The Effects of New York’s Labor Law 240 on Worker Safety

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ABSTRACT

We examine the effects of New York’s Labor Law 240, known as the Scaffold Law, on worker safety. This law is important because it generates much litigation and significantly increases the cost of infrastructure projects in the state, especially through insurance. Supporters of the 19th century law argue that it enhances worker safety. Critics suggest that it creates moral hazard, or reduced investment in precaution, on the part of workers. We assemble the first-ever panel data set across states, time, and economic activities to empirically examine those competing claims. Our data set includes 3,382 observations from 2000 to 2010 across 42 states and a variety of commercial activities. Using standard panel data techniques such as year-fixed effects, state-fixed effects, and robust standard errors, we found that New York’s Scaffold Law increases both fatal and nonfatal construction accidents. This effect is significant in magnitude, and is consistent with the predictions of standard models of liability rules. We conclude our study by examining the effect of Labor Law 240 on insurance loss costs in the state, finding that it significantly increases the cost of infrastructure construction through higher insurance costs, which is also consistent with reduced worker safety. Our analysis questions the ongoing efficacy of the law.

Keywords: Scaffold Law, infrastructure construction costs, worker safety, insurance costs, moral hazard.
INTRODUCTION

This paper assesses the effect of New York State’s Labor Law 240, also called the Scaffold Law, on worker safety. As interpreted by the courts, the Labor Law 240 imposes absolute liability on employers and property owners for worker injuries occurring “at height,” hence its common name. Workers’ Compensation claims under the Labor Law 240 do not preclude payments via the workers’ compensation system. The law has important cost implications for infrastructure construction in New York State.

There are at least three reasons for conducting an empirical study of the Labor Law 240. First, New York retains the 19th century law while other states that are similar in many ways, such as Illinois, have repealed. Because it is the only state retaining such a law, New York provides an excellent research setting for examining the law’s effects on worker safety. Second, the Labor Law 240 offers a straightforward test of a key refutable prediction from the economics of liability rules: within a simple bilateral-care model of accidents, injurer strict liability creates victim moral hazard, i.e., under-investment in precaution. Third, some commentators argue that the Labor Law 240 raises the cost of constructing numerous key infrastructure facilities with little countervailing social benefit. Others dispute that view. Although the law affects billions of dollars in infrastructure construction and renovation, careful empirical analysis of its effect on worker safety has been limited. The detailed empirical analysis of New York’s Labor Law 240 reported here informs assessment of the law’s costs and benefits.

We compiled a large state-by-year panel data set to study the law’s effect on two broad worker-safety measures: workplace fatalities and nonfatal injuries. We follow the 42 states for which data were available across 10 years using data on a variety of commercial categories. Our data set includes 3,382 observations from 2000 to 2010 across 42 states and a variety of
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commercial activities. We utilize a variety of standard panel data techniques, including state-and-year-fixed effects and standard errors that are robust to arbitrary forms of heteroskedasticity, in addition to including a number of control variables. We show how our estimates change with the omission or inclusion of alternative techniques. Our estimates indicate that, after correcting for heteroskedasticity and state-and-year-fixed effects, New York’s Labor Law 240 has a positive and statistically significant effect on both fatal and nonfatal worker injury rates. Such reduced worker safety is consistent with the basic bilateral-care accident model regarding victim moral hazard, which predicts that employer’s strict liability will cause workers to take sub-optimal care.

We proceed as follows. The next section of the paper provides an overview of New York’s Labor Law 240. It stresses that, via court interpretation, the law imposes strict liability on employers and owners, while disallowing the use of worker negligence as a defense. The section also reviews the widespread adoption of workers’ compensation as a form of relief from costly litigation surrounding such Labor Law 240. The paper then reviews basic theory in law and economics which predicts that, within a model of bilateral care, strict liability results in moral hazard, or suboptimal care, on the part of workers. The paper then reviews the data on worker safety rates, including both nonfatal and fatal accidents. We next consider the effect of Labor Law 240 on construction injuries. Our estimates indicate, with a high degree of confidence, that New York’s Labor Law 240 increases both fatal and nonfatal injuries in those activities it covers. We then examine the repeal of a similar law in Illinois, and its impact on worker safety. We find that Illinois experienced a steeper decline in accidents after repeal, consistent with their Labor Law 240 creating worker moral hazard. The final section summarizes our findings and concludes the paper.
OVERVIEW OF NEW YORK’S LABOR LAW 240

New York State’s first scaffold law, the forerunner of the modern Labor Law 240, was passed on May 22, 1885. It created civil and criminal liability for “a person employing or directing another” in order to ensure safe “scaffolding, hoists, stays, ladders, or other mechanical contrivances” as “proper protection to the life and limb of any person so employed or engaged.” However, the 1885 law (1) (2) allowed employers to escape liability by blaming an accident on the employee’s co-workers, and was viewed as weak. It was substantially amended in 1897 as part of broader labor law legislation (3). The amendment placed the onus for safety on employers directly. It also induced courts to interpret the law as creating a presumption of employer liability in the event of an accident (4).

The 1897 law, however, allowed employers to avoid liability by invoking contributory negligence (5). The statutory language of Labor Law 240 never explicitly barred contributory negligence as an employer defense. However, New York’s courts explicitly did so in 1948. They reasoned that the statute had to be interpreted that way to achieve its desired purpose (6). Similarly, in the Rocovich decision of 1991, the Court maintained the liberal application of Labor Law 240 and that “contributory negligence…is of no consequence.” That is critical for the economics of liability rules because a negligence standard is critical for achieving the efficient level of both injurer and victim care (8). There were also legislative amendments to New York’s Scaffold Law in 19211, and 19692. Those amendments expanded or clarified the law’s scope and applicability, seeking to place the primary burden of injury prevention on employers and owners. The most recent legislative amendment occurred in 1981. Explicitly, the statute covers “the

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1 “Safe Place to Work Statute” (1921, ch 50) established Labor Law 240 to encompass slings, hangers, blocks, pulleys, braces, irons, and ropes.
2 1969 amendment placed responsibility on “all contractors and owners and their agents” in place of “a person employing or directing another to perform labor of any kind” (L 1969, ch. 1108)
erection, demolition, repairing, altering, painting, cleaning, or pointing of a building or structure,”
intending to counteract the extraordinary risks of elevated construction, generally falling to a
lower level or being struck by a falling object. Fault on the part of the victim is not an available
defense (as in contributory negligence) or reason to reduce the defendant’s liability (as in
comparative negligence), nor is the duty delegable to a third party (e.g. safety monitoring firm) or
a coworker.

