Technical Advisory Board Report

Findings and Implications of the RSI Report to the Joint Task Force on Employee Misclassification and the Underground Economy: Contractor Use, Analysis, and Impact Results

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Preamble: The RSI Report and the Technical Advisory Board

In order to assess the extent of the problem of misclassification and of unreported compensation in the underground economy, the Massachusetts Joint Task Force on Employee Misclassification and the Underground Economy (JTF) commissioned an analysis of these practices in 2012. The study's purpose was to estimate the frequency, scale, and consequences of misclassification and the underground economy in the Commonwealth. In designing the study, the JTF acted on recommendations of the 2004 study of misclassification of workers in Massachusetts that advocated basing future research on more detailed compensation data than had been available at that time (see Carré and Wilson 2004). This included drawing on data not only from the Massachusetts Department of Unemployment Assistance used in the 2004 analysis, but also data from the Department of Revenue (DOR) and the Internal Revenue Service (IRS) including business filings of W-2 employment and 1099 contracting. Revenue Solutions, Inc. (RSI) was selected by DOR as a member of the JTF, to undertake the analysis and write a report of their findings. The RSI report provides a detailed description of the specific aims and analyses they undertook.

The JTF also created a Technical Advisory Board (TAB) made up of the authors of this report to work with the RSI team during their analysis. Because of the confidentiality of the data, the Technical Advisory Board could not and did not participate in the creation of the data set or the analysis of the data. The TAB did, however, offer responses and suggestions for improvements in a series of meetings with the JTF and RSI.

The Technical Advisory Board was also charged with writing an independent assessment of RSI's final report to the Joint Task Force. What follows is our assessment. We begin by providing context on the use of contracting and the problems of misclassification and the underground economy.

We then discuss RSI findings regarding: the extent of contracting in the Massachusetts economy; the measurement of misclassification and the underground economy; the association between misclassification and the earnings of employees and contractors; and the effects of misclassification and the underground economy on tax revenues. We conclude with a set of recommendations regarding future studies of misclassification and the underground economy.

Introduction: The Problem of Misclassification and the Underground Economy

Independent contracting is a well established and growing form of business organization. In 1995, there were 8.3 million workers in the US classified as independent contractors (or 6.7% of the workforce). By 2005 (the most recent period for which national estimates are available), there were 10.3 million independent contractors (or 7.4% of the workforce).[1]

The use of contractors to fill specialized needs and buffer changing economic conditions is a normal part of economic activity. A small retail store without any internet savvy employees, for example, might find it more efficient to use an independent contractor to build its web site rather than hire an employee to do the job. Independent contracting is also a common form of "non-standard employment" used during periods of unexpected surges in demand for a businesses' goods or services.[2] When demand is high, a company might need contractors for a short period of time until the

[1] These estimates are based on the Contingent Work Supplement to the Current Population Survey. See U.S. General Accountability Office (2006).

[2] Note that independent contracting is only one form of non-standard employment drawn on to deal with the need for changes in demand. Typically, companies maintain a "core" of workers as employees in standard employment, while also maintaining a "periphery" of workers through such non-standard arrangements as part-time employment, labor brokers, temp-agencies, or day laborers. Non-standard employment adds complexity to the legal definition of employment. If, for example, a worker is hired by a business through a temporary agency, the agency would be the direct employer of the worker, while the business would pay the agency for these services. See Kalleberg (2011), Osterman and Shulman (2011), and Stone and Arthurs (2013) for useful discussions of the different forms of non-standard employment. Weil (2014) discusses the evolution of the "fissured workplace" how in many industries characterized by shifting many of the functions traditionally done by the core workforce to non-standard arrangements including but not limited to independent contracting. For an economic model of the demand for core and periphery workers see Rebitzer and Taylor (1991).

spike in demand for products or services is met. In general, the demand for independent contracting moves with the economy as a whole--it expands with economic growth and as labor market conditions tighten and contracts with recessions and weak labor markets.

Misclassification arises when businesses classify workers as independent contractors who are engaged in activities that in most respects reflect an employment relationship. Determining whether or not workers are legitimately independent contractors has important consequences for businesses, for workers, and for society as a whole.

