# The Social and Economic Costs of Employee Misclassification in Construction

**Françoise Carré, Ph.D. and Randall Wilson**
**Center for Social Policy**
**McCormack Graduate School of Policy Studies**
**University of Massachusetts Boston**

A report of the

**Construction Policy Research Center**

**Labor and Worklife Program, Harvard Law School**
**and**
**Harvard School of Public Health**

**Elaine Bernard, Ph.D. and Robert Herrick, Sc.D. Principal Investigators**

December 2004

# I. Summary Findings

With this study, a cross disciplinary team of the Center for Construction Policy Research has taken a first and significant step in documenting employee misclassification in the Massachusetts construction industry. This report documents the dimensions of misclassification and its implications for tax collection and worker compensation insurance.

Misclassification occurs when employers treat workers who would otherwise be waged or salaried employees as independent contractors (self employed). Or as one report commissioned by the U.S. Department of Labor put it, misclassification occurs "when workers (who should be) getting W-2 forms for income tax filing instead receive 1099- Miscellaneous Income forms."[1]

Forces promoting employee misclassification include the desire to avoid the costs of payroll taxes and of mandated benefits. Chief among these factors is the desire to avoid payment of worker compensation insurance premiums.

Employee misclassification creates severe challenges for workers, employers, and insurers as well as for policy enforcement. Misclassified workers lose access to unemployment insurance and to appropriate levels of worker compensation insurance. Also, they are liable for the full Social Security tax. They lose access to employer-based benefits as well. For employers, the practice of misclassification creates an uneven playing field. Employers who classify workers appropriately have higher costs and can get underbid by employers who engage in misclassification. The collection of Unemployment Insurance tax, and to some degree that of the income tax, are adversely affected by misclassification. Worker Compensation insurers experience a loss of premiums.

Using several years of de-identified data on unemployment insurance tax audits made available by the Massachusetts Division of Unemployment Assistance (DUA), we have developed estimates of the dimensions of misclassification in the state and particularly in the construction industry.

Because this study relies on Unemployment Insurance tax audits to develop estimates of the dimensions and impacts of misclassification, it addresses primarily the forms of misclassification that can be documented. It does not fully capture the scope of underground economy activities in construction and other sectors.

## Employee Misclassification in Massachusetts

- During the years 2001-03, *at least one in seven, or 14%, of MA construction employers are estimated to have misclassified workers* as independent contactors. This conservative estimate translates into a minimum of 2,634 construction employers statewide.[2] Across all industries[3], 13% of employers were found to under-report worker wages and UI tax liability to the Commonwealth and thus to have misclassified workers. This represents about 26,000 employers statewide. This conservative estimate is based on audits of employers that, while not selected by fully statistically random methods, are considered random, or non-targeted, audits in common auditing practices (Planmatics 2000).

---

[1] Lalith de Silva et al. 2000. *Independent contractors: prevalence and implications for Unemployment Insurance programs*. Planmatics, Inc., Prepared for US Department of Labor Employment and Training Administration. Planmatics, 2000. (Hereafter, Planmatics 2000.)

[2] The yearly number of establishments averaged over 2001-03 was 18,803 in construction and 194,315 across all industries.

[3] The "all industries" category includes Construction as well.

- *Less conservative methods suggest that construction misclassification could run higher and range up to one in four (24%) of MA construction employers.* Projecting this rate to actual DUA establishment counts, we estimate that up to 4,459 construction employers are misclassifying workers statewide. Construction employers appear to engage in misclassification more frequently than the average of all employers. Across all industries, up to 19% of employers misclassified at some point over the period, amounting to about 36,500 employers. This less conservative method includes a mix of random audits and of audits explicitly targeted based on past behavior (and thus more likely to uncover misclassification).

- *When construction employers misclassify, they do so extensively.* A key measure of misclassification is the degree or severity of its impact *within* employers who misclassify. This measure indicates that *misclassification is a common occurrence rather than an isolated incident in construction companies where misclassification occurs*. According to our low estimate, 4 in 10 workers are misclassified in construction employers found to be misclassifying in 2001-03. The severity of impact of misclassification found among construction employers is one of the three highest among industrial sectors.

- When we consider the workforce of all employers (those that misclassify and those that do not), a*t least one in twenty (5.4%) construction workers in MA is estimated to be misclassified as an independent contractor during 2001-03, according to our conservative estimate.* The *extent* of misclassification is slightly higher in construction than the average across all industries (4.5%). And as we look at larger pools of data that include audits that are explicitly targeted based on past record, the extent of workers misclassified as independent contractors goes up to 11% in construction.

- We estimate that the actual number of workers affected across the Commonwealth ranges from almost 7,478 to about 15,790 construction workers.[4] For the workforce as a whole, it could range from about 125,725 to 248,206.

- While misclassified individuals lose out on unemployment insurance, the unemployment insurance system is adversely affected as well. We estimate that from $12.6 million to $35 million in unemployment insurance taxes are not levied on the payroll of misclassified workers as should be. Of these amounts, from $1.03 to $3.9 million are due to misclassification in construction.

- At income tax time, workers misclassified as independent contractors are known to under-report their personal income; therefore, the state experiences a loss of income tax revenue. Based on an estimate that 30% of the income of misclassified workers is not reported, we roughly estimate that $91 million of income tax are lost. Of these, $4 million are lost due to misclassification in construction. Based on an estimate that 50% of misclassified worker income goes unreported, a rough estimate of income tax loss amounts to $152 million of revenue. Of these, $6.9 million are due to misclassification in construction.

- The worker's compensation insurance industry loses on premium collection, a significant issue if, as is reported in previous studies[5], misclassified workers are surreptitiously added onto companies' worker compensation policies *after* they are injured. For these workers, benefits are paid out even though premiums were not collected. We estimate that up to $91 million of worker compensation premiums are not paid for misclassified workers. Of this amount, $7 million are not paid due to construction misclassification.

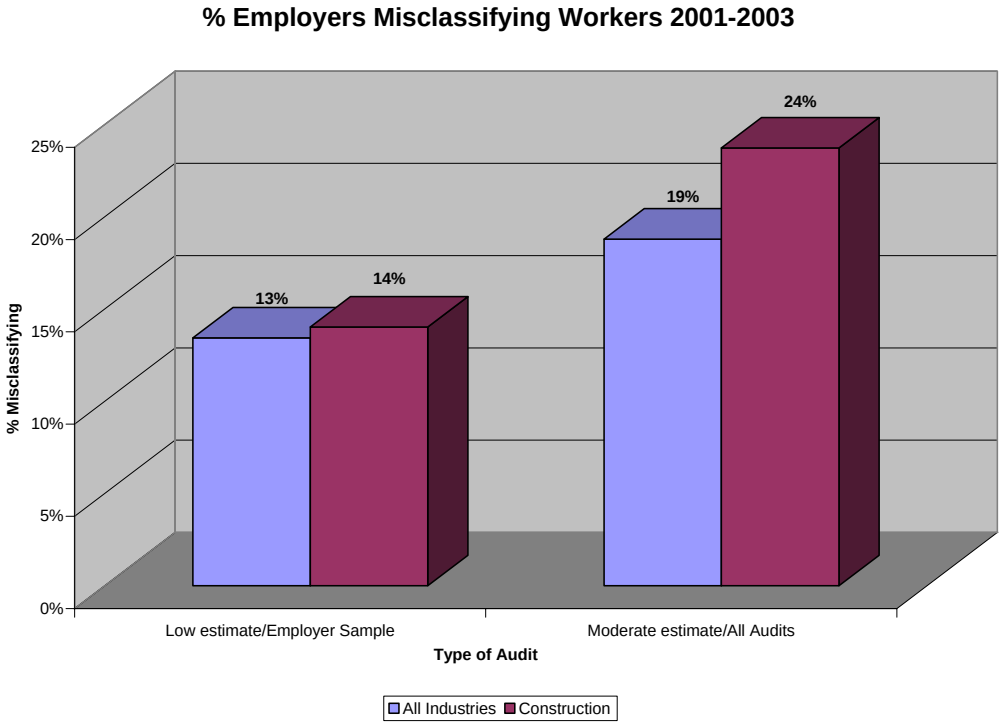
- The prevalence of misclassification has increased over the years since 1995 and so has the severity of impact. This is true for construction and across all sectors. Our low estimate for the

