Regulating Labor Standards in the Garment Industry

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I. Overview and key findings

The problem of regulating labor conditions in the garment industry is a very old one. In 1893, The Committee on Manufactures of the House of Representatives released a report regarding their investigations of the “sweating system” of production. Among other conclusions, the Committee concluded that 80 percent of production originated in sweatshop production.¹ Several years later, President McKinley appointed a commission made up of members of Congress and private citizens to study the problem. Arising from their study running from 1898-1901, the commission documented extensive abuses including long hours, low pay, and unsanitary conditions.²

Given this legacy, it is not surprising that enforcing provisions of the Fair Labor Standards Act (FLSA) in the garment industry has been an ongoing area of concern since its passage in 1938. The highly competitive structure of the market for apparel and for the workers who cut and assemble products have together made enforcing labor standards a major challenge for the U.S. Department of Labor’s Wage and Hour Division (WHD).

Despite these longstanding forces and recent employment declines in the domestic apparel industry caused by growth in imports, our study of regulatory enforcement in the garment industry suggests that WHD initiatives have had large and significant impacts on domestic labor standards. This study demonstrates that through the use of a combination of private market leverage and public enforcement, monitoring arrangements established by the Department of Labor in the New York City and Southern California markets have led to significant improvements in the percentage of employers in compliance with minimum wage and overtime provisions. More importantly, they have substantially reduced both the frequency with which violations occur within garment workplaces as well as the average level of underpayment to workers. The improvement in outcomes is particularly striking for minimum wage performance in both markets. The impact of monitoring efforts can be associated with overall improvements in those markets over time as well as increased incentives for compliance as perceived by the constantly changing set of contractors operating in the industry.

This report brings together our detailed analysis of data collected by WHD in five separate inspection-based surveys. We begin with an overview of the structure of the garment industry and the monitoring efforts within it. Section III then discusses overall trends in regulatory performance in New York and Southern California since 1997. Section IV presents our findings regarding the relation between regulatory performance and employer characteristics. Section V focuses on central findings regarding the impacts of monitoring on regulatory performance. Section VI concludes with an in-depth discussion of the implications of these findings for future garment industry efforts and more generally for the WHD in pursuing its larger regulatory mission.

II. Background

Structure of the garment industry

The structure of the apparel industry would lead one to predict high rates of employer noncompliance with labor standards. The industry has been characterized by a splintered production system, in which different enterprises carry out the design, cutting, sewing, and pressing / packaging of apparel products. For example, a “jobber” may sell a design to retailers, and then contract with a manufacturer or directly with a set of subcontractors for cutting, assembly and delivery of the product. Alternatively, a manufacturer supplier to retailers may purchase and cut fabrics, but then contract out sewing to one or more companies (which may, in turn, further contract out sub-assembly). Contractors compete to pre-assemble bundles of cut garment pieces in a market where there is little ability to differentiate services (i.e. sewing and associated assembly) except for some operations that require higher skill levels. The structure of relations from the retailer down to contractors and subcontractors is depicted in Figure 1.

In general, as one goes to “lower” levels of apparel production (that is from design and cutting by manufacturer or jobbers at the top of Figure 1, to sewing by contractors or subcontractor at the bottom) the level of competition intensifies and profit margins per garment diminishes. Sewing contractors—often themselves recent immigrants to the U.S.—compete in a market with large numbers of small companies (on average 25-35 workers in the women’s industry), low barriers to entry, and limited opportunities for product differentiation. These are classic conditions for intense price-based competition. Because labor costs represent the vast majority of total costs for a sewing contractor, the pressure on contractors to strike deals with jobbers and manufacturers that would not be economically sustainable if the contractor complied with wage and hour laws is high.

WHD approaches to the garment industry

Government regulatory activity historically focused at that contractor and subcontractor level of the apparel industry. The primary means of inducing compliance was through direct inspection of contractor shops and the effects of deterrence through the levying of civil penalties for those found in violation repeatedly. Based on the number of inspections conducted by WHD and the number of contractors operating in

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3 Historically, the women’s industry tends to be more highly decentralized than the men’s sector, with multiple levels of jobbers / manufacturers, contractors and subcontractors. Men’s clothing—from the 1920s onward—is primarily produced in factory-type settings, with manufacturers designing, cutting, sewing, pressing, and packaging products.

