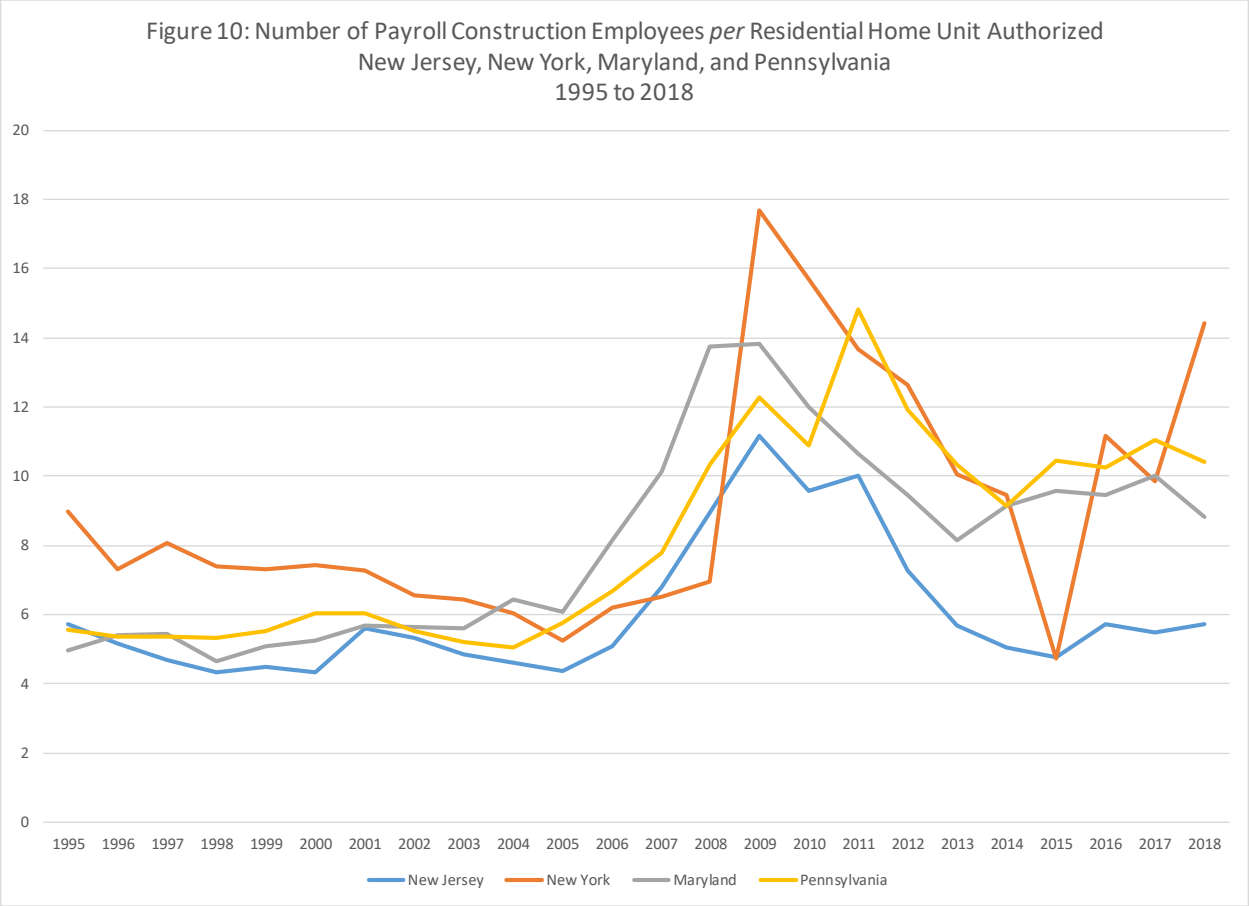
*2018 is year-to-date through December, i.e., final annual 2018 figure not yet available.
Source: U.S. Census Bureau.



As noted in the original report (see Section E), the number of payroll construction employees per residential housing unit authorized in New Jersey is considerably below that seen in several neighboring states. As Figure 10 shows, while this difference between New Jersey and these benchmark neighboring states is long-standing, it has increased considerably in recent years, i.e., during the recovery. For example, in 2010, there were 10 payroll construction employees per residential housing unit authorized in New Jersey, compared to an average of 13 in Maryland, New York, and Pennsylvania. Since then, this difference has widened. Last year, it equaled 5.5 (5.7 in New Jersey vs. 11.2 in the benchmark states).

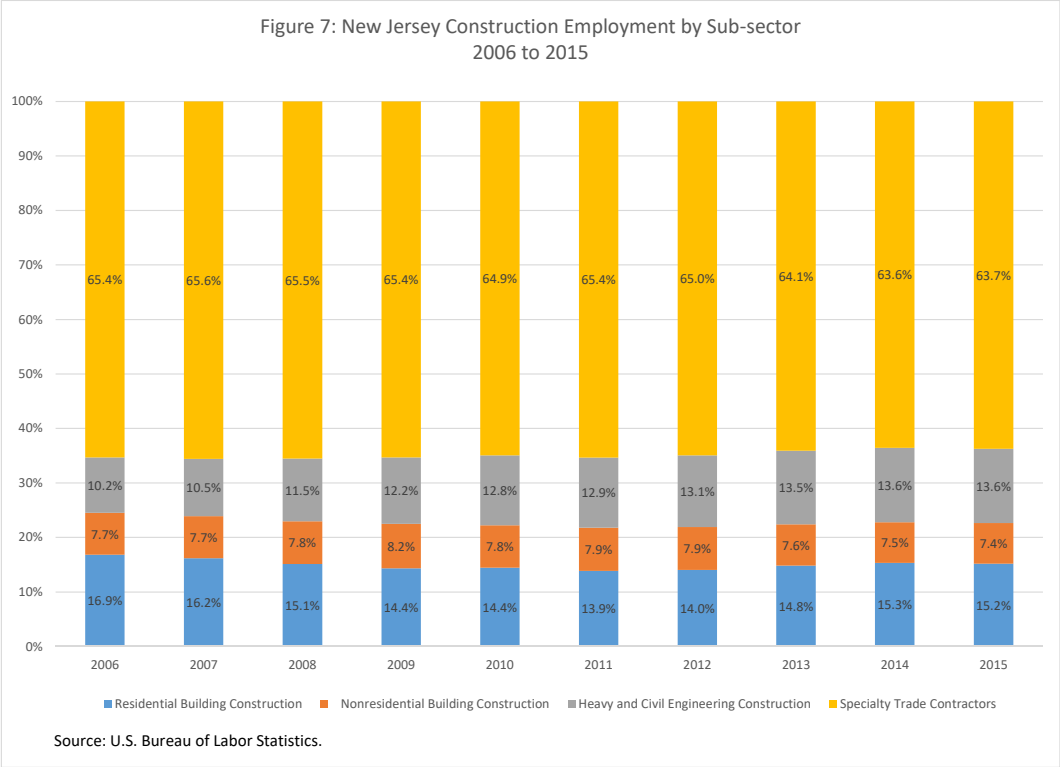
As noted in the original report, while a variety of factors could explain this discrepancy (such as regulatory differences across the states' construction sectors), it is noteworthy given its significance. It effectively suggests that New Jersey's residential homebuilders enjoy significantly higher levels of labor productivity *vis-a-vis* surrounding states' homebuilders. Given the increasingly standardized production techniques used within the homebuilding industry, such an apparent sizable productivity difference is noteworthy, and *may* be an indicator of above-average underground activity in New Jersey's residential homebuilding industry.[6] In particular, the use of underground labor by homebuilders in the state would ostensibly allow them to reduce the average number of formal sector (payroll) workers employed per housing unit authorized.

[6] It seems a reasonable assumption that underground activity plagues each of these states' homebuilding industries. Thus, the apparent productivity differential in New Jersey referenced could only be explained by a level of underground activity in New Jersey that was in excess of the average level experienced by its neighboring states.



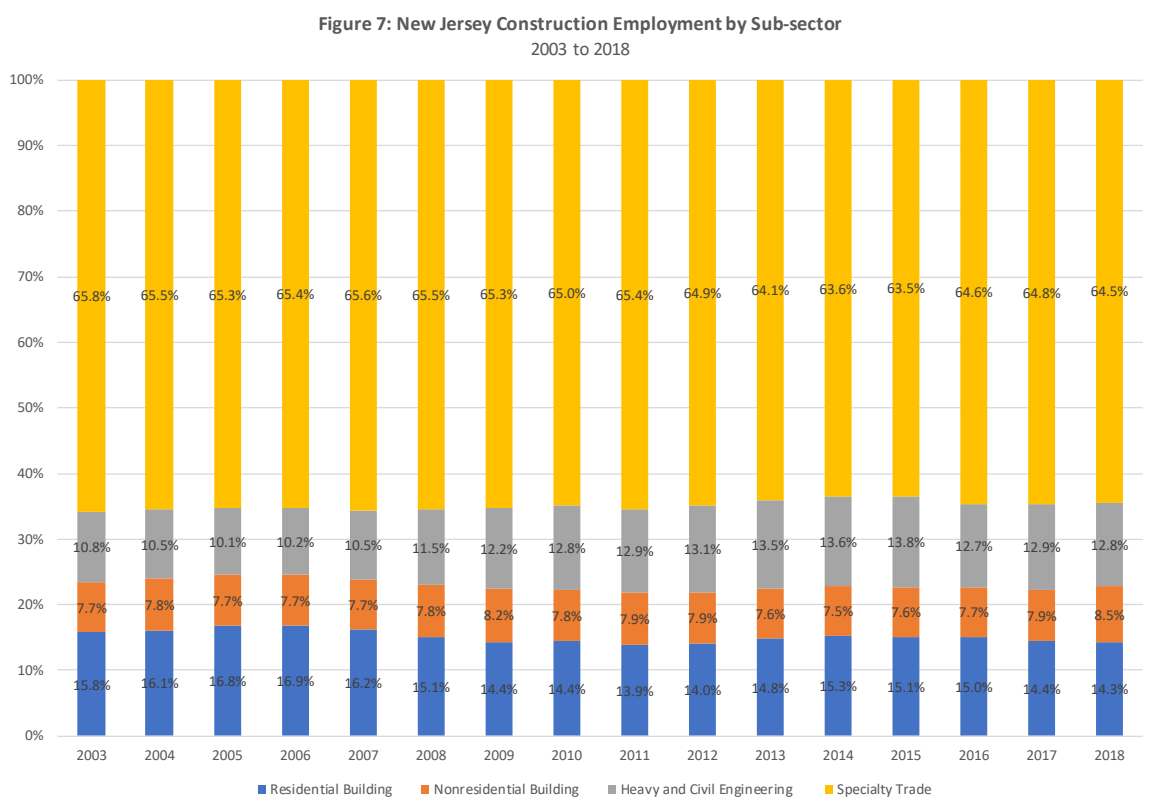
B. Employment by Sub-Sector (2016 report)

Figure 7 shows the composition of New Jersey's construction employment at the sub-sector level. Specialty trade contractors account for nearly two-thirds of all construction employment in New Jersey. Among others, this cohort of construction workers includes: plumbers, electricians, drywallers, roofers, tilers, masons, and framers. Those engaged in the residential home construction account for the next largest cohort of construction workers in the state (approximately 15 percent). Heavy and civil engineering construction workers account for 13 percent of all construction workers statewide, while the balance (roughly 7 percent) are employed in non-residential (commercial) building construction. The sub-sector breakdown of construction employment in New Jersey closely approximates the national average.



Source: U.S. Bureau of Labor Statistics.

Revised employment data 2019



Source: U.S. Bureau of Labor Statistics.

C. Residential Construction Employment in New Jersey

The above discussion regarding construction sector employment trends focused solely on establishment or payroll employment. Establishment or payroll employment data, produced monthly by the U.S. Bureau of Labor Statistics in conjunction with state departments of labor, are estimates of jobs (persons on a payroll) based on business surveys, and thus tie jobs to where they (or the establishment) are (is) physically located. Residential or household employment data (as from the Current Population Survey (CPS) pertain to individuals and relate to where they reside. All national unemployment and labor force data are drawn from the CPS. American Community Survey (ACS) data are similarly residential based.

Table 1 shows the difference between payroll and ACS residence-based estimates of construction employment in New Jersey. (Column E) There are several important differences that should be noted. First, the ACS-based estimate of residential construction employment is considerably higher than the payroll estimate. (At the same time, the two estimates' trend rates of annual growth are broadly similar.) This is largely a reflection of two items. First, a considerable portion of the difference between the two estimates reflects the fact that the payroll employment estimates exclude (by definition) self-employed individuals. The ACS-based estimates of residential construction employment include self-employment. As is well known, the construction industry has a high proportion of self-employed workers. For example, the ACS estimates indicate that 8.7 percent of New Jersey's employed civilians were self-employed in 2014. In construction, however, this proportion was 23 percent.[7] Thus, in 2014 (the last year for which ACS estimates are available), there were nearly 57,000 self-employed construction workers who resided in New Jersey. (Table 2, discussed further below, shows self-employment rates for residential construction workers in several other states.) As shown, the number of self-employed construction workers rose significantly between 2005 and 2007 (in tandem with the housing construction boom) and eventually peaked at 70,000 before declining sharply over the ensuing years as the housing market crisis set in.

Another reason for the difference between the payroll and ACS estimates reflects residential construction workers employed by the non-profit and public sectors. (Column I) Such construction workers would not be expected to show up on New Jersey-based *construction* firms' payrolls. Column J shows the total number of construction workers who reside in New Jersey that are either self-employed or work in the non-profit or public sectors. Thus, much of the difference between the payroll and ACS-based residential estimates of construction employment reflect self-employment and employment in the non-profit and public sectors. However, column K shows the remaining portion of the difference between the two construction employment estimates that is left unexplained. As shown, this residual grew more than threefold between 2005 and 2014 (from 10,600 to 34,000).

[7] The ACS data, it should be noted, break out the self-employed into individuals who have incorporated their own businesses and those who have not (non-incorporated). In New Jersey, in 2014, this break out was: 9.6 percent vs. 13.4 percent, respectively, where these two rates sum to the 23 percent self-employment rate cited in the text. It is worth noting that New Jersey's overall self-employment incorporated vs. non-incorporated breakout is unique. In particular, New Jersey is the *only* state whose overall *incorporated* self-employment rate (4.6 percent) is greater than its non-incorporated self-employment rate (4.4 percent). Thus, the construction sector is at odds with the state's overall incorporated vs. non-incorporated self-employment division.

There are but two reasons that might explain this difference. First, some of the difference likely reflects construction workers who reside in New Jersey (and thus are included in the ACS resident count) but work *outside* New Jersey (and thus may show up on out-of-state construction firms' payrolls). As is well known, New York City has experienced a tremendous construction boom over the past decade. In addition to the massive rebuilding activity tied to Lower Manhattan in the post-9/11 era, the entire New York City area (especially the outer boroughs) has experienced a significant construction upswing over the past decade.[8] Given this, it seems possible that many construction workers who reside in New Jersey may have found employment in New York City over the last decade. At the same time, several reports on New York City's construction sector by the *Fiscal Policy Institute* make clear that official payroll employment in New York City's construction sector has *not* increased significantly over the past decade.[9] Indeed, these reports document a significant increase in the city's underground construction sector. Thus, it may well be the case that while some New Jersey construction workers *have* found employment in New York City over the past decade, it has largely been in the underground construction sector.

It is worth noting that one of the aforementioned *Fiscal Policy Institute* reports estimates that the total number of construction workers who reside in New Jersey, Pennsylvania, and Connecticut but work in New York City totaled 14,600 in 2005. If one assumes, rather arbitrarily, that New Jersey resident construction workers accounted for 40 percent of those workers (or, 5,840), one would still be left with an unexplained count of approximately 4,700 workers (10,558 – 5,840) in 2005.[10]

The other possible reason for the apparent unexplained residual difference between New Jersey's official payroll construction employment and ACS resident-based construction employment is underground construction activity *in* New Jersey. And, as noted, the significant threefold increase in this unexplained residual between 2005 and 2014 *may* suggest that New Jersey's underground construction sector has grown significantly in recent years. We return and expand on this analysis of residential vs. payroll employment in considerable detail in Part 2's Section H, where we estimate the extent of "off-the-books" employment in New Jersey's construction sector.

Table 2 refines and adds to the information presented in Table 1. In particular, it adds several states and considers their construction sectors' real output and employment broken out by payroll, residential and self-employment. There are several noteworthy items that emerge from Table 2. First, as shown, New Jersey's self-employment rate (for its 247,000 residential construction workers), which equaled 23 percent in 2014, is similar to those found in other states. Second, Columns E-G in the table show real construction sector output *per employee* (for the different types of employment). Thus, for example, in New Jersey, real construction output per residential construction worker equaled $71,523 in 2014, while output per self-employed

[8] For details regarding the construction boom in New York City see, "Building Up New York, Tearing Down Job Quality" *Fiscal Policy Institute,* December 5, 2007.

[9] In addition to the report cited in footnote 2, see also: "The Underground Economy in the New York City Affordable Housing Construction Industry" *Fiscal Policy Institute,* April 17, 2007.

[10] As noted immediately below, we return to this issue in Part 2's Section H.

construction worker equaled $310,968. These figures are in rough alignment for those shown for the other states.

Output, or the monetary value of construction produced per *payroll* construction worker in New Jersey, however, which totaled $125,042 in 2014, was significantly higher than the figures shown for all other states. The next largest was for New York ($113,181). Nationally, this figure was $95,851. **It strains credibility to believe that New Jersey-based construction firms enjoy what appears to amount to a roughly 30 percent labor productivity premium.**[11] Indeed, even if one compares New Jersey to New York, the implied labor productivity premium is over 10 percent. **While a fuller discussion of "off-the-books" employment is set out below (Part 2, Section H), this finding *may* be another indicator of underground activity in New Jersey's construction sector.**

Table 2's Column J subtracts each state's payroll construction employment from its resident construction employment and then divides by resident construction employment. As shown, New Jersey's ratio of 0.43 is well above other states. As noted, this could be a reflection of the fact that some construction workers that reside in New Jersey are employed by construction firms in other states (and thus shown up on their payrolls), or it may be indicative of underground activity in New Jersey's construction sector. Again, we return to this discussion in Part 2's Section H.

Table 1: Construction Employment in New Jersey: Payroll, Residential, and Self-Employment

COLUMN ID	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*K*
	NJ Construction Firms' Payroll Employment		ACS Residential Construction Employment		ACS minus Payroll Estimate	ACS Employment in	ACS Employment Self-	ACS Self Employment	ACS Employment in Non-profit and	ACS Construction Employment Outside Private	ACS and Payroll Estimate Difference Left Unexplained
Year	No.	% Chg.	No.	% Chg.	Differential	Private Company	Employed	Rate	Public Sector	Construction Firms (Cols. G + I)	(Col. E - J)
2005	169,142	---	254,172	---	85,030	179,700	62,018	24.4%	12,454	74,472	10,558
2006	174,900	3.4%	273,566	7.6%	98,666	191,770	64,835	23.7%	17,235	82,070	16,596
2007	172,267	-1.5%	280,643	2.6%	108,376	193,082	70,722	25.2%	16,839	87,561	20,816
2008	164,475	-4.5%	275,806	-1.7%	111,331	200,511	60,126	21.8%	15,169	75,295	36,036
2009	138,642	-15.7%	237,935	-13.7%	99,293	166,792	58,294	24.5%	12,611	70,905	28,389
2010	129,475	-6.6%	235,211	-1.1%	105,736	161,590	56,451	24.0%	17,170	73,621	32,115
2011	129,900	0.3%	223,957	-4.8%	94,057	153,411	54,646	24.4%	15,901	70,546	23,511
2012	130,408	0.4%	235,786	5.3%	105,378	160,570	60,597	25.7%	14,619	75,216	30,162
2013	137,567	5.5%	237,394	0.7%	99,827	170,211	55,075	23.2%	12,107	67,183	32,645
2014	141,583	2.9%	247,558	4.3%	105,975	175,519	56,938	23.0%	14,853	71,792	34,183

Sources: U.S. Bureau of Labor Statistics CES program, U.S. Census Bureau's American Community Survey (ACS) program, and author calculations.

[11] This finding led to the derivation of similar estimates for all fifty states. The result holds: the New Jersey figure cited ($125,042) was the highest among all states. The only other states that come close to matching the New Jersey figure were Connecticut ($123,000) and Rhode Island ($124,000). Thus, while these findings suggest that New Jersey is not a complete outlier it nevertheless remains odd for the reason explained in the text.

Table 2: Comparing Payroll, Residential, and Self-Employment in the Construction Sector across States

COLUMN ID	A	B	C	D	E	F	G	H
		Construction Employment Category (2014)			Real Output per Employment Category Employee			
State	2014 Real Construction Output ($2009, billions)	Payroll	Residential (ACS)	Residential Self Employment (ACS)	Payroll	Residential (ACS)	Residential Self Employment (ACS)	Residential Construction Self Employment Rate (ACS)
California	$68.0	674,100	1,064,294	250,109	$100,843	$63,871	$271,793	23.5%
Florida	$33.1	397,300	596,857	158,764	$83,262	$55,424	$208,360	26.6%
Illinois	$23.4	201,700	319,907	72,299	$116,063	$73,178	$323,794	22.6%
Maryland	$13.9	149,500	206,702	35,553	$92,963	$67,237	$390,912	17.2%
Massachusetts	$14.0	129,000	193,323	52,391	$108,651	$72,500	$267,529	27.1%
Michigan	$13.3	141,800	219,286	61,400	$94,020	$60,797	$217,133	28.0%
New Jersey	**$17.7**	**141,600**	**247,558**	**56,938**	**$125,042**	**$71,523**	**$310,968**	**23.0%**
New York	$38.8	343,000	524,696	111,760	$113,181	$73,988	$347,360	21.3%
Pennsylvania	$20.8	228,900	359,108	84,390	$90,786	$57,868	$246,248	23.5%
Texas	$71.7	651,542	989,460	202,839	$110,113	$72,507	$353,694	20.5%
United States	$589.6	6,150,833	9,292,826	2,165,228	$95,851	$63,443	$272,287	23.3%

Source: U.S. Bureau of Economic Analysis, and U.S. Census Bureau's American Community Survey (ACS), 2014.

This section updates the discussion found in the original report's Section C "Residential Construction Employment in New Jersey." It provides updates of Tables 1 and 2. Revised 2019

Table 1 shows the difference between payroll and The U.S. Census Bureau's American Community Survey (ACS) residence-based estimates of construction employment in New Jersey. (Column E) There are several important differences that should be noted. First, the ACS-based estimate of residential construction employment is considerably higher than the payroll estimate. (At the same time, the two estimates' trend rates of annual growth are broadly similar.) This is largely a reflection of two items. First, a considerable portion of the difference between the two estimates reflects the fact that the payroll employment estimates exclude (by definition) self-employed individuals. The ACS-based estimates of residential construction employment include self-employment. As is well known, the construction industry has a high proportion of self-employed workers. For example, the ACS estimates indicate that 8.3 percent of New Jersey's age16-plus employed civilians were self-employed in 2017 (the latest year for which ACS residential employment data are available.) In construction, however, this proportion was 21.3 percent. Thus, in 2017, there were 54,600 self-employed construction workers who resided in New Jersey. (Table 2, discussed further below, shows self-employment rates for residential construction workers in several other states.) As shown, the number of self-employed construction workers rose significantly between 2005 and 2007 (in tandem with the housing construction boom) and eventually peaked at 70,000 before declining sharply over the ensuing years as the housing market crisis set in. While the number of self-employed construction workers in the state increased in 2012, they have continued to decline ever since.

Another reason for the difference between the payroll and ACS estimates reflects residential construction workers employed by the non-profit and public sectors. (Column I) Such construction workers would not be expected to show up on New Jersey-based *construction firms'* payrolls. Column J shows the total number of construction workers who reside in New Jersey who are either self-employed or work in the non-profit or public sectors. Thus, much of the difference between the payroll and ACS-based residential estimates of construction employment reflects self-employment and employment in the non-profit and public sectors. However, column

K shows the remaining portion of the difference between the two construction employment estimates that is left unexplained. As noted in the original report, this residual grew more than threefold between 2005 and 2014 (from 10,600 to 34,000). Between 2014 and 2017, this unexplained residual declined somewhat. In 2017, it equaled approximately 32,000.

As noted in the original report, some of this unexplained residual may be tied to methodological differences across the two employment estimates. Some of it also likely reflects construction workers who reside in New Jersey (and thus are included in New Jersey's ACS residential construction count) but work *outside* New Jersey (and thus may show up on out-of-state construction firms' payrolls). As noted in the original report, New York City's well-documented construction boom over the past 15 years or so in tandem with Northern New Jersey's well-known commuting ties to New York City, seem likely to account for *some* of the residual (as many New Jersey construction workers likely availed themselves of New York City-based construction employment opportunities). However, even taking this possibility into account (as the original report explains), leaves a sizable part of the residual unexplained.[12]

Finally, the other possible reason for the unexplained residual difference between New Jersey's official payroll construction employment and its ACS resident-based construction employment is underground construction activity *in* New Jersey. As noted in the original report, the threefold increase in this unexplained residual between 2005 and 2014 may be an indicator that New Jersey's underground construction sector grew during this period. Equally, the fact that this residual has *declined* somewhat since then (as just noted, it declined to approximately 32,000 in 2017) may indicate that the level of underground activity in the state's construction sector has *declined* somewhat over the past few years. As we did in the original report, we return to and expand on this analysis of residential vs. payroll employment in more detail below.

Table 1: Construction Employment in New Jersey: Payroll, Residential, and Self-Employment, 2005-2017

COLUMN ID	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*K*
	NJ Construction Firms' Payroll Employment		ACS Residential Construction Employment		ACS minus Payroll Estimate	ACS Employment in Private	ACS Employment Self-	ACS Self	ACS Employment in Non-profit and	ACS Construction Employment Outside Private	ACS and Payroll Estimate Difference Left Unexplained
Year	No.	% Chg.	No.	% Chg.	Differential	Company	Employed	Employment Rate	Public Sector	Construction Firms (Cols. G + I)	(Col. E - J)
2005	169,142	---	254,172	---	85,030	179,700	62,018	24.4%	12,454	74,472	10,558
2006	174,883	3.4%	273,566	7.6%	98,683	191,770	64,835	23.7%	17,235	82,070	16,613
2007	172,367	-1.4%	280,643	2.6%	108,276	193,082	70,722	25.2%	16,839	87,561	20,716
2008	164,392	-4.6%	275,806	-1.7%	111,414	200,511	60,126	21.8%	15,169	75,295	36,119
2009	138,708	-15.6%	237,935	-13.7%	99,227	166,792	58,294	24.5%	12,611	70,905	28,322
2010	129,567	-6.6%	235,211	-1.1%	105,644	161,590	56,451	24.0%	17,170	73,621	32,023
2011	129,900	0.3%	223,957	-4.8%	94,057	153,411	54,646	24.4%	15,901	70,546	23,511
2012	130,433	0.4%	235,786	5.3%	105,353	160,570	60,597	25.7%	14,619	75,216	30,137
2013	137,583	5.5%	237,394	0.7%	99,811	170,211	55,075	23.2%	12,107	67,183	32,628
2014	141,567	2.9%	247,558	4.3%	105,991	175,519	56,938	23.0%	14,853	71,792	34,200
2015	148,292	4.8%	257,973	4.2%	109,681	186,514	56,496	21.9%	15,220	71,716	37,965
2016	153,617	3.6%	253,497	-1.7%	99,880	184,546	55,009	21.7%	14,196	69,205	30,676
2017	155,950	1.5%	256,309	1.1%	100,359	188,131	54,594	21.3%	13,841	68,435	31,924

Sources: U.S. Bureau of Labor Statistics CES program, U.S. Census Bureau's American Community Survey (ACS) program, and author calculations.

Table 2 refines and adds to the information presented in Table 1. Specifically, it adds several states and considers their construction sectors' real output and employment broken out by

[12] The original report cited a Fiscal Policy Institute study that estimated the total number of construction workers who reside in New Jersey, Pennsylvania, and Connecticut but work in New York City totaled 14,600 in 2005. As noted in the original report, if one assumes, rather arbitrarily, that New Jersey resident construction workers accounted for 40 percent of those workers (or, 5,840), one would still be left with a rather sizable unexplained residual. It is also worth underscoring, as the original report did, that there are reasons to believe that many of these New Jersey-based construction commuter workers may well have found employment in New York City's underground construction sector. (See footnotes 2 and 3 in the original report.)

payroll, residential and self-employment. There are several noteworthy items that emerge from Table 2. First, as shown, New Jersey's self-employment rate (among its 256,000 residential construction workers), which equaled 21.3 percent in 2017, is broadly similar to those found in other states. Second, Columns E-G in the table show real construction sector output *per employee* (for the different types of employment shown). For example, in New Jersey, real construction output *per residential construction worker* equaled $69,459 in 2017, while output *per self-employed construction worker* equaled $326,099. These figures are in rough alignment with the figures shown for the other states (especially New York, Pennsylvania, and Maryland).

Real output *per payroll construction worker* in New Jersey, however, which totaled $114,158 in 2017, was significantly higher than the figures shown for all other states. The next largest shown in Table 2 was Massachusetts at $102,842. The comparable figures for New York and Pennsylvania were $97,812 and $100,518.[13] (Nationally, this figure was $89,554.) Thus, relative to its two closest neighbors, New Jersey's real construction output per payroll construction worker was 17 and 14 percent higher. Alternatively, whereas in takes 8.8 payroll construction workers to produce $1 million of real output in New Jersey's construction sector, it takes 10.2 workers in New York, and 9.9 in Pennsylvania. As noted in the original report, this implies that New Jersey's construction firms enjoy a sizable labor productivity premium. This apparent productivity premium is difficult to explain given the largely standardized production technologies used in the construction sector today. Thus, this apparent productivity differential *may* be an indicator of (above-average) underground activity in New Jersey's construction sector.