By wrongly classifying workers as independent contractors, a business engaged in misclassification avoids payroll taxes as well as required payments into the workers compensation or unemployment insurance systems. Misclassification also allows businesses to avoid other legally-mandated responsibilities such as minimum wage and overtime rules, workplace safety regulations, or coverage under employer provided benefits like health care or pensions. By avoiding these mandated responsibilities, businesses that engage in misclassification may reduce their costs and improve their competitive position relative to businesses that do not misclassify.

Misclassification places burdens on workers and society as well. When workers are improperly classified as independent contractors, payroll and income taxes fall solely to the contractor rather than being split between workers and employers. Workers classified as independent contractors also lose minimum wage and overtime protections. In Massachusetts, misclassified workers are still afforded access to unemployment insurance and workers compensation benefits. Because misclassifying employers do not pay unemployment insurance taxes or workers compensation insurance premiums, the practice undermines the funding mechanisms built into these social insurance systems.[3]

[3] If the DUA finds that a business has misclassified a worker, the claimant is still able to collect benefits even if his employer has not paid into the UI system, because a reserve buffer to deal with this type of situation is built into all employers' UI tax rates. Similarly, under the workers' compensation system, if an employer does not have an

Who is an Employee and Who is an Independent Contractor?

One might imagine that there exists a simple legal definition that cleanly distinguishes employees from independent contractors. Unfortunately, this is not the case. Complex case law has developed under the common law, the different federal statutes governing the workplace and state workplace laws regarding the definition of employment.[4] This complexity makes it quite difficult to measure and to regulate misclassification.

In the 1990s, a series of reports beginning with a study by Carré and Wilson in Massachusetts documented the presence of significant misclassification, particularly in the construction industry.[5] Although construction had always relied on contracting to efficiently complete projects, these studies found that many subcontractors were classifying their own direct workforce as independent contractors. In trades like sheetrocking and framing carpenters, members of a work crew were commonly paid as separate, independent contractors, even though the construction company hired, supervised, directed, and fired the individuals on its crews. The growing use of independent contracting was also documented in sectors like mining, manufacturing and low-skilled work in other industries.[6]

Concern over the implications of this trend led to a significant revision of the Massachusetts law dealing with independent contracting in 2004. The new law amended prior approaches to addressing

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insurance policy and a worker is injured, the worker will receive compensation from the workers compensation trust fund, which comes from a percentage of premium payments that employers pay. In either case, however, payment of the workers drains the trust fund, and represents a *de facto* transfer from employers who follow the law to businesses that do not.

[4] The distinctions between employees and independent contractors originally arose from tort law regarding workplace injuries. Federal and state legislation on the workplaces in somes cases draw on the definitions and tests arising from common law interpretations of liability and in other cases created new definitions for the distinction. See Weil (2014), Chapter 8 for a general discussion.

[5] See Carré and Wilson (2004).

[6] For mining, see Crandall, Starrett, and Parker (1998). Erickcek, Houseman, and Kalleberg (2003) examine the impact of temporary service and contracting on low-skill workers in auto supply, hospitals, and public schools. For estimates of the growing use of contracting generally in a variety of industries during the 1990s and early 2000s, see Dey, Houseman and Polivka (2010).

the problem of misclassification by creating a presumption that workers engaged by a business are employees unless three tests for legitimate independent contracting were met. First, that the individual engaged in the activity was free from control and direction in the performance of that activity both in word (contract) and deed (how they actually undertake their work). Second, that the activity provided by the independent contractor represents work outside the usual course of business of the contracting business (i.e. that it is a specialized function not ordinarily undertaken by the business). Third, that the individual engaged in the activity is part of a trade, occupation, profession, or business that typically provides such services as independent contractors.[7]

In addition to misclassification, a related problem of increasing concern to states like Massachusetts arises where compensation to workers is either unreported or underreported. This commonly occurs where workers are paid under-the-table in cash, and therefore are not reported to the state or federal government as either employees or independent contractors. As in the case of misclassification, underground arrangements of this nature reduce the costs facing employers of paying unemployment, workers compensation or payroll taxes, thereby potentially significantly reducing the labor costs of businesses. At the same time, it places workers who accept this arrangement at risk since they may not be eligible for coverage under unemployment compensation, are exposed to prosecution for failure to pay required state and federal taxes, and are more likely to be exposed to a range of workplace violations of labor standards, health and safety protections, and rights afforded by other state and federal laws. Finally, the public at large faces additional costs both in terms of lost tax revenues to support public sector expenditures and the added costs from providing assistance (e.g. emergency room services for injuries) for those working in the underground economy.