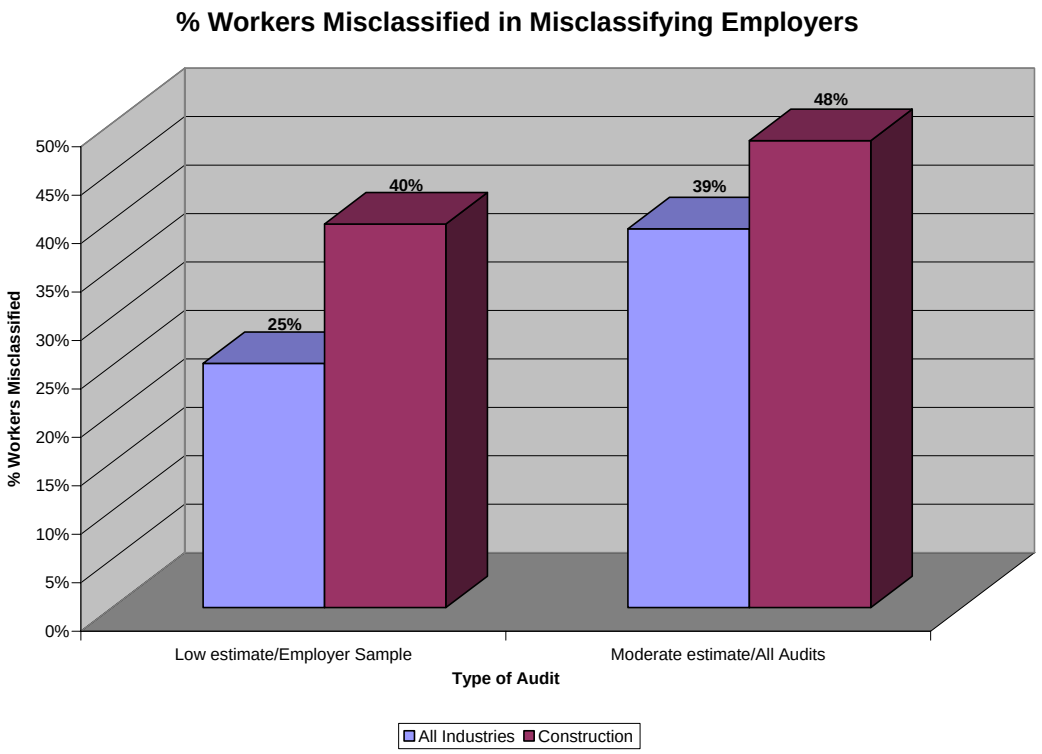
[4] The yearly number of workers over the period 2001-03 was 138,736 in construction, and 2,797,203 across all industries.
[5] Planmatics , 2000.

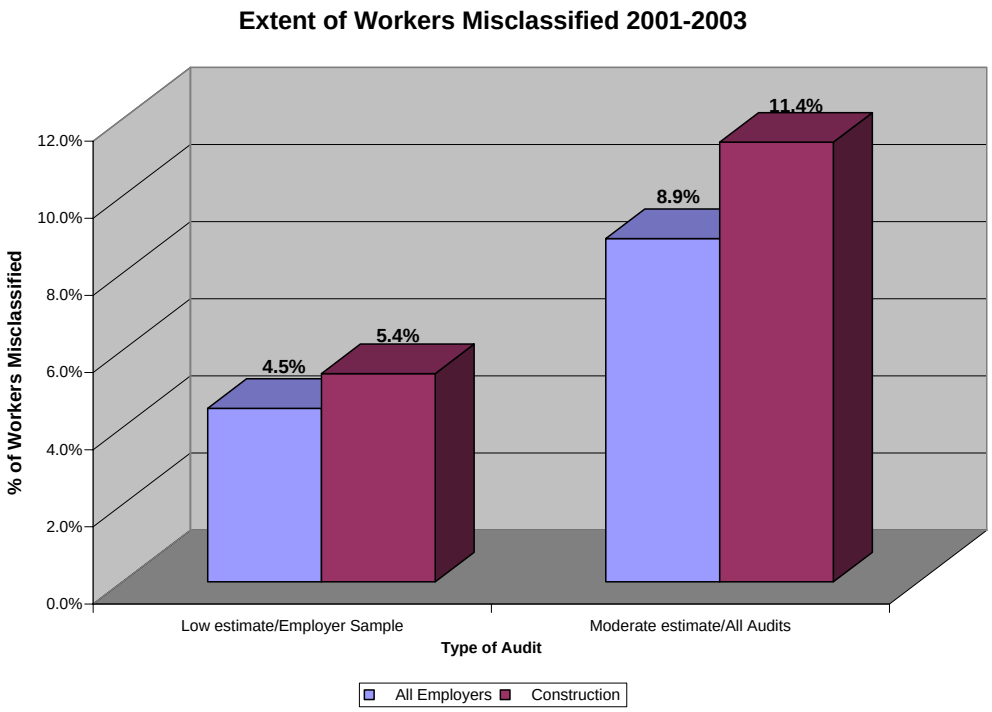
percent of construction employers found to be misclassifying was 10% for 1995-97 and 11% for 1998-2000 as compared to 14% for the 2001-03 period. The low estimate for all industries combined was 8% for the period 1995-97 and 11% for 1998-2000 as compared to 13% for the most recent period. The severity of impact, that is, the percent of workers misclassified *in the workforce of employers found to be misclassifying* appears to have increased as well.

- We believe that worker misclassification is a compelling problem requiring attention. It has significant consequences for workers, employers, insurers, and for tax revenues. We strongly recommend that a study employing both business and individual income tax returns be conducted with the Department of Revenue. It would provide an even more accurate measure of the tax revenue implications of misclassification. Workers, businesses, revenue collection agencies, and policy analysts all stand to benefit from better documentation of the impacts of misclassification.