Importantly, the court-created absolute employer liability interpretation is very strong in
that it extends to contractors not actually involved in construction and is interchangeable with
“strict liability.” In sum, as interpreted by the courts, Labor Law 240 creates strict accident
liability for employers and owners while disallowing contributory negligence. As one expert on
Labor Law 240, Chalos (4) mentions:

“... the words strict or absolute liability do not appear in Labor Law § 240 (1) or any of
its predecessors. Indeed, it was the Court, and not the Legislature, that began to use this
terminology in 1923 (under an earlier version of the statute), holding that employers had
an "absolute duty" to furnish safe scaffolding and would be liable when they failed to do
so and injury resulted (Maleeny v. Standard Shipbuilding Corp., 237 NY 250, 253 [1923];
Amberg v. Kinley, 214 NY 531, 545 [1915] [Collin, J., dissenting]). The Court used a
similar phrase 25 years later in Koenig, supra, [a duty "absolutely imposed"]). In 1958, in
Connors v. Boorstein (4 NY2d 172, 175 [1958]) the Court, for the first time, worded the
concept as "absolute liability" under section 240 (1), and did so again in Major v. Waverly
& Ogden, Inc. (7 NY2d 332, 336 [1960] ["absolute statutory liability"]) and Duda v.
Rouse (32 NY2d 405, 408 [1973] ["absolute liability"]).

NY Courts have also directed liability under Labor Law § 240 (1) as "absolute" in the
sense that owners or contractors not actually involved in construction can be held liable
(Haimes v. New York Telephone Co., 46 NY2d 132, 136 [1978], regardless of whether
they exercise supervision or control over the work (Ross v. Curtis-Palmer Hydro-Electric
Co., 81 NY2d 494, 500 [1993]). Intending the same meaning as absolute liability in Labor
Law § 240 (1) contexts, the Court in 1990 introduced the term "strict liability" (Cannon v.
Putnam, 76 NY2d 644, 649) and from that point on used the terms interchangeably.”
Labor Law 240 is of growing legal importance. As shown in Figure 1 in Appendix D, since 1990 the number of cases and appeals citing Labor Law 240 has increased fivefold, from an annual average of 63 cases from 1990-92 to an average of about 330 cases from 2010-12.³ As shown in Figure 2 in Appendix D, this increase in Labor Law 240 cases occurred despite the fact that employment in New York construction is lower than in 1990. This growth in cases has continued despite the global financial crisis. Indeed, the average annual growth rate of Labor Law 240 cases since 1990 has outpaced that of Gross Domestic Product in New York’s Construction Industry by a factor of almost three.⁴

FIGURE 1: Citations to Labor Law 240 Annually, 1990-2012

FIGURE 2: Construction Employment and Labor Law 240 Citations, 1990-2012

New York’s Labor Law 240 and The Broader Public Policy Context

As detailed in Fishback and Kantor’s Prelude to the Welfare State (9), the enactment of state Workers’ Compensation laws in the first half of the 20th century was preceded by an “increasingly antagonistic and uncertain legal climate in which accident claims were settled.” This environment generally arose within the negligence liability system, in which defenses of assumption of risk, fellow servant, and contributory negligence were standard. Although this system of torts had once been supported, broad-based political coalitions of employers, organized labor, and insurance firms emerged across the country in support of Workers’ Compensation. Ultimately, employers came to support Workers’ Compensation in response to costly, complex, litigation that reflected

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³ Using Bloomberg Law data.
⁴ New York Construction GDP (value-added) data from the Bureau of Economic Analysis (BEA)
the gradual legislative and legal weakening of employer defenses and expanding employer
liability for workplace accidents. (9)

Rising transaction costs in the torts approach were a major driver of Workers’
Compensation reforms. As noted on page 11 by Fishback and Kantor (9), legal, administrative,
and insurance costs “left a 40-60 percent gap between what employers paid out for post-accident
compensation and what workers ultimately received,” while court delays could reach five years.
Organized labor opposed the negligence liability system’s widespread failure to consistently
provide adequate compensation for accidents in a timely manner. For employers, after subtracting
legal and insurance costs, only 25-40 percent of their increasingly expensive insurance premiums
reached injured workers. Insurers faced increasing risk and employer liability, while Workers’
Compensation laws offered them a new market and greater ability to control risks. (9)

New York was the first state to pass a General Workers’ Compensation law in 1910, with
clear influence from workers (the law established Compulsory Compensation), employers, and
insurers (competitive state insurance). The law was declared unconstitutional for a brief period,
until New York passed a Constitutional amendment in 1913 paving the way for the compulsory
law. As Fishback and Kantor note, states that had earlier passed liability laws to limit employers’
legal defenses were the first to adopt Workers’ Compensation. As they also note: “Among states
adopting prior to 1913, 64 percent had employers' liability laws in place in 1910, compared with
only 25 percent among the states adopting after 1916.” (9) New York has a special place within
the literature as a state in which organized labor had increasingly found political sympathy for
expanding employer liability and limiting common law defenses, creating long-term pressure on
employers to support Workers’ Compensation (10). The emergence of Workers’ Compensation
seems to have facilitated coordination between employers and workers, not just in the workplace, but also in politics.

Overall, Workers’ Compensation may have increased total administrative costs over the negligence liability system, but due to the actual administration of more accident claims to injured workers (9). Empirical analyses of Workers’ Compensation’s impact on injury rates have found mixed results in varying employment contexts (8), with the risk of moral hazard a concern given that compensation is granted on a no-fault basis. These mixed results reflect varying emphasis on different ways of quantifying workplace injuries: the injury rate (frequency), composition (injury type), injury duration (severity), and total workdays lost. Researchers have analyzed these nuances of workers’ compensation’s impact on injuries and wages (12) in great detail and within many contexts, often in comparison to the negligence liability system that had preceded it (9).