[7] See Massachusetts Independent Contractor/Misclassification Law (M.G.L. c. 149, s. 148B).

Extent of Contracting

The RSI Report offers an unusually comprehensive view of the prevalence of contracting in the Massachusetts economy. The measures it reports arise from a count based on the population of 1099M and W-2 forms submitted by Massachusetts employers during the study period. An important limitation of these data for the purposes of the JTF study is that tax data do not distinguish between contractors who are appropriately classified and those who are misclassified.

The first key finding is that there are a lot of contractors in Massachusetts, but the number is small relative to the number working as regular employees. In 2010, for example, 354,924 people received 1099 forms compared with the 3.926 million who received W2 forms as regular employees, or about 9%.[8] This level is somewhat higher than the 7.4% of the workforce at the national level estimated in the GAO (2006) report for 2005. Calculating the ratio of contractors to employees is, however, tricky because the two categories are not mutually exclusive. If, by contractors, one means people whose primary source of earned income is contract relationships, then the ratio of contractors to regular employees may be less than 9%. This observation raises the question of how many contractors are also employees who take up contracting as an occasional or part-time supplement to their earnings on their regular job. As we discuss below, the number of hours worked by contractors is important for understanding many of the economic and social consequences of misclassification.

From the perspective of misclassification, the large absolute number of contractors suggests that the problem of misclassification is of genuine social concern as it could potentially affect a large numbers of Massachusetts citizens. The low incidence of contracting relative to employment relationships, however, suggests that potential unemployment insurance taxes lost to the state from

[8] These estimates are reported in Section 4.1 of the RSI Report (ver. 2/26/14).

misclassification are likely small relative to total revenues.

The second key finding is that independent contracting use varies considerably across industries, as categorized in the North American Industrial Classification System (NAICS) codes. In real estate (NAICS 53), for example, the ratio of contractors to employees is nearly 40%. In finance and insurance (NAICS 52), construction (NAICS 23), information technology (NAICS 51) and arts, entertainment and recreation (NAICS 71), the ratio ranges between 15% and 20%. The contractor ratio is, in contrast, less than 5% in utilities (NAICS 22), manufacturing (NAICS 31-33), and hospitality (NAICS 721).[9]

There is no generally accepted model of the demand for contractors, but the heterogeneity documented in this report likely reflects sharply different economic circumstances and drivers for using contractors (appropriately and inappropriately) across industries. In some industries, such as construction, the heavy use of contractors reflects in part the shifts in demand as firms move from one project to another and bring on workers as needed. However, as earlier studies have shown, it might also reflect the persistent misclassification of employees within subcontracting categories (e.g. sheetrocking subcontractors). In other industries, such as real estate, the use of contractors may also reflect the importance of sales incentives and other factors that favor the use of realtors as independent contractors. Whatever the cause, the heterogeneity in the use of contractors suggests that optimal enforcement of misclassification laws should *not* give equal attention to every industry in the state. This is a point we return to below.

The third key fact in the report is that there is no time trend in the use of 1099 workers between 1999 and 2010. Following a jump in the ratio of contractors to employees between 1999 and 2000

[9] See Exhibit 4-5 of the RSI Report (ver. 2/26/14).

(Exhibit 4-1), that percentage remains stable at about 9% from 2000 to 2010. However, the use of contracting generally is likely cyclical, rising in economic recoveries and falling in downturns. Given the "dot com" recession at the beginning of the study period and the "great recession" at the end, the fact that the overall extent of contracting did not change may suggest a shift in its use during those downturns.