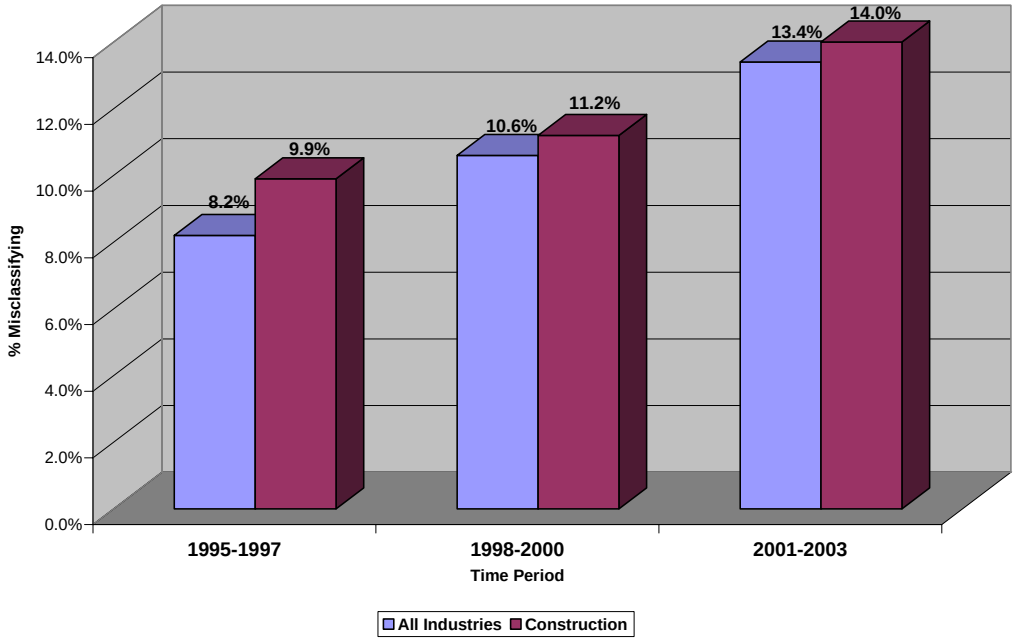
# Facts at a Glance



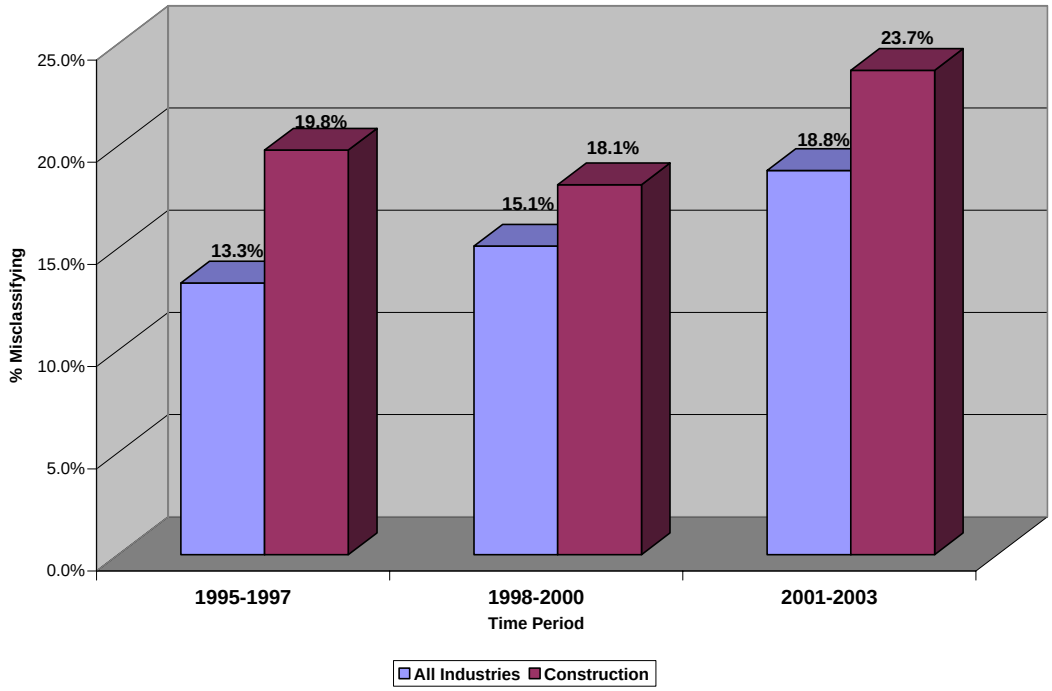

% Workers Misclassified in Misclassifying Employers
% Workers Misclassified
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
25%
40%
39%
48%
Low estimate/Employer Sample
Moderate estimate/All Audits
Type of Audit
All Industries
Construction


Extent of Workers Misclassified 2001-2003
% of Workers Misclassified
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
4.5%
5.4%
8.9%
11.4%
Low estimate/Employer Sample
Moderate estimate/All Audits
Type of Audit
All Employers
Construction

**Misclassification Rate by Time Period: Low Estimate/Employer Sample**




**Misclassification Rate by Time Period: Moderate Estimate/All Audits**



## Acknowledgements

This project received funding from the National Institute of Occupational Safety and Health through the Center to Protect Workers' Rights in Silver Spring, MD.

The authors wish to thank the Massachusetts Division of Unemployment Assistance (Department of Labor and Workforce Development). We are particularly grateful to members of the Division of Unemployment Assistance Revenue Services and Revenue Audits departments who provided access to de-identified audit data, prepared data files, and answered our numerous queries about variable definitions.

The authors also thank the members of this project for contributing to the implementation of the research and the interpretation of the results: Elaine Bernard, Ph.D. and Robert Herrick, Sc.D., Principal Investigators, as well as Mark Erlich of the United Brotherhood of Carpenters Local 40 and Prof. David Weil, Economics, Boston University and Harvard Kennedy School of Government. We also thank Lorette Baptiste and Dr. John Trumpbour at the Harvard Labor and Worklife Program.

# II. The Problem

*Misclassification occurs when employers treat workers who would otherwise be waged or salaried employees as independent contractors.* Or, as one report commissioned by the U.S. Department of Labor put it, "when workers (who should be) getting W-2 forms for income tax filing instead receive 1099- Miscellaneous Income forms."[6] In practice, these workers must take out their own taxes for Social Security and Medicare, rather than having the employer withhold them. But determining who is an employee, and who is a contractor, is sometimes far from simple. The distinction is complicated by deliberate deceptions on the part of employers (and workers, at times), who seek to avoid paying taxes and meeting other legal obligations to employees and to government. But even when there is no intent to deceive, ambiguities in employment law and relationships can result in misclassification, or make it easier to occur.

*How is misclassification accomplished?* Misclassification usually begins at the point when workers are hired. Practices vary widely. In one common pattern, employers put prospective hires to work as self-employed contractors and, for tax purposes, issue them a "1099" Miscellaneous income form. (Workers are sometimes referred to on construction sites as "1099s" or "subs," as well as independent contractors.) The paperwork does not stop there. Sometimes, before workers can begin employment, employers require them to purchase their own workers' compensation and liability insurance coverage. They are expected to sign certificates of worker's compensation insurance and of liability insurance as well as various other waivers absolving the employer of obligations. (However, because this workers' compensation insurance only covers the holders' employees, it has no value for the worker and only protects the employer in case of tax and/or insurance audits.) Another pattern, at the other end of the spectrum of practices, entails entirely informal arrangements with cash payment and no 1099 tax reporting. This second pattern leaves no documentation; the practice is part of what is termed the "underground economy" and is often paired with the hiring of unprotected, undocumented workers.

*Forces promoting employee misclassification include the desire to avoid the costs of payroll taxes, and of mandated benefits.* One factor stands out, however. A recent Department of Labor-sponsored report found that the "number one reason" for misclassifying workers lies in avoiding

[6] Planmatics, 2000.

payment of workers' compensation insurance premiums and thus escaping workplace injury and disability-related disputes.[7] Driven by increased medical costs, worker compensation costs have accelerated rapidly in recent years. And in industries such as construction worker compensation costs are particularly high.

*Misclassification creates severe challenges for workers, employers and insurers as well as for policy enforcement.* For workers who are misclassified, it creates immediate and long term problems. These include the lack of access to unemployment insurance, and to appropriate levels of worker compensation insurance. They entail liability for the full Social Security tax (rather than half for employees). They also include the loss of access to health insurance, and other employer-based social protection benefits. If injury strikes, it can be catastrophic for the worker.

Misclassification creates challenges for compliant employers because it creates an uneven "playing field." Employers who respect the law and classify employees appropriately have a higher wage bill and can get underbid by contractors that do not comply and have lower costs.

Misclassification presents a two-fold challenge for policy implementation. The *enforcement* of labor standards such as health and safety standards, or of wage and hours regulations is made more difficult in contexts where there are misclassified independent contractors. *Tax collection* is affected as well. This includes collection of unemployment insurance tax. It also includes state income tax because independent contractors are known to underreport their income.

The worker compensation insurance industry is also adversely affected by misclassification. Employers with misclassified workers have been known to surreptitiously add uncovered independent contractors, or those with insufficient coverage, back onto a company's worker compensation policy *after* they are injured. Therefore, benefits are paid out to workers for whom an insurance premium has not been paid according to a U.S. DOL commissioned study.[8]

Misclassification presents broader societal costs that are harder to document. For example, workers without health insurance might resort to publicly subsidized emergency medical care. The costs of "uncompensated care pools" make their way into the costs of health and worker compensation insurance. Also, workers who sustain injuries, and have inadequate worker compensation coverage, make use of public assistance when they are unable to work.

A problem of this importance for individual workers, businesses, and government requires thorough documentation. This study of the Center for Construction Policy Research represents a significant step in documenting employee misclassification in the Massachusetts construction industry and in estimating the costs of misclassification in terms of tax loss and worker compensation insurance premium losses. In subsequent work, these researchers will benchmark Massachusetts results with those of other New England states.

Using several years of de-identified data on unemployment insurance tax audits made available by the Massachusetts Division of Unemployment Assistance, we have developed estimates of the dimensions of misclassification in the state and particularly in the construction industry.[9] Using methods established in previous studies in particular one commissioned by the U.S. Department of Labor (Planmatics 2000), we present projections of the costs of misclassification for unemployment insurance, income tax, and worker compensation insurance systems.