For New York, Fishback and Kantor estimate that expected benefits for injured workers receiving workers’ compensation were 1.75 times more generous than the expected benefit under a negligence standard, before even considering the welfare gains from previously unreported accidents. Including conservative estimates of under-reported accidents under the previous system moves the rise in expected benefits to 2.5 times more generous for workers than the common law system in New York. Since its inception in 1913, New York State has had one of the most generous systems of Workers’ Compensation in the country, more generous than some states by a factor of two to three (9). As far as Workers’ Compensation premiums for employers in recent years, New York State rose from 13th most expensive to 5th most expensive between 2010 and 2012, reflecting premium costs 50 percent above the median (13).
The setting in which construction accidents occur “at height” is consistent with a standard economic bilateral-care model of accident liability. Both injurers (owners and contractors) and victims are able to influence both the likelihood and the severity of a construction accident. Contractors can influence those variables by providing safety equipment and an overall safe working environment. However, workers can also influence those variables by being careful on the job, such as by checking safety equipment handling tools carefully.

In a standard textbook treatment of this situation, Miceli (8) states that, First, under no liability, the injurer bears none of the victim’s damages and therefore, as in the unilateral care model, invests in no care . . . The victim, in contrast, fully bears her own damages and therefore chooses the level of care that minimizes her costs . . . Correspondingly, under strict liability the victim is fully compensated for her losses and hence chooses zero precaution, or \( y = 0 \). In contrast, the injurer faces full liability and therefore invests in care . . . The preceding shows that in the bilateral care model, neither strict liability nor no liability leads to the efficient outcome. This illustrates a fundamental problem – namely, that both parties must face full responsibility for the damages at the margin in order to have the proper incentives. Otherwise, there is a moral hazard problem that results in too little precaution by one of the parties (or both is the damages are shared).

The emphasis in the above is in the original. Because the Labor Law 240 effectively creates strict liability for employers and owners, it creates moral hazard on the part of workers. We expect workers to invest in too little precaution. Although worker precaution is difficult to observe directly, we expect worker moral hazard to manifest itself through more accidents. We predict that those activities subjected to Labor Law 240 in New York State will exhibit higher fatal and nonfatal accidents.

**THE SCAFFOLD LAW’S IMPACT ON SAFETY**
Workplace safety in the United States has improved markedly over the past two decades. As shown by Figures 5, 6 and 7, this improvement has occurred in the U.S. construction sector, with dramatic reductions in both nonfatal and fatal injury rates. Between 1992 and 2011, the U.S. overall saw a decline in reported nonfatal private sector injury rates of roughly 60 percent and decline of construction nonfatal injury rate of roughly 70 percent (Figure 5 in Appendix D). The decline in total fatalities per 100,000 full-time equivalent (FTE) workers has also fallen roughly 37 percent for all domestic U.S. sectors combined (public and private) and roughly 34 percent for construction (Figure 6 in Appendix D). As Figure 7 in Appendix D shows, the U.S. rate of fatal falls per 100,000 FTE construction workers, which measures the type of injury most relevant to Labor Law 240, has decreased by about 25 percent since the early 1990s. As indicated in Figures 3 and 5 above, U.S. construction is more dangerous than the broader private sector, as measured by nonfatal and especially fatal injury rates. Table 1 shows that construction workers face nearly a 1.5 percent greater risk of nonfatal injury than the national private sector average.

At the state level, nonfatal injury data suggests that New York is a relatively safe state, both inside and outside of the construction sector. New York’s private sector injury rate is among the lowest in the country, and its nonfatal injury rate is also among the lowest. As Table 1 in Appendix D shows, New York’s reported nonfatal injury rate for the construction industry is lower than the national average, but the state’s rate of fatal fall injuries per 100,000 workers is higher.

In the data analyzed by Mendelof and Burns (2012), across a range of construction industry subsectors and injury types, New York ranked in the top third of the sample in fatal injury rates, despite having a relatively low nonfatal injury rate (14). Compared to Illinois, which

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5 See the data table in Appendix C.
repealed its statute similar to Labor Law § 240 in 1995, the incidence rate of state construction
fatalities, (particularly fatal falls), has averaged higher in New York by about one full fatality in
recent years.

Other states have been catching up in terms of nonfatal injury rates, as nonfatal injury
rates nationally declined on average by 49.29 percent between 2000 and 2010. The state with the
lowest decline in safety was Vermont, which saw a 16.85 percent drop. Importantly, Illinois had
the largest decline among states at 66.67 percent.

We present injury rates and risks in several different ways, sometimes diverging from the
Bureau of Labor Statistics (BLS) methodology (see Appendix C). Although BLS historically
computed injury rates by dividing the number of injuries by the number of total workers, it
recently switched to a standard practice of dividing by full-time equivalent workers to find injury
incidence rate. When accurate data about average annual total hours worked is available, using
full-time equivalent workers more accurately measures the risk of workplace injury. Some BLS
calculations of full-time equivalent workers in a specific industry at the state-level, however, rely
on national-level estimates of that industry’s total annual hours.

Because this complicates the accuracy of BLS-calculated injury rates, we use
employment-based rates, rather than hours-based rates in calculating the incidence of, for
example, state-level fatal injury rates. Subject to data availability, we make comparisons using
both methods. To differentiate between the two, we refer to hours-based rates as “injury incidence
rates” or “per full-time equivalent (FTE) workers”, and employment-based rates as “per number
of workers.” Since some state-level data was available for total annual hours worked, our ability

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6 Outlined by BLS: [http://www.bls.gov/opub/cwc/sh20100121ar01p1.htm](http://www.bls.gov/opub/cwc/sh20100121ar01p1.htm)
7 For example, see this BLS report’s footnotes: [http://www.bls.gov/iif/oshwc/cfoi/rate2011nm.pdf](http://www.bls.gov/iif/oshwc/cfoi/rate2011nm.pdf)
to compare injury risks across different states is un-hindered by injury data availability. Appendix C presents our underlying methodology for calculating injury rates in more detail. Our analysis of the construction sector is not impacted by the 2003 switch from the Standard Industrial Classification (SIC) to the North American Industry Classification System, as evidenced by the 2012 NAICS to SIC Crosswalk.\(^8\)

**FIGURE 3: Nonfatal Injury Incidence Rates**

**FIGURE 4: Fatal Injury Incidence Rates**

**FIGURE 5: Fatal Falls Rates**

**TABLE 1: Average Annual Nonfatal Injury Incidence Rates 2000-2011, and Average Fatal Falls Rate 2003-2011**

**DETERMINANTS OF CONSTRUCTION SAFETY**

Simple averages however do not account for the numerous factors affecting worker injury rates, including Labor Law 240. Ordinary least squares regression estimates reported in Table 2 in Appendix D offer insights into factors affecting construction injury rates from 2000 to 2010. The dependent variable is the construction injury rate. Independent variables include the state’s population, the percent change in that variable, the state’s urbanization rate, construction employment, and several others. Our methodology is explained in greater detail in Appendix C.