A change in the nature of contracting is also suggested by the substantial growth over the study period in the prevalence of contractors who work only for a single business in the course of a year (Exhibit 4-15). In 2001, these singular contractors accounted for about 66.3% of all contracting relationships but by 2010 this ratio had grown to 82%. That a growing percentage of individuals earning compensation as contractors received those earnings from a single business is noteworthy because the three factors used in establishing that work is being undertaken by an independent contractor are based on that party operating as an independent business entity and therefore presumably having multiple clients. The rising proportion of singular contractors may, on this basis, suggest an increase in misclassification over the study period. It is important to note, however, that singular contractors are not necessarily misclassified and that the rise in the prevalence of singular contractors may reflect other economic forces. It may be, for example, that the rise in singular contract work reflects an increase in regular employees taking on additional contract work to supplement their income. Since the time available for contracts outside of a regular job is limited, a rise in singular contracting might not - on this account- be cause for concern about growing misclassification.

Investigating the growth of singular contractors further would be very important for understanding changes over time in misclassification as well as for improving the efficiency of law enforcement. If, for example, singular contractors turn out to be highly correlated with misclassification,

the Department of Unemployment Assistance could use this sort of relationship as a flag for initiating audits. A first step in this analysis would be to see if contractors with a single client stay with their client longer than contractors with multiple clients. If so, this might suggest that singular contractors have something closer to a true employment relationship than contractors with multiple clients.

Measurement of Misclassification and the Underground Economy

The measurement of misclassification in the JTF report uses very different data and methods than the measurement of the overall use of contractors. Where the contractor data discussed above was based on the universe of tax records, estimates of misclassification were taken from Department of Unemployment Assistance (DUA) audits of establishments. The RSI report in this regard follows a similar model as the original 2004 study on misclassification as well as other state-level studies.[10]

The primary limitation of the DUA data for the study of misclassification is that the audits combine into one category employees who were misclassified as contractors and employees whose compensation was unreported or under-reported. The latter phenomenon may be quite distinct from the former, but the audit data did not allow RSI to distinguish between them. The inability to separate out the two related, but different problems must be kept in mind in interpreting these results.

A further limitation of this data is that we do not have many details on the exact process by which establishments were selected for audit over the 2001-2010 period. As discussed in the RSI report, the distribution of audits across industrial classifications does not appear to favor one industry over another and is, in this sense, consistent with random sampling, but there are lots of other types of non-random selection that could be going on within industries or across time periods. Because the

[10] See Carré and Wilson (2004). The Carré and Wilson study followed an estimation procedure originally used by a study commissioned by the US Department of Labor in the late 1990s to estimate lost unemployment insurance revenues (see de Silva (2000)).

number of audits was not very large, detailed analyses by industry and year often lead to small sample sizes and unreliable estimates.

The RSI study reports a number of different estimates of the incidence of misclassification and unreported workers. Taking the sample as whole, approximately fifteen percent of businesses sampled were found to have at least one instance of these problems. However, employees who were misclassified or paid under-the-table constituted only four percent of all employees at audited establishments. While the use of contractors is obviously not synonymous with misclassification and under-reporting, there appears to be a correlation between the two practices: businesses using contractors exhibited misclassification and under-reporting at rates that were nearly twice that of other audited establishments (29%). These different measures of the incidence of misclassified and under-reported employment have a number of important implications.

From the perspective of tax collection, the state is losing unemployment insurance taxes from a small proportion of employees suggesting that tax revenue losses will be similarly small relative to overall revenues. However, given that misclassification and under-the-table payments are concentrated in certain sectors and, as we shall see below, particular employers, it may offer larger cost advantages to those who are violating the law.[11]

From the perspective of law enforcement, the large number of establishments combined with the fact that only a minority of employers violate the law underscores the need for targeted enforcement. The apparent correlation between the use of contractors and the presence of unlawful employees may be helpful in targeting enforcement - provided that the correlation is not spurious.

[11] In the case of workers compensation, the financial impact of misclassification arises through the premiums paid for workers' compensation insurance policies. The rates built into those insurance policies include payment into a trust fund, managed by the Department of Industrial Accidents, that is established in part to provide compensation to workers whose employers have not paid into the system. This has the end result of increasing the insurance rates paid by compliant employers.

The additional finding that audited employers with violations reduced the use of contract employees in subsequent years suggests that establishments with contractors changed their practices in response to being caught.[12] This would appear to support a relationship between misclassification / non-reporting of workers and the use of contractors, but other interpretations are also possible. It may be, for example, that the audit itself and not its findings caused employers to change staffing practices. To investigate this possibility, it would be useful to compare the subsequent use of contractors in establishments where audits found issues to audited establishments where no issues were found. It also may be that employers responded to detection or audits by reducing the use of both appropriately classified as well as misclassified contract workers.