Table 2's Column J subtracts each state's payroll construction employment from its resident construction employment and then divides by resident construction employment. As shown, New Jersey's ratio of 0.39 is above most other states' save Texas' (0.38). As noted in the original report, this could reflect the fact that some construction workers who reside in New Jersey are employed by construction firms in other states (and thus shown up on their payrolls), or it may be indicative of underground activity in New Jersey's construction sector. Again, we return to this discussion below.

At the same time, it should also be noted that this ratio equaled 0.43 for New Jersey in 2014 (i.e., in the original report). Thus, *as a share of residential construction employment,* the residual between the state's payroll construction employment and its ACS-based residential employment has *declined* somewhat over the past few years. This of course dovetails with the prior comment made above regarding the residual's *absolute value,* which has declined somewhat over the past few years.

[13] As noted in the original report (see footnote number 5), we once again calculated real construction output per construction payroll employee for all fifty states for 2017. The result noted in the original report continued to hold in 2017: the New Jersey figure cited above ($114,158) was the highest among all states. The only state that came close to matching New Jersey's figure was Connecticut ($109,723).

Table 2: Comparing Payroll, Residential, and Self-Employment in the Construction Sector across States, 2017

COLUMN ID	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*
		Construction Employment Category (2017)			Real Output *per* (Employment Category) Employee			
State	2017 Real Construction Output ($2012, billions)	Payroll	Residential (ACS)	Residential Self Employment (ACS)	Payroll	Residential (ACS)	Residential Self Employment (ACS)	Residentia Construction Employment F (ACS)
California	$81.0	810,317	1,195,959	288,226	$99,991	$67,749	$281,115	24.1%
Florida	$39.7	505,825	727,365	180,387	$78,429	$54,542	$219,926	24.8%
Illinois	$22.4	220,242	332,236	80,069	$101,881	$67,538	$280,239	24.1%
Maryland	$13.9	162,417	214,668	42,290	$85,859	$64,961	$329,750	19.7%
Massachusetts	$15.6	152,142	213,964	52,421	$102,842	$73,127	$298,477	24.5%
Michigan	$16.1	162,200	248,297	68,282	$99,417	$64,944	$236,161	27.5%
New Jersey	**$17.8**	**155,950**	**256,309**	**54,594**	**$114,158**	**$69,459**	**$326,099**	**21.3%**
New York	$37.9	387,642	551,537	115,823	$97,812	$68,746	$327,364	21.0%
Pennsylvania	$25.0	249,025	364,421	89,283	$100,518	$68,689	$280,362	24.5%
Texas	$69.8	712,242	1,145,046	241,605	$98,052	$60,990	$289,052	21.1%
United States	$623.8	6,965,500	10,292,425	2,418,720	$89,554	$60,607	$257,902	23.5%

Source: U.S. Bureau of Economic Analysis, and U.S. Census Bureau's American Community Survey (ACS), 2017.

D. Construction Sector Firm Size Composition (2016)

The Census Bureau's *County Business Patterns* program provides detailed data on the composition of the firms that comprise New Jersey's construction sector. Specifically, there were nearly 21,000 firms (or establishments) in the state's construction industry in 2014 (the last year for which these data are available). These establishments employed 139,000 individuals in 2014 and had a collective total annual payroll of $9.2 billion. (Table 3)

The average number of employees per construction firm in New Jersey was 6.6. This average was similar to New York's (6.8) though well below the national average of 8.6 as well as averages in Maryland (10.4) and Pennsylvania (8.4). The average annual payroll per construction firm in New Jersey totaled $440,000, a figure that was below the national average ($478,853) as well as the other states shown (except Maryland). While neither of these findings for New Jersey construction firms—below average employees per firm and below average payroll per firm—is large enough to draw conclusive inferences, they are noteworthy in the current context, as they may be indications of potential underground activity in the state's construction sector.

Of the firms that comprise the state's construction industry, 71.2 percent had 4 or fewer employees. This figure was higher than the national average of 66.8 percent and several other neighboring states' benchmarks. At the same time, it was comparable to New York's, where construction firms with 1-4 employees accounted for 71.7 percent of all construction establishments. These small construction firms in New Jersey accounted for 16.7 percent of total statewide construction employment compared to a national average of just 12.2 percent. In fact, small construction firms in New Jersey account for a significantly larger share of total industry

employment than they do in Maryland (9.6 percent), Pennsylvania (12.7 percent), and New York (15.5 percent). **If one extends the definition of "small" to include construction firms with 20 or fewer employees, such firms' employment in New Jersey accounts for 46.7 percent of statewide construction industry employment—a figure well above the national average of 38.6 percent and the other states shown in Table 1.** (New York's 44 percent is the second highest, whereas Maryland's 32.6 percent is the smallest.)

The apparent above-average "smallness" of New Jersey's construction sector—small construction firms (those with 20 or fewer employees) in the state account for an above-average share of total employment—may be important in the context of the underground economy. In particular, the business practice of misclassification (discussed in more detail in Part 2's Section G) may be facilitated in work settings, "where monitoring is more difficult because worksites are small, are scattered, and employ few workers."[14]

In terms of average annual pay, *County Business Patterns* data suggest that New Jersey construction workers enjoy sizable wage premiums compared to their counterparts in neighboring states. Across all establishment sizes, the average annual pay for a construction employee in New Jersey totaled $66,226 in 2014. While this was roughly comparable to the average pay for a New York construction worker ($66,341), it was well above those recorded in Maryland ($57,868), Pennsylvania ($59,320), and nationally ($55,992). While wage premia varied widely across firm size, over three-quarters of New Jersey's construction workers received annual pay that was greater than those working in comparably-sized firms in New York's construction sector.

[14] Francoise Carre, "(In)dependent Contractor Misclassification," *Economic Policy Institute,* June 8, 2015

Table 3: Firm Composition of New Jersey's and Selected States' Construction Sectors, 2014

	New Jersey									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	20,933	14,900	3,119	1,603	926	255	98	26	5	1
Cohort's Share Total Estabs.	100%	71.2%	14.9%	7.7%	4.4%	1.2%	0.5%	0.1%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	139,076	23,281	20,206	21,470	27,772	17,975	15,234	8,455	2,859	N/A
Cohort's Share Total Emps.	100%	16.7%	14.5%	15.4%	20.0%	12.9%	11.0%	6.1%	2.1%	N/A
Average No. Emps.	6.6	1.6	6.5	13.4	30.0	70.5	155.4	325.2	571.8	N/A
Annual Payroll ($ billions)	$9.2	$1.1	$1.0	$1.3	$2.0	$1.4	$1.3	$0.7	$0.1	N/A
Cohort's Share Total Payroll	100%	12%	11%	14%	21%	15%	15%	8%	2%	N/A
Average Annual Pay	$66,226	$48,539	$51,217	$61,418	$70,797	$76,107	$87,735	$83,879	$50,679	N/A
Average Annual Payroll per Estab.	$ 439,995	$75,841	$331,802	$822,604	$2,123,310	$5,364,831	$13,638,306	$27,276,731	$28,978,400	N/A

	Maryland									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	13,883	8,735	2,170	1,405	1,032	341	160	31	7	2
Cohort's Share Total Estabs.	100%	62.9%	15.6%	10.1%	7.4%	2.5%	1.2%	0.2%	0.1%	0.0%
No. Emps. on Mar. 12 Payroll	144,248	13,899	14,277	18,821	31,117	23,577	23,400	10,740	5,213	N/A
Cohort's Share Total Emps.	100%	9.6%	9.9%	13.0%	21.6%	16.3%	16.2%	7.4%	3.6%	N/A
Average No. Emps.	10.4	1.6	6.6	13.4	30.2	69.1	146.3	346.5	744.7	N/A
Annual Payroll ($ billions)	$8.3	$0.6	$0.6	$1.0	$1.8	$1.5	$1.5	$0.7	$0.5	N/A
Cohort's Share Total Payroll	100%	7.5%	7.7%	11.8%	21.5%	17.4%	17.8%	8.2%	5.6%	N/A
Average Annual Pay	$57,868	$44,814	$44,765	$52,168	$57,627	$61,589	$63,345	$63,958	$89,530	N/A
Average Annual Payroll per Estab.	$ 601,266	$71,307	$294,520	$698,828	$1,737,584	$4,258,287	$9,264,169	$22,158,323	$66,674,571	N/A

	New York									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	46,446	33,284	6,324	3,723	2,157	628	254	62	11	3
Cohort's Share Total Estabs.	100%	71.7%	13.6%	8.0%	4.6%	1.4%	0.5%	0.1%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	317,711	49,122	41,475	50,134	63,902	43,132	38,767	20,274	6,477	4,428
Cohort's Share Total Emps.	100%	15.5%	13.1%	15.8%	20.1%	13.6%	12.2%	6.4%	2.0%	1.4%
Average No. Emps.	6.8	1.5	6.6	13.5	29.6	68.7	152.6	327.0	588.8	1,476
Annual Payroll ($ billions)	$21.1	$2.3	$2.0	$2.9	$4.4	$3.5	$3.3	$1.8	$0.6	$0.3
Cohort's Share Total Payroll	100%	10.8%	9.3%	13.8%	20.8%	16.4%	15.7%	8.8%	2.8%	1.5%
Average Annual Pay	$66,341	$46,336	$47,335	$58,022	$68,693	$80,214	$85,447	$91,106	$91,646	$73,717
Average Annual Payroll per Estab.	$ 453,802	$68,384	$310,440	$781,331	$2,035,052	$5,509,252	$13,041,465	$29,791,758	$53,963,091	$108,805,667

	Pennsylvania									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	26,209	17,627	4,128	2,367	1,431	400	205	38	7	6
Cohort's Share Total Estabs.	100%	67.3%	15.8%	9.0%	5.5%	1.5%	0.8%	0.1%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	220,397	28,037	27,075	31,855	42,876	26,514	30,986	12,909	4,704	15,441
Cohort's Share Total Emps.	100%	12.7%	12.3%	14.5%	19.5%	12.0%	14.1%	5.9%	2.1%	7.0%
Average No. Emps.	8.4	1.6	6.6	13.5	30.0	66.3	151.2	339.7	672.0	2,574
Annual Payroll ($ billions)	$13.1	$1.2	$1.2	$1.7	$2.7	$1.8	$2.2	$1.0	$0.3	$0.9
Cohort's Share Total Payroll	100%	9.2%	9.5%	13.1%	20.4%	13.9%	16.9%	7.9%	2.4%	6.8%
Average Annual Pay	$59,320	$42,748	$45,725	$53,686	$62,286	$68,545	$71,184	$79,924	$67,599	$57,240
Average Annual Payroll per Estab.	$ 498,836	$67,994	$299,901	$722,510	$1,866,238	$4,543,523	$10,759,620	$27,151,184	$45,426,571	$147,306,333

	United States									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	667,099	445,471	104,408	61,229	38,282	11,157	5,053	1,051	320	128
Cohort's Share Total Estabs.	100%	66.8%	15.7%	9.2%	5.7%	1.7%	0.8%	0.2%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	5,705,146	695,636	684,858	822,960	1,149,125	757,531	750,325	357,755	217,163	269,793
Cohort's Share Total Emps.	100%	12.2%	12.0%	14.4%	20.1%	13.3%	13.2%	6.3%	3.8%	4.7%
Average No. Emps.	8.6	1.6	6.6	13.4	30.0	67.9	148.5	340.4	678.6	2,108
Annual Payroll ($ billions)	$319.4	$29.9	$29.3	$40.9	$64.9	$47.6	$49.8	$24.4	$15.2	$17.6
Cohort's Share Total Payroll	100%	9.4%	9.2%	12.8%	20.3%	14.9%	15.6%	7.6%	4.7%	5.5%
Average Annual Pay	$55,992	$43,025	$42,744	$49,726	$56,446	$62,778	$66,314	$68,197	$69,804	$65,174
Average Annual Payroll per Estab.	$ 478,853	$67,186	$280,375	$668,358	$1,694,353	$4,262,476	$9,847,027	$23,213,936	$47,371,431	$137,370,367

Source: U.S. Census Bureau's County Business Patterns.

This section updates the original report's Section D "Construction Sector Firm Size Composition." It provides an update of Table 3.

Revised 2019

The Census Bureau's *County Business Patterns* program provides detailed data on the composition of the firms that comprise New Jersey's construction sector. Specifically, there were nearly 21,389 firms (or establishments) in the state's construction industry in 2016 (the last year for which these data are available). These establishments employed approximately 155,000 individuals in 2016 and had a collective total annual payroll of $10.8 billion. (Table 3)

The average number of employees per construction firm in New Jersey was 7.3. This average was similar to New York's (7.4), though below the national average of 9.1 as well as averages in Maryland (10.7) and Pennsylvania (8.9). The average annual payroll per construction firm in New Jersey totaled $504,464, a figure that was below the national average ($532,853) as well as the other states shown (except Maryland).

Of the firms that comprise the state's construction industry, 70 percent had 4 or fewer employees. This figure was higher than the national average of 65.6 percent and several other neighboring states. At the same time, it was comparable to New York's, where construction firms with 1-4 employees accounted for 70.4 percent of all construction establishments. These small construction firms in New Jersey accounted for 15.3 percent of total statewide construction employment compared to a national average of 11.3 percent. In fact, small construction firms in New Jersey account for a larger share of total industry employment than they do in Maryland (9.4 percent), Pennsylvania (12 percent), and New York (14 percent). If one extends the definition of "small" to include construction firms with less than 20 employees, such firms' employment in New Jersey accounts for 43.2 percent of statewide construction industry employment—a figure above the national average of 37 percent and the other states shown in Table 1. (New York's 41.2 percent is the second highest, whereas Maryland's 32.3 percent is the smallest.)

The apparent above-average "smallness" of New Jersey's construction sector—small construction firms (those with fewer than 20 employees) in the state account for an above-average share of total employment—may be important in the context of the underground economy. In particular, as noted in the original report, the business practice of misclassification (discussed in more detail below) may be more common in jobs taken by these small firms, "where monitoring is more difficult because worksites are small, are scattered, and employ few workers."[15]

In terms of average annual pay, *County Business Patterns* data suggest that New Jersey construction workers enjoy sizable wage premiums compared to their counterparts in neighboring states. Across all establishment sizes, the average annual pay for a construction employee in New Jersey totaled $69,503 in 2016. While this was roughly comparable to the average pay for a New York construction worker ($68,289), it was well above those recorded in Maryland ($59,543), Pennsylvania ($60,265), and nationally ($58,824). While wage premia varied widely across firm size, nearly 90 percent of New Jersey's construction workers received annual pay that was greater than their counterparts working in comparably-sized firms in New York's construction sector.

[15] Francoise Carre, "(In)dependent Contractor Misclassification," *Economic Policy Institute,* June 8, 2015

Table 3: Firm Composition of New Jersey's and Selected States' Construction Sectors, 2016

	New Jersey									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	21,389	14,959	3,219	1,681	1,060	310	123	30	5	2
Cohort's Share Total Estabs.	100%	69.9%	15.0%	7.9%	5.0%	1.4%	0.6%	0.1%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	155,246	23,822	20,984	22,223	31,064	21,563	18,987	9,976	3,415	N/A
Cohort's Share Total Emps.	100%	15.3%	13.5%	14.3%	20.0%	13.9%	12.2%	6.4%	2.2%	N/A
Average No. Emps. per establishment	7.3	1.6	6.5	13.2	29.3	69.6	154.4	332.5	683.0	N/A
Annual Payroll ($ billions)	$10.8	$1.1	$1.1	$1.4	$2.3	$1.8	$1.7	$0.9	$0.2	N/A
Cohort's Share Total Payroll	100%	11%	10%	13%	21%	16%	16%	9%	2%	N/A
Average Annual Pay per Employee	$69,503	$47,796	$52,534	$62,083	$72,549	$81,751	$88,263	$94,199	$70,267	N/A
Average Annual Payroll per Estab.	$ 504,464	$76,115	$342,458	$820,750	$2,126,084	$5,686,468	$13,624,829	$31,324,233	$47,992,400	N/A

	Maryland									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	14,094	8,797	2,185	1,471	1,078	346	173	33	9	2
Cohort's Share Total Estabs.	100%	62.4%	15.5%	10.4%	7.6%	2.5%	1.2%	0.2%	0.1%	0.0%
No. Emps. on Mar. 12 Payroll	150,284	14,077	14,324	20,156	32,722	24,009	25,638	10,894	6,042	N/A
Cohort's Share Total Emps.	100%	9.4%	9.5%	13.4%	21.8%	16.0%	17.1%	7.2%	4.0%	N/A
Average No. Emps. per establishment	10.7	1.6	6.6	13.7	30.4	69.4	148.2	330.1	671.3	N/A
Annual Payroll ($ billions)	$8.9	$0.7	$0.7	$1.1	$2.0	$1.6	$1.7	$0.7	$0.5	N/A
Cohort's Share Total Payroll	100%	7.4%	7.3%	12.2%	21.9%	17.3%	19.2%	8.0%	5.3%	N/A
Average Annual Pay per Employee	$59,543	$47,037	$45,882	$54,082	$59,961	$64,605	$66,847	$66,063	$78,407	N/A
Average Annual Payroll per Estab.	$ 634,909	$75,269	$300,782	$741,041	$1,820,080	$4,482,951	$9,906,520	$21,808,727	$52,637,000	N/A

	New York									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	48,431	34,104	6,783	3,961	2,482	678	327	71	22	3
Cohort's Share Total Estabs.	100%	70.4%	14.0%	8.2%	5.1%	1.4%	0.7%	0.1%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	360,410	50,584	44,592	53,403	73,909	46,162	49,638	23,573	13,782	4,767
Cohort's Share Total Emps.	100%	14.0%	12.4%	14.8%	20.5%	12.8%	13.8%	6.5%	3.8%	1.3%
Average No. Emps. per establishment	7.4	1.5	6.6	13.5	29.8	68.1	151.8	332.0	626.5	1,589
Annual Payroll ($ billions)	$24.6	$2.4	$2.2	$3.1	$5.2	$3.7	$4.2	$2.3	$1.2	$0.3
Cohort's Share Total Payroll	100%	9.6%	8.8%	12.7%	21.0%	15.1%	17.1%	9.4%	5.0%	1.3%
Average Annual Pay per Employee	$68,289	$46,529	$48,664	$58,591	$69,900	$80,411	$84,540	$98,530	$89,923	$67,733
Average Annual Payroll per Estab.	$ 508,187	$69,012	$319,922	$789,939	$2,081,470	$5,474,823	$12,833,070	$32,713,437	$56,332,818	$107,628,000

	Pennsylvania									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	26,634	17,565	4,307	2,489	1,540	464	197	59	8	5
Cohort's Share Total Estabs.	100%	65.9%	16.2%	9.3%	5.8%	1.7%	0.7%	0.2%	0.0%	0.0%
No. Emps. on Mar. 12 Payroll	237,738	28,264	28,468	33,851	46,189	31,332	28,834	20,113	5,276	15,411
Cohort's Share Total Emps.	100%	11.9%	12.0%	14.2%	19.4%	13.2%	12.1%	8.5%	2.2%	6.5%
Average No. Emps. per establishment	8.9	1.6	6.6	13.6	30.0	67.5	146.4	340.9	659.5	3,082
Annual Payroll ($ billions)	$14.3	$1.2	$1.3	$1.9	$2.9	$2.2	$2.1	$1.6	$0.4	$0.8
Cohort's Share Total Payroll	100%	8.5%	9.4%	13.1%	20.2%	15.2%	14.5%	11.1%	2.6%	5.4%
Average Annual Pay per Employee	$60,265	$43,210	$47,115	$55,452	$62,637	$69,704	$71,867	$79,257	$71,041	$49,919
Average Annual Payroll per Estab.	$ 537,930	$69,529	$311,418	$754,161	$1,878,676	$4,706,849	$10,518,858	$27,018,475	$46,851,625	$153,860,200

	United States									
	Establishment Cohort (No. Employees)									
	All Estabs.	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
No. Establishments	696,733	457,376	111,181	65,702	42,327	12,506	5,831	1,288	378	144
Cohort's Share Total Estabs.	100%	65.6%	16.0%	9.4%	6.1%	1.8%	0.8%	0.2%	0.1%	0.0%
No. Emps. on Mar. 12 Payroll	6,311,264	714,491	729,938	882,061	1,269,736	855,277	861,363	433,282	253,235	311,881
Cohort's Share Total Emps.	100%	11.3%	11.6%	14.0%	20.1%	13.6%	13.6%	6.9%	4.0%	4.9%
Average No. Emps. per establishment	9.1	1.6	6.6	13.4	30.0	68.4	147.7	336.4	669.9	2,166
Annual Payroll ($ billions)	$371.3	$32.4	$32.4	$45.6	$75.1	$55.7	$59.6	$31.1	$18.7	$20.7
Cohort's Share Total Payroll	100%	8.7%	8.7%	12.3%	20.2%	15.0%	16.0%	8.4%	5.0%	5.6%
Average Annual Pay per Employee	$58,824	$45,388	$44,366	$51,718	$59,110	$65,106	$69,164	$71,879	$73,832	$66,275
Average Annual Payroll per Estab.	$ 532,853	$70,903	$291,274	$694,328	$1,773,205	$4,452,533	$10,217,000	$24,180,168	$49,462,452	$143,541,410

Source: U.S. Census Bureau's County Business Patterns.

Table 4: Occupational Employment and Wages in the Construction Sector: Delware, Maryland, New Jersey, New York, and Pennsylvania, 2017

	Delaware				Maryland				New Jersey				New York				Pennsylvania		
Occupation	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean
All Construction and Extraction Occupations	15,510	100.0%	$50,500	$47,290	115,820	100.0%	$49,350	$45,210	120,710	100.0%	$60,710	$56,200	332,420	100.0%	$64,420	$57,550	217,180	100.0%	$50,840
Boilermakers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	0.2%	$64,030	$55,450	360	0.1%	$65,160	$60,490	420	0.2%	$79,410
Brickmasons and Blockmasons	170	1.1%	$53,350	$55,010	2,460	2.1%	$48,750	$47,360	1,790	1.5%	$65,600	$62,820	6,270	1.9%	$75,390	$73,080	3,260	1.5%	$53,850
Stonemasons	N/A	N/A	N/A	N/A	330	0.3%	$41,990	$42,150	N/A	N/A	N/A	N/A	1,220	0.4%	$47,660	$35,850	220	0.1%	$55,490
Carpenters	1,770	11.4%	$48,390	$46,670	13,770	11.9%	$48,310	$45,720	16,360	13.6%	$61,390	$56,780	47,220	14.2%	$62,640	$55,210	28,440	13.1%	$50,770
Tile and Marble Setters	N/A	N/A	N/A	N/A	370	0.3%	$40,820	$39,310	1,320	1.1%	$63,150	$49,220	2,570	0.8%	$75,450	$77,390	1,060	0.5%	$51,850
Construction Laborers	1,810	11.7%	$34,560	$34,520	19,640	17.0%	$33,700	$32,810	23,440	19.4%	$52,220	$47,690	60,780	18.3%	$49,440	$42,520	41,150	18.9%	$39,180
Operating Engineers and Other Construction Equipment Operators	1,160	7.5%	$43,380	$39,830	4,610	4.0%	$49,040	$47,070	5,550	4.6%	$71,250	$67,570	12,520	3.8%	$77,580	$65,820	20,560	9.5%	$50,340
Drywall and Ceiling Tile Installers	310	2.0%	$50,320	$45,440	2,240	1.9%	$43,960	$44,140	1,480	1.2%	$59,020	$54,060	3,720	1.1%	$59,400	$47,610	1,850	0.9%	$48,720
Electricians	1,910	12.3%	$60,510	$58,760	13,070	11.3%	$55,000	$52,480	16,490	13.7%	$70,850	$62,420	41,920	12.6%	$76,480	$71,260	21,580	9.9%	$62,070
Glaziers	N/A	N/A	N/A	N/A	1,410	1.2%	$47,600	$46,890	950	0.8%	$71,300	$80,440	2,480	0.7%	$55,620	$50,730	1,390	0.6%	$51,940
Painters, Construction and Maintenance	440	2.8%	$41,220	$40,470	4,540	3.9%	$37,250	$36,360	4,350	3.6%	$47,440	$42,870	13,660	4.1%	$51,130	$45,480	5,890	2.7%	$42,230
Plumbers, Pipefitters, and Steamfitters	1,170	7.5%	$59,760	$57,220	9,870	8.5%	$57,070	$54,750	9,070	7.5%	$70,680	$62,190	27,410	8.2%	$77,990	$71,630	14,960	6.9%	$56,980
Roofers	180	1.2%	$40,780	$38,990	1,300	1.1%	$44,630	$44,820	1,570	1.3%	$56,270	$56,790	4,460	1.3%	$60,190	$49,430	3,840	1.8%	$42,320
Sheet Metal Workers	550	3.5%	$53,650	$54,860	2,880	2.5%	$52,700	$49,650	2,160	1.8%	$60,490	$53,830	8,080	2.4%	$66,730	$59,760	3,620	1.7%	$53,570
Structural Iron and Steel Workers	220	1.4%	$46,220	$47,050	630	0.5%	$51,120	$49,310	1,300	1.1%	$80,650	$87,320	6,240	1.9%	$87,870	$90,450	1,930	0.9%	$57,970
Total		62.5%				66.6%				71.4%				71.9%				69.1%	

Source: U.S. Bureau of Labor Statistics Occupational and Employment Statistics, 2017.

E. Residential Homebuilding Trends in New Jersey: 1995 to 2015

Figure 8 shows the number of residential home units officially "permitted" in New Jersey between 1995 and 2015. (Total, single-family, and multi-family units are shown separately.) As shown, the state saw two distinct periods of robust homebuilding activity during the past twenty years: the latter part of the 1990s and 2002-2005. Whereas the first period saw the number of housing units authorized climb to nearly 35,000 (in 2000), the 2002-2005 period saw the number of authorized units rise to nearly 38,600 (in 2005).

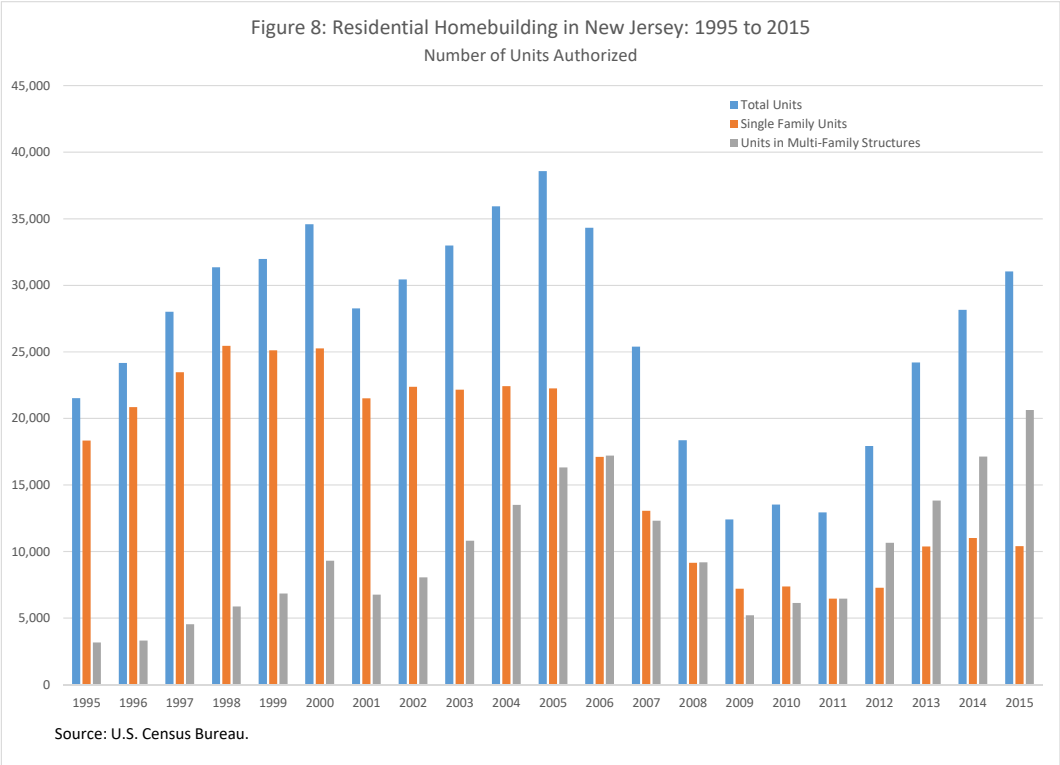
Following the onset of the national housing crisis, homebuilding activity in the state plummeted as the number of residential permits authorized statewide dropped to 12,400 in 2009. Homebuilding activity began to rebound in 2012. Last year the number of authorized residential units climbed back above 31,000—a level it last broached in 2006. It should be pointed out, however, that the past several years' worth of recovery in the state's homebuilding industry have seen a dramatic shift in the nature of housing construction. More specifically, whereas the two aforementioned periods of robust homebuilding were disproportionately driven by single family home construction, the past several years have been driven by multi-family unit construction. Last year, two-thirds of all residential units authorized were in multi-family structures.

Figure 9 benchmarks New Jersey's homebuilding trend against several neighboring states'. As shown, the overall trend in New Jersey's homebuilding trend over the past twenty years compares favorably to Pennsylvania's and Maryland's, though it has lagged New York's by a considerable margin.