The regressions reported in Table 2 indicate several things. First, once state population, rates of urbanization, and other key economic factors are included, New York is no safer than other states. The main driver in the regression is year. An array of unobservable factors changing over time lower construction injury rates by about 0.18 percentage points annually, depending on specification. Also important is the composition of a state’s construction industry. Higher

\(^8\) The data is from [http://www.naics.com/naicsfiles/2012NAICStoSIC-Crosswalk.pdf](http://www.naics.com/naicsfiles/2012NAICStoSIC-Crosswalk.pdf)
commercial construction activity, for example, is associated with a lower rate of nonfatal injuries. Additionally, states with larger populations tend to have lower injury rates.

TABLE 2: Ordinary Least Squares Regression Estimates of the Non-fatal Construction Injury Rates from 2000 to 2010

THE IMPACT OF Labor Law 240 ON CONSTRUCTION INJURIES

After inclusion of several basic controls, New York’s construction injury rate is about average. Analysis of raw injury data, however, does not allow analysis of the effects of Labor Law 240 on worker safety, because the law only applies to certain types of construction. To isolate its impact, we collected injury data on activities affected by Labor Law 240, and on unaffected activities. The unaffected occupation types provide a control group, which allows us to assess the impact of Labor Law 240 relative to a well-defined baseline. Affected sectors include non-residential building construction, roofing, and heavy commercial construction. Unaffected sectors include manufacturing, wholesale trade, retail trade, transportation and warehousing, utilities, and residential building construction.

In the regression estimates reported below, our dependent variable is the non-fatal injury rate across a range of activities, including roofing, heavy-civil engineering, non-residential construction, manufacturing, wholesale trade, retail trade, transportation warehousing, utilities, and residential construction injury rates, from 2000 to 2010. This results in 3,382 observations. Data were unavailable for only eight states. Key independent variables were defined as follows:

- **New York**: A binary variable set to one if the observation comes from New York, zero otherwise.
- **Labor Law 240 Sectors**: A binary variable set to one if the observation comes from a sector (in any state) impacted by Labor Law 240, which includes roofing, heavy-civil engineering, and non-residential construction, zero otherwise.

- **Labor Law 240 Impact**: A binary variable set to one if the observation is from New York and the sector is impacted by Labor Law 240, zero otherwise.

The key variable of interest reflecting the effect of Labor Law 240 on worker safety in New York is *Labor Law 240 Impact*, since that variable measures the effect on construction injury rates of both being in New York and subject to Labor Law 240. As indicated in Table 3 in Appendix D, the effect of *Labor Law 240 Impact* is positive and statistically significant at conventionally accepted levels of confidence when the year-fixed and state-fixed effects are included. In addition to statistical significance, the Labor Law 240 effect is large in magnitude. The *Labor Law 240 Impact* coefficient is close to one in all of the above specifications. This implies that Labor Law 240 increases the number of nonfatal injuries by about 1 per 100 full time workers annually, which is consistent with the hypothesis that the law creates employee moral hazard, i.e. that workers underinvest in safety. We thus have a high degree of confidence that Labor Law 240 makes construction in those activities to which it applies in New York State more dangerous. As of 2010, the activities we identified as especially impacted by Labor Law 240 in New York employed about 67,100 workers. Therefore, a reasonable estimate of the additional number of nonfatal injuries *per annum* due to the law is 670.

As indicated in Table 4 in Appendix D, *Labor Law 240 Impact* is positive and statistically significant at conventionally accepted levels of confidence when fixed effects and when robust
standard errors (which corrects for arbitrary forms of heteroskedasticity), are included.\textsuperscript{9} Labor Law 240 is thus also associated with a larger number of fatal injuries.

\textbf{TABLE 3: Ordinary Least Squares Regression Estimates of the Non-fatal Construction Injury Rates Including the Impact of Labor Law 240}

\textbf{TABLE 4: Ordinary Least Squares Regression Estimates of the Construction Industry Fatal Incidence Rates (per 100,000 FTE workers) Including the Impact of Labor Law 240}

\textbf{BREAKING DOWN THE IMPACT OF Labor Law 240 ON CONSTRUCTION INJURIES}

As discussed above, Labor Law 240 applies to non-residential building construction, roofing, and heavy commercial construction. In order to better understand the effect of the above activities, we developed the following model. The dependent variable is the nonfatal injury rate across a range of sectors, including roofing, heavy commercial construction, non-residential construction, manufacturing, wholesale trade, retail trade, transportation warehousing, utilities, and residential construction injury rates, across the years 2000 to 2010.

Key independent variables were defined as follows:

- **Roofing Sector**: A binary variable set to one if the observation comes from roofing sector, zero otherwise.

- **Roofing Impact**: A binary variable set to one if the observation is from New York and roofing sector, zero otherwise

- **Heavy commercial Sector**: A binary variable set to one if the observation comes from heavy commercial sector, zero otherwise.

- **Heavy commercial Impact**: A binary variable set to one if the observation comes from New York and heavy commercial sector, zero otherwise.

\textsuperscript{9} The assumption of homoscedastic errors can be rejected at the one percent level of better. This suggests that it is important to correct for hetero-skedasticity in our panel estimates.
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- **Non-residential Sector**: A binary variable set to one if the observation comes from non-residential sector, zero otherwise.

- **Non-residential Impact**: A binary variable set to one if the observation comes from New York and non-residential sector, zero otherwise.

As indicated in Table 5 in the Appendix, Heavy commercial Impact variable is positive and statistically significant at conventionally accepted levels of confidence whether fixed effects of state and year, and robust, are included or not. This means that Labor Law 240 increases the number of nonfatal injuries in heavy commercial construction. In addition, we fail to reject the hypothesis that Labor Law 240 has no significant effect on roofing and non-residential construction. Table 6 shows the basic statistics facts of the nine sectors.