Unemployment insurance (UI) tax audit records are a key source of information on employee misclassification. When an audit finds workers not covered by UI who should be (and documents under-reported wages), the cause is virtually always misclassification as independent contractor of

[7] Planmatics, 2000.
[8] Planmatics, 2000, p. 76.
[9] This study analyzes data on private sector employers exclusively.

someone who should be an employee included in the company payroll. Therefore, information from UI tax audits is a useful proxy for employee misclassification.[10]

Because this study relies exclusively on UI tax audits to develop estimates of the dimensions and impacts of misclassification, it addresses primarily the forms of misclassification that can be documented. It cannot fully capture underground economy activities in construction and other sectors.

# III. Dimensions of Misclassification in Massachusetts

## When employers engage in misclassification

During the years 2001-03, at least one in seven, or 14%, of MA construction employers are estimated to have misclassified workers as independent contactors. This conservative estimate translates into a minimum of 2,634 construction employers statewide. Across all industries[11] as a whole, 13% of employers were found to under-report worker wages and UI tax liability to the Commonwealth and thus to have misclassified workers. This represents about 26,000 employers statewide. This conservative estimate is 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 (Planmatics 2000).

*Less conservative methods suggest that construction misclassification could run higher and range up to one in four (24%) of MA construction employers.* Projecting this rate to actual DUA establishment counts, we estimate that up to 4,459 employers are misclassifying construction workers statewide. Construction employers appear to engage in misclassification more frequently than the average of employers across all industries. State wide, up to 19% of all employers misclassify at some point over the period, amounting to about 36,500 employers. This less conservative method includes a mix of random audits and of audits explicitly targeted based on past behavior (and thus more likely to uncover misclassification).

**Prevalence of Misclassification: Percent of Employers Found to Misclassify Workers as Independent Contractors - Massachusetts 2001-2003**

| | **Low estimate (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| All Industries | 13% | 19% |
| **Construction** | **14%** | **24%** |

**Estimated Number of MA Employers Found to Misclassify Workers 2001-03**

| | **Low estimate (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| All industries | 26,038 | 36,531 |
| **Construction** | 2,634 | 4,459 |

[10] In audit data, "new workers" that is, previously uncovered workers who are to be added to the employer payroll for UI tax purposes are proxies for misclassified workers.
[11] This "all industries" category includes Construction as well.

## Workers affected by misclassification

To understand how workers are affected by misclassification, we use two measures. The first measure is the percent of workers misclassified *within employers found to have misclassified workers.* This first measure is the degree of impact, or *severity of impact,* of misclassification when it occurs. The second is the percent of workers misclassified *among all workers in construction or in the state as a whole* (including employers who misclassify and those who do not). This second measure is the *extent* of misclassification.

1) **Severity of impact of misclassification:**

The measure of severity of impact indicates that in construction companies where misclassification occurs, it is a common occurrence rather than an isolated incident. According to the low estimate, 4 in 10 workers are misclassified in these employers. A less conservative estimate counts 1 in 2 workers affected among construction employers that are misclassifying. The severity of impact measure is higher in construction than average. Construction ranks among the top three industries in the state in terms of severity of impact.

**Percent of Workers Misclassified among Misclassifying Employers: 2001-2003**

| | **Low estimate- (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| All industries | 25% | 39% |
| **Construction** | 40% | 48% |

**2) Extent of misclassification**

*Over the 2001-03 period, at least one in twenty (5.4%) construction workers in MA is estimated to be misclassified as an independent contractor during 2001-03.* The *extent* of misclassification is slightly higher in construction than the average across all industries (4.5%). As we look at larger pools of data that include audits that are explicitly targeted based on past record, the extent of workers misclassified as independent contractors increases up to 11.4% in construction.

Based on these proportions, we estimate that the actual number of workers affected across the Commonwealth ranges from almost 7,500 to about 16,000 construction workers. For the workforce as a whole, it could range from about 125,700 to 248,206.

**Extent of MA Workers Misclassified as Independent Contractors**

| | **Low estimate- (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| All industries | 4.5% | 8.9% |
| **Construction** | **5.4%** | **11.4%** |

**Estimated Number of MA Workers Misclassified as Independent Contractors**

| | **Low estimate- (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| All industries | 125,725 | 248,206 |
| **Construction** | **7,478** | **15,790** |

## The problem worsens over time

The prevalence of misclassification has increased over the years since 1995 and so has the severity of impact. This is true for Construction and across all industries. This trend holds for random, or non-targeted, audits (low estimate/Employer Sample), a group of audits whose characteristics have not changed significantly over time, according to the DUA audit department. The trend also holds for all audits, a group whose composition has changed over time. The mix of audit methods has included a growing share of targeted audits and those are more likely to result in a finding of misclassification.[12] Nevertheless, findings from the random audits present compelling evidence that misclassification is increasing in construction as well as statewide, across all industries.

**Percent of employers found to be misclassifying across time: All Industries**

| | 1995-1997 | 1998-2000 | 2001-2003 |
|---|---|---|---|
| **Low estimate (Employer Sample)** | 8% | 11% | 13% |
| **Moderate estimate (All Audited Employers)** | 13% | 15% | 19% |

**Percent of employers found to be misclassifying across time: Construction Employers**

| | 1995-1997 | 1998-2000 | 2001-2003 |
|---|---|---|---|
| **Low estimate (Employer Sample)** | 10% | 11% | 14% |
| **Moderate estimate (All Audited Employers)** | 20% | 18% | 24% |

Additionally, where misclassification occurs, it is displaying greater severity of impact, meaning that the share of workers affected within misclassifying employers appears to have increased over the years. This pattern holds particularly for Construction.

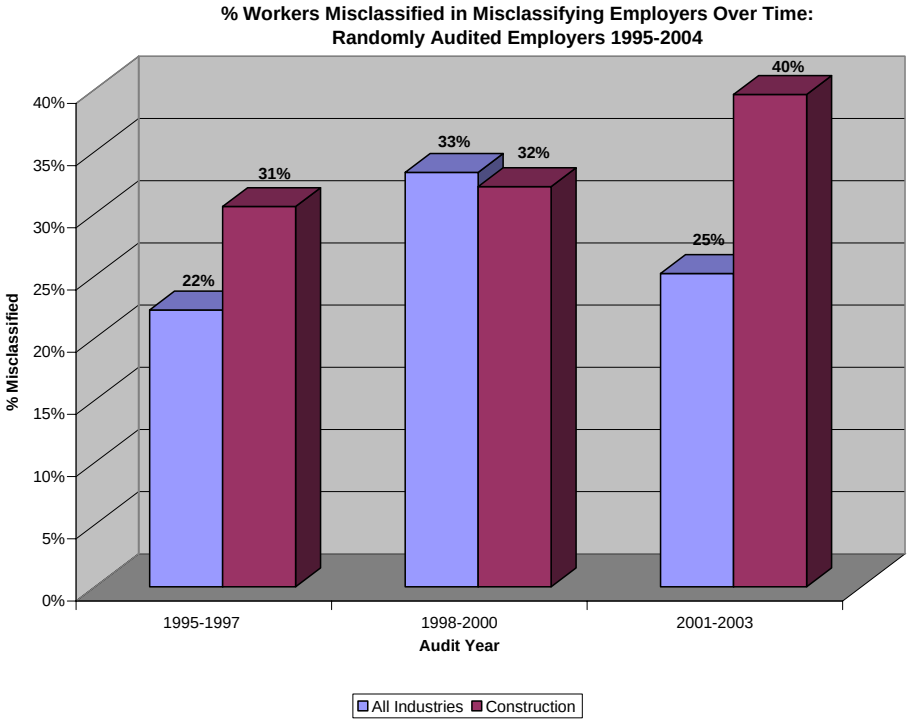
**Severity of Impact of Misclassification: % of Workers Misclassified in Misclassifying Employers Across Time: Low Estimate (Employer Sample)**