Figure 10 shows the number of *payroll construction employees per residential housing unit authorized* for New Jersey and the set of benchmark states. **As shown, the number of construction employees per residential unit authorized has tended to be lower in New Jersey than in these other states. In fact, over the entire period shown, the average number**

of payroll construction employees per authorized residential housing unit in New Jersey equaled 6.1, a figure well below New York's 8.6 and Pennsylvania's and Maryland's 7.9.

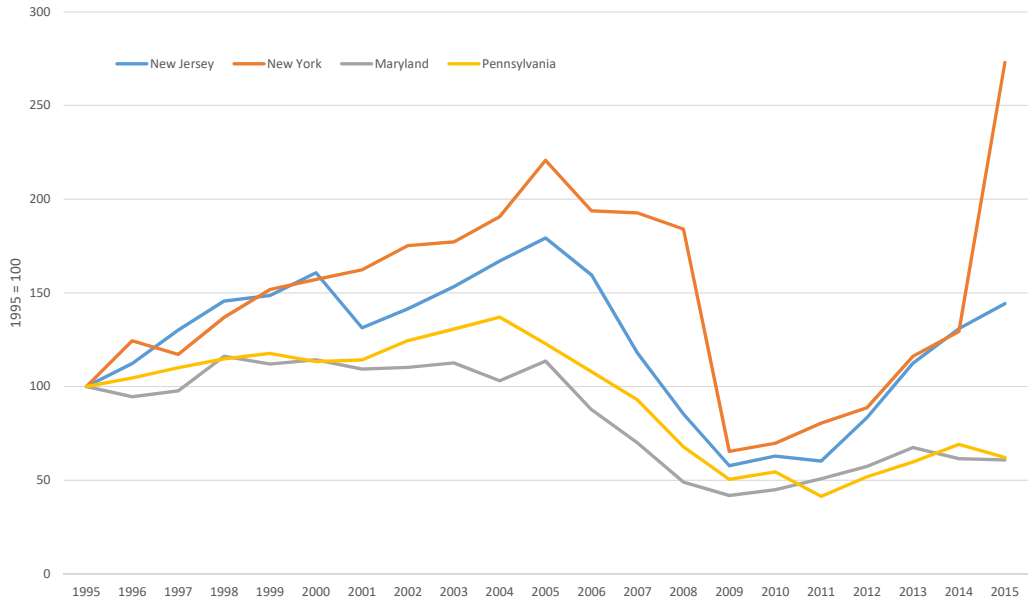
While a variety of factors could explain this discrepancy (such as differential construction regulations across states), it is noteworthy given its significance. In particular, it suggests that New Jersey's residential homebuilders enjoy significantly higher levels of labor productivity *vis-a-vis* surrounding states' homebuilders. The numbers cited above imply a labor productivity premium for New Jersey builders on the order of 25-30 percent.[16] Given the increasingly standardized production techniques used within the homebuilding industry, such a sizable productivity difference seems very unlikely. Thus, this discrepancy *may* be an indicator of above-average underground activity in New Jersey's residential homebuilding industry.[17] In particular, the use of underground labor by homebuilders in the state would ostensibly allow them to reduce the average number of formal sector (payroll) workers employed per housing unit authorized.



[16] Note that this implied labor productivity premium is similar to the aforementioned apparent productivity premium noted in the prior discussion concerning real construction sector output per payroll employee.

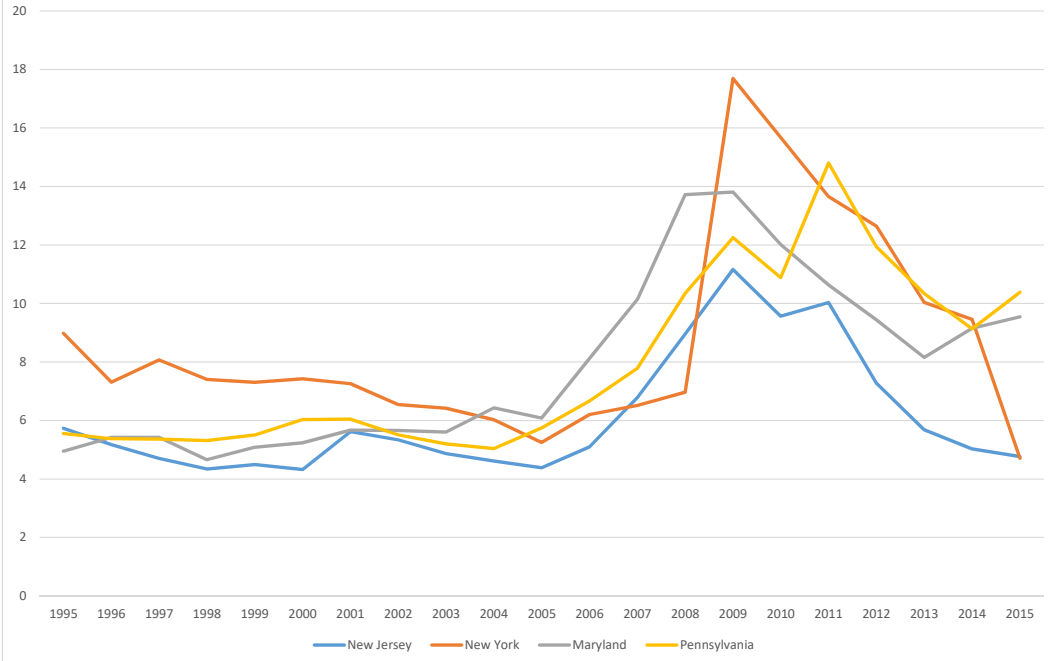
[17] It seems a reasonable assumption that underground activity plagues each of these states' homebuilding industries. Thus, the apparent productivity differential in New Jersey referenced could only be explained by a level of underground activity in New Jersey that was in *excess* of the average level experienced by its neighboring states.

Figure 9: Total Residential Building Permits: New Jersey, New York, Maryland, Pennsylvania
Units Authorized 1995 to 2015
Indexed



Source: U.S. Census Bureau.

Figure 10: Number of Payroll Construction Employees *per* Residential Home Unit Authorized
New Jersey, New York, Maryland, Pennsylvania and the U.S.
1995 to 2015



The update of the original report's Section E "Residential Homebuilding Trends in New Jersey" was included above.

F. Occupational Wages in the Construction Sector

The Bureau of Labor Statistics' *Occupational and Employment Statistics* program provides detailed occupational wage data for the construction sector. Table 4 shows mean and median annual wage data for a selected group of occupational cohorts (for New Jersey and several benchmark states) in the construction sector. As shown, employment within these occupational cohorts accounts for 65-72 percent of total construction sector employment across these states. The right-most columns of Table 4 benchmark New Jersey's occupational wage data against New York's and Pennsylvania's. As shown, most New Jersey occupational cohorts' mean and median annual wages are moderately less than New York's, and higher than Pennsylvania's. (Note, real hourly wage trends in the construction sector are analyzed in Section G below.)

Table 4: Occupational Wages in the Construction Sector: Delware, Maryland, New Jersey, New York, and Pennsylvania

	Delaware				Maryland				New Jersey				New York				Pennsylvania				New Jersey v. New York		New Jersey v. Pennsylvania	
Occupation	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Annual Mean	Annual Median	Annual Mean	Annual Median
All Construction and Extraction Occupations	15,240	100.0%	$47,180	$43,790	112,200	100.0%	$47,290	$43,120	115,820	100.0%	$58,650	$54,670	324,000	100.0%	$61,610	$54,820	221,040	100.0%	$48,900	$44,610	95.2%	99.7%	119.9%	122.6%
Boilermakers	N/A	N/A	N/A	N/A	90	0.1%	$68,280	$68,730	90	0.1%	$69,570	$72,600	570	0.2%	$71,500	$73,640	700	0.3%	$64,200	$62,760	97.3%	98.6%	108.4%	115.7%
Brickmasons and Blockmasons	250	1.6%	$51,110	$51,450	2,040	1.8%	$43,000	$43,050	1,400	1.2%	$60,660	$62,540	5,340	1.6%	$65,550	$62,240	3,340	1.5%	$52,790	$51,680	92.5%	100.5%	114.9%	121.0%
Stonemasons	40	0.3%	$38,950	$37,550	210	0.2%	$46,130	$42,860	270	0.2%	$44,620	$44,370	1,670	0.5%	$52,220	$44,630	390	0.2%	N/A	N/A	85.4%	99.4%	N/A	N/A
Carpenters	1,900	12.5%	$44,310	$43,030	12,270	10.9%	$46,650	$44,430	16,560	14.3%	$58,680	$52,490	47,960	14.8%	$60,700	$52,020	31,420	14.2%	$47,540	$42,900	96.7%	100.9%	123.4%	122.4%
Tile and Marble Setters	N/A	N/A	N/A	N/A	580	0.5%	$47,370	$45,340	1,110	1.0%	$51,250	$44,480	1,840	0.6%	$69,090	$67,610	1,010	0.5%	$41,850	$39,240	74.2%	65.8%	122.5%	113.4%
Construction Laborers	1,950	12.8%	$33,270	$33,420	19,160	17.1%	$32,410	$31,770	23,950	20.7%	$49,440	$45,730	58,700	18.1%	$47,730	$38,860	35,730	16.2%	$37,740	$34,620	103.6%	117.7%	131.0%	132.1%
Operating Engineers and Other Construction Equipment Operators	1,100	7.2%	$42,880	$42,010	5,150	4.6%	$47,160	$45,700	5,100	4.4%	$66,740	$65,050	12,750	3.9%	$72,610	$62,610	20,090	9.1%	$47,800	$43,990	91.9%	103.9%	139.6%	147.9%
Drywall and Ceiling Tile Installers	500	3.3%	$44,290	$39,760	2,400	2.1%	$39,700	$38,510	1,180	1.0%	$61,840	$59,900	2,950	0.9%	$66,800	$56,280	1,970	0.9%	$46,440	$43,890	92.6%	106.4%	133.2%	136.5%
Electricians	1,950	12.8%	$51,090	$49,090	12,070	10.8%	$54,870	$51,620	13,440	11.6%	$68,930	$60,460	40,100	12.4%	$72,540	$67,660	23,240	10.5%	$58,060	$53,670	95.0%	89.4%	118.7%	112.7%
Glaziers	N/A	N/A	N/A	N/A	1,170	1.0%	$47,900	$47,350	1,010	0.9%	$64,720	$60,750	2,540	0.8%	$57,010	$53,130	1,360	0.6%	$49,860	$43,180	113.5%	114.3%	129.8%	140.7%
Painters, Construction and Maintenance	430	2.8%	$39,620	$38,510	4,820	4.3%	$38,020	$35,990	4,350	3.8%	$41,420	$37,030	14,030	4.3%	$52,340	$46,380	5,570	2.5%	$41,960	$38,640	79.1%	79.8%	98.7%	95.8%
Plumbers, Pipefitters, and Steamfitters	980	6.4%	$58,790	$57,120	10,530	9.4%	$54,410	$53,120	7,360	6.4%	$67,930	$62,450	27,550	8.5%	$72,480	$65,110	15,120	6.8%	$56,860	$52,080	93.7%	95.9%	119.5%	119.9%
Roofers	210	1.4%	$38,720	$36,330	1,500	1.3%	$42,170	$39,280	1,910	1.6%	$56,020	$54,570	4,750	1.5%	$58,190	$43,920	4,060	1.8%	$39,910	$36,530	96.3%	124.2%	140.4%	149.4%
Sheet Metal Workers	470	3.1%	$51,040	$52,620	2,280	2.0%	$49,320	$46,810	3,530	3.0%	$62,020	$57,580	8,300	2.6%	$69,910	$62,250	3,510	1.6%	$53,860	$52,060	88.7%	92.5%	115.2%	110.6%
Structural Iron and Steel Workers	170	1.1%	$44,640	$45,680	1,090	1.0%	$48,890	$46,640	1,160	1.0%	$88,120	$91,660	4,840	1.5%	$87,240	$89,340	1,550	0.7%	$56,330	$51,370	101.0%	102.6%	156.4%	178.4%
Total		65.3%				67.2%				71.2%				72.2%				67.4%						

Source: U.S. Bureau of Labor Statistics OES, 2015.

Section F "Occupational Wages in the Construction Sector" - No significant changes in this section. Hence, the text immediately below is identical to what appeared in the original report. The accompanying Table 4 has been updated (2019).

Table 4: Occupational Employment and Wages in the Construction Sector: Delware, Maryland, New Jersey, New York, and Pennsylvania, 2017

	Delaware				Maryland				New Jersey				New York				Pennsylvania				New Jersey v. New York		New Jersey v. Pennsylvania	
Occupation	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Emp.	% Total	Annual Mean	Annual Median	Annual Mean	Annual Median	Annual Mean	Annual Median
All Construction and Extraction Occupations	15,510	100.0%	$50,500	$47,290	115,820	100.0%	$49,350	$45,210	120,710	100.0%	$60,710	$56,200	332,420	100.0%	$64,420	$57,550	217,180	100.0%	$50,840	$46,430	94.2%	97.7%	119.4%	121.0%
Boilermakers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	0.2%	$64,030	$55,450	360	0.1%	$65,160	$60,490	420	0.2%	$79,410	$85,180	98.3%	91.7%	80.6%	65.1%
Brickmasons and Blockmasons	170	1.1%	$53,350	$55,010	2,460	2.1%	$48,750	$47,360	1,790	1.5%	$65,600	$62,820	6,270	1.9%	$75,390	$73,080	3,260	1.5%	$53,850	$52,980	87.0%	86.0%	121.8%	118.6%
Stonemasons	N/A	N/A	N/A	N/A	330	0.3%	$41,990	$42,150	N/A	N/A	N/A	N/A	1,220	0.4%	$47,660	$35,850	220	0.1%	$55,490	$54,560	N/A	N/A	N/A	N/A
Carpenters	1,770	11.4%	$48,390	$46,670	13,770	11.9%	$48,310	$45,720	16,360	13.6%	$61,390	$56,780	47,220	14.2%	$62,640	$55,210	28,440	13.1%	$50,770	$46,510	98.0%	102.8%	120.9%	122.1%
Tile and Marble Setters	N/A	N/A	N/A	N/A	370	0.3%	$40,820	$39,310	1,320	1.1%	$63,150	$49,220	2,570	0.8%	$75,450	$77,390	1,060	0.5%	$51,850	$46,670	83.7%	63.6%	121.8%	105.5%
Construction Laborers	1,810	11.7%	$34,560	$34,520	19,640	17.0%	$33,700	$32,810	23,440	19.4%	$52,220	$47,690	60,780	18.3%	$49,440	$42,520	41,150	18.9%	$39,180	$36,190	105.6%	112.2%	133.3%	131.8%
Operating Engineers and Other Construction Equipment Operators	1,160	7.5%	$43,380	$39,830	4,610	4.0%	$49,040	$47,070	5,550	4.6%	$71,250	$67,570	12,520	3.8%	$77,580	$65,820	20,560	9.5%	$50,340	$46,850	91.8%	102.7%	141.5%	144.2%
Drywall and Ceiling Tile Installers	310	2.0%	$50,320	$45,440	2,240	1.9%	$43,960	$44,140	1,480	1.2%	$59,020	$54,060	3,720	1.1%	$59,400	$47,610	1,850	0.9%	$48,720	$47,390	99.4%	113.5%	121.1%	114.1%
Electricians	1,910	12.3%	$60,510	$58,760	13,070	11.3%	$55,000	$52,480	16,490	13.7%	$70,850	$62,420	41,920	12.6%	$76,480	$71,260	21,580	9.9%	$62,070	$56,890	92.6%	87.6%	114.1%	109.7%
Glaziers	N/A	N/A	N/A	N/A	1,410	1.2%	$47,600	$46,890	950	0.8%	$71,300	$80,440	2,480	0.7%	$55,620	$50,730	1,390	0.6%	$51,940	$45,090	128.2%	158.6%	137.3%	178.4%
Painters, Construction and Maintenance	440	2.8%	$41,220	$40,470	4,540	3.9%	$37,250	$36,360	4,350	3.6%	$47,440	$42,870	13,660	4.1%	$51,130	$45,480	5,890	2.7%	$42,230	$39,830	92.8%	94.3%	112.3%	107.6%
Plumbers, Pipefitters, and Steamfitters	1,170	7.5%	$59,760	$57,220	9,870	8.5%	$57,070	$54,750	9,070	7.5%	$70,680	$62,190	27,410	8.2%	$77,990	$71,630	14,960	6.9%	$56,980	$51,910	90.6%	86.8%	124.0%	119.8%
Roofers	180	1.2%	$40,780	$38,990	1,300	1.1%	$44,630	$44,820	1,570	1.3%	$56,270	$56,790	4,460	1.3%	$60,190	$49,430	3,840	1.8%	$42,320	$40,130	93.5%	114.9%	133.0%	141.5%
Sheet Metal Workers	550	3.5%	$53,650	$54,860	2,880	2.5%	$52,700	$49,650	2,160	1.8%	$60,490	$53,830	8,080	2.4%	$66,730	$59,760	3,620	1.7%	$53,570	$49,690	90.6%	90.1%	112.9%	108.3%
Structural Iron and Steel Workers	220	1.4%	$46,220	$47,050	630	0.5%	$51,120	$49,310	1,300	1.1%	$80,650	$87,320	6,240	1.9%	$87,870	$90,450	1,930	0.9%	$57,970	$53,140	91.8%	96.5%	139.1%	164.3%
Total		62.5%				66.6%				71.4%				71.9%				69.1%						

Source: U.S. Bureau of Labor Statistics Occupational and Employment Statistics, 2017.

G. Weekly Hours & Real Hourly Wage Trends in the Construction Sector (2016)

Figure 11 shows average weekly hours worked in the construction sector for New Jersey, New York, Pennsylvania, and the U.S. since 2007. As shown, average weekly hours across all states declined between early 2007 and early 2010 in tandem with the national housing crisis. It is noteworthy, however, that weekly hours in New Jersey's construction sector declined significantly more than in these other states. In particular, between early 2007 and early 2010, weekly hours in New Jersey fell nearly 7 percent or roughly four times the decline experienced in Pennsylvania and nationally. (In New York, weekly hours remained virtually unchanged during this period—a fact that partly reflects the aforementioned construction boom in New York City.) Weekly hours largely recovered during the 2010 to 2012 period for all states and have continued to advance in Pennsylvania and the nation over the past several years. (Weekly hours in New York have advanced less significantly over the past few years though, as noted, they declined far less during the housing crisis). New Jersey's experience, however, has been far different. In particular, after recovering briefly in 2010 and 2011, weekly hours declined sharply again in 2012. Since then, weekly hours in the state's construction sector have rebounded and closely tracked those in neighboring states and the nation.

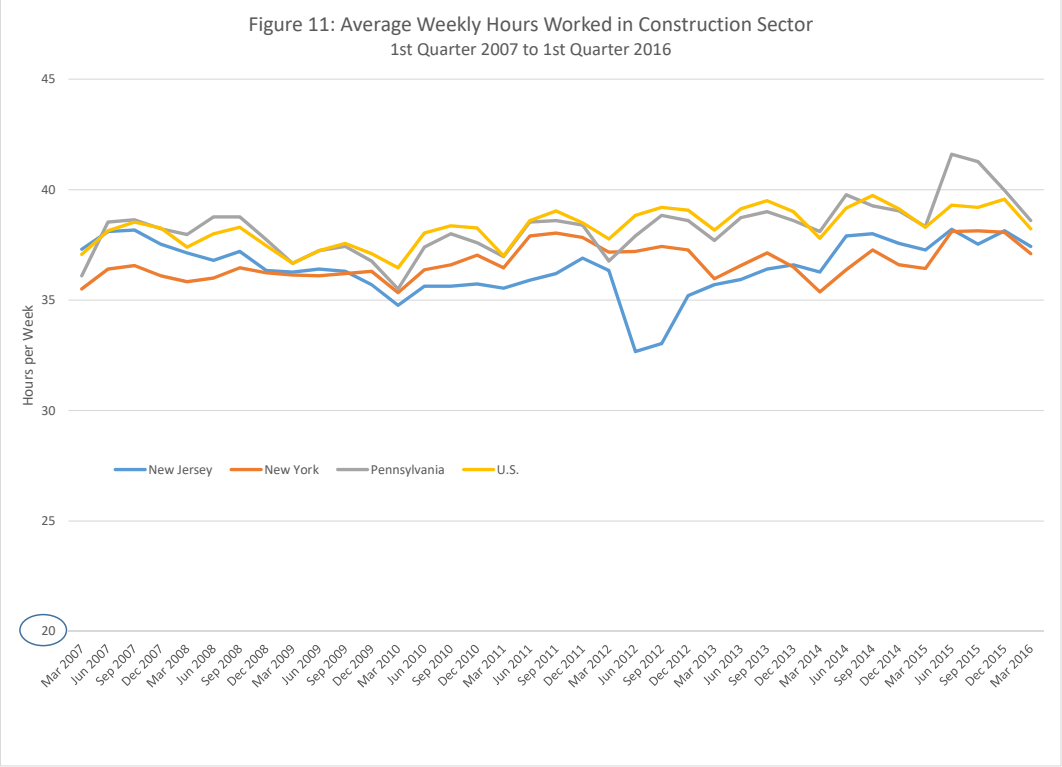


Figure 12 shows real average hourly wages for all construction sector employees between early 2007 and 2015 (for the same group of states that appear in Figure 11). As shown, real wages in New Jersey's construction sector were significantly higher than those in neighboring states and in the U.S. for much of the period shown. More recently, as real wages in New Jersey have plummeted, those in New York have risen moderately and are now higher than those in

New Jersey. Figure 13 shows the significance of the decline in the real hourly wage in New Jersey's construction section and benchmarks it against the trends in New York, Pennsylvania, and the nation. Since early 2007, the real hourly wage in New Jersey's construction sector has declined by an eye-popping 7.6 percent.

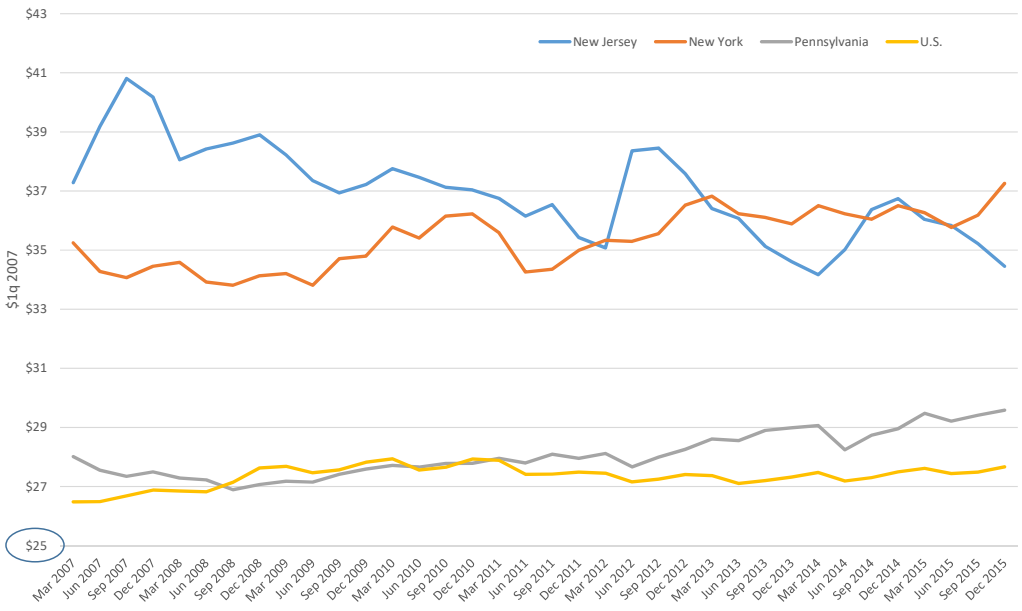
This remarkable finding led to additional investigation. Specifically, we compared OES median wages in construction in 2007 and 2015 for all fifty states. New Jersey's median construction wage increased *(in nominal terms)* 10.5 percent between 2007 and 2015. (The CPI rose approximately 15 percent during this period. Thus, New Jersey's nominal increase constituted a *real* decline.) This rate of growth ranked New Jersey 45th among all states, i.e., only five other states experienced *weaker* real hourly median construction wage growth (Rhode Island, Illinois, Nevada, Florida, and Michigan). New York's median hourly construction wage grew 17 percent while Pennsylvania's rose 15 percent

Real wages in the construction sector *increased* 5.7 percent in New York, 5.6 percent in Pennsylvania, and 4.5 percent nationally. This stark difference in real hourly construction wage trends over the past several years begs for an explanation. As noted, residential homebuilding permits fell dramatically (-67 percent) in New Jersey during the national housing crisis. However, the decline in homebuilding activity in New Jersey was actually *less* than that experienced in both New York and Pennsylvania (both -70 percent from peak to trough). Moreover, since the trough of the housing crisis in 2009, homebuilding in New Jersey has rebounded rather well, outpacing the rebounds experienced nationally and in Pennsylvania. (New York's rebound in homebuilding activity since 2009 has been truly remarkable, as residential permits grew over 300 percent between 2009 and last year. As noted, much of this rise reflects New York City's residential construction boom.)

Unfortunately, there are no readily available state-level data that could provide insight into *non-residential* construction activities, e.g., office, retail, industrial, and warehouse construction. Thus, it could be the case that non-residential construction activity in New Jersey has been deeply depressed compared to the levels of activity experienced in other states over the past several years. Were this the case, it could explain some (though likely not all) of the difference in real hourly construction wage trends.

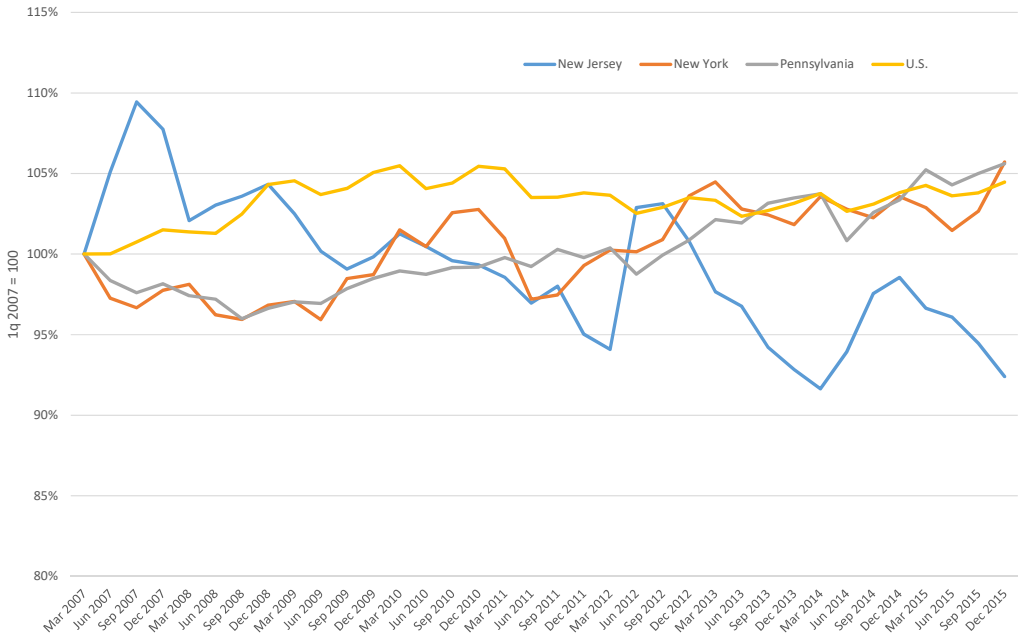
A significant increase in underground construction activity in New Jersey over the past several years could also explain some (though, again, not likely all) of the real hourly wage difference. A sharp rise in underground construction hiring in the state, for example, would have likely served to exert generalized downward pressure on New Jersey construction workers' real hourly wages. However, it seems *very* unlikely that *if* such an upswing in underground construction hiring has occurred that it would be unique to New Jersey.

Figure 12: Real Hourly Wages in the Construction Sector
2007 to 2015



Source: U.S. Bureau of Labor Statistics and author calcuations. BLS' CPI-U-RS used to convert nominal wages to real terms.

Figure 13: Indexed Real Hourly Wages in the Construction Sector
2007 to 2015



Source: U.S. Bureau of Labor Statistics and author calcuations.

This section responds to the query regarding the trend in real hourly construction wages in New Jersey since the end of the Great Recession in mid-2009. The relevant Figures in the original report were 12 and 13. Updated versions of these two figures appear below.

Revised 2019

As noted in the original report, real hourly wages in New Jersey's construction sector declined significantly amid the national housing crisis and the ensuing Great Recession of 2008-2009. Between the first quarter of 2007 and the final quarter of 2015, real wages in the Garden State's construction sector declined 7.6 percent. In contrast, they *increased* 5.7 percent in New York, 5.6 percent in Pennsylvania, and 4.5 percent nationally over the same period.

Over the past three years, real hourly wages in New Jersey's construction sector have risen modestly. Whereas they stood at $36.61 in the final quarter of 2015, they climbed to $37.60 in last year's final quarter. This 2.7 percent increase, moreover, was significantly better than the real wage growth experienced in New York's and Pennsylvania's construction sectors during the same period. In fact, real hourly construction wages *declined* 1.1 percent and 1.7 percent, respectively, in these two neighboring states. (Real hourly construction wages increased 3.3 percent nationally during this period.)