**TABLE 5: Regression Estimates of the Nonfatal Construction Injury Rates**

**TABLE 6: Summary of Nonfatal Injuries in the Nine Sectors**

**THE ILLINOIS CASE**

Illinois’ experience and 1995 repeal of the Structural Work Act\(^\text{10}\), is helpful in assessing the possible impact of reforming Labor Law 240. As in New York, Illinois courts have broadly interpreted (15) the legislative intent of the Structural Work Act (SWA), which explicitly applies to “scaffolds, hoists, cranes, stays, supports or other mechanical contrivances.” Because of the SWA’s similarity to N.Y. Labor Law 240 and the broad similarities of Illinois and New York, the Illinois experience following repeal of SWA provides a valuable case study of repeal’s effect on safety and insurance in the construction industry. As the table 7 indicates, the two states are similar along a number of relevant political, economic, and demographic dimensions.

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\(^{10}\) (IL ST CH 740 § 150/1) repealed by P.A. 89-2, § 5, eff. Feb. 14, 1995
TABLE 7: Illinois and New York States Basic Facts Compared

Despite their commonalities, the two states have diverged along construction safety rates since the 1990s. In the states’ overlapping years of data\(^{11}\) before and after repeal of the Structural Work Act, Illinois’ construction sector has generally become as safe, or safer than, New York State’s along the broadest fatal and nonfatal measures. These injury measures, however, measure far more widely than the injury types most related to Labor Law 240. For this reason, Table 8, Figure 6 and Figure 7 emphasis on “falls to lower level,” a direct measure of injuries at height and the target of Labor Law 240. Along these measures\(^{12}\) of construction injuries at height, Illinois’ construction industry has in recent years performed much better than construction in New York (including New York City) and the rest of the country.

TABLE 8: Average Annual Construction Injury Rates in the U.S., New York and Illinois


FIGURE 7: Fatal Injury Rates in New York and Illinois States

To see if injury rate methodology makes a difference for comparing the Illinois and New York, the fatal injury incidence rate was calculated using the BLS hours-based approach. As Table 9 in Appendix D shows, adjusting for the available state-level hours data in construction suggests that from 2007-2011, Illinois has in recent years been safer than New York by a full construction fatality and fatal fall.\(^{13}\)


\(^{12}\) Injury data are compared in the overlapping years using NAICS (2002-2011) and SIC (1992-2002) designations, which for construction industries are only negligibly different. See Appendix C.

\(^{13}\) See Appendix C for calculation methodology.
Figures 8 and 9 in Appendix D allow comparison of each state by injuries at height. As depicted in figure 8, Illinois construction has experienced a nonfatal fall incidence rate below that of New York in every year since 2006. Further, Illinois’ fatal fall injuries per 100,000 workers have been higher than New York’s only three times in 13 years of data since 1998.

TABLE 9: Checking Fatal Injury Rates in Construction with the BLS Framework

FIGURE 8: Construction Injuries at Height: Nonfatal Fall Injury Rates and Annual Fall Fatalities in New York and Illinois Construction, 1998-2011


The above data do not show that construction work at height in Illinois became more dangerous after the repeal of the Structural Work Act (SWA) in 1995. Instead, the injuries at height targeted by the law have become less common in Illinois compared to New York and the U.S. since the 1990s.

As shown in the first row of Table 10, average fatal injuries at height per 100,000 workers in Illinois construction in the four years before repeal, 1992-1995, were higher than in both the United States and New York. On a year-by-year basis, as Figure 9 shows, fatal injuries at height in Illinois were higher than in New York during three of the four years before SWA repeal, counting 1995 as pre-repeal given the lag of implementation. In the 15 years of data after repeal (1996-2011), Illinois fared worse than New York in three years along this same measure of fatal injuries at height. This trend dramatically reversed in the years following repeal. Between 1996 and 2011, New York’s construction industry averaged nearly two more deadly falls than Illinois’, as Table 10 shows. Illinois’ average fatal construction injuries at height has improved from being worse than the U.S. average between 1996-2005 to become better than the U.S. by nearly half a
fatality between 2006-2011. Considering the entire period, Illinois fatal falls in construction have fallen from an average of 8.92 per 100,000 construction workers to an average of 4.56 between 2006 and 2011. In New York, by contrast, fatal fall injuries decreased by a much more lower rate from an average of 7.25 from 1992-1995 to 5.95 from 2006-2011.

**TABLE 10: Fatal and Nonfatal Rates for Construction Injuries at Height in the U.S., Illinois, and New York**

In order to compare the impact of Labor Law 240 in Illinois and New York, we developed the following model. The dependent variable is the nonfatal injury rate across a range of sectors, including roofing, heavy-civil engineering, non-residential construction, manufacturing, wholesale trade, retail trade, transportation warehousing, utilities, and residential construction injury rates, across the years 2000 to 2010. Since data from Illinois and New York only is included, this results in 178 observations.

Key independent variables were defined as follows:

- **New York**: A binary variable set to one if the observation comes from New York, zero otherwise.

- **Labor Law 240 Sectors**: A binary variable set to one if the observation comes from a sector (in any state) that would be impacted by labor law 240, which includes roofing, heavy-civil engineering, and non-residential construction, zero otherwise.

- **Labor Law 240 Impact**: A binary variable set to one if the observation is from New York and the sector is impacted by Labor Law 240, zero otherwise.

As indicated in Table 11, *Labor Law 240 Impact* variable is positive and statistically significant at conventionally accepted levels of confidence whether fixed effects of state and year,
and robust, are included or not. This means that Labor Law 240 increases the number of non-fatal injuries in New York State.

**TABLE 11: Ordinary Least Squares Regression Estimates of the Nonfatal Construction Injury Rates Including the Impact of Labor Law 240 in Illinois and New York States**

**SUMMARY AND CONCLUSIONS**

Our empirical examination of New York’s Labor Law 240 is the first of its kind. Despite its importance for the cost of infrastructure construction in New York, researchers have never assembled an extensive panel data set, and applied standard panel data techniques, to examine the law’s effect on worker safety. Our estimates imply that, with a high degree of confidence, that the law reduces worker safety. We measure worker safety suing both fatal and nonfatal injury rates across both time and states. Our estimates also suggest that the magnitude of the law’s effect on worker safety is economically significant.