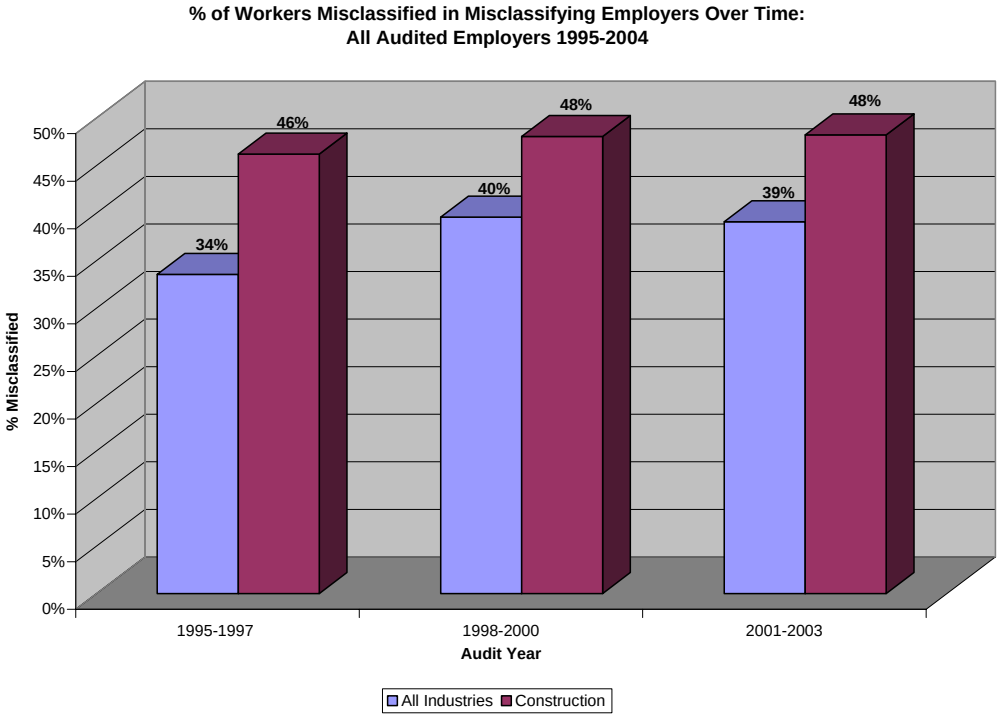
| Audit Year | **Construction** | All Industries |
|---|---|---|
| 1995-1997 | **31%** | 22% |
| 1998-2000 | **32%** | 33% |
| 2001-2003 | **40%** | 25% |

**Severity of Impact of Misclassification: % of Workers Misclassified in Misclassifying Employers Across Time: Moderate Estimate (All Audits)**

| | **Construction** | All Industries |
|---|---|---|
| 1995-1997 | **46%** | 34% |
| 1998-2000 | **48%** | 40% |
| 2001-2003 | **48%** | 39% |

[12] As discussed in a later section, targeted audits result from a study of past behavior related to UI tax payment or a contested UI claim.


% Workers Misclassified in Misclassifying Employers Over Time:
Randomly Audited Employers 1995-2004
% Misclassified
40%
35%
30%
25%
20%
15%
10%
5%
0%
22%
31%
33%
32%
25%
40%
1995-1997
1998-2000
2001-2003
Audit Year
All Industries
Construction


% of Workers Misclassified in Misclassifying Employers Over Time:
All Audited Employers 1995-2004
% Misclassified
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
34%
46%
40%
48%
39%
48%
1995-1997
1998-2000
2001-2003
Audit Year
All Industries
Construction

# IV. Implications of Employee Misclassification in Massachusetts

We estimate the implications of employee misclassification for unemployment insurance tax revenues as well as state income tax revenues. We also estimate the amount of workers' compensation insurance premiums lost due to misclassification. These cost estimates rely upon our *Low Estimates* of prevalence and extent of misclassification (random audits). They are therefore conservative estimates. In fact, our approach is more conservative than that used in the DOL commissioned study (Planmatics 2000) which used a rate of prevalence derived from mixes of random and targeted audits. (Further details on calculation methods are in the Appendix.)

## The implications of employee misclassification for Unemployment Insurance tax

Workers who should be misclassified as employees lose out when work ceases, and they are ineligible for unemployment insurance compensation. In some cases, workers may be unaware that they are ineligible. Some employer audits are triggered when workers file for unemployment insurance and the claim is contested.

In addition to individuals, the unemployment insurance system is also affected by misclassification. The unemployment insurance tax is a payroll tax and, when workers are misclassified, the tax is not levied on their earnings, as it should. We estimate that from $12.6 to $35.1 million of UI tax were lost over the period 2001-03 due to misclassification statewide. [13] Of that amount, from $1 to $3.9 million of UI tax were lost due to misclassification in the construction sector per se. These losses correspond to annualized averages ranging from $3.4 to $11.7 million statewide, and $334,000 to $1.3 million due to construction alone.

For the period 2001 to 2003, we further estimate that the state lost an estimated $83 to $142 in unpaid UI taxes per worker misclassified in all industries, and between $134 and $251 per construction worker misclassified (2001-2003).

**Estimate of UI Tax Impacts from Misclassification, MA 2001-2003[14]**

| | All industries | **Construction** |
|---|---|---|
| | | |
| Low estimate (Employer sample/Random audits) | $12,629,058 | $1,030,311 |
| Moderate estimate (All audits) | $35,125,471 | $3,961,678 |

To derive these estimates of the size of the UI tax loss, we replicated the method used in the 2000 US DOL commissioned report to assess the impacts of misclassification on UI trust funds. Essentially, the method entails computing the average tax loss per worker due to misclassification for the audit sample and multiplying this amount by the estimated number of workers misclassified statewide.

[13] The low estimate is derived using the percent of workers misclassified in the random/Employer Sample audit results only. The Moderate estimate is derived using the percent of workers misclassified in results from all audit types.
[14] These figures were computed using the methodology of Planmatics, Inc., in a report for the U.S. Department of Labor.

## The implications of employee misclassification for state income tax revenues

At income tax time, workers misclassified as independent contractors are known to under-report their personal income; therefore, the state experiences a loss of income tax revenue. Based on an estimate that 30 % of the income of misclassified workers is not reported, we roughly estimate that $91 million of income taxes are lost. Of these, $4 Million are lost due to misclassification in construction. Based on an estimate that 50% of misclassified worker income goes unreported, a rough estimate of income tax loss amounts to $152 million of lost tax revenue. Of these, $7 million are due to misclassification in construction.

This estimate is a broad estimate applying the state's 5.3 percent income tax rate to the unreported share (30% or 50%) of personal income of misclassified workers. We assumed that any standard or itemized deductions were taken fully on the reported share of income and therefore do not apply to the unreported income.[15]

| | 30% of income is not reported | 50% of income is not reported |
|---|---|---|
| All industries | $91,546,482 | $152,577,470 |
| Construction | $ 4,161,507 | $ 6,935,845 |

## The implications of employee misclassification for worker compensation

The workers compensation insurance industry loses on premium collection, a significant issue if, as is reported in previous studies, misclassified workers are surreptitiously added onto companies' worker compensation policies *after* they are injured. For these workers, benefits are paid out even though premiums were not collected.

Data were not available to us to compute the extent to which benefits are paid to workers for whom premiums were not paid. However, we estimate the amount of insurance premiums that would have been collected were workers not misclassified.

We estimate that over the period 2001-03, up to $7 million of worker compensation premiums were not paid for misclassified construction workers and up to $91 million of premiums were not paid for misclassified workers across all industries. This estimate is broad. It applies an average worker compensation premium of $15 per $100 of payroll to the estimated amount of wages for misclassified workers statewide, in construction and across all industries. Alternatively, with an average worker compensation premium of $12 per $100 of payroll, we estimate that $5.5 million of premium were not paid for misclassified construction workers and $73 million were not paid for misclassified workers in all industries.

A more detailed estimate would apply detailed rates for construction trades (such as finished carpentry, or drywall) appropriately weighed by the share of employment accounted for by each trade.