As Figure 13 makes clear, however, despite these recent gains, real hourly wages in New Jersey's construction sector remain below their early 2007 level. More specifically, as of last year's final quarter, real hourly wages in the state's construction sector remained 4.9 percent below their first-quarter 2007 level. This stands in sharp contrast to New York and Pennsylvania, where real hourly construction wages in late 2018 were 4.8 and 4.1 percent *higher* than their early 2007 levels. (Nationally, real hourly wages in the construction sector in late 2018 were 8.2 percent higher than their early 2007 level.)

It seems likely that some of the recent gains in real wages in New Jersey's construction sector can be attributed to a rebound in residential homebuilding activity in the state over the past several years. (As noted in the original report, residential homebuilding activity in New Jersey (and most surrounding states) plummeted in the aftermath of the national housing crisis and the Great Recession and remained depressed until 2012.) While 2016 saw a slowdown in residential homebuilding activity (after four consecutive years of solid increases between 2012 and 2015), the pace of construction accelerated again in 2017 before slowing modestly last year. (See this report's updated Figures 8-9.)

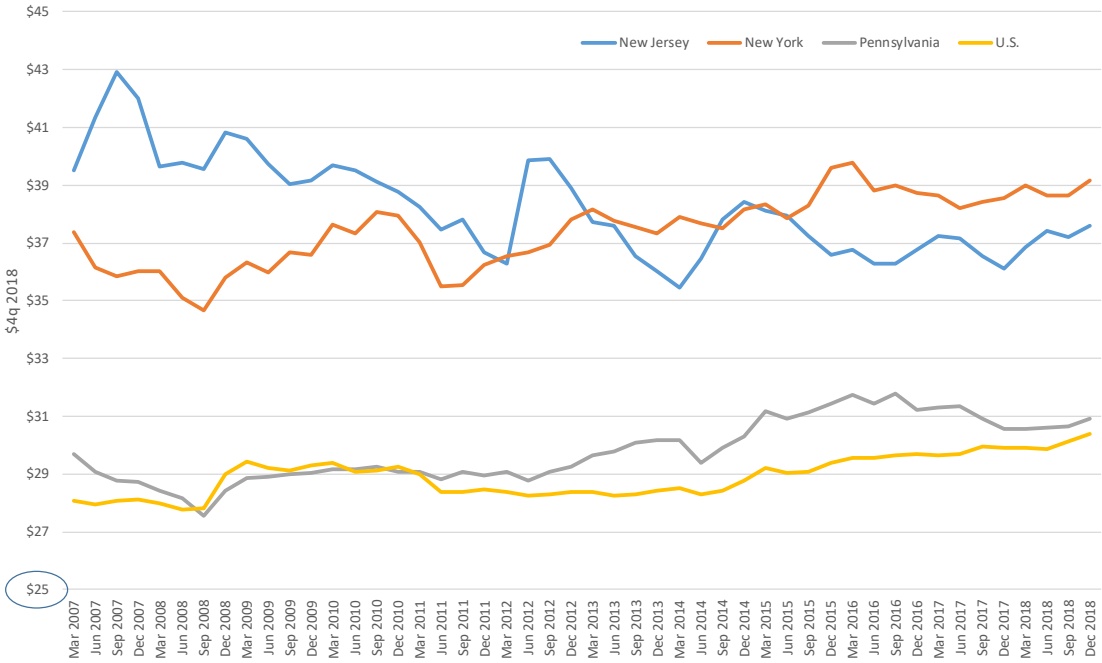
As noted in the original report, drawing inferences about the state's underground construction sector based on the broader trend in real hourly wages in New Jersey's construction sector over the past decade or so is complicated because there are no readily available state-level data that track *non-residential* construction activity, e.g., office, retail, industrial, and warehouse construction. Thus, it may well be the case that the sub-par growth in real hourly construction wages in New Jersey since the Great Recession's end reflects differential trends in non-residential construction activity across the region's states.

Indeed, despite a recent slowdown in *residential* homebuilding activity, New York City continues to experience a non-residential construction boom. A report released last fall by the New York Building Congress, for example, noted that construction spending in New York City was expected to total $61.5 billion in 2018—a record high in the city's history.[18] And, the report credits much of this activity to non-resident projects, e.g., office space, hotels, entertainment

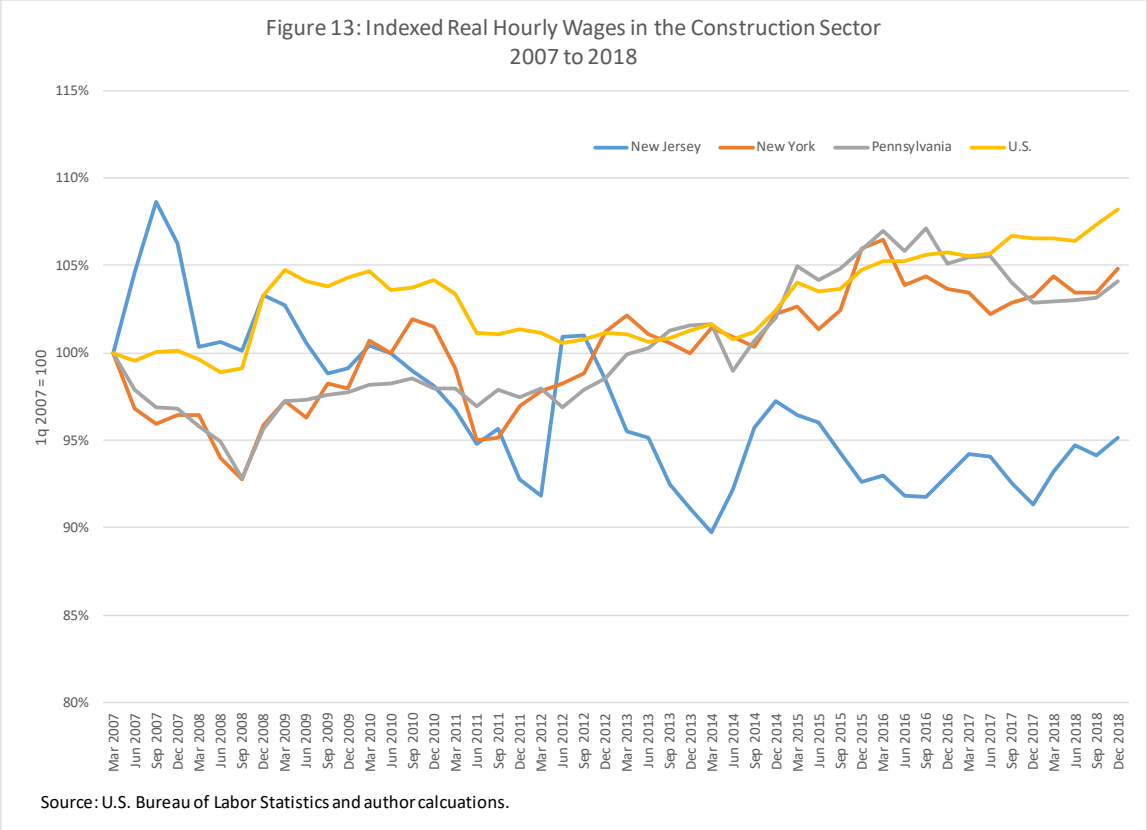
[18] https://www.buildingcongress.com/advocacy-and-reports/reports-and-anal (N.Y.Building Congress, N.Y. Building Foundation, 2018)ysis/Construction-Outlook-2018-2020.html

venues, etc. Non-residential development was estimated to total $39 billion last year, compared to $23.5 billion in 2017.

Figure 12: Real Hourly Wages in the Construction Sector
2007 to 2018



Source: U.S. Bureau of Labor Statistics and author calcuations. CPI used to convert nominal wages to real terms.



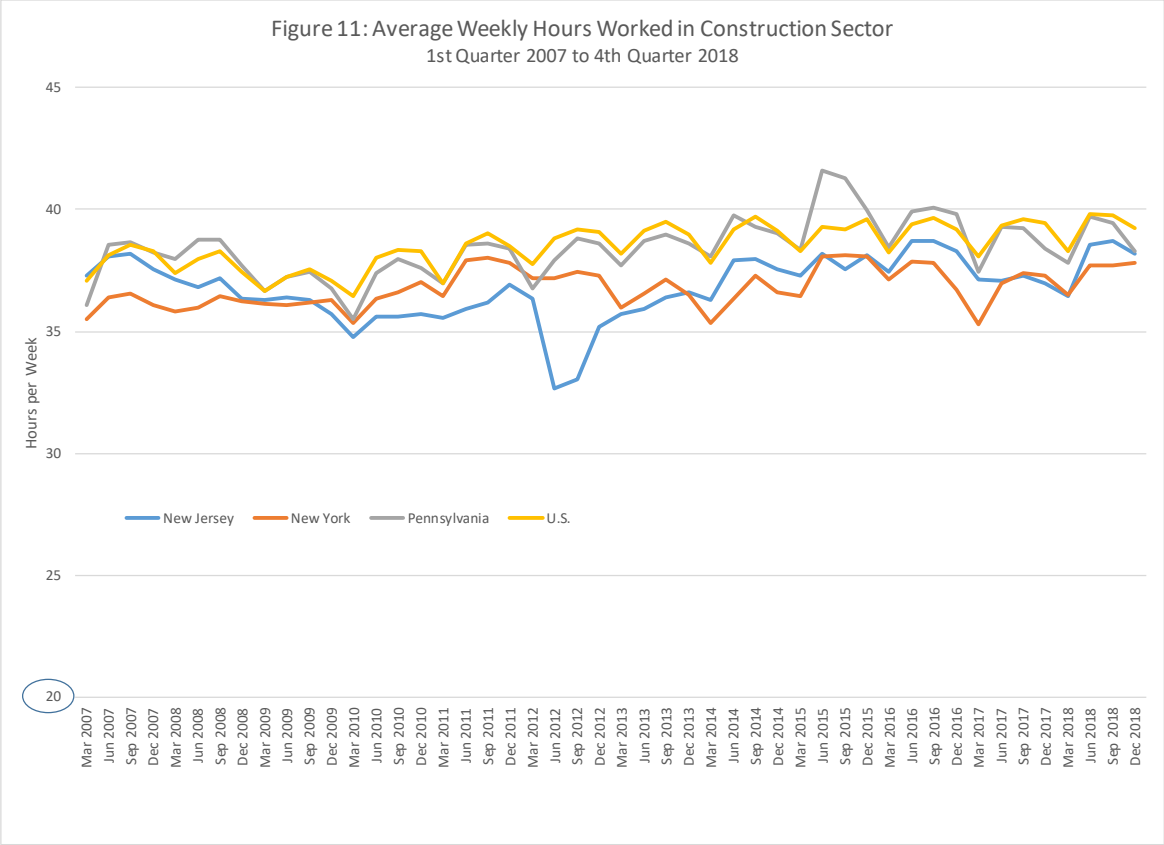
Source: U.S. Bureau of Labor Statistics and author calcuations.

This section updates the original report's Section G "Weekly Hours & Real Hourly Wage Trends in the Construction Sector." It provides updates of Figures 11-13.

Revised 2019

Figure 11 shows average weekly hours worked in the construction sector for New Jersey, New York, Pennsylvania, and the U.S. since 2007. As shown, average weekly hours across all states declined between early 2007 and early 2010 in tandem with the national housing crisis. It is noteworthy, however, that weekly hours in New Jersey's construction sector declined significantly more than in these other states. Between early 2007 and early 2010, weekly hours in New Jersey fell nearly 7% or roughly four times the decline experienced in Pennsylvania and nationally. (In New York, weekly hours remained virtually unchanged during this period—a fact that partly reflects the aforementioned construction boom in New York City.)

Weekly hours recovered during the 2010 to 2012 period and largely continued to advance over the next several years until late 2016. Weekly hours declined over the ensuing 15 moths across the three states shown, as well as nationally. In New Jersey, weekly hours fell to 36.5 from 38.3 between the final quarter of 2016 and the first quarter of 2018. Weekly hours rose to 38.7 in last year's third quarter before declining modestly to 38.2 in last year's final quarter.



H. Putting it all Together: Is there Evidence of Underground Activity in New Jersey's Construction Sector?

The above overview of the state's construction industry yields a number of insights that seem relevant to the issue of the underground construction economy in New Jersey. These include:

- Our analysis of official payroll and ACS-based residential construction employment in New Jersey indicates that there is a large "unexplained" residual between the two estimates. (See Column K of Table 1 and the discussion set out above.) Moreover, this unexplained residual increased by more than threefold between 2005 and 2014. As noted, some of this residual likely reflects the fact that some New Jersey-based construction workers found employment in New York City's booming construction sector over the past decade. (Thus, these workers would ostensibly show up on New York-based construction firms' payrolls). However, even if one assumes that one-half of the residual is accounted for by this phenomenon, there would remain nearly 17,000 New Jersey construction workers that are effectively unaccounted for, i.e., they do not identify themselves as self-employed, nor do they work in the non-profit or public sectors.
- Real construction output per payroll construction worker in New Jersey which totaled $125,042 in 2014, is significantly higher than in several other benchmark states. The next

largest among the benchmark states discussed was New York ($113,181). Nationally, this figure was $95,851. It strains credibility to believe that New Jersey-based construction firms enjoy what would amount to a roughly 30 percent labor productivity premium relative to surrounding states' construction firms.[19]

- The average number of employees per construction firm in New Jersey is 6.6. This average is similar to New York's (6.8) though well below a national average of 8.6 as well as averages in Maryland (10.4) and Pennsylvania (8.4). The average annual payroll per construction firm in New Jersey totaled $440,000, a figure that was below the national average ($478,853) as well as the other states analyzed (save Maryland).
- The number of construction employees per residential unit authorized has tended to be lower in New Jersey than in several other benchmark states. In fact, over the entire period analyzed, the average number of payroll construction employees per authorized residential housing unit in New Jersey equaled 6.1, a figure well below New York's 8.6 and Pennsylvania's and Maryland's 7.9. This suggests that New Jersey's residential homebuilders enjoy significantly higher levels of labor productivity *vis-a-vis* surrounding states' homebuilders. The numbers cited imply a labor productivity premium for New Jersey builders on the order of 25-30 percent. Given the increasingly standardized production techniques used within the homebuilding industry, such a sizable productivity difference seems very unlikely and thus is rather suspicious.
- While New Jersey's construction workers are paid relatively well compared to their counterparts in many surrounding states, real hourly wages in New Jersey's construction sector have declined significantly (-7.6 percent) since 2007, whereas they have risen in several neighboring states (on average about 5.3 percent). This rather remarkable difference in real hourly construction wage growth could, in part, reflect an increase in underground activity in the state's construction sector in recent years. A sharp rise in underground construction hiring in the state, for example, would likely have exerted generalized downward pressure on New Jersey construction workers' real hourly wages. At the same time, as noted, it seems unlikely that any upswing in underground construction hiring would be *unique* to New Jersey.
- Like most states, New Jersey's construction sector is disproportionately comprised of small firms. Seventy-one percent of the sector's firms had 4 or fewer employees. However, New Jersey's small construction firms appear to account for an above-average share of construction sector employment. If one extends the definition of "small" to include construction firms with 20 or fewer employees, such firms' employment in New Jersey accounts for 46.7 percent of construction employment—a figure well above the national average of 38.6 percent and the other states analyzed. As noted, the apparent above-average small-firm character of New Jersey's construction sector may be important in the context of the underground economy. In particular, the business practice of misclassification may be facilitated in work settings, "where monitoring is more difficult because worksites are small, are scattered, and employ few workers."[20]

[19] See footnote 4, however.
[20] Carre.

While each individual finding alone does not prove the existence of an underground economy, taken together they present a collective body of evidence that appear to show underground activity in New Jersey's construction sector.

Part 2 of this report attempts to assess how large this underground construction economy may be, and analyzes two of its most important aspects—namely, misclassification of workers and "off-the-books" employment.

II. The Underground Economy

Public interest in the underground economy has grown immensely over the past few decades. Indeed, this interest has spawned an ever-burgeoning academic literature and policy discourse on the topic. Regardless of broader political orientations, there seems to be a fairly widespread consensus that the size and scope of underground economies throughout the world have grown and widened over the past few decades. Thus, much of today's public and academic discourse on the underground economy regards questions that concern how large it has become in certain places, how fast it is growing, how problematic it really is, and what factors drive its growth.

While this research touches on some of these issues, the latter issue—namely, what factors drive the underground economy—is an especially important one as it ties directly to larger public policy questions that surround the topic. Broadly speaking, there are two responses to this question. Those on the political right most often see the underground economy as a response to various burdens and regulations imposed on the formal economy by the state. For such individuals, the growth of underground economies across the world is symptomatic of increasingly expansive states. In a foreword to a recent book on the shadow economy, for example, Philip Booth writes:

> "It is an indictment of modern government that the shadow economy is so large. A shadow economy equal to 9-12 percent of total economic activity is not untypical for Anglo-Saxon countries, and levels of 20-30 percent are common in southern Europe. Not only would tax rates be lower if the shadow economy were small but, if the size of the state were smaller, the shadow economy would be smaller."[21]

In stark contrast, those on the political left often see a growing underground economy as a reflection of de- or under-regulation. For example, in discussing the growth of "informalization" in New York City and Chicago labor markets, DeFilippis, et al., remark:

> "Informalization thrives on governmental deregulation of workplace standards, labor laws, and social safety nets. As governmental regulations have been scaled back, a new "formalization of informalization" is taking shape . . . informalization arises in response to under-regulation. As government has scaled back on labor laws

[21] Friedrich Schneider and Colin C. Williams, The Shadow Economy, (London: The Institute of Economic Affairs, 2013) 11

and enforcement, a regulatory vacuum has been filled by informalized labor relations."[22]

Needless to say, such widely divergent views on the underlying causes of the underground economy color individual analysts' and policymakers' approaches to the underground economy, their working assumptions and methodological techniques, and thus preferred policy responses and recommendations.

A. Definitional Issues

The underground economy is difficult to define. For example, the terms hidden, shadow, informal, and underground are often used in everyday language to refer broadly to the same basic concept. At the same time, these terms are often used in specific ways in different context by different analysts. The Organization for Economic Cooperation and Development's (OECD) *Measuring the Non-Observed Economy—a Handbook*[23] uses the "non-observed economy" (NOE) as an umbrella term that covers five major areas:

- **Underground production:** activities that are productive and legal but are deliberately concealed from public authorities to avoid payment of taxes or compliance with regulations.
- **Illegal production:** production activities that generate goods and services forbidden by law or that are unlawful when carried out by unauthorized procedures.
- **Informal sector production:** productive activities conducted by unincorporated enterprises in the household sector or other units that are unregistered and/or less than a specified size in terms of employment, and that have some market production.
- **Production of households for own-final use:** productive activities that result in goods or services consumed or capitalized by the households that produced them.
- **Statistical underground:** defined as all productive activities that should be accounted for in basic data collection programs but are missed due to deficiencies in the statistics system.

The differences between these basic categories are important from a public policy perspective because they usually warrant different policy responses. As the OECD states:

"For example, illegal production relates to activities that are criminal in nature and policymakers would like to curb; underground production covers legal and often desirable activities, where the policy aim is to achieve compliance with regulations and tax obligations without disturbing the production process; and finally for informal sector production, policymakers acknowledge that activities are small scale and it would not necessarily be feasible to bring them into the formal economy as the

[22] James DeFilippis, Nina Martin, Annette Bernhardt, and Siobhan McGrath, "On the Character and Organization of Unregulated Work in the Cities of the United States," Urban Geography, 30:1 (2009), 66

[23] Measuring the Non-Observed Economy—a Handbook (OECD-IMF-ILO-CIS Stat), 2002

> costs associated would be overwhelming for both enforcement and for entities carrying out these activities."[24]

As the OECD goes on to note, the boundaries between these categories is often difficult to draw. For example, it is often difficult to differentiate between underground production and informal production absent an ability to identify the primary motive of an agent. The taxonomy of the underground economy is not only complicated by virtue of its inclusion of both illegal and legal activities, but also by the fact that some underground activities involve monetary transactions while others don't. (Figure 14 and Table 5 provide common visual renderings of the taxonomy of the underground economy.)[25]

Such definitional issues obviously complicate the task of policymakers seeking to address the underground economy. Similarly, they complicate efforts to estimate the size of underground economies. In the context of this research, the primary focus (or our working definition of the underground economy) is on what the OECD labels "underground production" (as defined above). In other words, our focus will be on otherwise legal market activity that is deliberately concealed from public authorities in order to avoid payment of taxes or compliance with regulations. So, for example, underground production would include hiring workers "off-the-books" as well as the deliberate misclassification of workers.[26] In both cases, the workers hired engage in legal production activities. However, the nature of their wage and working conditions is deliberately concealed from or misrepresented to public authorities.

[24] Gyorgy Gyomai and Peter van de Ven, "The Non-Observed Economy in the System of National Accounts," *OECD Statistics Brief,* June 2014, 2

[25] Table 5's source included. Figure 14's source: Jim Mayfield, *"The Underground Construction Economy in Washington State: A Review of the Literature and Preliminary Finding".* Presentation to the Joint Task Force on the Underground Construction Economy, September 26, 2007, Washington State Institute for Public Policy, Slide #4

[26] Misclassification (especially in the construction sector) can take two forms. On one hand, misclassification may refer to the practice of considering workers who are really employees as independent contractors. On the other hand, in the workers' compensation field, occupational misclassification involves assigning a worker to an occupation whose workers' compensation premium rate is below the rate of the occupation to which s/he *should* be assigned.

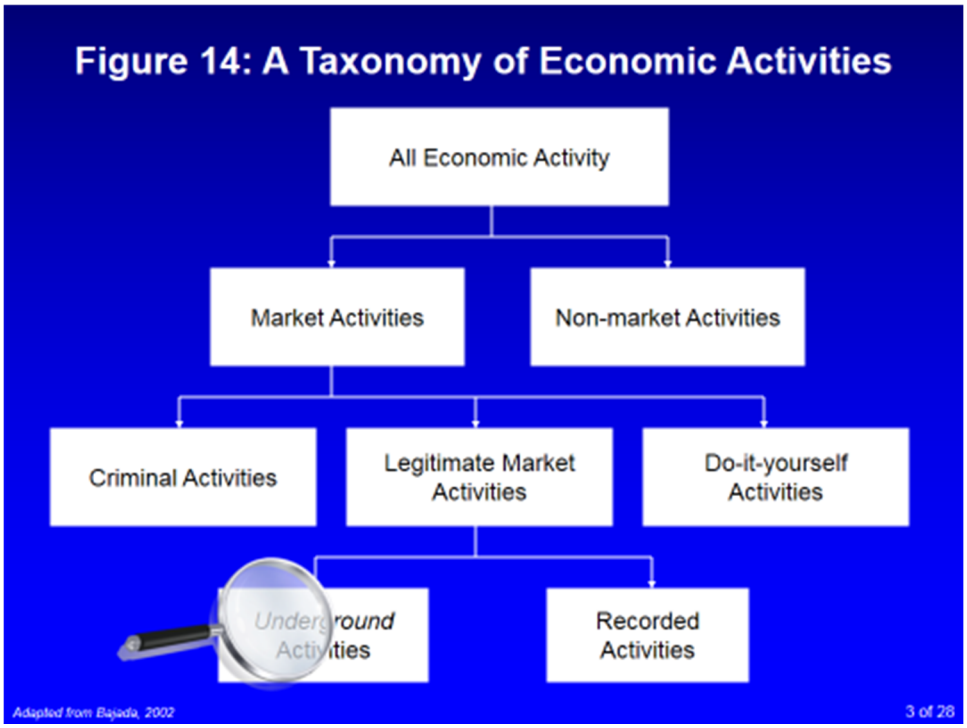


Table 5: A Taxonomy of Underground Economic Activities

	Monetary Transactions		Nonmonetary Transactions	
Illegal Activities	Trade in stolen goods; drug dealing and manufacturing; prostitution; gambling; smuggling and fraud.		Barter: drugs, stolen goods, smuggling, etc. Produce or growing drugs for own use. Theft for own use.	
	Tax Evasion	**Tax Avoidance**	**Tax Evasion**	**Tax Avoidance**
Legal Activities	Unreported income from self-employment; Wages, salaries and assets from unreported work related to legal services and goods.	Employee discounts, fringe benefits.	Barter of legal services and goods.	All do-it-yourself work and neighbor help

Source: Rolf Mirus and Roger S. Smith (1997, p. 5). Reprinted in Schneider and Enste (2000).

B. The Cons (and Pros?) of the Underground Economy

The underground economy yields a host of well-known problems. Among others, the underground economy:

- distorts economic data collected by public authorities and thus undermines policymakers' and analysts' ability to measure economic growth, employment, and productivity. Such distortions also complicate analysis of—and undermine—social insurance programs.
- reduces tax revenue
- creates an unfair playing field
- reduces tax equity
- promotes unregulated activities
- erodes health and safety standards
- reduces wages (and thus contributes to wage and income inequality through generalized pressure on the wages of workers on the lower-end of the wage distribution)
- is detrimental to the trust in and integrity of public institutions, and may lead to a suboptimal design of policies and institutions

At the same time, some have suggested that the existence of the underground economy may also yield benefits.[27] For example:

- participation in informal labor markets may provide some workers a route into the formal labor market
- underground activities may provide start-up firms "trial runs"
- underground activities may provide alternatives to criminal activities
- underground activities may serve to nurture and sustain social networks
- underground activities may provide lower-priced goods and services

a large portion of all incomes earned via underground activities are eventually channeled into the formal economy

Recognition of both the advantages and disadvantages of the underground economy is especially important in a policy-making context. In particular, policymakers faced with addressing various aspects of the underground economy must not only grapple with the aforementioned definitional issues, but also weigh the real social costs of any underground activity, its potential social benefits, as well as the costs of policy itself, e.g., enforcement-related ones. Is should be noted, however, that such "benefits" are informal, and none are sanctioned by government as policy objectives. On the other hand, these effects are seen as thwarting or undermining stated policy objectives.

[27] Many of these are outlined in, Jim Mayfield, *"The Underground Construction Economy in Washington State: A Review of the Literature and Preliminary Finding".* Presentation to the Joint Task Force on the Underground Construction Economy, September 26, 2007, Washington State Institute for Public Policy.

C. How Big are Underground Economies? Country-Level Estimates

Before turning to a discussion of New Jersey's underground construction industry, we provide some brief comments regarding the existing literature's estimates of the relative sizes of underground economies. This background provides some useful reference points for benchmarking our own analysis and estimates.

Schneider and Williams provide a set of estimates of the relative sizes of underground economies in 21 OECD countries.[28] (Table 6 is drawn directly from this work.) As shown, these estimates suggest that there is considerable variation in the size of underground economies across developed world economies. The size of underground economies range from highs of around 25-28 percent of official GDP in Greece and Italy to lows of around 6-9 percent in the United States and Switzerland. The unweighted average for the collection of OECD countries shown was 16 percent in 2007. In the case of the United States, the 2007 point estimate of 8.4 percent translates into an underground economy whose value totaled approximately $1.3 trillion.

A recent report on the Non-Observed Economy (NOE) by the OECD suggests that many of the standard methodologies used to estimate the relative sizes of underground economies (including those employed by Schneider and Williams) likely significantly *overstate* the size of underground economies.[29] Among other methodological issues cited, the report notes that because public authorities in all OECD countries regularly adjust their estimates of official GDP statistics *for* the NOE (i.e., they are adjusted upward so as to take account of NOE activity), estimates like Schneider's and William's—which are tied to official GDP data—overestimate the relative size of underground economies. To take but two examples, the OECD's analysis shows that the underground economy in Italy is 16.2 percent of 2012 GDP (versus Schneider's and William's 21.6 percent estimate). The comparable estimates for Austria were 2.4 percent and 7.6 percent. As the OECD report states, such "difference[s] [in estimates] are likely to be, in great part, caused by unrealistic model assumptions and calibration decisions."[30]

[28] Schneider and Williams (2013), 55. While discussion of the methodology used to derive these estimates is set out below, it should be noted that these estimates of the relative sizes of OECD countries' shadow economies rest upon a definition of the shadow economy that is in rough accord with our working definition of the underground economy set out above. Namely, it includes all market-based production of legal goods and services that are deliberately concealed from public authorities in order to avoid: various taxes, social security contributions, compliance with labor market standards and other working conditions and administrative obligations. See Schneider and Williams (2013) p. 25 for details.