Beyond the safety considerations, which have been discussed at length in previous sections, it is worth noting that the high fixed cost of construction at height in New York has a broader impact on social welfare. For public entities, such as a schools and infrastructure projects, exposure to Labor Law 240 has a subtle and perhaps unseen impact on the New Yorkers who make regular use of these public services. For private construction, we can expect that Labor Law 240 would serve as a constraint on the supply of additional buildings at height, suggesting a second order disincentive for population density, which in turn may suggest a subtle environmental impact for the law. Finally, an examination of the law’s effect on insurance loss costs suggests that it increases the cost of infrastructure construction in New York State.

**REFERENCES**
1. *Kimmer v. Webber*, 151 NY 417, 421 (1897)

2. *Butler v. Townsend*, 126 NY 105, 111 (1891)


5. *Gombert v. McKay*, 201 NY 27, 31 (1911)


7. 78 NY 2d 509 – NY: [Court of Appeals 1991]


15. Meyer v. Caterpillar Tractor Co., 135 Ill. 2d 1, 7-8 (1990)


19. New York’s Metropolitan Transit Authority’s Owner Controlled Insurance Program (OCIP) review


27. Local Laws of the City of New York, For the Year 1998, No. 11.

APPENDIX

Figures

FIGURE 1: Citations to Labor Law 240 Annually, 1990-2012

FIGURE 2: Construction Employment and Labor Law 240 Citations, 1990-2012
FIGURE 3: Nonfatal Injury Incidence Rates

Nonfatal Injury Incidence Rates per 100 workers (US)

Private Sector
Construction
FIGURE 4: Fatal Injury Rates (US)

Total Fatalities per 100,000 Full-Time Equivalent Workers

Construction (Public & Private)

All U.S. Sectors (Public & Private)
FIGURE 5: Fatal Falls Rate (US)

FIGURE 7: Fatal Injury Rates in New York and Illinois States
FIGURE 8: Construction Injuries at Height: Nonfatal Fall Injury Rates and Annual Fall Fatalities in New York and Illinois Construction, 1998-2011

Figure 10: Illinois’ Premises/Operations Historical Loss Costs (1992-2000)
## TABLE 1: Average Annual Nonfatal Injury Incidence Rates 2000-2011, and Average Fatal Falls Rate, 2003-2011

<table>
<thead>
<tr>
<th></th>
<th>Construction Nonfatal Injury Incidence Rate (per 100 workers), 2000-2011</th>
<th>Private Sector Nonfatal Injury Incidence Rate, 2000-2011</th>
<th>Fatal Falls (to lower level) per 100,000 Construction Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York State</td>
<td>4.58</td>
<td>3.14</td>
<td>6.51</td>
</tr>
<tr>
<td>Average U.S.</td>
<td>6.32</td>
<td>4.90</td>
<td>6.11</td>
</tr>
<tr>
<td>Over 10 Million Population</td>
<td>5.23</td>
<td>4.04</td>
<td>5.54</td>
</tr>
<tr>
<td>5 to 10 Million</td>
<td>6.28</td>
<td>4.73</td>
<td>5.26</td>
</tr>
<tr>
<td>2 to 5 million</td>
<td>6.01</td>
<td>4.92</td>
<td>7.99</td>
</tr>
<tr>
<td>Less than 2 Million</td>
<td>7.30</td>
<td>5.53</td>
<td>N/A</td>
</tr>
<tr>
<td>Safest State</td>
<td>LA*</td>
<td>NY</td>
<td>AZ</td>
</tr>
<tr>
<td>Most Dangerous State</td>
<td>WA</td>
<td>ME</td>
<td>IA</td>
</tr>
</tbody>
</table>

* Safest in reported nonfatal rate, but fatal rate suggests LA is not generally the safest state. See Mendeloff and Burns (2012)

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14 Source: [U.S. Bureau of Labor Statistics SSOI](https://www.bls.gov), See Appendix C.

15 Ibid.

16 See Appendix C for Fatal Injury Rates methodology.
### TABLE 2: Ordinary Least Squares Regression Estimates of the Non-fatal Construction Injury Rate from 2000 to 2010

<table>
<thead>
<tr>
<th></th>
<th>(1) Coefficient (t-stat)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of observations in parentheses</td>
<td>* = .10 significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>** = .05 significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*** = .01 significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NY</td>
<td>-1.9487 (-2.92)***</td>
<td>-0.7743 (-1.09)</td>
<td>-0.3265 (-0.43)</td>
</tr>
<tr>
<td>Year (550)</td>
<td>-0.1744 (-5.38)***</td>
<td>-0.0955 (-2.66)***</td>
<td>-0.1898 (-4.01)***</td>
</tr>
<tr>
<td>Population (550)</td>
<td>-0.0704 (-4.07)***</td>
<td>-0.1401 (-1.67)*</td>
<td>-0.1898 (-4.01)***</td>
</tr>
<tr>
<td>Percent Change (500)</td>
<td>10.0170 (1.11)</td>
<td>9.8898 (1.06)</td>
<td>-0.1898 (-4.01)***</td>
</tr>
<tr>
<td>Urbanization (a) (550)</td>
<td>0.0066 (.01)</td>
<td>-1.2952 (-1.53)</td>
<td>-0.1898 (-4.01)***</td>
</tr>
<tr>
<td>Construction Employment (b) (550)</td>
<td>-0.0087 (-2.23)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Change (500)</td>
<td>38.7939 (1.77)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction GDP © (528)</td>
<td>0.2000 (4.88)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Change (480)</td>
<td>0.2757 (0.16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Permits (d) (550)</td>
<td>-0.0021 (-1.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Change (500)</td>
<td>-0.4962 (-4.75)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Permits (e) (550)</td>
<td>-0.0173 (-3.05)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Change (500)</td>
<td>-0.3358 (-0.77)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>7.4380 (38.63)***</td>
<td>7.2056 (12.11)***</td>
<td>8.1459 (10.29)***</td>
</tr>
<tr>
<td>Adj R-squared</td>
<td>0.0721</td>
<td>0.0684</td>
<td>0.1694</td>
</tr>
</tbody>
</table>

(a) Percent of populous living in cities, U.S. Census
(b) Number of people employed in construction, U.S. BEA
(c) Total GDP allocated to construction. Units in millions of nominal dollars,
(d) Units in hundreds, U.S. Census.
(e) Commercial Permits, Units in Hundreds
### TABLE 3: Ordinary Least Squares Regression Estimates of the Non-fatal Construction Injury Rates Including the Impact of Labor Law 240