4 Most academic studies of FLSA compliance (particularly of minimum wage) focus on this aspect of government interventions. See Ashenfelter and Smith (1979); Grenier (1982); Chang and Erlich (1985); and Yaniv (2002).
different markets, the average annual probability (over the past decade) that a given contract shop received an inspection was below 0.10.\(^5\)

The Wage and Hour Division began to alter this regulatory model substantially in the mid-1990s, partly in response to changes in the larger apparel industry. New forms of retailing—sometimes referred to as “lean retailing” (Abernathy, Dunlop, Hammond, and Weil, 1999) —take advantage of information technology to use real time information to reduce exposure to changing consumer tastes.

Lean retailing reduces the need for retailers to stockpile large inventories of a growing range of products, thereby reducing their risks of stock-outs, markdowns, and inventory carrying costs. In contrast to the infrequent, large bulk shipments between apparel manufacturers and retailers under traditional retailing, lean retailers require frequent shipments made on the basis of ongoing replenishment orders by their suppliers. Apparel suppliers, in turn, must operate with far greater levels of responsiveness and accept a great deal more risk than in the past. Suppliers must replenish products within a selling season, with retailers now requiring replenishment of orders in as little as three days. Consequently, lean retailers are extremely vulnerable to disruptions to the weekly replenishment of retail orders by apparel suppliers—disruptions that can lead to penalties, cancellation of orders, and even loss of retail customers. The increasing importance of time translates into a potential tool of regulatory enforcement.

The WHD shifted its enforcement focus from targeting the individual contractor to exerting regulatory pressure by invoking a long-ignored provision of the FLSA, Section 15(a). Under Section 15(a) (the “hot cargo provision”), WHD can embargo goods that have been manufactured in violation of the Act. Although this provision had limited impact in the traditional retail-apparel relationships, when long delays in shipments and large retail inventories were expected, invocation of the hot goods provision today (given the short lead times of retailers) potentially raises the costs to retailers and their manufacturers of lost shipments and lost contracts. The embargo of goods may create penalties for FLSA violations that quickly exceed the costs of back wages and civil penalties owed. In effect, the ability to stop the flow of goods creates significant private penalties associated with the market-based costs of failing to deliver orders in a timely manner.

Current WHD policy uses the threat of embargoing goods to persuade manufacturers to augment the regulatory activities of the WHD. It does so by making the release of embargoed goods contingent on the manufacturer’s agreement to create a compliance program for its contractors and subcontractors as well as to assure that back

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\(^5\) This is based on the following calculation: There were roughly 10,000 establishments in the segments of the apparel industry that are the focus of WHD regulation (primarily the women’s and to some extent the children’s industry). Given that there was an average of about 800 investigations conducted annually by WHD investigators, the annual probability of inspection is about .08.
wages owed to workers are paid (either by the contractor or manufacturer). Under the 
compliance program, the manufacturer agrees to sign two types of agreements: an 
agreement between the manufacturer (or jobber) and the Department of Labor; and an 
agreement between the manufacturer and its contractors. The agreement between the 
Department of Labor and the manufacturer stipulates the basic components of a 
monitoring system that will be conducted by the manufacturer. The provisions of this 
agreement include explicit top management commitment to upholding the FLSA; 
screening of new contractors concerning prior history of FLSA compliance; 
establishment of a monitoring system; back wage guarantee and formal remediation 
process; and informing and training contractors regarding their responsibilities under the 
law.

The second set of agreements is between the manufacturer and all of its 
contractors. These agreements set out the specific FLSA requirements, clearly define the 
terms and methods of assessing wages and overtime (the subject of some ambiguity given 
that much of the industry uses piece rate payment); establish specific procedures for 
tracking payroll records, time cards, and the use of time clocks; and lay out other 
administrative procedures related the contractor’s compensation policies.

Source of data for the analysis

The data for the following analysis arise from four random surveys of apparel 
contractors operating in Los Angeles / Southern California (1998 and 2000) and the New 
York City area (1999, 2001). The surveys were conducted by the U.S. Department of 
Labor Wage and Hour Division using a randomly selected set of establishments in the 
Southern California and New York area apparel markets. Total sample sizes for the four 
surveys are as follows: Southern California: 77 (1998); 67 (2000); New York: 91 (1999); 

Apparel manufacturing and contractor firms appearing on the California and New 
York manufacturing registration lists for each year constituted the universe for the

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6 These agreements are known as Augmented Compliance Program Agreements (ACPA). The ACPA 
contains within it a Program to Monitor Contractors that includes various provisions regarding contractor 
monitoring (discussed below).