[29] Gyorgy Gyomai and Peter van de Ven, "The Non-Observed Economy in the System of National Accounts," *OECD Statistics Brief,* June 2014

[30] Ibid., 11

Table 6: Size of the Shadow Economy (% of official GDP) in 21 OECD Countries												
OECD Countries		1989/1990	1994/1995	1997/1998	1999	2001	2003	2005	2007	2009	2011	2012
1	Australia	10.1	13.5	14.0	14.4	14.3	13.9	13.7	13.5	n/a	n/a	n/a
2	Austria	6.9	8.6	9.0	10.0	9.7	9.8	9.8	9.5	8.5	8.0	7.6
3	Belgium	19.3	21.5	22.5	22.7	22.1	22.0	21.8	21.3	17.8	17.1	16.8
4	Canada	12.8	14.8	16.2	16.3	15.9	15.7	15.5	15.3	n/a	n/a	n/a
5	Denmark	10.8	17.8	18.3	18.4	18.0	18.0	17.6	16.9	14.3	13.8	13.4
6	Finland	13.4	18.2	18.9	18.4	17.9	17.7	17.4	17.0	14.2	13.7	13.3
7	France	9.0	14.5	14.9	15.7	15.0	15.0	14.8	14.7	11.6	11.0	10.8
8	Germany	11.8	13.5	14.9	16.4	15.9	16.3	16.0	15.3	14.6	13.7	13.3
9	Greece	22.6	28.6	29.0	28.5	28.2	27.4	26.9	26.5	25.0	24.3	24.0
10	Ireland	11.0	15.4	16.2	16.1	15.9	16.0	15.6	15.4	13.1	12.8	12.7
11	Italy	22.8	26.0	27.1	27.8	26.7	27.0	27.1	26.8	22.0	21.2	21.6
12	Japan	8.8	10.6	11.1	11.4	11.2	11.2	10.7	10.3	n/a	n/a	n/a
13	Netherlands	11.9	13.7	13.5	13.3	13.1	13.3	13.2	13.0	10.2	9.8	9.5
14	New Zealand	9.2	11.3	11.9	13.0	12.6	12.2	12.1	12.0	n/a	n/a	n/a
15	Norway	14.8	18.2	19.6	19.2	19.0	19.0	18.5	18.0	n/a	n/a	n/a
16	Portugal	15.9	22.1	23.1	23.0	22.6	23.0	23.3	23.0	19.5	19.4	19.4
17	Spain	16.1	22.4	23.1	23.0	22.4	22.4	22.4	22.2	19.5	19.2	19.2
18	Sweden	15.8	19.5	19.9	19.6	19.1	18.7	18.6	17.9	15.4	14.7	14.3
19	Switzerland	6.7	7.8	8.1	8.8	8.6	8.8	8.5	8.1	n/a	n/a	n/a
20	UK	9.6	12.5	13.0	12.8	12.6	12.5	12.4	12.2	10.9	11.0	10.3
21	USA	6.7	8.8	8.9	8.8	8.8	8.7	8.5	8.4	n/a	n/a	n/a
Unweighted average for 21 OECD countries		12.7	16.2	16.8	17.0	16.7	16.6	16.4	16.1	n/a	n/a	n/a
Source: Friedrich Schneider, and Colin C. William, The Shadow Economy, The Institute of Economic Affairs, 2013, Table 6, p. 55.												

D. Measuring the Size of the Underground Economy: Methodologies

Measuring the size or prevalence of the underground economy is, for obvious reasons, difficult. The aforementioned definitional issues only serve to further complicate such efforts. Yet, while considerable debate remains over the causes and consequences of underground economies, the underground economy literature that has developed over the past few decades has converged upon two basic methodological strategies for estimating the size/prevalence of underground economies: direct and indirect approaches. Each approach, unsurprisingly, has strengths and weaknesses.[31]

Direct Approaches

Direct approaches typically rely on surveys, samples derived from voluntary replies, tax audits and other compliance methods. There are several limitations associated with such approaches. For instance, typically these approaches limit investigators' ability to draw general conclusions as results are tied to specific survey questions and few surveys are alike. In the case of direct questionnaires, many respondents are not willing to admit that they are not reporting taxes or engaging in illegal activity. Direct estimates of informal economic activity can also be derived by calculating differences between official payroll-based job counts and household survey-based counts of employment.

[31] This discussion draws heavily on, "Measuring Underground Economy Can be Done, but It Is Difficult" The Regional Economist, St. Louis Federal Reserve Bank, January 2015

Indirect Approaches

There have been a number of indirect approaches developed for estimating the extent/size of underground economies.

- In theory, the income and expenditure measures of GDP should be equal. However, informal activity can show up in the expenditure measurement but not in the income measurement. This discrepancy usually reflects that fact that the income side is measured through the value added of officially registered firms, while on the expenditure side there is often some self-reporting. The difference can be attributable to the informal economy. While there are several methodological issues that this strategy raises, one in particular is that public statistics like GDP always involve discrepancies between income and expenditures, and officials use various methods to minimize these *before* the official estimates are made public. Thus, the estimates investigators rely upon to estimate underground activity have already been massaged by statisticians.
- Changes in labor force participation rates have also been exploited in order to draw inferences about the growth of informal economy. Generally speaking, positive (negative) growth in labor force participation may indicate a decrease (increase) in underground economic activity. The basic idea is that labor force participation rates are often pro-cyclical, i.e., they tend to rise in tandem with robust (formal sector) job growth. As more jobs become available, some underground workers may choose to leave the informal sector. Similar logic has led some to use GDP per capita as an indicator of underground economic activity. A growing underground economy, for example, pulls various factors of production out of the formal economy, and thereby, potentially reduces its size. Thus, there is a potential trade-off posited between the formal and underground economies.
- Some of the earliest attempts to estimate the size of underground economies involve the transaction and currency demand approaches. The former approach relies upon the quantity theory of money and estimates nominal GDP on the basis of an economy's total value of transactions. The difference between this nominal GDP estimate and an official GDP estimate provides an estimate of the informal economy. The currency approach assumes that informal activity tends to involve cash transactions and thus uses the correlation between currency demand and tax pressures to infer increases/decreases in the informal economy.
- The electricity consumption method assumes that electricity consumption is a good physical indicator of both formal and informal economic activity. (The electricity/GDP elasticity is usually quite close to 1.) By using electricity consumption as a proxy for economic activity and then subtracting it from official GDP estimates, a measure of informal economic activity can be derived.
- Finally, the use of Multiple-Indicators-Multiple-Causes (MIMIC) modelling approaches, first developed in the early 1980s, has grown considerably over the course of the past decade. This approach develops a system of equations that relate potential *causes* of

underground economic activity with potential *indicators* of shadow economic activity in order to estimate the underground economy's size. Thus, MIMIC models make use of several *observable* variables, grouped into indicators and causes, to assess the magnitude of *unobservable* underground economic activity.

As with direct approaches, there are several limitations associated with these indirect approaches. The primary problem with most of these approaches is that they tend to be rather simplistic and highly aggregated. The currency demand and MIMIC approaches typically rely upon very strong econometric assumptions, the robustness of which can be questioned. For example, the determinants of currency demand or the indicator variables used in MIMIC models can be many and varied, and the omission of key variables from the models may bias the results. Additionally, some variables used may be related to the observed economy, implying that some of the shadow or underground economy captured through them may *not* actually capture activity attributable to the underground economy. Relationships between variables used in these approaches may also change over time. And, the calibration required with MIMIC models hinges on critical and often questionable assumptions.

Such shortcomings, of course, plague all statistical and survey-based methodological research techniques. Recognition of different approaches' limitations and the constraints they imply regarding the ability to draw broader inferences and/or generalizations is important. In light of these realities, we underscore that our own analysis of New Jersey's underground construction sector should *not* be interpreted as definitive in nature. Rather, it can provide but one perspective on a complex issue that should be conjoined with a much broader set of related research efforts and products.

E. State-Level Estimates of Underground Economies

As a first step in our attempt to quantify the size of New Jersey's underground construction economy we begin by considering the state's economy as a whole. Above, we cited Schneider's and Williams' estimates of the relative sizes of 21 OECD countries' underground (or, shadow) economies. As noted, their estimates imply that the value of the underground economy in the U.S. totaled $1.3 trillion or 8.4 percent of GDP in 2007. For reasons previously explained (in particular the OECD's finding that the methodology upon which Schneider's and Williams' estimates are based likely *overstates* the size of the underground economy by a considerable margin) we assume the dollar figure just cited ($1.3 trillion) represents a very high-end estimate of the actual value of the nation's underground economy.[32] In light of this, we scale the Schneider and Williams' estimates down to produce a range-estimate for the size of the nation's underground economy.[33] In particular, we assume that the Schneider and Williams' estimate

[32] The OECD's analysis of 19 individual countries' national accounts estimates of the NOE (which provide the basis for their respective internal adjustments to official national income and product accounting) suggests that, on average, Schneider's estimates of the size of underground economies are 6.7 times higher than those implied by official national account estimation and adjustment techniques.

[33] In the aftermath of the Great Recession, considerable national press brought the underground economy to the forefront of national discourse. Many of these headline stories pointed to trends—e.g., weak payroll job growth combined with surprisingly healthy household spending—that suggested that there was an upsurge of national underground economic activity. Many of these stories cited estimates of the size of the national underground economy as lying between 8-14 percent of official GDP. See: Rick Newman, "The New Underground Economy"

overstates the size of the nation's underground economy by factors of 6.7, 5, and 3.[34] As shown in Table 7, this implies a range-estimate of $190-$425 billion (or, 1.3 percent-2.9 percent of nominal GDP) for the value of the nation's underground economy in 2007.

Table 7: Estimating the Size of the Underground Economy in the U.S., 2007

U.S. GDP, 2007 Nominal $	$ 14,477,600,000,000	
Schneider/Williams' estimate of UE's Size		
8.8% of GDP	$ 1,274,028,800,000	
If Schneider/Williams' estimate *overstates* UE size by a factor of:	Implied $ Size of UE	Implied Size of UE as % GDP
6.7	$190,153,552,239	1.3%
5.0	$254,805,760,000	1.8%
3.0	$424,676,266,667	2.9%
Source: Author calculations.		

In 2007, New Jersey's GDP totaled $482 billion or 3.3 percent of U.S. nominal GDP. Were states' underground economies proportional to their shares of national GDP, this would suggest a range-estimate value (comparable to the one shown above, i.e., 1.3 percent to 2.9 percent) for New Jersey's underground economy of approximately $6.4-14.2 billion in 2007. If one assumes that the underground economy grew at a rate roughly proportional to the formal economy between 2007 and 2014, then New Jersey's underground economy likely had a range-estimate value of $7.3-$16.3 billion in 2014.[35]

Repeating the same exercise for California (chosen for reasons explained in the text immediately below), provides a similar range estimate for the value of its underground economy of $26-$58 billion in 2007 and $30-$68 billion in 2014.

Some indication of the ballpark accuracy of the above range-estimates for the size of California's (and thus indirectly our New Jersey estimates) can be had via reference to a 2012 California Employment Development Department (CEDD) analysis of IRS findings that estimated the size of California's underground economy at $60-140 billion annually.[36] Based on its 2009 GDP of $1.9 trillion (which represented 13 percent of total U.S. GDP, roughly four times New Jersey's share of national GDP), the CEDD's range estimate implies that the value of

U.S. News and World Report, March 18, 2013, and, James Surowiecki, "The Underground Economy" The New Yorker, April 29, 2013. The larger point here is that our decision to scale the Schneider and Williams' estimates *down* (for the reasons noted in the text) produce range estimates for the sizes of underground economies that are more *conservative* (i.e., smaller) than those typically cited in the mainstream press over the past several years.

[34] See footnote 23.

[35] Nominal GDP for the state increased 14.5 percent between 2007 and 2014.

[36] This analysis was prepared for a California Senate Sub-Committee hearing on the underground economy in 2012. See: http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_1151-1200/sb_1185_cfa_20120629_140323_asm_comm.htm. Cited in, Travis Wiseman, "US shadow economies: a state-level study," Constitutional Political Economy, 24 (2013): 310-335

California's underground economy was equivalent to 3.1 percent-7.3 percent of its GDP.[37] The lower end of this range (3.1 percent of GDP or $60 billion in 2009) is roughly comparable to the range estimates we set out above for the years 2007 and 2014. (The high-end estimates for 2007 and 2014 equal $58 and $68 billion, respectively.)

Using a MIMIC methodological approach, Wiseman (2013) develops estimates of the size of all fifty states' underground economies for the 1997 to 2008 period.[38] Table 8 shows these estimates for a select group of states, including New Jersey. As shown, between 1997 and 2008, Wiseman's estimates suggest that New Jersey's underground economy averaged 7.7 percent of official state GDP. Moreover, his analysis suggests that New Jersey's underground economy was the 5th *smallest* (in terms of its proportion of GDP) among the fifty states. (Delaware's was the smallest, while Mississippi's was the largest.)

Wiseman's 2008 point estimate for California indicates an underground economy equivalent to 6.3 percent of the state's GDP or $126 billion—a figure that is close to the CEDD's upper range estimate of $140 billion (cited above). Wiseman's estimate for New Jersey's total underground economy for 2008 is 6.5 percent of state GDP. This implies an underground economy with a value of $32.2 billion in 2008. This figure is twice as large as the high-end estimate of $14.2 billion (for 2007) we calculated above. Figure 15 shows Wiseman-based estimates of the sizes of underground economies for the same group of states shown in Table 8 for the period 1997 to 2008.

Table 8: US state-level shadow economy estimates, (% GDP), 1997–2008, MIMIC method

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	State Average	State Rank
California	8.4	8.4	8.2	8.1	8.2	8.1	7.8	7.6	7.5	6.8	6.5	6.3	7.7	4.0
Delaware	7.9	7.9	7.7	7.7	7.7	7.7	7.5	7.4	7.1	6.5	6.2	6.2	7.3	1.0
Maryland	9.1	9.1	8.9	8.9	8.9	8.8	8.7	8.6	8.3	7.8	7.4	7.3	8.5	35.0
New Jersey	8.3	8.4	8.2	8.1	8.1	8.0	7.8	7.7	7.5	6.8	6.6	6.5	7.7	5.0
New York	8.6	8.6	8.4	8.3	8.4	8.3	8.2	8.1	7.9	7.1	6.9	6.7	8.0	16.0
Pennsylvania	8.9	9.0	8.7	8.8	8.9	8.8	8.5	8.4	8.3	7.5	7.3	7.1	8.4	29.0
US average	8.9	8.9	8.7	8.7	8.7	8.7	8.5	8.3	8.2	7.5	7.2	7.1	--	--

Source: Wiseman (2013), Table 3.

Wiseman's analysis is not only clever but also (and, unfortunately) unique: it represents the only attempt we found within the sizable underground literature reviewed to *originally* produce consistent time series estimates of the sizes of *states'* underground economies. Thus, while Wiseman's estimates are useful for our purposes, we underscore that his MIMIC methodological approach necessitates a calibration technique that ties his estimates directly to ones produced by

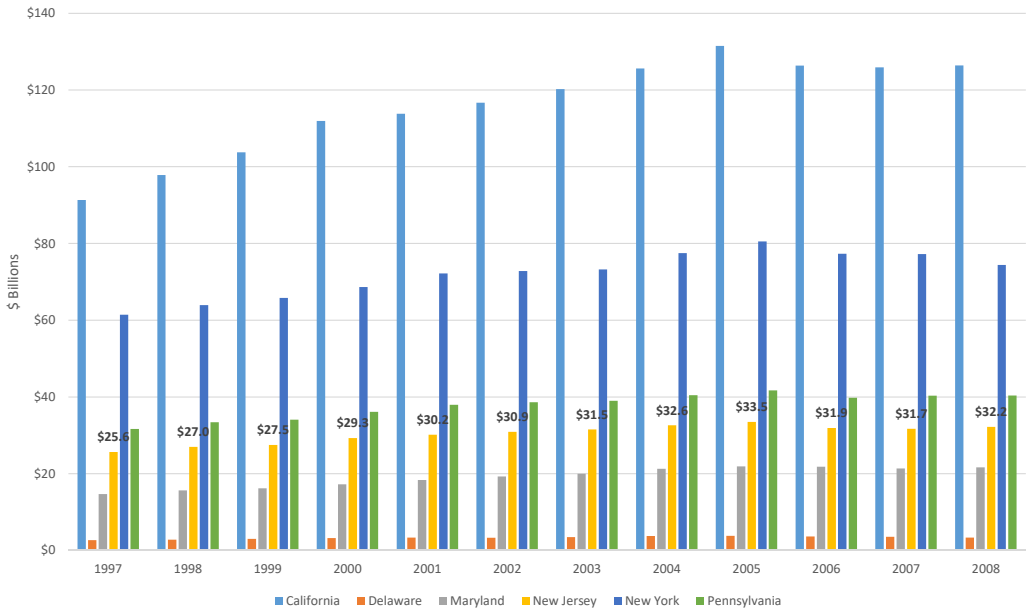
[37] The CEDD full report could not be accessed. Therefore, what precise year(s) the $60-140 billion range estimate refer(s) to could not be determined. However, because it was on an analysis of IRS tax data findings (which are often produced with some time lag), we assume it refers to a year range that preceded the report's publication, e.g., 2008-2010. The percentage figures we cited use California's 2009 GDP.

[38] See footnote 27.

another author.[39] **The upshot is that Wiseman's estimates likely suffer from the same shortcomings previously described—namely, they likely *overstate* the size of states' underground economies.**

In sum, the above discussion leads us to estimate a range size value for New Jersey's *total* underground economy of $7.3-$16.3 billion. Again, this would imply a total underground economy that constituted approximately 1.3 percent-3 percent of the state's nominal GDP in 2014.

Figure 15: The Size of Underground Economies based on Wiseman (2013) Estimates:
California, Delaware, Maryland, New Jersey, New York, and Pennsylvania
1997 to 2008



Source: Wiseman (2013), U.S. Bureau of Economic Analysis, and author calculations.

F. Estimating the Size of New Jersey's Underground Construction Economy

The above dollar range estimate of the size of the state's *total* underground economy ($7.3-$16.3 billion) allows us to form a similar range estimate for the size of the state's underground *construction* economy. Table 9 presents our estimates.

[39] As Wiseman duly notes, "One notable criticism of the MIMIC model is its use for constructing cardinal time series of shadow economy size. Since the MIMIC model can only produce an ordinal time series index, cardinal calibration requires use of *past shadow economy estimates, ultimately dependent upon other methods such as electricity consumption and currency demand."* [Emphasis added.] Wiseman (2013), footnote 2, p. 326. Wiseman's estimates are calibrated using ones published by Schneider. See, Friedrich Schneider, "The influence of the economic crisis on the underground economy in Germany and the other OECD countries in 2010: a further increase" *Working Paper, 2010.* It should further be noted that these estimates are similar to many others produced by Schneider in subsequent work (including the Schneider and Williams' book referenced above).

New Jersey's total (nominal) GDP in 2014 totaled $552 billion, while the construction sector's total (nominal) output totaled $19.9 billion or 3.6 percent of the state's GDP. As shown, based on the discussion above, we estimate a range value for the size of the state's *total underground economy* of $7.3-$16.3 billion. (Thus, the midpoint estimate equals $11.8 billion or 2.1 percent of GDP.)

Based on this range estimate we derive a similar range estimate for the size of the state's underground construction sector. **Our conservative estimate (shown first) assumes that the size of the underground construction sector is proportional to the construction sector's share of total state GDP (3.6 percent). This yields a range estimate of $264-$590 million, with a midpoint of $426 million.**

A more aggressive (i.e., less conservative) estimate assumes that the size of the construction underground economy is twice the construction sector's share of total state GDP (7.2 percent). This yields a range estimate for the underground construction economy of $528-$1.2 billion, with a midpoint of $853 million.

The final row of Table 9 shows the average of the two midpoints noted above. This yields an estimate of $640 million for the size of New Jersey's underground construction economy. As shown, this represents 3.2 percent of official total construction sector output (in 2014), 5.4 percent of New Jersey's total underground economy, and 0.12 percent of total state GDP.

Two additional comments help contextualize these estimates. First, a study of misclassification of workers in Massachusetts (described in more detail in Section G below) indicates that misclassification rates for workers in the construction sector are higher than the average misclassification rate across all industries. (At the same time, misclassification rates in construction are *not* the highest among all industries. Rates in the transportation, education/health services, and professional/business services sectors are higher.) Second, the OECD notes that when official national product and income account statisticians adjust their estimates to account for the non-observed economy (the underground economy represents but one, albeit a rather large, part of the total non-observed economy), adjustments for the construction sector generally represent a large share of total adjustments.[40] Both of these findings would seem to suggest that the *construction* sector's share of the state's *total* underground economy is likely larger than its official share of GDP.

[40] Gyomai (2014), 7-8

Table 9: Estimating the size of New Jersey's Total Underground and Construction Underground Economies				
2014 NJ GDP (nominal) = $551.8 billion				
Total NJ Underground Economy	2014 nominal value	% 2014 NJ GDP		
Low-end estimate	$7.3 billion	1.3%		
High-end estimate	$16.3 billion	3.0%		
Midpoint	$11.8 billion	2.1%		
2014 Construction Sector Output (nominal) = $19.9 billion				
2014 Construction Sector Output as share of NJ GDP = 3.6%				
Construction Sector Underground Economy				
If construction underground economy is proportional to constructon sector's share of GDP (3.6%) >> ***CONSERVATIVE ESTIMATE***		% Construction Sector Output	% NJ's Total Underground Economy	% Total NJ GDP
Low-end estimate	$263.8 million	1.3%	3.6%	0.05%
High-end estimate	$589.0 million	3.0%	3.6%	0.11%
Midpoint	$426.4 million	2.1%	3.6%	0.08%
If construction underground economy is 2X construction sector's share of GDP (7.2%) >> ***AGGRESSIVE ESTIMATE***		% Construction Sector Output	% NJ's Total Underground Economy	% Total NJ GDP
Low-end estimate	$527.6 millon	2.6%	7.2%	0.10%
High-end estimate	$1.18 billion	6.0%	7.2%	0.21%
Midpoint	$852.8 million	4.2%	7.2%	0.16%
Average of above two midpoints	***$639.6 million***	***3.2%***	***5.4%***	***0.12%***
Source: U.S. Bureau of Economic Analysis and author calculations.				

Finally, it should be noted that our estimate of "off-the-books" employment in the construction industry (see Section H below) indicates that such labor market practices in the state's construction industry accounted for nearly $284 million in unreported wages in 2014. In other words, using our average midpoint figure from above ($640 million), off-the-books hiring activities account for approximately 44 percent of all underground activity in the state's construction sector. A significant share of the balance seems likely to be tied to misclassification practices.

While we believe the estimates set out above are rather conservative in nature, we again underscore that significant level of uncertainty that surrounds them. In short, estimating the sizes of underground economies is far more art than science. As a recent comprehensive study of California's underground economy rightly notes:

> "The underground economy is both elusive and everywhere. Experts find it difficult to define, calculate and track, yet it permeates nearly every commercial

industry in California and costs the state billions of dollars annually in uncollected taxes and other revenue."[41]

Indeed, as is widely remarked in the underground economy literature, the very nature of the underground economy implies that all attempts to estimate its size—regardless of the methodological approach used—reflect a host of often very strong theoretical and empirical assumptions, many of which are likely *not* terribly robust. Thus, any policy-making that uses such estimates (including ours) as inputs should tread lightly and recognize the significant margins of error that characterize such estimates.

G. Misclassification in New Jersey's Construction Sector

There is now an abundance of evidence that suggests that the practice of misclassification is widespread and growing. As Francoise Carre remarks, "Numerous state-level studies show that between 10 and 20 percent of employers misclassify at least one worker as an independent contractor."[42] Independent contractor (IC) misclassification refers to the practice of considering a worker who should be a direct employee of a business (and therefore who should receive a W-2 form to file with tax returns) as a self-employed, or "independent" contractor (and who thus receives a 1099-MISC form).[43]

While the consequences of misclassification are many, among the most important are its fiscal ones. For example, a 2007 Cornell University study that exploited New York unemployment insurance program audits estimated that 10 percent of all firms in a group of selected industries misclassified workers. This represented almost $4.3 billion in unreported wages annually, and underreporting for unemployment at more than $175 million.[44] Testimony given to California's Little Hoover Commission (that has been at the forefront of state-level efforts to grapple with underground economies) in 2006 cites a U.S. IRS Tax Gap study for 2006 that documents a national tax gap of $450 billion—an estimated 17 percent of all taxes owed were either unreported or unpaid. The vast majority of this was due to underreporting or non-reported income/earnings.[45] In 2007, three Washington State taxing agencies conducted an unregistered business study. The study broke down the tax compliance gap between firms that

[41] "Level the Playing Field: Put California's Underground Economy out of Business" Little Hoover Commission, Rpt. #226, March 2015

[42] Francoise Carre, "(In)dependent Contractor Misclassification," Economic Policy Institute, June 2015. Carre provides a comprehensive bibliography for this literature.

[43] As noted previously, in the workers' compensation field, occupational misclassification refers to the practice of intentionally placing an employee in an occupational cohort that has a lower workers' compensation premium rate than the occupational class to which the worker should be assigned. Occupational misclassification is thus especially important in the construction sector owing to the usually high compensation premiums paid.

[44] Linda H. Donahue, James Ryan Lamare, and Fred B. Kotler J.D., "The Cost of Worker Misclassification in New York State" Cornell University ILR, February 2007

[45] See testimony provided by Carl Hammersburg, accessible here: http://www.lhc.ca.gov/studies/226/March percent20Testimony/Hammersburg percent20Testimony.pdf

were missing completely from the rolls of one or more tax agencies, and those that were under-reporting. The study found a gap of $708 million in taxes annually within the state.[46]

In the current context, misclassification is especially relevant because such practices have been found to be rampant in the construction sector. A study focused on the construction sector in Texas found 40 percent of workers misclassified as ICs or working under the table for cash. Estimated impacts of such practices ranged from $54.5 million in missing unemployment tax in the sector; wage theft totaling $118 million; and $8.8 million in lost sales tax revenue. Carre cites another study that estimated that one-third of construction workers in Southern states such as North Carolina and Texas are misclassified.[47]

As Carre goes on to note:

> "Misclassification is most common in industries where it is most profitable (such as construction, where workers' compensation insurance premiums are high), and in industries with scattered worksites where work is performed in isolation. Housecleaning, in-home care, and trucking are industries in which misclassification is particularly common. New "sharing economy" businesses create cause for concern about possible misclassification because it is unclear how "autonomous" these workers really are."[48]

In addition to its fiscal implications, misclassification is problematic for a host of additional reasons, including:

- Employers who misclassify avoid paying payroll taxes and workers' compensation insurance, are not responsible for providing health insurance, and are able to bypass requirements of the Fair Labor Standards Act, as well as the 1986 Immigration Reform and Control Act.
- Misclassified workers are ineligible for unemployment insurance, workers' compensation, minimum wage, and overtime, and are forced to pay the full FICA tax and purchase their own health insurance.
- Misclassification undermines worker bargaining power and leaves workers more vulnerable to wage theft.
- Federal and state governments not only lose out on revenue from income taxes, but Federal and state unemployment insurance, worker compensation, and disability insurance systems are adversely affected.
- Employers who play by the rules are disadvantaged by higher labor and administration costs relative to employers who misclassify.[49]

[46] Unregistered Business Study. Report of the Washington State Department of Revenue, Cindi L. Holmstrom, Director, Prepared by Lorrie Brown, Study Lead Research Division and Stan Harris, Chief Study Analyst Compliance Division, February 2007

[47] Carre (2015) cites, Franco Ordonez and Manny Locke, "Immigrants are Most Susceptible to Worker Misclassification" McClatchy Washington Bureau, September 2014

[48] Carre (2015)

[49] Carre (2015)

Among all of the many forces promoting misclassification, one factor in particular deserves special mention. As a 2000 U.S. Department of Labor-commissioned study on independent contractors noted, "The number one reason employers use ICs and/or misclassify employees is the savings in not paying workers' compensation premiums and not being subject to workplace injury and disability-related disputes."[50] And, as a 2004 Massachusetts study of misclassification in the construction industry states, "Driven by increased medical costs, worker compensation costs rose significantly over the past twenty years. And in industries such as construction, worker compensation costs are particularly high."[51]

How Prevalent is Misclassification in New Jersey and in the New Jersey Construction Sector? (2016)

In this section we attempt to apply some of the results produced by an (admittedly somewhat dated) study of the prevalence of misclassification in Massachusetts' construction sector to New Jersey's construction sector. Despite its 2004 publication date, this Massachusetts-based study replicated the aforementioned comprehensive 2000 U.S. Department of Labor-commissioned Planmatics study that relied upon sophisticated audit methods to assess the prevalence of misclassification in nine states, including New Jersey. As this report states:

> "The number one reason employers use ICs and/or misclassify employees is the savings in not paying workers' compensation premiums and not being subject to workplace injury and disability-related disputes. Another reason is the avoidance of costs associated with employee lawsuits against employers alleging discrimination, sexual harassment, and implementing regulations and reporting procedures that go along with having employees. Understanding and complying with all the labor and worker protection laws is often beyond the capabilities of many small businesses. Even governmental agencies use ICs to avoid conferring employee status and attendant benefits because they have authorization to spend money on contracted services, but not on full-time employees."[52]

The Planmatics' report found that for the nine states analyzed the percentage of audited employers with misclassified workers ranged from 10 percent to 30 percent. In New Jersey, 9.2 percent of audited *employers* (638 out of 6,972) were found to have misclassified ICs. The percent of *workers* misclassified as ICs at audited employers in New Jersey was 8.9 percent (which represented 322,435 employees statewide). Taxable wages underreported per misclassified worker averaged $4,908 in New Jersey. (This figure was the second-largest among the nine states, trailing only Nebraska, where the taxable wages underreported per misclassified worker averaged $5,000.) In New Jersey, the underreported tax per misclassified worker averaged $420. All told, the Planmatics' report indicated that in New Jersey that total underreported tax due to misclassification totaled $135 million. The percentages of state UI tax revenues underreported due to misclassification varied from 0.26 percent in Wisconsin to 9.9

[50] Planmatics, Inc. "Independent Contractors: Prevalence and Implications for Unemployment Insurance Program" US-DOL commissioned report, February, 2000, iii

[51] Francoise Carre and Randall Wilson, "The Social and Economic Costs of Employee Misclassification in Construction," Construction Policy Research Center, Harvard, December 2004

[52] Ibid., p. iii

percent in New Jersey (the highest among the nine states analyzed).[53] Planmatics' calculations were of course tied to data from the late 1990s.