Targeted enforcement actions might also usefully focus on industries where violations seem to be concentrated. As Table 1 illustrates, there appears to be substantial variation in the use of misclassification and unreported workers across NAICS industries, for those industries where a sufficiently high number of audits were present to allow for comparison.[13] For each industry, we report the estimated incidence of those problems (percent of businesses found to have committed those violations) and the percent of workers experiencing violations relative to all workers. Table 1 presents the calculated probability that a worker was misclassified or unreported by the business given the presence of a violation (that is, how likely is one to experience misclassification or under-the-table payments if the business is engaged in that practice).

[12] This is based on the RSI results reported in Exhibit 3-4.

[13] Sample sizes for a number of the industries in the study are very small making it difficult to discern true cross-industry variation from random variation. We only present industries with more than 100 audits during the study period.

Table 1: Measures of Misclassification / Unreported Employment for Selected Industries, 1999-2010

Industry	Number of Audits	Incidence of Misclassified / Unreported Workers in Audits [a]	Percent of Workers Misclassified / Unreported in Audited Establishments [b]	Percentage of Misclassified / Unreported Workers *Given an Audit Finding* [c]
OVERALL	**--**	**15%**	**4%**	**27%**
Retail Trade (44-45)	1712	13%	5%	39%
Construction (23)	1413	15%	4%	27%
Manufacturing (31-33)	1160	14%	2%	14%
Other Services (except public administration) (81)	1074	11%	8%	72%
Health Care and Social Assistance (62)	1019	15%	5%	33%
Professional, Scientific and Technical Services (54)	965	17%	3%	18%
Food Services and Drinking Places (722)	884	10%	3%	30%
Wholesale Trade (42)	696	11%	2%	18%
Finance and Insurance (52)	646	19%	9%	47%
Administrative and Support and Waste Management / Remediation Service (56)	517	19%	7%	37%
Real Estate and Rental and Leasing (53)	270	17%	3%	18%
Arts, Entertainment, and Recreation (71)	260	25%	4%	16%
Transportation and Warehousing (48-49)	125	23%	12%	52%
Information (51)	114	23%	4%	17%

[a] See Exhibit 5-2; [b] See Exhibit 5-5; [c] Calculated as column 4 / column 3.

Table 1 shows that overall 15% of audited establishments engaged in misclassification or paying under-the-table and that 4% of employees in all audited establishments were misclassified. Taken together, these figures imply that businesses that misclassify or do not report employees may be doing so for a large fraction of their workforce. As reported, for example, in Table 1, the probability a worker was a misclassified or unreported employee at a business with an audit finding was 27%.[14] This latter calculation can be repeated at the industry level as we report in the final column of Table 1. In some industries (e.g. NAICS 48-49; 52; 81), businesses with an audit finding appear to have a very high percentage of the workforce that has been misclassified or working on an unreported basis.

More generally, to the extent that businesses that misclassify or pay under-the-table are able to avoid a variety of required taxes and payments into social insurance systems, the high probability of engaging in these unlawful activities as violators suggests that scofflaw employers may gain a significant cost advantage from violating the law. We return to this issue in the next sections.

Impacts of Misclassification and Unreported Workers on Earnings of Employees and Contractors

Another unique feature of the data assembled for the JTF study is that by combining information from the DOR and DUA data sources, the earnings of workers classified as employees versus contractors can be compared. Using the DUA audit data, RSI classifies businesses as those that misclassified workers versus those that did not. It then compares earnings of those individuals as reported to the DOR.