7 These agreements, however, are entered in voluntarily by the manufacturer and their terms are therefore 
negotiated out between the government and the manufacturer / jobber. The terms described here are taken 
from the Department of Labor’s model agreement language specified in formal policy documents (see 
Wage and Hour Division, 1998).

8 An additional survey for 1997 in New York City was conducted by WHD. We present overall results for 
this survey, but do not include it in the detailed analysis because of the limited number of monitoring 
agreements in place at that time.

9 For certain analyses of Southern California in 2000, an additional sample of 36 randomly selected, former 
violators were also used in statisitical analyses. This additional sample is discussed in the accompanying 
technical paper by Weil and Mallo, Estimating the Impact of Monitoring on FLSA Regulatory 
Performance, Technical Paper for the U.S. Department of Labor Wage and Hour Division, Boston 
University, December 2003.
surveys. The WHD randomly selected establishments representing contractors operating in each of the sample years. Contractors selected from the list received an “inspection-based survey” by WHD investigators that included a review of all payroll records for a designated time period.

III. Changing regulatory performance over time

Measuring regulatory performance

Measurements of the impact of WHD interventions differ according to how one defines regulatory performance. Traditionally, the WHD used the percent of employers with at least one violation of minimum wage and/or overtime provisions as their primary measure of performance. The obvious problem with this measure is that it does not delineate between employers who underpaid a small fraction of the workforce from those who underpaid a large proportion. Further, the above definition of employer compliance does not distinguish between cases in which employees bear a large burden because of non-compliance (that is experience gross underpayment in wages) from cases in which the infractions are relatively minor.

More recently, WHD has adopted broader measures of regulatory performance that also capture the incidence of regulatory violations (how common they are among workers) and the severity of those violations (the amount of back wages owed to workers). Accordingly, we focus on two measures of compliance: contractor compliance behavior in terms of the incidence of violations (measured as the number of violations per 100 workers employed); and the severity of violations (measured as average back wages owed per worker per week). In several places, we have also provided results on the back wages owed per affected worker, a severity measure specifically focusing on the wage losses of only those workers who were underpaid. However, we primarily use back wages owed per worker per week since it measures the severity of underpayment for the workforce as a whole.

Changing performance over time

10 The registration lists for apparel consist of “… all persons or firms engaged in the business of apparel manufacturing…” where apparel manufacturing is defined as “… sewing, cutting, making, processing, repairing, finishing, assembling, or otherwise preparing any garment or any article of wearing apparel or accessories designed or intended to be worn by any individual…” Registration lists are kept by separate state-level agencies in California and New York.
11 The WHD also selects a random sample among previous violators in order to see the evolution of the behavior of those who had already been found to violate FLSA regulations. The performance of prior violators is not a focus of this report; the accompanying technical paper references the recidivist group in more detail.
12 The need for alternative regulatory performance measures was the subject of the first phase of the Boston University / Mathematica Policy Research study for the Wage and Hour Division and OSAM and is discussed in length in a memo dated July 14, 2003.
Figure 2 provides overall results of regulatory performance in the garment sector between 1998 and 2000 in the Southern California market. The traditional measure of compliance (percent of employers in compliance with minimum wage and overtime provisions—two bars on the far left of the figure) suggests a decline in performance in both minimum wage and overtime outcomes between 1998 and 2000. However, this performance measure masks improvements that actually occurred between the two time periods. In the area of minimum wage, the overall incidence of violations (measured as the number of violations per 100 workers) decreased, implying an improvement in regulatory performance. Similarly, the average severity of those violations (measured as average back wages owed per worker per week) declined. With respect to overtime, the incidence of violations increased between 1998 and 2000, but the average severity of violations remained unchanged.

Regulatory performance in the New York City area in 1997, 1999 and 2001 is depicted in Figure 3. Measures of compliance traditionally used by WHD, when applied to the three survey years in New York City, mask more complex changes in regulatory performance. Once again, the use of incidence and severity measures provides more comprehensive information on changes that have occurred over time. The incidence and severity of violations increased significantly between 1997 and 1999, as the traditional measure of compliance declined. Between 1999 and 2001, however, the incidence and severity of violations declined far more dramatically than indicated by the improvement in the overall rate of compliance. This improvement in regulatory performance was particularly pronounced in the area of minimum wage compliance: the incidence of violations declined from 24 per 100 workers in 1999 to 10 per 100 workers in 2001. The severity of average minimum wage violations also fell dramatically, from an average weekly back wage underpayment of $16 per worker in 1999 to only $3 per worker in 2001. Average back wages per affected worker declined from $52 per worker per week to $25.