# V. What lies behind the Low and Moderate Estimates?

We have taken a *conservative approach* in estimating the overall prevalence, extent, and tax implications of misclassification in Massachusetts. We derived estimates on the number of employers engaged in misclassification, the number of workers affected, and their tax revenue

[15] For this computation, we estimated the annual (self employment) earnings of misclassified construction workers to be $35,000. This is a conservative estimate, lower than median earnings in the state. We used this estimate because we found the UI audit file to be an unreliable source of information on total earnings. We estimated average annual earnings for workers across all industries to be $45,796, a simple average computed on the BLS-ES202 database for Massachusetts.

consequences using the results of a subset of audits that are the audits labeled random,[16] or non-targeted, according to standard auditing practices. ( The Massachusetts Division of Unemployment Assistance refers to these audits as the "Employer Sample.")

In choosing to work with Unemployment Insurance tax audits to develop low and moderate estimates of misclassification, we took the lead from a study commissioned by the U.S. Department of Labor (Planmatics 2000). Our estimates for "low," and "moderate" rates of misclassification are based on the different categories employed by the DUA for selecting audit candidates. *Low* estimates are based solely on audits listed here as "random" or less targeted (the Employer Sample) while *moderate* estimates are based on all categories of audits from random to targeted. Targeted audits find higher levels of prevalence of misclassification. (Further details are provided in the Appendix.)

# VI. How does the situation in construction compare to that in other industries?

In Massachusetts, the percent of construction employers engaged in misclassification and the overall percent of workers affected are slightly higher than average but not among the highest. *However, when construction employers are found to be misclassifying, the percent of their workers affected by misclassification ( "severity of impact" measure) is among the highest among industrial sectors*. In other words, the construction sector as a whole has a prevalence of misclassification that is high but, most importantly, it includes firms that, when engaged in misclassification, do so for a significant share of their workers. In the employer sample, among employers engaged in misclassification, up to 40 percent of the workforce is found to be misclassified.

### Prevalence of Misclassification by Industry and Audit Type – 2001-03

| | **Low estimate- (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| Transportation/utilities | 21.4% | 28.7% |
| Information | 20.9% | 28.7% |
| Professional/business services | 19.0% | 22.2% |
| Education/health services | 15.7% | 18.7% |
| Natural resources | 14.6% | 17.6% |
| **Construction** | **14.0%** | **23.7%** |
| **Total (all industries)** | **13.4%** | **18.8%** |
| Manufacturing | 12.9% | 15.3% |
| Other services, private | 12.5% | 20.0% |
| Financial activities | 10.8% | 15.7% |
| Leisure/hospitality | 10.4% | 13.7% |
| Trade | 10.1% | 13.4% |

[16] This is the nomenclature used by US DOL to describe these audits (Planmatics 2000).

**Extent of Misclassification by Industry and Audit Type: Percent of Total Employment Affected**

| | **Low estimate- (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| Transportation/utilities | 12.0% | 17.0% |
| Other services, private | 8.5% | 13.1% |
| Professional/business services | 7.2% | 13.5% |
| Education/health services | 5.4% | 16.1% |
| **Construction** | **5.4%** | **11.4%** |
| **Total (all industries)** | **4.5%** | **8.9%** |
| Natural resources | 4.1% | 10.6% |
| Leisure/hospitality | 4.0% | 4.8% |
| Trade | 3.8% | 5.0% |
| Financial activities | 3.7% | 7.2% |
| Information | 3.1% | 14.3% |
| Manufacturing | 1.4% | 2.5% |

**Severity of Impact by Industry and Audit Type: Percent of Misclassified Workers among Employers Found to be Misclassifying**

| Industry | **Low estimate- (Employer Sample)** | **Moderate estimate (All Audits)** |
|---|---|---|
| Transportation/utilities | 48% | 52% |
| Other services, private | 44% | 52% |
| **Construction** | **40%** | **48%** |
| Professional/business services | 29% | 43% |
| Natural resources | 28% | 43% |
| Leisure/hospitality | 26% | 29% |
| **Total (all industries)** | **25%** | **39%** |
| Education/health services | 24% | 55% |
| Financial activities | 23% | 34% |
| Trade | 19% | 25% |
| Manufacturing | 13% | 16% |
| Information | 10% | 44% |

# VII. Strengths and limitations of estimates of misclassification

Prior research on misclassification has generated estimates *for all industries* primarily, rather than for construction per se. Only one federal study provides a 1984 estimate that 20 % of construction employers engage in misclassification (GAO 1996).

In this section, we examine in greater detail estimates from other studies for all industries and compare these with the estimates we derived from our analysis of the Massachusetts UI tax audit data. This exercise has enabled us to put lower and upper bounds to our estimate.

## Comparing Massachusetts 2001-03 estimates to data from other states

The table below summarizes the results of the study commissioned by the U.S. Department of Labor for misclassification *across all industries* in nine states (Planmatics 2000), as well as a 1984 Treasury Department estimate (U.S. GAO 1996) for employers nationwide.

**Past State and National Estimates of the Prevalence of Employer Misclassification**

| | Low | Moderate | High |
|---|---|---|---|
| All industries (MA) | 13% | 19% | |
| All industries (9 states) 1/ | 5-10% | 13-23% | 29-42% |
| All industries (US) 2/ | | 15% | |
| **Construction MA** | **14%** | **24%** | |
| **Construction (US) 2/** | | **20%** | |

1) All industries based on DOL/Planmatics state estimate ranges, ~1999
2) Based on 1984 Treasury Department estimate, cited by U.S. GAO. (1996)

For all industries, our estimates for MA generally fall close to or within the ranges found in other states and for the US as a whole. The US DOL-commissioned study arrayed 9 states according to their mix of "targeted" and "random" audits. In the table above, the low estimate for the 9 states sample is derived only from states with a low proportion of targeted audits in their audit mix. Conversely the high estimate is derived only from results for states with higher share of targeted audits in their mix and the moderate estimate from states with 30 to 50 % of random audits in their mix.

Our study's moderate estimate —derived from the complete and mixed set of audits— falls directly within the ranges found in other states with similar audit mix. Our low estimate for all Massachusetts employers is slightly higher (13%) than for states from the U.S. DOL study with a high share of random audits (5-10%).

The next table compares MA to the DOL study's state findings in greater detail. It also presents the degree to which each state did target audit candidates versus relying on more "random" selection methods. For the 9 states in the DOL study, we observe that, as expected, the more a state targets employers (by size/industry/location, by past record, by presence of worker claim), the higher is the observed rate of misclassification. Massachusetts generally conforms to this pattern. For the period 2001-2003, the DUA utilized "random" (less targeted) methods for a little over half of all audits (56%). It is thus closest to the "moderately random" states listed below. Our observed rate of misclassification (from audits of all types) which generated the Moderate estimate for all industries, at 19%, falls between the "low random" state of Minnesota (13% employers misclassifying) and moderate-random Wisconsin, with a misclassification rate of 23%.

**Prevalence of Misclassification in All Industries: MA vs. DOL State Estimates**

| State | % employers misclassifying workers | % of audit group randomly sampled | Dominant Audit method |
|---|---|---|---|
| **MD** | 5% | 100% | High randomness |
| **WA** | 10% | 98% | High randomness |
| **CO** | 5% | 90% | High randomness |
| **MA** | **19%** | **56%** | **Mod-High randomness** |
| **MN** | 13% | 30-50% | Moderate randomness |
| **NE** | 10% | 30-50% | Moderate randomness |
| **NJ** | 9% | 30-50% | Moderate randomness |
| **WI** | 23% | 18% | Low randomness |
| **CN** | 42% | 5% | Low randomness |
| **CA** | 29% | 1% | Low randomness |

Another source of comparison comes from another New England state, Maine.[17] The state relies exclusively on audits that are considered fully random. For the Maine Construction industry, the rate of misclassification is 14.2 percent (Peterson 2004 for Maine Department of Labor, to be released). On a number of dimensions — construction wages as share of state's average wage, distribution of construction establishments by subsectors, and distribution of employment by subsectors— the Maine construction industry does not differ significantly from that in Massachusetts. However, the two state construction industries have different unionization rates; about 10% in Maine as compared to 28 % in Massachusetts (estimates). Also, the share of value of construction work is highest for the building, developing and general contracting category in Massachusetts (43% of construction work$$$). In contrast, it is highest for the specialty trade contractors in Maine (44% of construction work $$$).[18]

# VIII. Next Steps

This study has made significant headway toward documenting the dimensions and impacts of misclassification in construction in the state. Next steps include, first, examining more closely the misclassification of workers across construction subsectors (for example, carpentry or dry walling) because accounts from the field indicate that there is wide variation across subsectors in prevalence. Second, next steps also include comparing the findings from Massachusetts with those from other New England states. While keeping in mind variations in characteristics of the construction industry across states (e.g. firm size, distribution of activity across types of contractors), we plan to use estimates of incidence, severity, and extent derived from UI tax audit results elsewhere in New England as a further means to gauge the dimensions of misclassification in Massachusetts. Third, we will explore in greater detail policy proposals for addressing misclassification and look at approaches that have been successful in other states. This task will be particularly timely if misclassification is growing in prevalence as it appears to be. A final report for this project will

[17] Audit results from Maine will be the object of a separate report produced collaboratively with the Maine Department of Labor.