On the basis of those comparisons, the study finds that businesses that misclassify workers pay

[14] It is interesting to note that Carré and Wilson in their 2004 study of Massachusetts estimated that the percent of misclassified workers among employers found to be misclassifying was 25%--very similar to the estimate found here. See Carré and Wilson (2004), p.18.

less - and this pay differential is found for both employees and contractors. Audited businesses found to misclassify or under-report paid their W-2 workers about 15% less than other audited employers. ($33,027 versus $28,177). Similarly, audited businesses found to misclassify or underreport paid their contractors receiving 1099 forms about 16% less than other audited businesses ($18,566 versus $15,548).[15]

It is important to note that many factors could drive these differences other than the unlawful behavior of the businesses involved. As a preliminary step to control for such differences, the report uses a simple regression analysis to statistically hold constant some factors--industry, business size, and type of compensation-- that might be associated with both misclassification behavior and earnings. In general, the results show that workers in misclassifying / non-reporting businesses receive lower annual earnings.[16] These regression results are quite limited and must be interpreted cautiously. They do not account for many other important determinants of earnings such as hours worked, union status, experience, education, and other characteristics of workers and workplaces that might differ systematically between businesses that do and do not misclassify. As a result, it is unclear how much of the earnings differentials is attributable to misclassification *per se*.

In addition, the evidence is not sufficient to establish that misclassification and under-reporting is the *cause* of lower earnings. It might be, for example, that both pay differentials and misclassification/under-reporting are responses to a firm's poor competitive position and weakening financial performance. In this case, low pay would not be the source of competitive advantage for firms that violate the law, but rather a symptom of competitive failures. The compensation differences

[15] Based on 2013 constant dollars. These results can be found in Exhibit 6.1 (2/26/14 RSI report).
[16] Based on regression results reported Appendix B (2/26/14 RSI report). The RSI regressions are done at the individual worker level for all audited businesses during the study period using 2013 constant dollars. The regression coefficients for the misclassification / under-the-table variable are statistically significant (based on the full regressions reported in the Appendix B).

associated with misclassification are of obvious importance and should be the object of future study.

Impacts of Misclassification and the Underground Economy on Tax Revenues

Misclassification of contractors and paying workers under-the-table impacts taxes collected by the state and can shift social costs in unintended ways. By misclassifying workers as independent contractors rather than employees, payments into the unemployment compensation system are reduced, undermining its financial stability, particularly during recessions. Similarly, since qualifying employers pay into the workers compensation system to provide support for workers injured at the workplace, misclassification reduces revenues to support that social assistance program. Injured workers lacking support may then need to rely on other social programs for medical assistance and income support. If workers are treated as independent contractors, the requirement for tax payment and collection falls entirely upon the contractor whereas an employer is required to administratively both pay and collect required taxes.[17] In addition, if workers are unreported and paid in cash, tax payments may be entirely lost from the system since that income is not recorded by either party.

The RSI report provides estimates of tax losses to the unemployment insurance system, payroll taxes, and to two other taxes paid by businesses: sales taxes and corporate income taxes. Limited data availability precluded estimates of financial impacts to the workers compensation system.

[17] Economic theory suggests that even when employers pay the tax administratively, some of the tax is nevertheless "paid" by employees through lower wages. Calculating the incidence of such tax payments is complicated and clearly beyond the scope of the RSI study.

Unemployment insurance

The report estimates an annual loss of unemployment insurance taxes of about $958 million over the study period, or an annual average loss of $87 million.[18] These losses are calculated based on the same data used to estimate the number of misclassified / unreported workers by year and industry. As such, they should be interpreted with the same caveats. In particular, since the data do not allow one to distinguish between misclassification and under-the-table payments, the resulting estimates assume that tax losses are similar across the two types of problems. In addition, since unemployment insurance payments are based in part on the earnings of workers, a set of assumptions about the earnings of misclassified workers were used. While such assumptions are unavoidable, it is hard to know what assumptions to make and this may lead to under- or over-estimating the earnings of the population of misclassified workers.[19]

The study also finds that the absolute losses in unemployment insurance vary significantly by industry (Exhibit 6-2). This is not surprising given that misclassification itself is concentrated in particular industries. Nonetheless, the study suggests that the potential impact of underfunding for the unemployment insurance system should consider the sectoral impact of misclassification in addition to the overall impact on taxes paid into the system. This sectoral perspective is especially important because unemployment insurance payments are based in part on the past use of unemployment benefits by employees of the business which are related to industry-level volatility in employment.

[18] These estimates are reported in Section 6.2 (2/26/14 RSI report) and are based on 2013 constant dollars.
[19] This is because of the underlying assumption used to calculate the prevalence of misclassification overall: that industry audit rates reflect a random draw from the population of workplaces in the Massachusetts economy.