* = .10 significance; ** = .05 significance; *** = .01 significance

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>-1.885 (-5.75)**</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Labor Law 240 Sectors</td>
<td>0.856 (8.94)**</td>
<td>0.818 (10.78)**</td>
<td>0.818 (9.45)**</td>
</tr>
<tr>
<td>Labor Law 240 Impact</td>
<td>0.926 (1.63)</td>
<td>0.964 (2.15)**</td>
<td>0.964 (2.03)**</td>
</tr>
<tr>
<td>State &amp; Year Fixed Effects</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Robust</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Adj R-Squared</td>
<td>3.43 percent</td>
<td>40.25 percent</td>
<td>41.19 percent</td>
</tr>
<tr>
<td>Observations</td>
<td>3,382</td>
<td>3,382</td>
<td>3,382</td>
</tr>
</tbody>
</table>
### TABLE 4: Ordinary Least Squares Regression Estimates of the Construction Industry Fatal Incidence Rates (per 100,000 FTE workers) Including the Impact of Labor Law 240

<table>
<thead>
<tr>
<th></th>
<th>(1) Coefficient (Standard Error)</th>
<th>(2) Coefficient (Standard Error)</th>
<th>(3) Coefficient (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>Coefficient</td>
<td>Coefficient</td>
<td>Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>-3.198 (3.03)**</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Manufacturing Sector</td>
<td>-1.294 (2.47)**</td>
<td>-1.475 (3.56)**</td>
<td>-1.475 (6.07)**</td>
</tr>
<tr>
<td>Retail Sector</td>
<td>-3.237 (6.07)**</td>
<td>-3.168 (7.50)**</td>
<td>-3.168 (12.75)**</td>
</tr>
<tr>
<td>Wholesale Sector</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>N.Y. Labor Law 240 Impact</td>
<td>1.038 (0.45)</td>
<td>1.908 (1.04)</td>
<td>1.908 (2.42)**</td>
</tr>
<tr>
<td>Constant</td>
<td>4.950 (12.77)**</td>
<td>18.038 (12.58)**</td>
<td>18.038 (5.09)**</td>
</tr>
<tr>
<td>Year &amp; Fixed Effects</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Robust</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Adj R-Squared</td>
<td>0.4493</td>
<td>0.6596</td>
<td>0.6722</td>
</tr>
<tr>
<td>Observations</td>
<td>1618</td>
<td>1618</td>
<td>1618</td>
</tr>
</tbody>
</table>

* = .10 significance; ** = .05 significance; *** = .01 significance.
TABLE 5: Regression Estimates of the Nonfatal Construction Injury Rates

<table>
<thead>
<tr>
<th></th>
<th>(1) Coefficient (t-test)</th>
<th>(2) Coefficient (t-test)</th>
<th>(3) Coefficient (t-test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing Sector</td>
<td>2.573 (15.19)***</td>
<td>2.610 (17.30)***</td>
<td>2.610 (12.74)***</td>
</tr>
<tr>
<td>Roofing Impact</td>
<td>0.544 (0.66)</td>
<td>0.855 (1.16)</td>
<td>0.855 (0.75)</td>
</tr>
<tr>
<td>Heavy commercial sector</td>
<td>0.457 (3.96)***</td>
<td>0.379 (3.69)***</td>
<td>0.379 (3.93)***</td>
</tr>
<tr>
<td>Heavy commercial Impact</td>
<td>1.727 (2.41)***</td>
<td>1.678 (2.63)***</td>
<td>1.678 (3.70)***</td>
</tr>
<tr>
<td>Non-residential Sector</td>
<td>0.583 (4.86)***</td>
<td>0.474 (4.43)***</td>
<td>0.474 (3.52)***</td>
</tr>
<tr>
<td>Non-residential Impact</td>
<td>-0.172 (-0.24)</td>
<td>-0.189 (-0.30)</td>
<td>-0.189 (-0.41)</td>
</tr>
<tr>
<td>Constant</td>
<td>7.779 (31.96)***</td>
<td>9.713 (39.13)***</td>
<td>9.713 (27.09)***</td>
</tr>
<tr>
<td>State Fixed Effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year Fixed Effect</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Robust</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td>28.73 percent</td>
<td>43.56 percent</td>
<td>44.51 percent</td>
</tr>
<tr>
<td>Observations</td>
<td>3,382</td>
<td>3,382</td>
<td>3,382</td>
</tr>
</tbody>
</table>
### TABLE 6: Summary of Nonfatal Injuries in the Nine Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>New York State</th>
<th>Average</th>
<th>Safest</th>
<th>Most Dangerous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Residential Building</td>
<td>4.12</td>
<td>6.12</td>
<td>Texas</td>
<td>Montana</td>
</tr>
<tr>
<td>Heavy Civil Construction</td>
<td>5.89</td>
<td>6.06</td>
<td>Louisiana</td>
<td>Vermont</td>
</tr>
<tr>
<td>Roofing</td>
<td>6.83</td>
<td>7.84</td>
<td>North Carolina</td>
<td>Washington</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.35</td>
<td>6.69</td>
<td>Arizona</td>
<td>Alaska</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>2.75</td>
<td>4.93</td>
<td>New York</td>
<td>Maine</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>3.36</td>
<td>5.15</td>
<td>New York</td>
<td>Maine</td>
</tr>
<tr>
<td>Transportation &amp; Warehousing</td>
<td>5.55</td>
<td>6.49</td>
<td>Louisiana</td>
<td>Rhode Island</td>
</tr>
<tr>
<td>Utilities</td>
<td>3.45</td>
<td>4.44</td>
<td>South Carolina</td>
<td>Maine</td>
</tr>
<tr>
<td>Residential Building Construction</td>
<td>3.21</td>
<td>5.50</td>
<td>Texas</td>
<td>Washington</td>
</tr>
</tbody>
</table>
### TABLE 7: Illinois and New York Compared