Regulatory outcomes in both markets improved over time, in part reflecting the impact of monitoring efforts as will be discussed below. The improvements in regulatory performance between 1998 and 2000 in Southern California and between 1999 and 2001 in the New York City area also led to a convergence in regulatory performance between the two markets. Specifically, the gaps between regulatory outcomes for both minimum wage and overtime performance in Los Angeles and New York were wider for most measures in the period 1998/99 than they were in 2000/01. For example, the gap between New York and Los Angeles in minimum wage back wages owed per worker per week declined from a difference of $7 in 1998/99 (an average of $16 back wages owed per worker per week in New York and $9 per worker per week in Los Angeles) to a gap of $3 in 2000/01. Similarly, the gap in overtime back wages owed per worker per week fell from $9 between New York and Los Angeles in 1998/99 to only $3 in 2000/01.

13 Throughout this study, we use establishment-based measures of outcomes. Because almost all of the contractors in the study are small, single-site enterprises, the difference between establishment- and industry-level measures of outcomes are minor.
Survey data from the 1998/99 and 2000/01 periods can also be combined to provide an overall estimate of improvement in regulatory performance. Figure 4 provides the different measures of regulatory performance, combining the Southern California and New York City data for the proximate time periods, and weighting them based on average employment in the markets. The results show striking (and statistically significant) changes in minimum wage performance between the two time periods. The change in overtime performance, however, is small and not statistically significant in the combined sample.

IV. Contractor characteristics and regulatory performance

The garment industry is characterized by a high degree of entry into and exit from the industry by companies. In the Southern California sample for 2000, for example, about 45 percent of contractors had been in business less than two years; in the New York City sample for 2001, 60 percent of employers had been in business less than two years. The high level of “cycling” reflects the low entry costs to apparel production, the high levels of competition for those providing contractor services (predominately garment assembly) in the industry, and the low costs—and high probability—of leaving the industry.

The highly dynamic nature of the industry has an impact on regulatory performance. In both the Southern California and New York City areas, we find consistent evidence of an association between regulatory performance and a set of business characteristics that is tied to competitive viability. More specifically, contractors that are larger in size, have been in business for a longer period of time, and have some ability to affect the price paid for their products all tend to exhibit better regulatory performance. Each of these characteristics tends to be associated not only with better regulatory performance, but also with one another (e.g. larger contractors also tend to have been in business longer).

Some of the largest improvements in regulatory performance over time have occurred among those contractors that have an ability to influence the price of the goods they provide to garment manufacturers. The ability to affect price indicates that a

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14 Employment data used for weighting are based on estimates from the Current Employment Statistics Survey conducted by BLS. In the year 2000, total employment in the apparel industry in New York was 65,600 and in California, 122,600. Therefore, California received a weight of 2/3 and New York 1/3.

15 For example, in the Southern California 2000 sample, the correlation between number of years under current ownership and number of employees is 25%, and it is significant at the 5% level.

16 The ability to affect price is based on a several questions included in the garment surveys. In the Southern California survey, contractors were asked, “do you negotiate for a higher price if your manufacturer customer changes the due date for products?” Those who answered “yes” were asked the amount that the price typically changed as a result of renegotiation. Our contractors deemed to have market power were those who answered “yes” and who then reported that the price charged for the goods changed as a result of the negotiation. In Southern California, the fraction of contractors who satisfy these criteria is about 13% for both 1998 and 2000; in New York, the fraction is above 25% for years 1999 and 2001.
contractor has some form of market power, which may arise from a distinctive product niche, uncommon skill sets, or a favorable reputation in the marketplace. As a result, the firm is able to compete not only on the basis of price (which will still be critical to winning work) but also on other factors. This, in turn, provides them a greater ability to comply with FLSA. Figure 5a shows that the incidence and severity of minimum wage violations for contractors able to exert influence over the price of their service had better performance in general than those lacking such influence, in both Southern California and New York City. Figure 5b portrays the same associations between ability to influence product price and overtime performance.

The relation between the size of contractor and regulatory performance is shown in Figures 6a and 6b. Specifically, larger contractors (measured as total employment above the median for companies in the market) tend to have better performance with respect to minimum wage (6a) than smaller contractors. The pattern is less clear with respect to overtime (6b), particularly in the case of New York City, where in some cases the relation is reversed. There is also an association between age of companies and performance. Older contractors (those who have been in business longer than the median for the particular market) tend to perform better than contractors that have more recently entered the industry. This relationship is fairly consistent for both minimum wage (Figure 7a) and overtime (7b) performance across time periods and markets.\textsuperscript{17}

The association between contractor age, size, and market power, and regulatory performance has great relevance for future FLSA compliance in the garment industry. First, the results imply that if WHD actions lead contractors who are entering the industry to more fully comply with FLSA than those who happen to be exiting the industry, the overall level of regulatory performance in the industry will improve given the high levels of contractor turnover. Second, the results suggest that competitive survival in apparel does not inevitably contradict regulatory performance. We return to this issue and its implications on garment industry employment levels and WHD policy in Section VI.