[18] Sources used included: U.S. Department of Labor, Bureau of Labor Statistics, ES-202 Series (wages, distribution of employment and of establishments by subsector); U.S. Census Bureau, Current Population Survey (unionization); and U.S. Bureau of the Census, 1997 Economic Census, Construction—Geographic Area Series. (Massachusetts, Maine). General Statistics for Establishments With Payroll By State. Table 2, page 9 (value of construction work by subsector)..

provide an analysis of policy issues and present the results of Massachusetts in the context of those for other New England states.

More importantly, this study's findings have established that worker misclassification is indeed a compelling problem requiring attention and one with significant consequences for workers, employers, insurers, and for tax revenues. A problem of this importance requires further and more precise documentation, one that would enable analysts to project revenue losses with greater confidence than is possible when relying on UI tax audit data which require making several assumptions.

A tested and more accurate method for measuring misclassification has been established in a national study by the U.S. General Accounting Office (U.S. GAO 1989) and rests on the combined use of business and individual tax information. Such a study could be replicated with state level tax information. This approach entails matching "1099 information returns" filed by businesses on behalf of their independent contractors with individual income tax returns for the workers concerned. This match enables analysts to apply criteria such as deriving all or most of one's income from a single business payer (a strong indicator of misclassification) and thus to estimate the percent of workers misclassified. The federal study (U.S. GAO 1989) that first established this method found that very stringent criteria (e.g. at least $10,000 of income all from a single business payer) point to misclassification that, in turn, is confirmed in virtually all cases (through an IRS audit). Using these criteria, or slight variations of these criteria,[19] would generate measures of the number of workers misclassified in a given tax year and the number of businesses engaged in misclassification, as well as a very reliable accounting of misclassified earnings and tax losses.

We strongly recommend the replication of this federal study with Massachusetts tax information. Such a replication would require investment from, and the collaboration of, the Massachusetts Department of Revenue because it entails using individual tax record information (as well as the sharing of federal business income tax return information by the Internal Revenue Service with the Massachusetts DOR). The information generated with the present study presents a compelling case for making this investment in better documenting misclassification in the Commonwealth through a study of tax records. More precise measures of misclassification would inform a more specific policy debate about means to address it. Our study also makes clear that multiple parties stand to benefit from better documentation of the dimensions and implications of worker misclassification —individual workers stand to gain better social protection, tax authorities stand to recover tax revenue losses, and compliant employers would benefit from an even playing field.

Further research will also need to devise means to document underground activities and their implications. These do not leave traces in UI or tax records that we can readily examine.

[19] For example, the criterion might be amended to receiving most or 70% of one's self-employment earnings from a single business payer.

# References

Alpert, William T. 1994. "Estimated 1992 Costs in Connecticut of the Misclassification of Employees," Department of Economics, University of Connecticut.

de Silva, Lalith, et al. 2000. *Independent contractors: prevalence and implications for Unemployment Insurance programs*. Planmatics, Inc., Prepared for US Department of Labor Employment and Training Administration.

Petersons, Kurtis. 2004. *Prevalence of Misclassification in the Construction Industry: Executive Summary*. Maine Department of Labor. Bureau of Labor Standards. Unpublished Report, August.

U.S. Bureau of the Census, Current Population Survey 1998-2004.

U.S. Bureau of the Census. 1997 Economic Census. Construction—Geographic Area Series. (Massachusetts, Maine).

US Department of Labor, Bureau of Labor Statistics, ES-202 Series

U.S. GAO. 1996. *Tax Administration: Issues in Classifying Workers as Employees or Independent Contractors*. GAO/T-GGD-96-130.

US GAO. 1994. *Tax Administration: Estimates of the Tax Gap for Service Providers*. GAO/GGD-95-59.

US GAO. 1989. *Tax Administration: Information Returns Can be Used to Identify Employers Who Misclassify Workers.* GAO/GGD-89-107.

# Appendix A - Estimation Methods

*Audit Year*
We assigned each audit record to a specific year (1995-2004) and to three-year cycles (1995-1997, 1998-2000, and 2001-2003). This was done on the basis of the Massachusetts DUA's "year complete" variable, using the calendar date of the audit's official completion. While a portion of the audits may have actually been initiated in the year prior to completion, we believe that the resulting distortion is small when audits are grouped in three-year periods.

*Calculating the Prevalence of Employer Misclassification (% of employers with misclassified workers)*
Employers are assumed to be misclassifying workers if their audit record reveals one or more 'new worker.' New workers are those who were not covered previously by Unemployment Insurance. We calculate the percentage of all (randomly) audited employers who are misclassifying, and apply the result to the total number of UI-covered employers in the state. We thus assume that the sample of employers selected for auditing is representative of (can stand for) all UI-contributing employers statewide.

*Calculating the Severity of Impact of Misclassification (% of workers misclassified within employers misclassifying workers as independent contractors.)*
To estimate the severity or degree of misclassification among those employers who under-report workers (who would otherwise be covered by UI), we assume that audited employers found to be misclassifying can represent all misclassifying employers in the state. We compute the percentage of workers among these audited employers who are misclassified (or "new workers,") and use it to estimate the statewide severity (% misclassified) among all Massachusetts employers that misclassify workers.

*Calculating the Extent of Workers Misclassified (% of all workers misclassified as independent contractors)*
We assume that total workers employed by audited employers can represent all UI-covered workers statewide. To estimate the extent of worker misclassification, we compute the percentage of workers at all audited employers who are "new workers," or previously unreported for purposes of unemployment insurance taxes. This percentage is applied to the total number of UI-covered workers in the state.

*Calculating Losses in Unemployment Insurance Taxes*
Revenue losses from underpayment of UI taxes (owed on workers misclassified as independent contractors) were estimated using the method employed in the DOL-requested study (Planmatics, 2000). We computed an average tax loss per worker due to misclassification of workers in the audit sample. We assumed, as before, that these workers could stand for all workers statewide misclassified as independent contractors (and that the distribution of wages was similar). The result was multiplied by the estimated number of workers misclassified statewide.

*Calculating Losses in the State Income Tax*
To compute losses in state income tax revenue, we multiplied the estimated number of misclassified workers statewide (7,478) by an estimated average yearly income level for construction workers of $35,000. We then made two estimates of "hidden income" using alternative assumptions about the amount of income unreported by these workers (50% and 30%). Multiplying each of these results by 5.3% (the state income tax rate) provided a range of estimated state income tax losses.
We chose an average earnings level for construction workers of $35,000 per year, a level much lower than median earnings for Massachusetts and, therefore, a conservative estimate. The level is higher than earnings culled from the audit database but we had concerns about the reliability of those data

for portraying the level of earnings in the state. For earnings across all industries, we used average annual earnings for workers across all industries at $45,796, a simple average computed on the BLS-ES202 database for Massachusetts.

*Calculating Revenue Losses on Worker Compensation Insurance Premiums*

We assumed that all average WC premiums for workers, including construction workers, can be estimated by assuming $15 per $100 of payroll for workers compensation. We computed unreported wages from misclassifying employers as a percentage of total payroll from randomly audited firms, and assumed that this could represent the percentage of wages unreported from misclassifying employers statewide. Applying this to the actual total wages of UI-contributing employers statewide yielded an estimate of unreported wages for employers in all industries and construction employers. Taking 15% of these figures produced estimates of WC revenue losses. We also computed a lower estimate of premium losses by setting the WC rate at $12 per $100 of payroll.