Sales and corporate income taxes

Misclassification and non-reporting of compensation may also be associated with underpayment of other forms of taxes. The study examined its impact on sales taxes (i.e. taxes paid on the basis of sales revenues) and income taxes. The study finds that businesses that violate these laws pay less in sales taxes than businesses that do not engage in this behavior. Over the study period, businesses that misclassify or not report compensation pay annually about $6500 less in sales tax than those that do not ($23,806 for those that do not misclassify versus $17,315 for those that have misclassified). Also of note is that the percentage of businesses that pay some sales tax at all is lower among those that violate those laws versus those that do not (40% of businesses that do not violate the law pay some sales tax versus 36% of those that do). The study finds lower sales tax collection levels and rates for the most part even when holding constant the size of employers and year.[20]

As in the discussion of compensation effects in the prior section, one must be very cautious in interpreting these associations, since there may be other factors leading to differences in tax collection amounts and rates. For example, the study does not control for differences in sales revenue among businesses, so the difference in rates might reflect systematic differences in sales activity. The study finds no evidence that businesses that misclassify or pay under-the-table pay lower corporate income taxes.

The report does not state why misclassification/under-reporting should have effects on sales or corporate incomes taxes. One theory may be that businesses that engage in one type of noncompliance are more likely to engage in other forms of noncompliance. If this was the case, tracking misclassification / under-reporting may help improve other sorts of tax collection. Alternatively,

[20] These estimates are reported in Section 7 (2/26/14 RSI report) and are based on 2013 constant dollars.

reduction of tax payments by businesses that flout the law may arise from factors related to the financial health of the businesses themselves: businesses that misclassify as a way to "stay afloat" may be in worse financial health, and therefore have lower taxable sales or income.

Taxes and the Underground Economy

A very important concern of the JTF covered in the RSI report is the impact of the underground economy-- with respect to under-the-table payments to employees--on tax collections. As noted above, the study design did not allow RSI to directly separate out non-compliance arising from misclassification from that arising from the underground economy. Given this limitation in the data, RSI examined establishments with audit findings, but where there was no record of 1099 forms being provided to workers. About 35% of all employees found to be misclassified/unreported worked in these establishments and RSI used this figure as a lowest-bound estimate of the fraction of under-the table employment discovered in DUA audits. Because this lowest bound estimate is surely a vast underestimate of unreported work, RSI adopted the reasonable assumption that 50% of the misclassified/unreported employees discovered in audits were unreported.

Building on this assumption, RSI uses DUA audits to estimate the number of unreported workers in the underground economy. To estimate tax losses, they make the further assumption that each underground worker would, if discovered, pay income taxes equal to that paid by the average worker in the Massachusetts economy. They estimate, on this basis, that the state lost $2.85 billion in unpaid taxes over the time period of the study, or an average of $259 million per year.[21]

[21] These estimates are reported in Section 9.2 (2/26/14 RSI report) and are based on 2013 constant dollars.

Obviously these estimates of tax losses are built on untested assumptions. We do not know if the assumption of 50% unreported is correct and the assumption about the income taxes that would be paid by these workers if they were forced out of the underground economy is even more speculative. For these reasons, estimates of the income tax losses must be interpreted as preliminary and unreliable. At a minimum, future research should examine RSI's assumptions and assess how sensitive the results are to different assumptions. In calculating income tax revenue losses over time, it would also be good to compare lost revenues to total income tax revenues each year - both to put magnitudes in some perspective and also to begin to assess the effects of inflation.

Recommendations

The RSI study for the Joint Task Force on Employee Misclassification and the Underground Economy assembled significant new data for understanding the misclassification of contractors and the use of unreported workers in the underground economy. On the basis of our review of the RSI report, we conclude that there are important, unresolved issues. What follows are recommendations for future work in understanding misclassification and the underground economy.

1. *Measuring independent contracting:* Independent contracting is a well-established form of business organization that in many instances can offer significant advantages over traditional employment. Our current understanding of the use of independent contracting is, however, quite limited. The data warehouse developed for the current study allows - for the first time - a sector-by-sector measure of independent contracting in Massachusetts. Further analysis of this data can help build a comprehensive view of the contributions independent contracting makes towards economic growth and prosperity as well as towards misclassification of workers and expansion of the underground economy.