Given its relevance to this report, it is also worth quoting at some length the following passage from the Planmatics' report:

> "The construction industry was the industry frequently cited by interviewees as most likely to use ICs, contain the highest incidence of misclassification, or as one that lures workers into becoming ICs.
>
> In any industry, it makes economic sense to award a contract to the lowest bidder. The construction industry is no different. Many employers believed that hiring independent contractors was a way to cut their costs in order to improve their competitiveness and get more contracts. Employers who misclassify employees as ICs gain a distinct competitive advantage over those who pay taxes, provide benefits to their employees, and are placed on equal footing with employers who operate in the underground economy. The benefits to be gained in this arrangement greatly outweigh the risks associated of being caught.
>
> The ICs in the construction industry belong to the low-skilled, less-educated group, of which many are recent immigrants. Employers exploit these workers by paying them very low wages "under the table," because they do not know or understand their rights as employees. The advantages to ICs that are paid "under the table" are:
>
> - they can avoid paying taxes on income
> - they can shield income sources from their creditors and/or former spouses
> - they can make more per hour if paid in cash rather than by payroll check
> - they can draw benefits such as welfare, unemployment insurance, or disability insurance if legally entitled to be employed in the United States."[54]

Table 10 documents the key findings from the aforementioned Massachusetts study of the prevalence of misclassification in the construction sector. As shown, the rate of misclassification *by employers* in Massachusetts ranged from 13 percent-19 percent for all industries, and 14 percent-24 percent for the construction sector. The low-end estimates shown were based on audits of employers that, while not selected by fully statistically random methods, are considered non-targeted or random audits in common auditing practices. The upper-end estimates, in contrast, included a mix of random audits and audits explicitly targeted based on past behavior (and thus were more likely uncover misclassification).

In terms of *workers,* the analysis indicates that 4.5 percent-8.9 percent of *all workers across all industries* were misclassified, while 5.4 percent-11.4 percent of *construction workers* were misclassified. It should be noted that the Massachusetts study also documents the fact that misclassification rates rise significantly *among employers found to have misclassified their workers.* For example, among misclassifying employers (regardless of industry), misclassification rates ranged from 25 percent-39 percent, while they ranged from 40 percent-48 percent within the construction sector. Finally, the report notes that the extent of misclassification increased between the mid-1990s and the early 2000s. While the percentage of

[53] California's rate of 7.46 percent was the second highest. Though if one includes all audits (not just those required by the DOL) California's rate was the highest (13.2 percent).

[54] Planmatics (2000), p. 41

workers misclassified across all industries increased from 22 percent to 25 percent between 1995-97 and 2001-2003 (low-estimate), it rose from 31 percent to 40 percent in construction.

Table 10: Prevalence of Misclassification in Massachusetts, 2001-2003		
	Low estimate (employer sample)	Moderate estimate (all audits)
Percent of Employers Found to Misclassify Workers as ICs, 2001-2003		
All industries	13%	19%
Construction	14%	24%
Percent of Workers Found to be Misclassified as ICs, 2001-2003		
All industries	4.5%	8.9%
Construction	5.4%	11.4%
Source: Francoise Carre, et al., (2004)		

Here, we build on our prior discussion of the state's construction sector, the Massachusetts study's findings, and those from the aforementioned Planmatics' report in order to generate our own range-estimates of the likely extent of misclassification in New Jersey's construction industry.

As noted, the Massachusetts study replicated the methodology used in the Planmatics' study to arrive at the results shown in Table 10. Thus, the 19 percent misclassification rate shown for *employers* in Massachusetts (across all industries) was well above the 9.2 percent estimate produced for New Jersey employers in the Planmatics' study. At the same time, the misclassification rate for all *employees* (across all industries) in Massachusetts (8.9 percent) was *identical* to the rate for New Jersey in the Planmatics' study.[55]

Unfortunately, the Planmatics' study did not break out results by industry, as the Massachusetts study did. **If we assume that the misclassification rate for employees *within* the construction sector in New Jersey is roughly comparable to that estimated for Massachusetts—namely 11.4 percent—the implication would be that some 15,800 payroll construction workers in New Jersey were misclassified in 2014.[56] If the more conservative misclassification rate for Massachusetts' construction is used (5.4 percent) this number declines to 7,500. Applying the Massachusetts study's unpaid UI tax per misclassified construction worker ($134-$251) to these figures yields a range-estimate loss (i.e., unpaid) UI taxes in the construction industry in New Jersey of $1-4 million in 2014. If the much higher Planmatics' study estimate of underreported tax per misclassified worker in New Jersey is used instead ($420), this range estimate of unpaid UI taxes in construction increases to $3.1 million to $6.7 million.**

[55] Note here that we are referencing the moderate estimates which are less conservative, i.e., they yield *higher* misclassification rates.

[56] We use the *County Business Pattern* payroll estimate shown in Table 3. This estimate (139,000) was slightly *less than* the establishment payroll figure produced by the U.S. Bureau of Labor Statistics (141,600) for 2014. (See Table 1)

Two additional points regarding the above estimates should be made. First, all of these estimates—both those produced by the Planmatics' and the Massachusetts study—are based on audits and data collected in the late-1990s and early 2000s. As explained, there is considerable evidence from other state-level studies that the extent of misclassification has *increased* over the past decade or so. Moreover, there is also evidence that misclassification in the construction sector in some states may be as high as 40 percent. In fact, the Massachusetts study estimated that among misclassifying employers in construction, between 40 percent-48 percent of all workers were misclassified. Given these facts it seems likely that the range estimates of misclassified workers (along with the related actual dollar range estimates of unpaid UI taxes) set out above are conservative.

Second, a much more recent report on Texas' underground construction economy estimates that 300,000 Texas construction workers were misclassified by their employers.[57] This would constitute 46 percent of total payroll construction employment in Texas. Our high-end figure cited above (15,800) would in contrast only constitute 11.2 percent of total New Jersey payroll construction employment. While the stark difference in unionization rates in construction across New Jersey and Texas (18.2 vs. 2.8 percent) may well play a significant role in explaining *some* of this sizable differential, they certainly can't explain all of it. Put otherwise, it seems reasonable to assume that even our high-end estimate above is conservative.

While we do not generate our own estimates, it should be recognized, of course, that in additional to lost UI payroll taxes, misclassification holds additional important implications in terms of lost or unpaid income taxes as well as worker compensation premiums.

This section updates the key findings for New Jersey associated with the original report's Section G "Misclassification in New Jersey's Construction Sector." In particular, it updates the estimate of misclassified payroll construction workers in New Jersey. (The relevant discussion in the original report is set out in the text immediately following Table 10.)

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Importantly, it should be noted that our update here relies upon the same assumptions and methodology adopted in the original report. In particular, it draws up data and insights from two *(rather dated)* reports on misclassification: a 2000 U.S. Department of Labor-commissioned study published by *Planmatics*, and a 2004 Massachusetts-based study published by Harvard's Construction Policy Research Center.

If we assume that the misclassification rate for employees within the construction sector in New Jersey is roughly comparable to that estimated for Massachusetts—namely, 11.4 percent—the implication would be that some 17,670 payroll construction workers in New Jersey were misclassified in 2017. If the more conservative misclassification rate for Massachusetts' construction is used (5.4 percent) this number declines to 8,370. Applying the Massachusetts study's unpaid UI tax per misclassified construction worker ($134-$251) to these figures yields a range-estimate loss (i.e., unpaid) UI taxes in the construction industry in New Jersey of $1.1-$4.4

[57] "Built a Better Texas" Workers Defense Project, January 2013, 46

million. If the much higher *Planmatics'* study estimate of underreported tax per misclassified worker in New Jersey is used instead ($420), this range estimate of unpaid UI taxes in construction increases to $3.5-$7.4 million.

As explained in the original report, the estimates just provided use inputs derived from audits and data collected in the late-1990s and early aughts. And, as explained in the original report, there is considerable evidence from other state-level studies that the extent of misclassification has *increased* since then. As we originally noted, there is evidence that misclassification in the construction sector in some states may be as high as 40 percent. Indeed, we originally noted that the Massachusetts' study estimated that among misclassifying *employers* in construction, between 40-48 percent of all *workers* were misclassified. We also cited a 2013 report on Texas' underground construction economy that estimated that 300,000 Texas construction workers were misclassified by their employers. *As noted, this constituted 46 percent of total payroll construction employment in Texas.* Our updated figure above (17,670) constitutes 11.4 percent of total New Jersey payroll construction employment. While the stark difference between Texas and New Jersey unionization rates likely explain some of this rate differential, it can't explain all of it. For these reasons, we continue to hold (as we did in the original report) that it seems reasonable to assume that even our high-end estimate above is conservative.

At the same time, however, it should be recognized that our updated estimate implicitly assumes that misclassification practices (and, thus rates) have remained identical to what they were several years ago when we produced our original report. This may not be the case.

The upshot is that while our methodological approach yields estimates that are likely conservative, it may also be true that recently enhanced enforcement and regulatory practices by the state have had a meaningful impact on misclassification rates in recent years. Were this the case, then our updated estimate of misclassified construction workers in New Jersey may *overstate* the number of misclassified construction workers. (Future efforts to document and analyze the results of recent years' enhanced enforcement and regulatory efforts would of course shed light on this empirical question.)

H. "Off-the-books" Employment in New Jersey's Construction Sector (2016)

In addition to the problems associated with misclassification, workers paid "off-the-books" represent yet another dimension of the underground economy. Unlike misclassification, which produces some documentation (1099-MISCs), "off-the-books" arrangements leave no documentation at all. Our prior discussion of residential construction provides a means of gauging the extent of this aspect of the underground construction economy in New Jersey.

As explained, there is a significant unexplained residual between ACS-based residential construction employment estimates in New Jersey (i.e., these are individuals who live in New Jersey and identify themselves as working in the construction industry) and official establishment payroll estimates of construction employment (construction workers on New

Jersey-based construction firms' payrolls). And, as noted, this residual increased threefold between 2005 and 2014 (to an estimated 34,000 workers).[58]

Table 11 shows a revamped version of Tables 1 and 2 and facilitates the following discussion regarding our estimate of the extent of "off-the-books" employment in New Jersey's construction industry.

[58] This unexplained residual is also highlighted by the rather high ratio (0.43) shown for New Jersey in Table 2's Column J.

Table 11: Estimating Off-the-books Employment in New Jersey's Construction Sector

COLUMN ID	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	K	L
	Construction Employment *2014*			ACS Residential Employment Broken Out by Category					Residual			
State	Payroll	ACS Residential	Difference between Employment Estimates	Private Sector	Non-profit	Public Sector	Self-Employment	Sum (E + F + G)	C - H	I / B	Difference between Private Sector ACS Workers and Payroll Employment D - A (approximately equal to Column I)	Difference between Private Sector ACS Workers and Payroll Employment / Payroll Employment (K / A)
California	674,100	1,064,294	390,194	767,356	12,772	34,057	250,109	296,938	93,256	8.8%	93,256	13.8%
Florida	397,300	596,857	199,557	416,009	5,969	16,712	158,764	181,445	18,112	3.0%	18,709	4.7%
Illinois	201,700	319,907	118,207	224,575	3,839	19,194	72,299	95,332	22,875	7.2%	22,875	11.3%
Maryland	149,500	206,702	57,202	158,954	3,514	8,681	35,553	47,748	9,454	4.6%	9,454	6.3%
Massachusetts	129,000	193,323	64,323	130,493	2,320	8,313	52,391	63,023	1,300	0.7%	1,493	1.2%
Michigan	141,800	219,286	77,486	146,702	2,631	8,771	61,400	72,803	4,683	2.1%	4,902	3.5%
New Jersey	**141,600**	**247,558**	**105,958**	**175,519**	**3,218**	**11,635**	**56,938**	**71,792**	**34,166**	**13.8%**	**33,919**	**24.0%**
New York	343,000	524,696	181,696	369,911	10,494	32,531	111,760	154,785	26,911	5.1%	26,911	7.8%
Pennsylvania	228,900	359,108	130,208	252,812	5,028	16,878	84,390	106,296	23,912	6.7%	23,912	10.4%
Texas	651,542	989,460	337,918	747,042	13,852	26,715	202,839	243,407	94,511	9.6%	95,501	14.7%
			Category's % total residential									
			New Jersey	71.1%	1.3%	4.7%	23.0%					
			Average for all states ex-NJ	70.9%	1.4%	4.2%	23.4%			5.3%		8.2%
			Assume 1/3 of NJ Column K tied to NYC employment					11,306				
			Remaining balance: (33,919 - 11,306) =					**22,860**	→	***Implied off-the-books employment***		
			NYC employment taken into account: 22,860 / 247,558 and 22,860 / 141,600. Thus, the rates shown are *recalculated* rates identical to Columns J and L above.					9.2% and 16.1%				
			What NJ's Columns I and K would be if identical to the (ex-NJ) average across other states shown (5.3% and 8.2%)					13,112 and 11,607				
			Estimated number of "off-the-books" workers		Average hours per year (30 hours/week and 40 weeks/year)			Hourly wage	Implied "off-the-book" construction workers total wages			
			22,860		1,200			$10.38	$284,743,820			

Source: U.S. Bureau of Labor Statistics, Census Bureau, and author calculations.

Column C shows the respective difference between residential and payroll employment estimates across a set of benchmark states. Based on rates not shown directly in the table, Columns D-G show residential construction employment across several categories (private, non-profit, public, and self-employment). As explained previously, construction employment in the latter three categories would *not* be expected to show up on construction firms' payrolls. As shown, once employment for these three categories (shown in Column H) is accounted for, there remains an unexplained residual (shown in column I). This residual thus should represent the difference between official payroll construction employment and ACS-based residential private sector construction employment. (This difference is shown in Column K and, as noted, it closely approximates the figures shown in Column I.)

The table also shows that rates of residential construction employment in New Jersey across these four categories. As shown, New Jersey's rates do *not* differ substantially from other state's rates. Most importantly, however, are the percentages shown in Columns J and L. Column J represents the proportion of total residential construction employment in each state that remains unaccounted for after non-profit, public, and self-employment is taken into account. As shown, New Jersey's rate (13.8 percent) is considerably higher than other states' rates. In fact, the average rate for the other states is 5.3 percent. Thus, New Jersey's residual is 2.6 times this average.

A slightly different way to viewing the same issue can be had by comparing the rates shown in Column L. This column takes the difference between ACS-based residential employment in the private sector (i.e., these workers ostensibly show up on *some* construction firm's payroll) and actual payroll employment and then divides by payroll employment. As shown, this figure is an eye-popping 24 percent for New Jersey. (In other words only 3 out of every 4 New Jersey construction workers who work in the private sector are accounted for by New Jersey construction firms' payrolls. And, importantly, New Jersey's figure is three times larger than the average (8.2 percent) for the other states. (Again, the implication is that 92 percent of resident construction workers in other states, on average, are accounted for by their construction firms' payrolls.

For reasons explained previously, it seems likely that some portion of these anomalies for New Jersey are tied to New York City. Northern New Jersey construction workers obviously have easy access to New York City's construction sector. Thus, a portion of the anomalies just described are undoubtedly tied to northern New Jersey's rather unique and well-known commuting relationship with New York City.

However, even if one assumes that the NYC phenomenon explains one-third of the residual (which would imply that some 11,300 New Jersey construction workers pour into New York City daily to work), there remains a residual of over nearly 23,000 construction workers.[59] As

[59] Again, we note that a 2007 analysis of the underground construction economy in New York City by the *Fiscal Policy Institute* estimated that there were 14,000 construction workers working in New York City's construction sector that were residents of Connecticut, Pennsylvania, and New Jersey. See, *Fiscal Policy Institute*, April 2007. Thus, our analysis is *conservative* in that it assumes that a large portion of these (11,300/14,000 or 78 percent) were from New Jersey. (A lower figure would *increase* the unexplained residual—the focal point of attention here.) It should further be noted that if these 23,000 workers were added to New Jersey construction firms' payrolls (the official payroll count was 141,600 in 2014), New Jersey's payroll employment to residential

shown in the table, the New York City consideration reduces New Jersey's unexplained residual to 9.2 percent of total residential employment and 16.1 percent of payroll employment, i.e., still substantially above the averages for the other states (5.3 percent and 8.2 percent).

Based on this analysis, we estimate that nearly 23,000 New Jersey construction workers are likely to be working off-the-books. (It might be added, moreover, that it seems likely that some of the New Jersey workers that work in NYC are also working off-the-books.)

To get a very rough estimate of the total wages this off-the-books activity in the construction sector amounts to, we assume that the average New Jersey off-the-books construction worker works an average of 1,200 hours per year (i.e., 30 hours per week and 40 weeks per year). The hourly wage at the 10th percentile of the wage distribution for the construction sector in New Jersey in 2015 was $13.84.[60] We make the (admittedly arbitrary) assumption that these off-the-books construction workers make 75 percent of this hourly wage, or $10.38 per hour. Were this the case, total wages for these approximately 23,000 workers would amount to $284 million. Again, as noted above, this figure would account for approximately 44 percent of underground construction economy activity (which we estimated above as $640 million). Using the very highest estimate of underground activity of $1.2 billion, the wages would amount to $528 million. The very lowest estimate of wages using the most conservative numbers would be $116 million.

Making an estimate of lost income taxes becomes even more arbitrary than earlier estimates. It requires making assumptions about the following questions:

- On average, what share of these construction workers' gross incomes are taxable via the state's personal income tax system?
- What is the filing status of these workers? Do they file singly or jointly? If the latter, how much do their incomes represent as a share of the tax filing unit's total income?

This report estimates there are 22,860 off-the-books New Jersey construction workers. Per Table 11 in the report they make $12,456 annually (1,200 hours at $10.38 per). Assume all of these workers belong to tax-filing units with *two* income earners that file jointly. Assume these tax filing units earn an average of $32,400. This was the *actual* average annual income of New Jersey family (tax-filing) units in the second-lowest 20 percent of all filing units in 2015. (See: http://www.itep.org/whopays/states/new_jersey.php.) This would imply that the second earner in the unit (the non-construction sector worker) earns $19,944. At 2,000 hours per year (40 hours/week and 50 weeks/year), this second earner has wages of just under $10/hour. So, we have two low-wage workers who together earn $32,400. Again, this was the actual *average* income of tax-filing New Jersey families in the second-lowest income quintile (between the 20th and 40th percentiles) in 2015 according to the ITEP report.

Based on the ITEP study (see link above), this New Jersey family had an effective state income tax rate of 0.6 percent. Thus, it should have paid a *total* of $194 in personal income taxes. However, because 38 percent of the family's income ($12,456/$32,400) goes entirely unreported because of off-the-books work in the construction sector it files on income of only

employment ratio would equal 66 percent—the average ratio for all other states shown in Tables 2 and 11. New Jersey's actual ratio was just 57 percent in 2014.

[60] U.S. Bureau of Labor Statistics' OES data, 2015.

$19,944.[61] Per the ITEP report, this implies that this family/tax unit now has a *negative* effective income tax rate of -0.8%. Were this indeed the case, the entire $194 of personal income tax would be lost to the state's treasury. [62] If every single one of the 22,860 off-the-books workers were in this exact same position—i.e., was a member of a two-earner family that filed jointly and made the average income of $32,400 for families in the state's second-lowest income quintile ($22,000 to $43,000)—the total dollar value of income taxes lost would be approximately equal to $4.4 million.

However, anecdotal evidence suggests that many underground workers in New Jersey earn more than $10.38 an hour. Union officials, day laborers and an activist organization told our researchers that underground construction workers in 2016 often earn $20 an hour cash and work more than eight hours a day or five days a week. Doubling those workers' hourly wages and increasing the work week to 50 hours at 40 weeks or 40 hours at 50 weeks could place such a family in an effective state income tax rate of 1.7 percent for total personal income taxes of $748. If we said half of the 22,860 underground construction workers were in the higher bracket, the total income taxes going unpaid would be $10.8 million. The lost income taxes would also total almost $11 million if all underground workers averaged a wage estimate of $15 an hour, the mid-point between $10.38 and $20. It should be noted that these estimates apply tax rates to all of the income, while in reality they would apply to taxable income only. Finally, union leaders would argue that the true cost of lost tax revenue should be based on what these workers would earn if strict enforcement required employers to pay legal rates and overtime, which would likely increase the estimate.

As for misclassified workers: as the previously cited Massachusetts study states, "At income tax time, workers misclassified as independent contractors are known to under-report their personal income (they are over-represented among taxpayers found to owe taxes relative to their share of taxpayers and the problem seems to have worsened)."[63] The obvious point is that misclassification costs state treasuries personal income tax revenues.

Our midpoint estimate of the number of misclassified construction workers in New Jersey is 11,600. According to the Census Bureau's Nonemployer Statistics program (see: www.census.gov/econ/nonemployer/) there were nearly 49,000 individual proprietorships in the state's construction sector in 2014.[64] Combined, these businesses raked in $2.9 billion in receipts—or, nearly $60,000 per proprietorship. Our Table 4, which is based on the U.S. Bureau of Labor Statistics' OES program, indicates median annual earnings across all construction

[61] This is still another assumption that must be made, viz., that the second earner actually *does* fully comply with his/her personal income tax liabilities.

[62] This reflects New Jersey's 20 percent refundable Earned Income Tax Credit (EITC). For additional information on negative effective income tax rates see the above-referenced ITEP report, *Who Pays*? 5th ed., p. 10. Refundable credits do not depend on the amount of income taxes paid: if the credit exceeds income tax liability, the taxpayer receives the excess as a refund. The upshot is that the state treasury not only foregoes collecting $194 of personal income taxes, but it could well refund this family monies via the EITC program—monies it would not receive had its secondary (construction sector) earner been working above board.

[63] Carre, MA study. See prior cite.

[64] Nonemployer Statistics is an annual series that provides sub-national economic data for businesses that have no paid employees and are subject to federal income tax. The data consist of the number of businesses and total receipts by industry. Most non-employers are self-employed individuals operating unincorporated businesses (known as sole proprietorships), which may or may not be the owner's principal source of income.

sector occupational cohorts in New Jersey of $54,670. We average these two annual figures to arrive at an estimate of misclassified construction workers' annual (self-employment) earnings of $57,135.

We assume these misclassified construction workers underreport earnings by 30 percent.[65] Hence, they report income of only $39,990. We again assume all of these misclassified 1099 construction workers are members of two earner families that file taxes jointly (per our working assumption above with off-the-books workers). If we assume the second worker's annual earnings total approximately $20,000 (2,000 hours at $10/hour) we get families with reported incomes of roughly $60,000. Based on the previously cited ITEP report, such families would fall into New Jersey's middle quintile (40th to 60th percentile) and would pay an average effective personal income tax rate of 1.7%. **Combined, these families' (each one including a misclassified construction sector worker) would pay New Jersey personal income taxes totaling $11.8 million. Were these workers *not* misclassified and therefore received W2s (vs. 1099s) and thus *would* fully report their incomes for tax purposes, their combined personal income taxes would (again under the same working assumptions set out previously) be approximately $20.6 million.[66] The difference between this figure and the $11.8 million ($8.75 million) represents lost personal income tax revenue to the state.[67]**

Putting these two estimates together ($4.40 million and $8.75 million), we end up with a combined $13.1 million in lost state personal income taxes due to the state's underground construction industry. Using a higher estimate of off-the-books workers working longer and earning $20 an hour, the total would be $19.6 million.

This section updates the original report's Section H "Off-the-books Employment in New Jersey's Construction Sector"

Revised 2019

An updated Table 11 appears below. As in the original report, Table 11 represents a revamped version of Tables 1 and 2 and facilitates the following discussion of our estimate of "off-the-books" employment in New Jersey's construction sector.

Column C shows differences between residential and payroll construction employment for New Jersey and several benchmark states in 2017. Based on rates not shown in the table, Columns D-G show residential construction employment across several categories (private, non-profit, public, and self-employment). As explained previously, construction employment in the latter three categories would *not* be expected to show up on construction firms' payrolls. As shown, once employment for these three categories (shown in Column H) is accounted for,

[65] See Carre MA study. Therein they provide range estimates based on 30% and 50% underreporting.

[66] This calculation can be derived as follows. Take the product of the average effective tax rate for the fourth quintile as specified in the ITEP report (2.3%)—the result of 100% income reporting that would occur absent misclassification of these construction sector workers—and $894.7 million (the product of 11, 600 and $77,135). This yields the $20.6 million cited in the text.

[67] Note that there are two effects that flow from misclassification under our working assumptions. The first reflects the differential effective tax *rates* that are paid by family tax units. (Because misclassified workers are presumed to under-report their incomes, they end up paying a lower effective rate.) The second effect reflects differentials in taxable income. Under our assumptions, 61% of the loss in personal income tax revenue (to the treasury) is tied to the rate differential, while 39% is tied to the taxable income differential.

Table 11: Estimating Off-the-books Employment in New Jersey's Construction Sector 2017

COLUMN ID	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	K	L
	Construction Employment											
	2017			ACS Residential Employment Broken Out by Category					Residual			
State	Payroll	ACS Residential	Difference between Employment Estimates	Private Sector	Non-profit	Public Sector	Self-Employment	Sum (E + F + G)	C - H	I / B	Difference between Private Sector ACS Workers and Payroll Employment D - A (approximately equal to Column I)	Difference between Private Sector ACS Workers and Payroll Employment / Payroll Employment (K / A)
California	810,317	1,195,959	385,642	858,699	10,764	38,271	288,226	337,260	48,382	4.0%	48,382	6.0%
Florida	505,825	727,365	221,540	527,340	5,819	14,547	180,387	200,753	20,787	2.9%	21,515	4.3%
Illinois	220,242	332,236	111,994	233,562	3,655	14,618	80,069	98,342	13,652	4.1%	13,320	6.0%
Maryland	162,417	214,668	52,251	161,645	2,576	8,157	42,290	53,023	-772	-0.4%	-772	-0.5%
Massachusetts	152,142	213,964	61,822	150,631	2,140	8,773	52,421	63,333	-1,511	-0.7%	-1,511	-1.0%
Michigan	162,200	248,297	86,097	169,339	1,490	8,939	68,282	78,710	7,387	3.0%	7,139	4.4%
New Jersey	**155,950**	**256,309**	**100,359**	**188,131**	**1,794**	**12,047**	**54,594**	**68,435**	**31,924**	**12.5%**	**32,181**	**20.6%**
New York	387,642	551,537	163,895	395,452	8,825	31,989	115,823	156,637	7,259	1.3%	7,810	2.0%
Pennsylvania	249,025	364,421	115,396	255,459	2,551	17,492	89,283	109,326	6,070	1.7%	6,434	2.6%
Texas	712,242	1,145,046	432,804	864,510	10,305	27,481	241,605	279,391	153,413	13.4%	152,268	21.4%
			Category's % total residential									
			New Jersey	73.4%	0.7%	4.7%	21.3%					
			Average for all states ex-NJ	71.8%	1.0%	3.8%	23.5%			3.3%		5.0%
			Assume 1/3 of NJ Column K tied to NYC employment					10,727				
			Remaining balance: (31,924 - 10,727) =					**21,198**	→	***Implied off-the-books employment***		
			NYC employment taken into account: 21,198 / 256,309 and 21,198 / 155,950. Thus, the rates shown are *recalculated* New Jersey rates identical to Columns J and L above.					8.3% and 13.6%				
			What NJ's Columns I and K would be if identical to the (ex-NJ) average across other states shown (3.3% and 5.0%)					8,345 and 7,829				
			Estimated number of "off-the-books" workers		Average hours per year (30 hours/week and 40 weeks/year)			Hourly wage	Implied "off-the-book" construction workers total wages			
			21,198		1,200			$11.00	$279,871,407			

Source: U.S. Bureau of Labor Statistics, Census Bureau, and author calculations.

there remains an unexplained residual (shown in column I). This residual should represent the approximate difference between official payroll construction employment and ACS-based residential *private sector* construction employment. (This difference is shown in Column K and, as expected, it closely approximates the figures shown in Column I.)

The table also shows that rates of residential construction employment in New Jersey across these four categories. As shown, New Jersey's rates do *not* differ substantially from other state's rates. Most importantly, however, are the percentages shown in Columns J and L. Column J represents the proportion of total residential construction employment in each state that remains unaccounted for after non-profit, public, and self-employment are taken into account. As shown, New Jersey's rate (12.5 percent) is considerably higher than all other state's rates shown except Texas (13.4 percent). In fact, the average rate (including Texas) for the other states is 3.3 percent. Thus, New Jersey's residual is 3.7 times this average.

Importantly, the New Jersey rate just cited (12.5 percent) is *lower than* the 13.8 percent rate calculated in the original report. In fact, all states save Michigan and Texas saw their residual rates decline between 2014 and 2017. Therefore, despite declining between 2014 and 2017, New Jersey's residual rate relative to the average rate across the other states *increased* to 3.7 from 2.6 (in the original report), i.e., most other states saw their residual rates decline significantly since 2014.

As noted in the original report, a slightly different way to viewing this issue can be had by comparing the rates shown in Column L. This column takes the difference between ACS-based residential employment *in the private sector* (i.e., these workers ostensibly show up on *some* construction firm's payroll) and actual state-based payroll construction employment and then divides by payroll construction employment. As shown, this figure equals 20.6 percent for New Jersey, compared to an average of 5 percent across all the other states. (The only state that comes close to matching New Jersey's rate is Texas, whose rate, at 21.4 percent, exceeded New Jersey's in 2017.) Put otherwise, only 83 out of every 100 New Jersey-based construction workers who work in the private sector were accounted for by New Jersey construction firms' payrolls in 2017. The comparable average figure across all the other states shown in the table (save Texas) was 97. In 2014, approximately 80 out of every 100 New Jersey-based construction workers who work in the private sector were accounted for by New Jersey construction firms' payrolls.[68]

For reasons explained in the original report (and repeated in this updated report), it seems likely that some portion of this anomaly for New Jersey is tied to New York City. Northern New Jersey construction workers obviously have easy access to New York City's still-booming construction sector. Thus, a portion of the anomaly described seems likely to be tied to northern New Jersey's rather unique and well-known commuting relationship with New York City.