# Appendix B - The Role of Audit Methods

The report commissioned by the US Department of Labor used Unemployment Insurance (UI) tax audit results from 9 states to obtain an estimate of misclassification (Planmatics 2000). Unemployment Insurance Tax audits seek to establish whether all workers supposed to be covered by unemployment insurance are in fact covered. Most often, when workers are not covered, it is because they were classified as independent contractors. When an audit finds workers not covered by UI who should be, they are reclassified as a "new worker" on the payroll subject to taxation. Therefore UI tax audits are a useful source of information about misclassification, one that has been relied upon by previous studies such as the DOL commissioned report.

UI tax audits are the best source of information on misclassification behavior available to researchers to date, and have been used by the US Department of Labor to gauge the prevalence and extent of misclassification. Using them to estimate misclassification, however, is not a straightforward matter. UI tax audit practices aim at redressing tax loss. The sampling of employers for audit purposes is not meant to be statistically random; it is meant to assist in UI tax collection. Some of the audit methods used are targeted; they aim to audit employers with a high likelihood of misclassification based on past UI tax record. Therefore these methods result in a relatively high observed rate of misclassification. Conversely, other audit methods are not targeted; they are conventionally called random audits. All state UI tax revenue departments practice a mix of methods. Therefore, audits are not a statistically perfect source of information; they allow for an estimation rather than an actual measure of the dimensions of misclassification.[20]

The Massachusetts Division of Unemployment Assistance (DUA) conducts random audits based on broad guidelines provided by US DOL for non-targeted audits. The Employer Sample (random audits) consists of audit candidates from the UI Tax employer database (Tax System) that fit limited, DOL recommended, criteria such as employment size, distribution of geographic location and industry. The results yielded by these audits provide a conservative estimate of the prevalence and extent of misclassification in the state as a whole.

The DUA performed 5,957 audits over the period 2001-03. Slightly over half (56%) of the audits were drawn from the "Employer Sample." [21] They are referred to here as "random" (sampled but prescreened on the basis of selected criteria), or "not targeted." [22]

The remainder of DUA audits were targeted audits based on contested unemployment claims and/or a determination that a worker is in fact an employee, or because of delinquent UI tax filings over the years. Their purpose is to locate cases of likely misclassification. Targeted audit methods include the following categories:

1) "Targeted Type 1" or Request Multiple (RM) audits: The employer has three quarters of filings delinquent within the last three years. (20 % of audits in 2001-03.)
2) "Targeted Type 2" or Request Delinquency (RD) audits: The employer has multiple delinquent quarters due to late registration, often related to UI claims made by workers. (7 % of audits in 2001-03.)
3) "Targeted Type 3" or Subjectivity Letter (SL) audits: The employer is either made subject of an audit as the result of a claim or determination has been made that an employer/employee relationship exists. (18% of audits in 2001-03.)

[20] An actual measure would require a large scale random survey of workers and employers throughout the state.
[21] There were 919 construction audits, of which 428 were random audits.
[22] The "audit rate" or percent of audited employers in total employers was 3.1 percent across all industries, and 4.9 percent in construction. These rates represent declines from the period 1995-2000 when greater resources were available for auditing: 5 percent of employers across all industries were audited and 6 percent of construction employers were audited. Also random/Employer Sample audits amounted to over 80 % of audits in the earlier period 1995 to 2000. With declining resources for auditing, targeted audits are used with more frequency to aid in tax collection.

As can be seen below, more targeted audit methods find higher prevalence of misclassification, as expected. Among all audit methods, Subjectivity Letters and "Request Multiple" audits find misclassification most frequently. This is true for construction as well as for all industries. The prevalence rates obtained from these targeted methods provide an "upper bound" for an estimate of misclassification in the state.

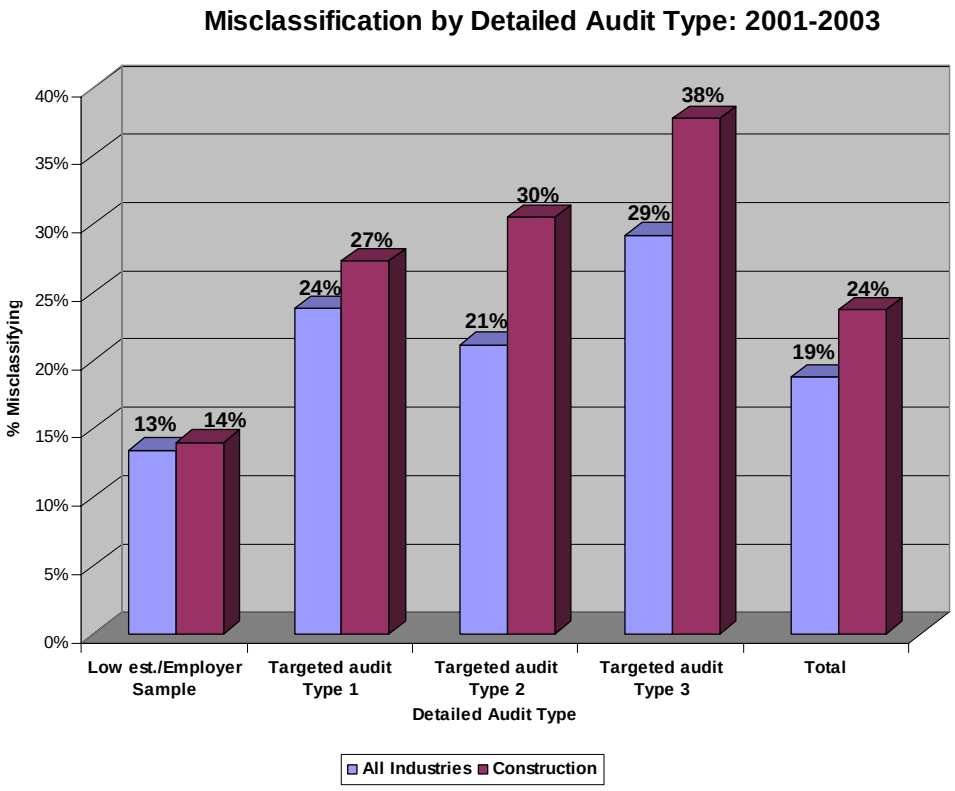
**Rates of Misclassification by Detailed Audit Type: All Industries**

| | **Low estimate- (Employer Sample)** | **Targeted Type 1 (Request Multiple)** | **Targeted Type 2 (Request Delinquent)** | **Targeted Type 3 (Subjectivity letter)** | **Moderate estimate (All Audits)** |
|---|---|---|---|---|---|
| **Misclassifying Employers** | 448 | 278 | 83 | 310 | 1119 |
| **All Audited Employers** | 3335 | 1168 | 392 | 1062 | 5957 |
| **% Misclassifying** | 13% | 24% | 21% | 29% | 19% |

**Rates of Misclassification by Detailed Audit Type: Construction Employers**

| | **Low estimate- (Employer Sample)** | **Targeted Type 1 (Request Multiple)** | **Targeted Type 2 (Request Delinquent)** | **Targeted Type 2 (Request Delinquent)** | **Moderate estimate (All Audits)** |
|---|---|---|---|---|---|
| **Misclassifying Employers** | 60 | 56 | 25 | 77 | 218 |
| **All Audited Employers** | 428 | 205 | 82 | 204 | 919 |
| **% Misclassifying** | 14% | 27% | 30% | 38% | 24% |

For our estimates of impacts, we have used results from random audits only (Employer Sample) as a base. This approach is more conservative than that taken in the US DOL commissioned study (Planmatics 2000). That study relied on results from both random and targeted audits (to the exclusion of very targeted audits) to generate the estimates used to project tax revenue losses.


Misclassification by Detailed Audit Type: 2001-2003
% Misclassifying
40%
35%
30%
25%
20%
15%
10%
5%
0%
13%
14%
24%
27%
21%
30%
29%
38%
19%
24%
Low est./Employer Sample
Targeted audit Type 1
Targeted audit Type 2
Targeted audit Type 3
Total
Detailed Audit Type
All Industries
Construction