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Population, 2011&lt;sup&gt;17&lt;/sup&gt;</td>
<td>12,869,257</td>
<td>19,465,197</td>
</tr>
<tr>
<td>Large Metro Area</td>
<td>Chicago</td>
<td>New York City</td>
</tr>
<tr>
<td>Urbanization (percent)&lt;sup&gt;18&lt;/sup&gt;</td>
<td>88.5 percent</td>
<td>87.9 percent</td>
</tr>
<tr>
<td>Average Annual Construction Employment ('000s), 2000-2012&lt;sup&gt;19&lt;/sup&gt;</td>
<td>249.42</td>
<td>326.67</td>
</tr>
<tr>
<td>2010 Workers’ Compensation Coverage (percent share of Unemployment Insurance)&lt;sup&gt;20&lt;/sup&gt;</td>
<td>99.8 percent</td>
<td>99.8 percent</td>
</tr>
<tr>
<td>2012 Workers’ Compensation Premium Ranking (of 51)&lt;sup&gt;21&lt;/sup&gt;</td>
<td>4th</td>
<td>5th</td>
</tr>
<tr>
<td>Statute creating special liability for injuries at height</td>
<td>Structural Work Act (repealed in 1995)</td>
<td>Labor Law 240</td>
</tr>
</tbody>
</table>

<sup>17</sup> U.S. Census, 2011.
<sup>18</sup> Id.
<sup>19</sup> FRED data, St. Louis Federal Reserve.
<sup>21</sup> Dotter & Manley, “2012 Oregon Workers’ Compensation Premium Rate Ranking Summary,”
<table>
<thead>
<tr>
<th>Injury Rate Measure</th>
<th>All U.S.</th>
<th>Illinois</th>
<th>New York (including NYC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Nonfatal Injury Incidence Rates per 100 Private Construction Workers, 1998-2006&lt;sup&gt;22&lt;/sup&gt;</td>
<td>6.31</td>
<td>7.76</td>
<td>5.08</td>
</tr>
<tr>
<td>Average Nonfatal Injury Incidence Rates per 100 Private Construction Workers, 2006-2011</td>
<td>4.7</td>
<td>3.68</td>
<td>4.4</td>
</tr>
<tr>
<td>Average Fatal Injuries per 100,000 Construction Workers (Public and Private), 1992-2011&lt;sup&gt;23&lt;/sup&gt;</td>
<td>17.86</td>
<td>16.88</td>
<td>17.52</td>
</tr>
<tr>
<td>Average Fatal Injuries per 100,000 Construction Workers (Public and Private), 2006-2011</td>
<td>15.09</td>
<td>13.63</td>
<td>13.62</td>
</tr>
</tbody>
</table>

<sup>22</sup> Taken directly from the Bureau of Labor Statistics State Survey database, 2012. See Appendix C.

<sup>23</sup> Generated with BLS data from the Census of Fatal Occupational Injuries. See Appendix C.
### TABLE 9: Checking Fatal Injury Rates in Construction with the BLS Framework

<table>
<thead>
<tr>
<th>Injury Measure</th>
<th>All U.S.</th>
<th>Illinois</th>
<th>New York (including NYC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Fatal Injury Incidence Rate per 10,000 Full-time Equivalent Construction Workers, 2007-2011</td>
<td>14.78</td>
<td>14.73</td>
<td>15.76</td>
</tr>
<tr>
<td>Average Fatal Fall Injury Incidence Rate per 10,000 Full-time Equivalent Construction Workers, 2007-2011</td>
<td>4.87</td>
<td>4.83</td>
<td>5.88</td>
</tr>
</tbody>
</table>
### TABLE 10: Fatal and Nonfatal Rates for Construction Injuries at Height in the U.S., Illinois, and New York

<table>
<thead>
<tr>
<th>Fall (to lower level) Injury Rate Measure</th>
<th>All U.S.</th>
<th>Illinois</th>
<th>New York (including NYC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Fatal Falls (to lower level) per 100,000 Construction Workers, 1992-1995(^{24})</td>
<td>5.92</td>
<td>8.92</td>
<td>7.25</td>
</tr>
<tr>
<td>Average Fatal Falls (to lower level) per 100,000 Construction Workers, 1996-2011</td>
<td>5.49</td>
<td>5.51</td>
<td>7.41</td>
</tr>
<tr>
<td>Average Fatal Falls (to lower level) per 100,000 Construction Workers, 1996-2005</td>
<td>5.8</td>
<td>6.08</td>
<td>8.29</td>
</tr>
<tr>
<td>Average Fatal Falls (to lower level) per 100,000 Construction Workers, 2006-2011</td>
<td>4.97</td>
<td>4.56</td>
<td>5.95</td>
</tr>
<tr>
<td>Average Nonfatal Falls (to lower level) Injury Rate per 10,000 Construction Workers, 1998-2011(^{25})</td>
<td>30.77</td>
<td>28.87</td>
<td>31.35</td>
</tr>
<tr>
<td>Average Nonfatal Falls (to lower level) Injury Rate per 10,000 Construction Workers, 1998-2005</td>
<td>36.79</td>
<td>39.15</td>
<td>35.19</td>
</tr>
<tr>
<td>Average Nonfatal Falls (to lower level) Injury Rate per 10,000 Construction Workers, 2006-2011</td>
<td>22.75</td>
<td>15.17</td>
<td>26.23</td>
</tr>
</tbody>
</table>

\(^{24}\) Created with [BLS Data](https://www.bls.gov) including Public and Private Sector Construction. See Appendix C.

**TABLE 11: Ordinary Least Squares Regression Estimates of the Nonfatal Construction Injury Rates Including the Impact of Labor Law 240 in Illinois and New York States**

<table>
<thead>
<tr>
<th></th>
<th>(1) Coefficient (t-test)</th>
<th>(2) Coefficient (t-test)</th>
<th>(3) Coefficient (t-test)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New York</strong></td>
<td>-1.010 (-3.14)***</td>
<td>-1.018 (-3.26)***</td>
<td>-1.018 (-3.76)***</td>
</tr>
<tr>
<td><strong>Labor Law 240</strong></td>
<td>0.792 (2.02)**</td>
<td>0.778 (2.03)**</td>
<td>0.778 (1.86)*</td>
</tr>
<tr>
<td><strong>Sectors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Labor Law 240</strong></td>
<td>0.991 (1.79)*</td>
<td>1.005 (1.87)*</td>
<td>1.005 (1.69)*</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>4.717 (20.59)*****</td>
<td>4.907 (9.09)*****</td>
<td>4.907 (7.35)*****</td>
</tr>
<tr>
<td><strong>Year Fixed Effects</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Robust</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Adjusted R-Squared</strong></td>
<td>13.99 percent</td>
<td>18.87 percent</td>
<td>24.83 percent</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>178</td>
<td>178</td>
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