However, even if one assumes that the New York City phenomenon explains one-third of the residual (i.e., 0.33 X 32,181), which would imply that some 10,700 New Jersey-based construction workers commute into New York City to work each day), there remains a residual of 21,200 construction workers. As shown in the table, the New York City consideration reduces New Jersey's unexplained residual to 8.3 percent of total residential employment and 13.6

[68] The original report erroneously cited this figure as approximately 75 percent.

percent of payroll employment, i.e., still substantially above the averages for the other states (3.3 and 5 percent, or 2 and 3 percent if Texas is excluded from the average).

Based on this analysis, we estimate that nearly 21,200 New Jersey construction workers are likely to be working off-the-books. At the same time, it should be noted that this 2017 estimate is *smaller than* our original estimate of 22,860 (for 2014). Again, this decline in off-the-books construction work is duly reflected in the differences shown in our updated Table 11's columns I-L

As the original report did, our updated Table 11 provides a rough estimate of the total wages this off-the-books activity in the construction sector represents. As shown, we assume that the average New Jersey off-the-books construction worker works an average of 1,200 hours per year (i.e., 30 hours per week and 40 weeks per year). The hourly wage at the 10th percentile of the wage distribution for the construction sector in New Jersey in 2017 was $14.67.[69] We make the (admittedly arbitrary) assumption that these off-the-books construction workers make 75% of this hourly wage, or $11.00 per hour. Thus, total wages for our estimated 21,200 off-the-book workers would amount to approximately $280 million. This figure would account for approximately 39% of underground construction economy activity in New Jersey (which we estimated above as $710 million).

Making an estimate of lost income taxes becomes even more arbitrary than earlier estimates, particularly because of changes in ITEP methodology on which our estimates are based since our 2016 report. Because of the ITEP changes, 2019 estimates of lost taxes should not be compared to our 2016 estimates. Policy makers are urged to use caution and acknowledge the uncertainty if citing these estimates. This report estimates there are 21,200 off-the-books New Jersey construction workers making $13,200 annually (1,200 hours at $11 per). Assume all of these workers belong to tax-filing units with two-income earners that file jointly and earn an average of $34,000. Based on an ITEP study, this New Jersey family had an effective state income tax rate of 0.1 percent. Thus, it should have paid a total of $34 in personal income taxes if all income were on the books. If every one of the 21,200 off-the-books workers were in this same position, the total dollar value of income taxes lost would be approximately $721,000. (See cautionary note in our Executive Summary on page 11 .)

However, anecdotal evidence suggests that many underground workers in New Jersey earn more than $11 an hour. Union officials, day laborers and an activist organization told our researchers that underground construction workers in 2016 often earn $20 an hour and work more than eight hours a day or five days a week. Increasing those workers' hourly wages to $18 and increasing the work week to 36 hours would result in family income of $45,900 if the second worker earned $20,000. That could place such a family in an effective state income tax rate of 1.6 percent for total personal income taxes of $735. If one-third of the 21,200 underground construction workers were in the higher bracket, the total state income taxes going unpaid would be $5.7 million. It should be noted that these estimates apply tax rates to all of the income, while in reality they would apply to taxable income only. Finally, union leaders would argue that the

[69] U.S. Bureau of Labor Statistics' OES data, 2017.

true cost of lost tax revenue should be based on what these workers would earn if strict enforcement required employers to pay legal rates and overtime.

Our midpoint estimate of the number of misclassified construction workers in New Jersey is 13,000. We estimate that misclassified construction workers earn $67,274 but report income of only $47,092. If all of these misclassified construction workers are again members of two-earner families that file taxes jointly and the second worker's annual earnings approximate $20,000, we get families with reported incomes of $67,092. Based on the previously cited ITEP report, such families would pay an average effective income tax rate of 1.6 percent. Combined, these families with a misclassified worker would pay New Jersey personal income taxes totaling $13.96 million versus $26.1 million if all income were reported. The difference suggests there is $12.1 million in lost personal income tax revenue to the state.

Combined, we estimate $12.8 million in lost state personal income taxes due to misclassification and off-the-books activity in the state's underground construction industry. Using a higher estimate of off-the-books workers working longer weekly hours and earning $18 an hour, the total would be $17.8 million.

I. Final Remark (2016)

If we sum our estimates for off-the-books construction workers (approximately 23,000) and misclassified construction workers (approximately 11,600, which represents the average of our low- and high-end estimates), we arrive at a figure of nearly 35,000 New Jersey construction workers that are likely to be involved in some way in the state's underground construction industry. This would represent 14 percent of total residential construction employment in the state in 2014.

Final Remark
Revised 2019

If we sum our estimates for off-the-books construction workers (approximately 21,200) and misclassified construction workers (approximately 13,000, which represents the average of our low- (8,370) and high-end estimates (17,670)), we arrive at a figure of nearly 34,200 New Jersey construction workers that are likely to be involved in some way in the state's underground construction industry. This would represent approximately 13% of total residential construction employment in the state in 2017.

It should be pointed out again, however, that for the reasons explained above, our misclassification estimate for 2017 is likely not very precise as it relies upon misclassification studies and audit data from the early aughts, i.e., those data are now (in 2019) even more outdated than they were when our original report was published. Indeed, given that our off-the-books workers estimate for 2017 was smaller than our original estimate (as explained above), it may be the case that our updated estimate of misclassified workers (13,000 vs. an original estimate of 11,600) overstates the extent of misclassification in the state's construction sector in

2017. This may be especially true given the state's recently enhanced enforcement and regulatory activities. [Again, JF may want to weigh in here.]

However, even if the 13,000 figure represents an overestimate on the order of two, the number of misclassified workers would, at 6,500, remain significant. Summing this misclassification figure with the updated off-the-books workers yields nearly 28,000 New Jersey construction workers engaged in the underground construction sector in 2017 (nearly 11 percent of residential construction employment statewide). Moreover, as noted above (and in the original report), there is strong evidence that suggests that the rate of misclassification has risen since the early aughts. As we originally noted (and repeated here), there is evidence that misclassification in the construction sector in some states may be as high as 40 percent. Indeed, the originally cited Massachusetts' study estimated that among misclassifying employers in construction, between 40-48 percent of all workers were misclassified. We also cited a 2013 report on Texas' underground construction economy that estimated that 300,000 Texas construction workers were misclassified by their employers. As noted, this constituted 46 percent of total payroll construction employment in Texas. Our updated figure above (13,000) constitutes just 8.3 percent of total New Jersey payroll construction employment.

REGULATION OF NEW JERSEY'S CONSTRUCTION INDUSTRY

The construction industry's activities are regulated at the state level by the N.J. Department of Labor and Workforce Development (NJLWD) and at the federal level by the U.S. Department of Labor (DOL). In New Jersey, the NJLWD receives 7,500-8,000 complaints a year and has about 20 general enforcement field staffers who investigate, reflecting a decline from about 30 between 2013 and 2015. Included in the general enforcement staff have been staff dedicated to investigating misclassification. Between 5,000 and 6,000 state inspections of New Jersey construction sites were conducted 2013-15, but that number declined to nearly 4,000 in 2016-17, according to NJLWD data. Department officials did not respond to repeated requests to explain the apparent decline in enforcement numbers.

Inspections are to encompass a range of activities and observations, including observing the different trade or craft classifications at work, talking to workers from all of the trades, determine who the employers are, and request payroll records. A wage collection hearing may be scheduled in disputes involving employed workers (not independent contractors) with disputed wages of $30,000 or less. With higher amounts, the worker must sue the employer in civil court to recover wages.

The NJLWD performs approximately 2,700 to 3,000 audits a year to determine if employers are paying unemployment compensation taxes and other taxes in full. Some employers are randomly selected for audit from the state's comprehensive list of employers required to pay into the unemployment compensation system, but many audits result from complaints or benefit disputes[70]. The auditor will review reported payroll records going back one year, although records from other years may be reviewed if problems are evident. Other records to be audited include those involving cash disbursements, tax payments or documents, checks, corporate documents, invoices, contracts, and more. Part of the audit's aim is to see if workers who should be considered employees have been misclassified as independent contractors as a way to evade paying taxes. The state's enforcement activities resulted in $2.2 million in penalties a year, down from $2.6 million from 2014 to 2016. Those monies fund the budget of the Wage and Hour Division, which does not operate on state revenues.

Some 14 NJLWD field staffers have been dedicated solely to regulating compliance with the state's prevailing wage law in recent years. An additional seven had been hired by 2018-19, but state labor officials said some had resigned, and it was unclear how many had completed training. NJLWD officials did not respond to multiple requests by the researchers to explain the data provided. That staff conducted fewer than 600 job-site inspections on prevailing wage complaints in 2017-18, down from 864 in 2013-14 despite increasing field staff from 14 to 18 that year. The amount of penalties assessed in prevailing wage cases in New Jersey declined from more than $600,000 in 2016-17 to $415,000 in 2017-18. The penalties fund the enforcement activities

Despite the high numbers of cases and penalties, state regulators admit that their investigators can only scratch the surface of underground economy violations. Approximately

[70] http://lwd.dol.state.nj.us/labor/handbook/chap1/chap1sec7AuditProcess.html#3

10,000 companies are registered to perform public construction work in the state (Gaines, 2016). With nearly 600 school districts and 565 municipalities in New Jersey – not to mention numerous county and state government agencies – all potentially approving public construction, 30 field inspectors cannot possibly get to a majority of construction projects.

According to DOL documents, the federal agency that contracts out construction work is responsible for enforcing provisions of the Davis-Bacon Act requiring payment of set prevailing wage rates and fringe benefits. That agency is also responsible for enforcing the Contract Work Hours and Safety Standards Act, which ensures that overtime is paid at the rate of 1.5 the regular wage for hours worked in excess of 40 hours a week on federal construction contracts of $100,000 or more. This means the agency, which may not contract out enforcement responsibilities, must ensure prevailing wage compliance, review certified payrolls, conduct investigations, interview workers, and refer cases to the federal Wage and Hour Division (WHD) (U.S. Department of Labor, 2015). Employers must maintain employee records showing each worker's name, address, Social Security number, hourly pay rates, the number of hours worked, deductions, and more. Certified payrolls must be submitted on a weekly basis. Contractors are responsible for making sure subcontractors abide by the law. Civil and criminal penalties are possible for violations. The federal agency may withhold contract payments to satisfy any back wages found to be owed to employees.

The DOL through a spokesperson said that many of its wage and hour investigations are the result of complaints, but that the division also targets low-wage industries, businesses that employ vulnerable workers or industries undergoing rapid growth or decline, or businesses in a geographic region. Approximately 40 percent of investigations are initiated by the division, the spokesperson said.

Comparison of New Jersey state and federal enforcement efforts is difficult because the federal DOL lists staffing levels and enforcement actions at a national level and does not break down that data by state. According to the federal department's Budget in Brief document, on the national level: "In FY 2014, (the Wage and Hour Division) utilized over 1,000 investigators, completed 29,483 compliance actions, and obtained agreements to pay over $240 million in back wages for more than 270,000 workers (U.S. Department of Labor, 2015, p. 42)." In FY 2015, the WHD completed 27,915 compliance actions, and obtained agreements to pay over $246 million in back wages for more than 240,000 workers, according to the DOL Budget in Brief. However, the Budget in Brief document discontinued providing this enforcement data after FY 2015.

Analysis of a DOL database of Wage and Hour Compliance actions dating back to 2007 provides a glimpse of federal regulatory activities in New Jersey. Over the nine-year period covered in the database[71], the main industries involved in New Jersey cases were restaurants and gas stations, each accounting for about 12 percent of the total. About 10 percent involved the agriculture industry, with another 1 percent in landscaping. The construction industry accounted for 8 percent of all actions. Other major industries targeted included the computer/high technology and health care fields, each representing 7 percent of New Jersey enforcement actions.

[71] http://ogesdw.dol.gov/views/data_catalogs.php

The WHD database lists the years in which the first and last findings of fact were made in each case. Analysis shows that in 2010, there were 93 cases in which findings were first made, and 82 cases in which final findings were recorded. After accounting for cases in which both first and last findings were made in 2010, there were 138 distinct WHD cases with findings in 2010. In 2011, there were 84 distinct wage and hour cases with first or last findings in the state. In 2012, there were 98 distinct federal wage and hour cases with findings in New Jersey. The numbers for completed cases for the next three years according to analysis were 70 in 2013, 65 in 2014 and 57 in 2015. The decline is likely explained by cases that were opened in the later years still pending. The totals for all years were well below the hundreds of prevailing wage cases reported each year by the NJLWD. The number of New Jersey cases in the federal database dropped significantly after 2012, possibly suggesting incomplete data, so totals for later years were not computed.

NEW JERSEY ENFORCEMENT EXAMPLES (2016)

Enforcement actions often start with a complaint to state or federal wage and hour regulators, and construction unions have a vested interest in reporting companies engaged in underground activities. Prevailing wage laws were aimed at leveling the playing field when companies bid on construction projects. A company that illegally pays sub-par wages has a competitive advantage in being able to quote lower prices when submitting bids. Union officials and others say the main contractor who wins the bid hires subcontractors to do certain work and is supposed to make sure the subcontractors follow wage and hour laws. Some unions, such as the Northeast Regional Council of Carpenters in New Jersey, actively monitor construction sites for evidence of violations. The following two examples of cases in New Jersey illustrate the kind of treatment faced by underground construction workers. The examples are based on interviews with union carpenters and NJLWD records.

The first involves construction of the Brandywine Assisted Living Center in Vorhees, Camden County, in 2013. The carpenters union sent three representatives to work on the site and to record or report their experience and observations. One union company submitted a bid of $2.8 million, but the contract was given to Mega Construction of Spotswood, N.J. with a bid of $1.6 million. Anibal “Junior” Burriel, a carpenters council representative, said he went to the job site and said he wanted to work. He was hired on the spot working for subcontractor Miguel Drywall for $120 a day. He said he did not fill out a W-4 form for tax deductions. A log based on secret recordings Burriel made showed he usually started by 7 a.m. and often worked until 4 p.m. or later. He said he was paid in cash after a few days, but his supervisor said he would be paid based on the number of sheet rocks hung, not on the time he worked. Burriel reported that other workers told him they were being paid $60 or $70 a day. He said that a week later, the supervisor told him he would now be paid $100 a day. He said one day when he was told to work until 5 p.m., he told the supervisor that the work day ends at 3:30 p.m. He said the supervisor paid him in cash what he was owed and fired him.

Another Northeast Regional Council of Carpenters representative, Jesus Gutierrez, was also hired at the Brandywine site and also made recordings. A log he kept showed he regularly worked from 7 a.m. to 5 or 5:30 p.m. He said he did not sign a W-4 form and was paid $60 a day in cash. Gutierrez reported that on the morning of April 12, 2013, 16 workers were ordered out or the building and told to all hide in a van for one hour. He said he was later told the contractor had feared an inspection would be made by state Labor Department staff. A couple days later, according to his log, workers were told that if a Labor Department inspector asks, they must say they work for subcontractor Blue Marin and are paid $10 an hour by check. Gutierrez' log relates a conversation in which a supervisor asks Gutierrez to turn over his passport so the company can create a PIN for him to get paid. Burriel said companies try to get such documents to have records showing a documented workers on staff. Gutierrez refused to hand over his passport.

Documents show that Burriel, Gutierrez and Ramon Garcias of the union all filed complaints against Mega Construction alleging they were paid in cash, did not receive pay stubs and were not paid overtime. According to the NJLWD, Blue Marin Drywall paid a penalty of $10,000. The firm of YNL was assessed a $12,000 penalty. Two other subcontractors paid penalties of $1,500 and $2,000. The U.S. Department of Labor ordered Guiterrez to be paid $295 in back wages. Mega Construction, the main contractor, was not charged with any violations, according to the NJLWD.

In the second example, the contractor Sidd & Associates was hired for $3.6 million to rebuild the Seaside Heights Boardwalk in Ocean County in February 2013 after the Boardwalk had been destroyed by Superstorm Sandy (Allentoff, 2013).One of the companies to work on the Boardwalk was Jamali Developers LLC of (Schley, 2014). Andrew Bulakowski of the carpenters' council said in an interview that he aggressively monitored the job site, taking pictures of the workers and asking about documentation. He said that he observed an average of at least 30 workers on the site, and that he believed they were undocumented. Because the Boardwalk reconstruction was a public works project, the contractors had to submit certified payrolls. Bulakowski said instead of 30-plus workers he had counted, the certified payroll showed only 10. He said that the NJLWD acted swiftly and decisively in investigating the complaint. According to the state department, Sidd & Associates paid nearly $18,000 in wages for 12 employees and nearly $1,800 in fees. It also paid a penalty of $5,000. According to the NJLWD, Jamali Developers was assessed unspecified wages, fees and penalties that were still pending. However, the company has been suspended pending debarment, according to the department.

MISCLASSIFICATION AND INDEPENDENT CONTRACTORS

To review what was discussed above, the "underground economy" is an umbrella term for business behaviors to evade mandatory taxes and employment laws and regulations. The products produced and sold are legal (unlike the "black market"). It is often thought to include three categories:

- Misclassification
- Unregulated work
- Work for cash or barter

Misclassification is when a worker is classified as an independent contractor rather than as an employee. They receive a 1099-MISC tax form rather than a W-2 form. They are treated as if they are self-employed.

Unregulated work is work that is not covered by employment and labor laws. Employers here tend to violate the Fair Labor Standards Act (FLSA) and underpay workers; they may not pay the minimum wage, pay for the full number of hours worked, or pay overtime for work more than 40 hours per week, also called "wage theft."

Working for cash or barter, also called working under the table, is another way of avoiding tax obligations and employment legislation. In this case, there are zero records for employees.

Researchers and policymakers have begun to document the scope of these problems because they leave millions of workers uninsured, without benefits and other rights, and without job security. This section will focus on construction industry misclassification, which is a serious problem. Estimates from studies about the construction industry based upon state audits are startling:

- One-third of construction workers in southern states such as North Carolina and Texas have been misclassified (Ordonez and Locke, 2014).
- One quarter of Michigan construction workers were misclassified, according to another study (Belman and Block, 2009).
- 14 to 24 percent of Massachusetts construction employers misclassified workers; among these, 40 to 48 percent of workers were misclassified (Carré and Wilson, 2005).
- An unemployment insurance audit study in New York State found that 14.8 percent of construction workers were misclassified (Hammersburg, 2006; Donahue, Lamare, and Kotler, 2007).
- About one out of six (16 percent) construction jobs fell into the informal sector in California in 2011 (Liu, Flaming, and Burns, 2014).
- The Iowa Workforce Development Misclassification Task Force in 2010 found that of the 230 employers identified (responsible for the misclassification of 2,602 workers), 112 (49 percent) were in construction (Gordon, 2015: 4).
- In a meta-analysis of 27 state studies by the National Employment Law Project, the percent of employers (construction and/or others) who misclassify ranged from a low of 10 percent to a high of 42 percent (NELP, 2015).

We begin with a federal misclassification initiative launched by the U.S. Department of Labor. We then summarize how New Jersey has recently addressed misclassification. We conclude with policy recommendations.

Part 2. Federal Efforts to Combat Misclassification

Beginning in 2011, the U.S. Department of Labor's Wage and Hour Division (WHD) teamed with the U.S. Treasury Department on a multi-agency initiative to develop strategies to reduce employee misclassification. According to the misclassification section of the WHD website:

> "The misclassification of employees as independent contractors presents one of the most serious problems facing affected workers, employers and the entire economy.
>
> Misclassified employees often are denied access to critical benefits and protections to which they are entitled, such as the minimum wage, overtime compensation, family and medical leave, unemployment insurance, and safe workplaces. Employee misclassification generates substantial losses to the federal government and state governments in the form of lower tax revenues, as well as to state unemployment insurance and workers' compensation funds. It hurts taxpayers and undermines the economy." (U.S. Department of Labor, WHD, n.d.)

The website has an interactive map of the United States and information about the states that have signed a federal-state Memorandum of Understanding (MOU) to work in partnership with WHD and the Internal Revenue Service (IRS) on information sharing and coordinated enforcement. Table 1 lists the U.S. states (in alphabetical order) that have signed MOUs with the U.S. Department of Labor under the misclassification initiative. New Jersey was notably absent among them in our original 2016 report. However, Governor Phil Murphy signed an agreement with the U.S. Department of Labor on Aug. 10, 2018 to have the NJLWD partner with the federal agency to combat misclassification.

Table 1. States that Have Signed MOUs with the U.S. Department of Labor under the Misclassification Initiative

Alabama	Iowa	New Mexico
Alaska	Kentucky	New York
Arkansas	Louisiana	Rhode Island
California	Maryland	Texas
Colorado	Massachusetts	Utah
Connecticut	Minnesota	Vermont
Florida	Missouri	Washington
Hawaii	Montana	Wisconsin
Idaho	New Hampshire	Wyoming
Illinois	New Jersey	

Part 3. How New Jersey Has Evaluated Misclassification

New Jersey defines independent contractors by the three-part "ABC test," the most commonly used criteria of the federal Internal Revenue Service (IRS). According to the state's Construction Industry Independent Contractor Act, all three prongs of the ABC test are required to establish that someone is an independent contractor:

> a. the individual has been and will continue to be free from control or direction over the performance of that service, both under his contract of service and in fact; and
>
> b. the service is either outside the usual course of the business for which the service is performed, or the service is performed outside of all the places of business of the employer for which the service is performed; and
>
> c. the individual is customarily engaged in an independently established trade, occupation, profession or business. (New Jersey LWD, n.d., "Construction Industry Independent Contractor Act").

On May 3, 2018, Governor Murphy signed Executive Order No. 25 creating a state Task Force on Employee Misclassification, which will advise the executive branch on enforcement and compliance issues and review existing legislation and laws. Membership of the task force includes three representatives from the Department of Labor and Workforce Development; three representatives from the Department of the Treasury; and one representative each from the Department of Law and Public Safety, the Department of Agriculture, the Department of Banking and Insurance, the Department of Human Services, the Department of Transportation, and the Economic Development Authority. The task force held its first meeting in early August, although it is unclear if any formal action was taken. A review of New Jersey state websites and news media coverage as of May 2019 did not reflect the task force holding a second meeting or taking any formal action. An Open Public Records Act request to the NJLWD on meeting minutes for any misclassification task force meetings remained unanswered and pending when this report was published.

Prior to the 2018 actions, Governor Jon Corzine established the Governor's Advisory Commission on Construction Industry Independent Contractor Reform ("Advisory Commission") in Executive Order #96 on January 18, 2008 (New Jersey, State of, 2008). Its members included: the Commissioner of Labor and Workforce Development, the Attorney General, the State Treasurer, eight members of the public, three representatives from three different building trades unions, one representative from the New Jersey AFL-CIO, one representative of residential developers, one representative of residential construction contractors, one representative of commercial developers, and one representative of commercial construction contractors. Its mission was to develop recommendations to address the problem of misclassification in the construction industry and ensure compliance with the state's Construction Industry Independent Contractor Act.

In an extensive search of the State of New Jersey website, we could not find evidence that this Advisory Commission still exists. A spokesman for Commissioner Darlene Regina of the Associated Construction Contractors of New Jersey said the commission never met and did not produce a formal report. The spokesman said commission members had hoped to start work in Corzine's second term, but the governor was defeated for re-election by Chris Christie in

2009. Evidence that some recommendations were made to the incoming administration is found in a Department of Labor and Workforce Development Transition Committee final report in January 2010. Governor-Elect Christie's transition team opined the following about the Advisory Commission and independent contractor misclassification:

> "Better guidelines are needed with respect to employee and independent contractor classification. New Jersey has some of the most Draconian laws in the nation related to employee misclassification. For example, a construction industry employer who knowingly misclassifies an employee as an independent contractor faces criminal charges and could potentially be sentenced to a term in incarceration – for what could have been a simple clerical error. An Advisory Commission appointed by Governor Corzine in January 2008 to study the issue made recommendations that did not address the core problem." (NJ LWD, n.d., "Transition Subcommittee Final Report," 11)

In general, however, whether or not one intends to commit a criminal act is generally not a defense.

> Included with information from the New Jersey Department of Labor & Workforce Development for the Christie transition team is a "Discussion Points" document (probably circa late 2009 or early 2010) with questions and answers. The transition team asked questions about the results of the task force investigations and follow-up questions about the number of workplace audits and the amount of fees or fines collected from those audits. Most relevant for our current study is a question about the number of employees dedicated to audits and investigations. The detailed reply speaks to the institutional structure of how misclassification was investigated under Governor Corzine: "The Misclassification Unit in the Division of Wage and Hour Compliance investigates workers on private construction sites that are listed as independent contractors when they should be employees, thereby not covered for workers compensation and unemployment/disability" (NJ LWD, n.d., "Discussion Points": 21).

Part 4. Best Practices in Other States

Policies to reduce the size of the underground economy in the construction industry require cooperation among various state agencies, the federal government, labor unions, employer trade associations, and employers. Construction trade associations do not want a so-called "race to the bottom" with underbidding and cost cutting. Nor does organized labor, which seeks a level playing field. Even consumers can help reduce employee misclassification.

In order to make policy recommendations for the State of New Jersey, and specifically the construction industry, we researched best practices in other states. The best practices in other states can be categorized into five areas:

- Measuring the problem and making it a policy priority

- Updating the legal definition of independent contractor
- Enhancing enforcement mechanisms
- Developing or augmenting education campaigns for consumers and employers
- Increasing cooperation with the federal government and nearby state governments

The "best practices" states discussed in this report represent information currently available to the general public. The discussion may not include a complete list of state activities to combat misclassification. Nevertheless, the models provided offer good comparisons with New Jersey's current policies and practices.

1. Measuring the problem and making it a policy priority

Numerous states in the U.S. have named state-wide task forces to study the problem of misclassification, recommend possible solutions, and/or play a role in enforcement. These task forces have played a significant role in promoting new policies and procedures that have led to the five best practices categories above. Table 2 contains a list of 13 states with active task forces that have moved beyond documenting the problem and are taking action. Table 2 also includes a hotlink to the website of each state task force.

New York State's Joint Employment Task Force on Employee Misclassification (JETF) was established by Governor Eliot Spitzer by executive order in 2007. Successive Governors David Paterson and Andrew Cuomo continued the task force by executive order in 2008 and 2001 respectively. Governors in other states have similarly signed executive orders to name employee misclassification task forces. Ideally, a task force or permanent inter-agency body's existence would not be beholden to a gubernatorial executive order. The legislature could establish a permanent joint inter-agency body on employee misclassification. The states of Washington and Oregon are examples of states with especially active task forces on the underground economy that were products of legislative action. Regardless of how they were created, state task forces have had an imprint on the misclassification problem. ***Through the activities of their task forces, the 13 states in Table 2 provide current models of states that are aggressively trying to reduce employee misclassification.***

Table 2. Model States with Active Interagency Task Forces to Combat the Underground Economy
As noted above, New Jersey's Task Force on Employee Misclassification was formed in 2018.

State	Task Force Name	Website
California	Joint Enforcement Strike Force	http://www.edd.ca.gov/payroll_taxes/Joint_Enforcement_Strike_Force.htm
Connecticut	Joint Employee Commission on Employee Misclassification	http://www.ctdol.state.ct.us/wgwkstnd/JEC/JEC.htm
Iowa	Iowa Worker Misclassification Unit	https://www.iowaworkforcedevelopment.gov/misclassification-workers-iowa
Maine	Joint Enforcement Task Force on Employee Misclassification	http://www.maine.gov/labor/misclass/index.shtml
Maryland	Joint Enforcement Task Force on Workplace Fraud	http://www.dllr.maryland.gov/workplacefraudtaskforce/
Massachusetts	Council on the Underground Economy	http://www.mass.gov/lwd/eolwd/cue/
Minnesota	Advisory Task Force on Employee Misclassification	http://www.dli.mn.gov/ls/Misclassification.asp
New Hampshire	Interagency Task Force on Worker Misclassification	www.dli.mn.gov/ls/Misclassification.asp
New York	Joint Enforcement Task Force on Worker Misclassification	http://www.labor.ny.gov/ui/employerinfo/employer-misclassification-of-workers.shtm
Oregon	Interagency Compliance Network	https://www.oregon.gov/ic/Support-and-Resources/Pages/About.aspx
Utah	Utah Worker Classification Coordinated Enforcement Council	http://laborcommission.utah.gov/divisions/IndustrialAccidents/WorkersComp/employee%20misclassification.html
Vermont	Workers Compensation Employee Classification, Coding, and Fraud Enforcement Task Force	http://labor.vermont.gov/workers-compensation/misclassification/
Washington State	Construction Underground Economy Advisory Committee	http://lni.wa.gov/TradesLicensing/Contractors/UE/default.asp

Notes: Michigan's Interagency Task Force on Employee Misclassification was rescinded by Governor Rick Synder in 2010. Virginia's Governor Terry McAuliffe signed an Executive Order in 2014 to establish an Inter-Agency Task Force on Worker Misclassification and Payroll Fraud; the Virginia Department of Labor and Industry is beginning to implement recommendations.

2. Updating the legal definition of independent contractor

As a result of misclassification task force recommendations, several states have updated their independent contractor definitions through state law. These states have sought more specificity in the kind of conditions and practices that *must* exist for work that is considered completed by an independent contractor. Many states, like New Jersey, have adopted the federal three-prong "ABC test" (per federal taxation vis-à-vis the Internal Revenue Service). Washington State, Minnesota, and New York have amended their laws to have more strict definitions and standards. The new standards in these three states are reproduced in Box 1. A direct comparison to New Jersey can be made, as Box 1 begins with New Jersey's relatively weaker ABC test.