To understand trends in independent contracting, however, one must do more than simply count. Future research needs to develop a model of how the demand for independent contracting varies with general economic and labor market conditions. Without such a model, it will be hard to assess whether and why the Massachusetts economy is relying more or less on contractors than it has in the past. In analyzing trends, special attention needs to be devoted to analyzing the growth of single contracting relationships. Specifically it is important to understand if this represents a substitution of contractors for regular employment or if this is driven by regular employees increasingly using independent contracting to augment their earnings.

2. *Understanding the drivers of misclassification and unreported workers:* One lesson from our review of the RSI report is that understanding the scope of misclassification and unreported workers in the Massachusetts economy should not depend solely on audits conducted by the DUA. While reliance on DUA audits was necessary and unavoidable, we are concerned that they do not provide the best snapshot of the prevalence of misclassification/unreporting.[22] The problem is that measuring the incidence of misclassification/unreporting requires a stratified random sample of establishments while efficient enforcement requires auditors to focus in particular sectors and work places where abuses are most likely to occur. We recommend therefore that future work combine both these approaches. The US Department of Labor over the last decade has created a two-track process of undertaking more focused investigation activities combined with sectorally-focused random investigations. This experience suggests that the two approaches can be complementary and jointly

[22] After 2009, DUA audit procedures were altered in part because of changes in the US Department of Labor's standards for Tax Performance Standards (TPS) reviews. The TPS create yearly standards that DUA audits need to attain. In 2009/2010 the US DOL reduced the number of audits the DUA was required to complete, but raised the bar on the number of misclassified workers they were expected to find. By moving towards more targeted rather than random audit procedures, future audit data is less useful for estimating misclassification /under-reporting in the manner used by RSI in the present study.

pursued.

3. *Understanding the consequences of misclassification and unreported workers*. The study provides a number of suggestive and provocative findings on the consequences of misclassification and unreported workers, including their impacts on compensation and tax collections. As potentially important as these findings are, they must be read carefully given the limited data and strong assumptions that drive them.

In addition it is critically important to future policy to better understand how much of a competitive advantage does misclassification/unreporting provide to businesses that engage in it. Regulators also need to understand if misclassification/unreporting is associated with non-compliance with other legal requirements in workplace and non-workplace areas.

4. *Expanding researcher access to the JTF data*: RSI has created a unique and remarkable data warehouse that links the DOR data on employers, employees and contractors to DUA data on establishment audits. The difficulties in assembling such data, ensuring security and confidentiality while linking across diverse administrative databases were formidable and required significant investments and expertise.

Given the complexity of the issues and the complexity of the data, no single set of researchers could produce a report that fully addresses all the important issues relating to misclassification and the underground economy. We would encourage the JTF to allow other research teams to also analyze the assembled data. This approach is similar to the "open source" development strategy pursued by many software companies and it can cost-effectively accelerate the pace and quality of research. We are aware that allowing wider access to this data requires the State to maintain high levels of data security and confidentiality. We note, however, that the federal government has developed methods to allow

investigators from the academic community to use sensitive business and individual data collected by the US Census Bureau and that these programs of cooperative research that have proven enormously productive.[23] The large academic research community located in the Boston area would greatly facilitate such an ongoing, collaborative effort.

[23] For example, the Longitudinal Research Database (LRD) is a company-level database that contains detailed information on a wide variety of economic outcomes based on data collected by the US Bureau of the Census. Researchers using this confidential data do so at a Center for Economic Studies government office overseen by the Census Bureau after they have been specially sworn to uphold and comply with confidentiality requirements. The program has been in place since the late 1990s and has resulted in hundreds of published papers as well as improvements in the underlying data used by researchers and as the basis of Census programs (such as the Census of Manufacturing). Other programs at the Census Bureau and the Bureau of Labor Statistics that provide authorized researchers with access to the micro-data underlying government surveys have been created based on the success of the LRD model. Information on the research data programs administered by the Bureau of Census can be found at http://www.census.gov/ces/rdcresearch/. .

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