Washington State adopted a seven-part test as a result of a legislative investigation into employee misclassification. An example of greater specificity are numbers 4, 5, 6, and 7. A true independent contractor must register the business and possess and valid contractor license, and must maintain separate books and records and file paperwork with the IRS. Unfortunately, Washington's strict criteria only apply to public works projects. Therefore, Minnesota and New York's broader coverage represent better models of regulating private construction projects.

Minnesota amended its definition of independent contractor in 2012. The state uses a new nine-factor test and an independent contractor must meet *all* nine requirements. The Minnesota model covers all the conditions in the ABC test such as maintaining a separate businesses for tax purposes, but the language is written less legal jargon with more unambiguous obligations. For example, factor #5 says that the contractor is liable for failure to complete the services. Factor #6 deals with compensation for services, stipulating that compensation must be per job or per competitive bid only. Factors #7 and #8 expounds on the contractor's normal operation as a separate business, and that the business can suffer a loss and have recurring business liabilities.

New York State uses the ABC test, but the New York classification task force and the state legislature have gone further. The state legislature passed and Governor Andrew Cuomo signed a Construction Industry Fair Play Act in October, 2010. The act helped refine the investigative process "by creating a presumption of employment in the construction industry unless an employer can meet the ABC test" (NYS JETF, 2015: 9). Thus, the legislation is a companion piece that adds a 12-part test for determination of when a sole proprietor, partnership, or corporation constitutes a "separate business entity" from the business who provides the service. And the entity must meet all 12 criteria to be considered a separate business entity. New York's definition of separate business entity independent and apart from the original business may well be the strongest in the U.S. in deterring employee misclassification. For example, in part #3, the separate entity must have substantial investment of capital in the entity beyond ordinary tools and equipment and a personal vehicle. In other words, a person in a Ford F-150 truck who owns his own circular saw and power tools is not, by itself, sufficiently separate from the employer to be deemed an independent contractor. Parts #5, #7, and #8 ensure that a separate entity provides these services with a license, under the entity's name, and on a regular basis.

Box 1. The Definition of Independent Contractor: State Comparisons

New Jersey

(A) Such individual has been and will continue to be free from control or direction over the performance of such service, both under his contract of service and in fact; and

(B) Such service is either outside the usual course of the business for which such service is performed, or that such service performed outside of all the places of business of the enterprise for which such service is performed; and

(C) Such individual is customarily engaged in an independently established trade, occupation, profession or business.

Source: New Jersey Department of Labor and Workforce Development at http://lwd.dol.state.nj.us/labor/ea/empinfo/EmployeeIndependentContractor.html.

Washington State

An individual employed on a public works project is not considered to be a laborer, worker, or mechanic, and consequently not required to be paid prevailing wages, when:

1. the individual has been and is free from control or direction over the performance of services;
2. the service is outside the usual course of business for the contractor for whom the individual performs services;
3. the individual is customarily engaged in an independently established trade;
4. the individual is responsible for filing paperwork with the Internal Revenue Service;
5. the individual has an active and valid certificate of registration with the Department of Revenue for the business the individual is conducting;
6. the individual maintains separate books and records; and
7. the individual has a valid contractor registration or license if the nature of the work requires registration or licensure.

Source: Washington State. (2010, January 13) *Joint Legislative Task Force on the Underground Economy. Final Report: January 13, 2010* at http://leg.wa.gov/JointCommittees/Archive/UECI/documents/FinalReport_1-13-2010.pdf.

Minnesota

An individual who performs public- or private-sector commercial or residential building construction or improvement services in Minnesota on or after Sept. 15, 2012, is an independent contractor only if he or she is registered (or exempt) and meets **all** of the following requirements:

1. maintains a separate business with the individual's own office, equipment, materials, and other facilities;
2. holds or has applied for a federal employer identification number or has filed business or self-employment income tax returns with the federal Internal Revenue Service if the individual has performed services in the previous year;
3. is operating under contract to perform the specific services for the person for specific amounts of money and under which the individual controls the means of performing the services;
4. is incurring the main expenses related to the services that the individual is performing for the person under the contract;
5. is responsible for the satisfactory completion of the services that the individual has contracted to perform for the person and is liable for a failure to complete the services;
6. receives compensation from the person for the services performed under the contract on a commission or per-job or competitive bid basis and not on any other basis;
7. may realize a profit or suffer a loss under the contract to perform services for the person;

8. has continuing or recurring business liabilities or obligations; and
9. the success or failure of the individual's business depends on the relationship of business receipts to expenditures.

Source: Minnesota Department of Labor & Industry at http://www.dli.mn.gov/CCLD/Register_nine_factors.asp.

New York State

To be considered a separate business entity from the business to which services are provided, a sole proprietor, partnership, corporation or other entity must:

(1) be performing the service free from the direction or control over the means and manner of providing the service subject only to the right of the contractor to specify the desired result;
(2) not be subject to cancellation when its work with the contractor ends;
(3) have a substantial investment of capital in the entity beyond ordinary tools and equipment and a personal vehicle;
(4) own the capital goods and gain the profits and bear the losses of the entity;
(5) make its services available to the general public or business community on a regular basis;
(6) include the services provided on a federal income tax schedule as an independent business;
(7) perform the services under the entity's name;
(8)obtain and pay for any required license or permit in the entity's name;
(9)furnish the tools and equipment necessary to provide the service;
(10) hire its own employees without contractor approval, pay the employees without reimbursement from the contractor and report the employees' income to the Internal Revenue Service;
(11) have the right to perform similar services for others on whatever basis and whenever it chooses; and
(12) the contractor does not represent the entity or the employees of the entity as its own employees to its customers.

Source: New York Department of Labor at https://labor.ny.gov/legal/construction-industry-fair-play-act.shtm and Fact Sheet at https://www.labor.ny.gov/formsdocs/wp/p738.pdf.

An interesting and creative approach was taken by the State of Nevada. On October 1, 2015, Nevada law was revised to ensure that only contractors licensed per the Nevada contractors' licensing law may advertise their services/work (Pierce, 2015). Therefore, paid advertising or advertising on free social media is not legal unless a legitimate contractor is licensed. Nevada has taken one innovative step to stem employee misclassification.

We are not arguing here that the ABC test does not allow for investigations into fraud and misclassification that can be penalized. Instead, we are arguing that the ABC test that relies on language from Internal Revenue Service documents for tax fraud is not as specific and transparent as it could be. ***Because they have updated their definitions of independent contractor, Washington State, Minnesota, and New York—notably New York with its new law—provide examples of best practices.***

3. Enhancing enforcement

Cooperation among government agencies, employers, trade associations, labor unions, and consumers have already stemmed the tide by helping to uncover and penalize employee misclassification. Below we include some state snapshot of increased enforcement. This does not mean that other states are idle, but these examples stand out in the public record. However, it is important to emphasize that states are operating within constraints. These may include: funding/budget constraints; limits in the number of investigation and enforcement staff and hours devoted to enforcement; and legal caps in terms on fees, fines, and criminal penalties. Some state task forces, labor and industry groups, and university researchers point to penalties that are too lax and staff that are too few to effectively deter employee misclassification. Unscrupulous firms may decide that their "reward" outweighs the risk. In other words, they can leave the medical costs of worker injuries to the state (public sector) and/or the worker himself, assuming a low risk of being sued and/or a low monetary fine for employee misclassification (e.g. back-due insurance payments).

State Snapshots of Increased Enforcement

- On inter-agency cooperation, Massachusetts state licensing entities cross-check with the Department of Unemployment Assistance to ensure that a business seeking a license to operate is in compliance with its unemployment tax obligations.

- On finding suspected evaders, the State of Washington checks on Craigslist for advertising by unregistered contractors. The Massachusetts Joint Task Force and the California Joint Enforcement Strike Force staff a tip hotline for anyone who wishes to report suspected fraud. The Connecticut Labor Department has been auditing Unemployment Insurance Division records to uncover clues as to workers misclassified as independent contractors.

- On detection and referrals, Oregon's Interagency Compliance Network (ICN) created the High-risk Employers Database (HRED). It enables auditors to compare employer IRS Form 1099 data with Form 1040 individual return data for discrepancies. The database also provides industry-specific information (but few specific details are provided publicly to protect enforcement strategies). Referrals and shared leads are also generated at monthly group enforcement meetings.

- On establishing enough funding to step up enforcement, the Iowa legislature awarded $500,000 in state general appropriations and potential use of $250,000 from the penalty and interest fund to enhance enforcement efforts in FY 2010 and FY 2010.

- On increasing audits and on-site inspections, the State of Washington put more "boots on the ground" for inspections at job sites. Data from a progress report titled *Combating the Underground Economy in Construction* finds job site visits are up, contractors checked onsite are up, infractions issued are up. This report notes that "Our compliance actions are changing behavior" (Washington State Department of Labor & Industries, January 2013: 3). More audits and inspections lead to more citations of infractions and increased

revenue. The state has found that unregistered contractors are getting registered and state contracting and labor laws are increasingly observed.

- On increasing job site visits (and publicizing them for effect), in November of 2011 Connecticut Labor Department staff accompanied police in the City of Hartford on inspections of small storefronts who were allegedly suspected of illegal activity. They issued stop work orders at bodegas for failing to pay minimum wages, and levied fines.

- On coordinated investigations and assessing penalties reported in the 2015 *Annual Report of the Joint Enforcement Task Force on Employee Misclassification*, New York State's Joint Enforcement Task Force has increased enforcement sweeps and fraud investigations. In 2014 alone, the task force identified nearly 26,000 cases of employee misclassification, discovered $316 in unreported wages, and assessed nearly $8.8 million in unemployment insurance contributions.

- On government-industry-labor cooperation, the Washington State Heating, Ventilation, Air Conditioning, and Refrigeration Association exemplifies a joint industry-labor trade association. Since 2013, a new Construction Economy Advisory Council has met quarterly to "tackle the issue" (see Washington State HVAC Contractors Association, n.d.)

Due in part to their efforts to uncover and penalize employee misclassification, the states of Massachusetts, Washington, Connecticut, Oregon, Iowa, and New York, provide examples of best practices to deter employee misclassification.

4. Developing or augmenting education campaigns for consumers and employers

Effective enforcement is best when coupled with education to deter future employee misclassification. Several U.S. states have taken a variety of approaches to combat employee misclassification before it even occurs. Exemplary campaigns include:

- The State of Washington's Department of Labor & Industries maintains an excellent interactive website for employers, employees, and consumers at http://www.lni.wa.gov/. Here, for instance, one can verify whether a contractor or tradesperson possess a state license, look up an employer's worker compensation account to view safety citations and other infractions, report suspected fraud, search a list of debarred contractors, and learn about wage and hour laws.

- The State of California's Joint Enforcement Task Force publishes an easy-to-read two-page handout on combatting the underground economy at http://www.edd.ca.gov/pdf_pub_ctr/de665.pdf. It contains summaries of relevant laws, links to websites, and toll free phone numbers.

- In 2009, the Oregon legislature created a seven-agency Interagency Compliance Network (ICN) to improve both employer and worker compliance with Oregon's tax and employment laws. ICN must report on its activities, funding, and revenue impact to the legislature every two years (Oregon, State of, 2015). ICN has great educational materials for employers and workers on its website, including videos and webinars. Though an official government website, note that its url is oregonindependentcontractors.com rather than a dot-gov website. It is easier to remember and targeted to employers and workers.

Due to their efforts to better educate both employers and the general public, the states of Washington, California, and Oregon provide examples of best practices to deter employee misclassification.

5. Increasing cooperation with the federal government and nearby state governments

Part 2 of this report section reviewed state-federal cooperation to combat employee misclassification expressed through the Memoranda of Understandings listed in Table 1. But neighboring state governments are also collaborating. If a violator in one state can easily relocate work to a bordering state then we may merely be relocating the problem. Contractors, like "snowbirds" may spend summers in a northern state and winters in a southern state. Some contractors regularly perform work in New York or New Jersey and Florida, for instance. We made attempts to identify cross-state alliances.

Virginia's Governor Terry McAuliffe signed an Executive Order to create a state task force on worker misclassification in part because Maryland adopted a statute to prevent misclassification in the construction and landscaping industries (Withrow et al., n.d.: footnote 8). Our reading of the enforcement efforts of Washington State and Oregon suggest inter-state cooperation and collaboration. If other cross-state partnerships have occurred and have not been made public, perhaps it is because it is a strategy to not openly reveal joint enforcement tactics. Yet it seems reasonable to support greater enforcement efforts across state lines.

Part 5. Comparisons and Recommendations

Revenue losses from employee misclassification can be sizeable. Such losses can negatively affect the economy. A stunning estimate can be seen from America's largest state, California. California's Commission on California State Government Organization and Economy, an independent state agency known as the "Little Hoover Commission" estimated state loses from uncollected tax revenue ranging from $8.5 billion to $10 billion (Little Hoover Commission, 2015).

Based on the review of best practices in other states, we outline 15 policy recommendations for the State of New Jersey. Recommendations #1 through #4 are related to the structure and functions of state government entities that have duties related to employee misclassification. Recommendations #5 and #6 deal with the definition of independent

contractor. Recommendations #7 through #9 call for increased education. The final five recommendations deal with enforcement issues.

Recommendation #1. The Commissioner of the New Jersey Department of Labor and Workforce Development should sign an MOU with the Wage and Hour Division of the U.S. Department of Labor to collaborate to reduce misclassification of employees as independent contractors. **This recommendation was accomplished by Gov. Phil Murphy in August 2018.**

Recommendation #2. The New Jersey legislature should pass and the governor should sign legislation to create a joint interagency Task Force dedicated to investigating and prosecuting employee misclassification. It should include representation of state government, labor unions, and employers. The Task Force should deliver an annual report to the legislature and the governor. **This recommendation was enacted by Gov. Phil Murphy through executive order.**

Recommendation #3. New Jersey should restructure state government, as necessary, to ensure greater information sharing among state agencies to reduce employee misclassification.

Recommendation #4. New Jersey should utilize a one-stop (single entry) portal for businesses to interact with various state agencies, and to handle business registration, licensing, etc.

Recommendation #5. New Jersey government should review its laws and update its definition of independent contractor to model other states such as Washington, Minnesota, and especially New York State, a neighboring state.

Recommendation #6. New Jersey should work collaboratively with other states and the U.S. government to review state and federal laws and regulations to conform legal definitions of who is a covered worker for unemployment, wage and hours laws, health and safety, etc. Since commercial and construction businesses often operate across state lines, the ultimate objective would be uniformity in coverage.

Recommendation #7. New Jersey should embark on a statewide education campaign on employee misclassification in cooperation with trade associations and labor unions. Both written and online/digital guides should be available. Further, the State should offer seminars and webinars to assist businesses.

Recommendation #8. New Jersey should design a dedicated inter-agency website on employee misclassification. It should be accessible to employers and consumers through a simple, one-click url. Ideally, the website should be maintained by the joint Task Force (see Recommendation #1 above, but accessible also through hotlinks on other state government websites.

Recommendation #9. New Jersey should publicize data on completed enforcement action and include names of past violators.

Recommendation #10. New Jersey should create and staff a tip line so that businesses and consumers may offer tips of suspicious hiring practices confidentially.

Recommendation #11. New Jersey government should work with industry and employer associations and labor unions on voluntary audit programs within industry. New Jersey should not just rely on the current audit and inspection process.

Recommendation #12. New Jersey should step up efforts to monitor social media for employers seeking workers and construction workers seeking jobs, as this will offer clues for audits and investigations.

Recommendation #13. New Jersey should step up enforcement under existing law, e.g. stop work orders, other penalties and fines, business revocation. Further, New Jersey should ensure that enforcement is fully funded and staffed.

Recommendation #14. New Jersey should conduct a thorough review of current laws and enforcement to increase the costs of avoiding the law. For example, New Jersey should consider: not merely work stoppage orders but asset seizure laws; higher fines than paying back wages and insurance premiums; progressive penalties for repeat offenders; revoking licenses; holding contractors and corporate officers legally responsible for actions of subcontractors; and working with other neighboring states to prevent offenders from relocating to nearby states.

Recommendation #15. New Jersey State government should set an example by ensuring that its own contracts that are awarded to the "lowest responsible bidder" are not low because laws and regulations are being evaded or fudged through subcontracting.

References

Allentoff, J. (2013, February 15). *A Landmark Day In Seaside Heights*. Retrieved from 92.7 WOBM: http://wobm.com/a-landmark-day-in-seaside-heights-video/

Belman, Dale L. and Richard Block. (2009) *Informing the Debate: The Social and Economic Costs of Misclassification in the Michigan Construction Industry*. East Lansing, MI: Institute for Public Policy and Social Research, Michigan State University. Available at http://ippsr.msu.edu/publications/ARMisClass.pdf. Accessed 3-22-2016.

Bordonaro, Greg. (2014, November 10) State Broadens Efforts to Eradicate CT's Underground Economy. HartfordBusiness.com. Available at http://www.hartfordbusiness.com/apps/pbcs.dll/article?AID=/20141110/PRINTEDITION/311079980&template=printart. Accessed 3-22-2016.

California Employment Development Department. (n.d.) Website FAQs on Combating Underground Employment. Available at http://www.edd.ca.gov/pdf_pub_ctr/de665.pdf. Accessed 2-16-2016.

[California] Little Hoover Commission. (2015) *Level the Playing Field: Put California's Underground Economy Out of Business*. Sacramento, CA: Little Hoover Commission, Report #226. Available from www.lhc.ca.gov.

Carré, Francoise. (2015, June 8) (In)dependent Contractor Misclassification. Washington, DC: Economic Policy Institute Report. Available at http://www.epi.org/publication/independent-contractor-misclassification/. Accessed 4-2-2016.

Carré, Francoise and Randall Wilson. (2005) *The Social and Economic Costs of Employee Misclassification in Construction. (Massachusetts)*. Cambridge, MA: Construction Policy Research Center, Labor and Worklife Program at Harvard Law School and Harvard School of Public Health. Available at http://tcimass.org/sites/builtbest.prometheuslabor.com/files/MisclassificationMass.pdf. Accessed 3-22-2016.

Cooke, O.D. (2015). The South Jersey Economic Review, 9, 1. Galloway, NJ: Stockton University. Retrieved from https://intraweb.stockton.edu/eyos/office_of_academic_affairs/content/docs/SJER percent20Summer percent202015.pdf

Cooke, O.D., Figart, D., Froonjian, J. (2016). *The Underground Construction Economy in New Jersey*. Galloway, N.J: Stockton University. Retrieved from https://stockton.edu/hughes-center/documents/2018-0424-underground-economy-report.pdf

DeFilippis, James, Nina Martin, Annette Bernhardt, and Siobhán McGrath. (2009) "On the Character and Organization of Unregulated Work in the Cities of the United States." *Urban Geography* 30(1): 63-90.

Donahue, Linda H., James Ryan Lamare, and Fred B. Kotler. (2007, February 1) *The Cost of Worker Misclassification in New York State*. Ithaca, NY: Cornell University ILR School, Research Studies and Reports. Available at http://digitalcommons.ilr.cornell.edu/reports. Accessed 4-25-2016.

Erlich, M. G. (2005). Standing at a crossroads: the building trades in the twenty-first century. Labor History, 426.

Feige, E.L., & Cebula, R. (2011). America's underground economy: Measuring the size, growth and determinants of income tax evasion in the U.S. University of Wisconsin-Madison: MPRA Paper No. 29672, posted 19. March 2011 16:13 UTC.

Figart, D.M. (2008). What unions do: A briefing pamphlet. Galloway, NJ: William J. Hughes Center for Public Policy, Stockton University.

Gaines, R. (2016, June 19). Director of N.J. Division of Wage and Hour. (J. Froonjian, Interviewer)

Gordon, Colin. (2015) Stolen Chances: Low-Wage Work and Wage Theft in Iowa. Iowa City, IA: The Iowa Policy Project, September 2015. Available at www.IowaPolicyProject.org. Accessed 4-3-2016.

Gumz, Jondi. (2014). "California agencies target 'underground economy*,"* *Santa Cruz Sentinel*, December 26 Available at http://www.santacruzsentinel.com/business/20141226/california-agencies-target-underground-economy?source=most_viewed&template=printart. Accessed 2-16-2016.

Hammersburg, Carl. (2006) Testimony to the Little Hoover Commission on the underground economy in California, June 19. Available at http://www.lhc.ca.gov/studies/226/March%20Testimony/Hammersburg%20Testimony.pdf. Accessed: 4-3-2016.

Hammersburg, C. (2014). Little Hoover Commission Testimony. Retrieved from http://www.lhc.ca.gov/studies/226/March percent20Testimony/Hammersburg percent20Testimony.pdf

Iowa Misclassification Task Force, 2nd report. (2010, December 30). Available at https://www.iowaworkforcedevelopment.gov/sites/search.iowaworkforcedevelopment.gov/files/Iowa%20Misclassification%20Task%20Force%202nd%20Report.pdf. Accessed 4-2-2016.

League of United Latin American Citizens. (2013). The economic benefits of fixing our broken immigration system: impacts for New Jersey families. Retrieved from http://www.lulac.org

Little Hoover Commission. (2015). Level the playing field: Put California's underground economy out of business. Report #226. Retrieved from http://www.lhc.ca.gov/studies/226/Report226.pdf

Liu, Yvonne Yen, Daniel Flaming, and Patrick Burns. (2014) *Sinking Underground: The Growing Informal Economy in California Construction*. Available from the Economic Roundtable at www.economicrt.org.

Mihelic, F. J. (2016, June). Prevailing Wage Laws Critical to a State's Economic Stability. *New Jersey Construction*.

Mutari, E., & D.M. Figart. (2015). Just one more hand: life in the casino economy. Lanham, MD: Rowman & Littlefield.

National Employment Law Project (NELP). (2015, July) Independent Contractor Misclassification Imposes Huge Costs on Workers and Federal and State Treasuries. Washington, DC: NELP Fact Sheet.

New England Regional Council of Carpenters. (2011). Escaping the underground economy: One carpenter's story. Retrieved from http://www.nercc.org/rights

New Hampshire Joint Agency Task Force. (2011). First report of the joint agency task force on employee misclassification enforcement. Retrieved from http://www.nh.gov/nhworkers/documents/1stReportofthejaeme.pdf

New Jersey Business & Industry Association. (n.d.) "Fast Facts 2014-2015: Independent Contractors and Worker Misclassification." Available at http://www.njbia.org/docs/default-source/fast-facts/Fast_Facts_Independent_Contractors_and_Worker_Misclassification.pdf. Accessed 4-7-2016.

New Jersey Department of Labor & Workforce Development. (n.d.) "Construction Industry Independent Contractor Act." Available at http://lwd.dol.state.nj.us/labor/wagehour/lawregs/indep_contractor_act.html. Accessed 4-2-2016.

New Jersey Department of Labor and Workforce Development (n.d.) "Discussion Points FY2009-2010." Available at http://www.njleg.state.nj.us/legislativepub/budget_2010/Department_Response/DOL_responses10.pdf. Accessed 4-7-2016.

New Jersey Department of Labor & Workforce Development. (n.d.). "Transition Subcommittee Final Report." Available at http://www.state.nj.us/governor/news/reports/Labor%20&%20Workforce%20Development.pdf. Accessed 4-9-2016.

New Jersey, State of. (2008, January 18) State of New Jersey Executive Order #96, signed by Governor Jon S. Corzine. Available at http://nj.gov/infobank/circular/eojsc96.htm.

N.Y.Building Congress, N.Y. Building Foundation. (2018, October). *Reports and Analysis.* Retrieved from New York Building Congress: https://www.buildingcongress.com/advocacy-and-reports/reports-and-analysis/Construction-Outlook-2018-2020.html

New York State Department of Labor. (2015, February 1). Annual Report of the Joint Enforcement Task Force on Employee Misclassification. Available at https://www.labor.ny.gov/agencyinfo/PDFs/Misclassification-Task-Force-Report-2-1-2015.pdf. Accessed 4-3-2016.

Ordonez, Franco and Mandy Locke. (2014, February 1) "Immigrants Are Most Susceptible to Worker Misclassification." *The Charlotte Observer*, September 5. Available at http://www.charlotteobserver.com/news/business/article9160514.html. Accessed 4-2-2016.

Oregon, State of. *Interagency Compliance Network's Third Report to the Oregon Legislature*. (2015, March). Available from www.oregonindependentcontractors.com. Accessed 4-2-2016.

Packen, S. (2015). Construction. Trenton, NJ: New Jersey Department of Labor & Workforce Development, Office of Research & Information, Bureau of Labor Market Information. Retrieved from http://lwd.state.nj.us/labor/lpa/pub/empecon/construction.pdf

Pierce, Amy. (2015, October 9). "Nevada Adds Another Tool to Its Tool-belt to Combat Underground Economy." Gavel2Gavel Construction Law Blog. Available at http://www.gravel2gavel.com/2015/10/nevada-adds-another-tool-to-its-tool-belt-to-combat-underground-economy.html. Accessed 2-16-2016.

Plumer, B. (2013). "The $2 trillion shadow economy is the recession's big winner." The Washington Post.

Restrepo-Echavarria, P. (2015) "Measuring the underground economy can be done, but it is difficult." The Regional Economist. St. Louis: Federal Reserve Bank of St. Louis, 10-11.

Schley, M. a. (2014, March 6). *New Jersey and New York Workplace Rights Blog and Information Center*. Retrieved from Law Offices of Mitchell Schley, LLC: http://www.schleylaw.com/blog/construction-company-hired-to-rebuild-seaside-heights-boardwalk-facing-wage-and-overtime-lawsuit/

Sloane, K.E. Economic indicators and quality of life in the Southern New Jersey. (2015). Galloway, NJ: William J. Hughes Center for Public Policy, Stockton University. Retrieved from http://intraweb.stockton.edu/eyos/hughescenter/content/docs/Research/Eco percent20Indicators percent20- percent202015-0512.pdf

State of New Jersey. (2016). *Chapter 1 Employer Taxes and Wage Reporting; Section 1 - Responsibilities of all Employers.* Retrieved from Department of Labor and Workforce Development: http://lwd.dol.state.nj.us/labor/handbook/chap1/chap1sec1employerresponsibilites.html#top

State of New Jersey Department of Community Affairs. (2011). Uniform construction code: Municipal procedures manual. Retrieved from http://www.state.nj.us/dca/divisions/codes/codreg/ucc.html

State of New Jersey Department of Labor. (2014). New Jersey key industry clusters. Retrieved from http://lwd.dol.state.nj.us/labor/lpa/pub/lmv/cluster percent20handout.pdf

State of New Jersey. (2016). *Division of Employer Accounts FAQ*. Retrieved from Department of Labor and Workforce Development: http://lwd.dol.state.nj.us/labor/ea/content/eafaq.html

Surowieki, J. (2013). "The underground recovery." The New Yorker.

United States Bureau of Economic Analysis. (2015). Gross Domestic Product for New Jersey by Industry, 1997-2014 (Millions of current dollars). Retrieved from http://lwd.dol.state.nj.us/labor/lpa/industry/gsp/gsp_index.html

United States Bureau of Economic Analysis. (2014). Gross Domestic Product (Millions of current dollars) 2011-2014, States. Retrieved from http://lwd.dol.state.nj.us/labor/lpa/industry/gsp/gsp_index.html

United States Department of Labor. (2015). Misclassification of employees as independent contractors. Retrieved from http://www.dol.gov/whd/workers/misclassification/

U.S. Department of Labor, Wage and Hour Division (WHD). (n.d.). "Misclassification of Employees as Independent Contractors." Available at http://www.dol.gov/whd/workers/Misclassification/index.htm#resources. Accessed 3-22-2016.

U.S. Department of Labor. (2015). *FY 2016 Department of Labor Budget in Brief.* Washington, D.C.: U.S. Department of Labor.

U.S. Department of Labor. (2015). *Prevailing Wage Resource Book.* Retrieved from Wage and Hour Division: https://www.dol.gov/whd/recovery/pwrb/Tab11.pdf

Washington State Department of Labor & Industries. (2013, January). *Combating the Underground Economy in Construction*. Available at http://www.lni.wa.gov/Main/Docs/ContractorUndergroundEconomyProgressReport.pdf. Accessed 3-27-2016.

Washington State Department of Labor and Industries. (2014). Underground economy benchmark report (RCW 18.27.800): 2014 annual report to the legislature. Retrieved from http://www.lni.wa.gov/Main/AboutLNI/Legislature/PDFs/Reports/2014/UndergroundEconomyBenchmarkReport.pdf

Washington State Department of Labor and Industries. (2013). Combating the underground economy in construction. Retrieved from http://www.lni.wa.gov/Main/Docs/ContractorUndergroundEconomyProgressReport.pdf

Washington State Department of Labor and Industries. (2010). Washington's underground economy task force. National Conferences of State Legislatures. Retrieved from http://www.ncsl.org/Portals/1/Documents/employ/LED-EmpMis-KohlWells.pdf

Washington State Heating, Ventilation, Air Conditioning, and Refrigeration Association of Washington [now Washington State HVAC Contractor's Association] (n.d). "The Underground Economy." Bothell, WA. Available at http://www.wshvacra.org/undergroundeconomy.pdf. Accessed 2-12-2016.

Wiseman, T. (2013). US shadow economies: a state-level study. Constitutional Political Economy: 24:310-335.

Withrow, Jay, Bill Purge, Paul Schlinski, Chris Buisset, Virginia Department of Labor and Industry. (n.d.) "What is Virginia Doing About Misclassification of Workers?" Available at https://www.osha.gov/dcsp/osp/vamisclassification.pdf. Accessed 4-7-2016.