V. Measuring the Impact of WHD Monitoring

\textit{Incidence of monitoring}

Compliance program agreements entered into by the WHD at both the manufacturer- and contractor-level stipulate a method of formal monitoring to be conducted by the manufacturer (or its designated third party). In a model program as described by WHD, manufacturers would undertake unannounced monitoring visits “…at least once every 90 days.” In the course of the visits, monitors would review contractors’ payroll records and timecards; undertake piece counts (important for translating piece rate payments into hourly earnings); interview employees in private; advise contractors of

\textsuperscript{17} The exception is minimum wage in the 2001 New York survey.
compliance problems; and undertake training for contractors and/or their employees (U.S. DOL, 1998; 1999).

The frequency of different types of monitoring arrangements between contractors and manufacturers is presented in Figure 8. The upper part of the table indicates the presence of seven different monitoring features by at least one of the manufacturers for whom the contractors worked in the past 6 months. For example, in 1998, 54 percent of all Los Angeles contractors surveyed did work for at least one manufacturer that conducted unannounced visits, which increased to 58.5 percent in 2000. Certain activities (e.g. payroll review, time cards review) decreased in frequency over time in Los Angeles, in part reflecting the cycling of contractors within the industry. The prevalence of the seven different monitoring activities is somewhat lower for New York City contractors, as compared to Southern California contractors. The frequency of different monitoring activities increased for all categories in New York between 1999 and 2001.

Although there are many potential combinations of the different monitoring activities, certain combinations of activities have potentially larger impacts on contractor behavior than others. We focus below on specific combinations of monitoring activities, grouped as “low,” “medium,” and “high” monitoring, which indicate the stringency of monitoring arrangements under which a contractor operates. The category of Low monitoring is assigned to contractors who report that at least one of their manufacturers is conducting at least one of the seven monitoring activities. It therefore represents the presence of any monitoring activity. About 60 percent of the contractors in the New York sample in 2001 and over 72 percent in Los Angeles could be classified as operating under Low monitoring.

Medium and High monitoring are defined according to the presence of two specific monitoring features: payroll review and unannounced inspections. This combination of monitoring activities provides manufacturers with the means of assessing the presence of possible minimum wage or overtime violations (payroll review) and a way of gaining a more realistic assessment of contractor operations (unannounced visits). We focus on these features because of their consistently significant impact on

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18 Model agreements also require that back wages are paid to workers: “Whenever the FIRM finds any act or omission by a Contractor that violates Sections 6 and/or 7 of the Act with respect to any work on any goods that the FIRM has shipped during the term of this ACPA or will ship during the term of this ACPA, the FIRM will immediately i) suspend all shipment of goods affected by such violations until all such violations affecting the goods have been remediated …and ii) cause …. the payment of all unpaid back wages resulting from any violations of Section 6 and/or 7 of the Act by the Contractor …. and do so in an amount approved by DOL …” The agreements may also provide for a more advanced set of monitoring arrangements and work practice agreements including the use of electronic time clocks and an agreement not to subcontract work without prior approval of the manufacturer. (WHD regional offices in New York and California frequently use the FCPA, a slightly shorter version of the ACPA.)

19 In the random surveys, contractors are asked to specify the names of manufacturers and/or jobbers for whom the contractor provided services over a specified time period, and the monitoring activities (if any) that were conducted by those manufacturers. We use this information to create the different categories of monitoring discussed in the text. For further details on our definitions of monitoring, please see the accompanying technical paper by Weil and Mallo.
performance and complementary nature with one another.\textsuperscript{20} A Medium level of monitoring occurs when a contractor is subject to review of its payroll and to unannounced monitoring visits, but not necessarily by the same manufacturer. About 47 percent of the Los Angeles sample in 2000 and 37 percent of New York City contractors in 2001 reported operating under these provisions.

Finally, High monitoring occurs when all of a contractor’s manufacturing customers have both payroll review and unannounced visits in place. As a result, this very high level of oversight of a contractor by all of its customers represents the most stringent case of monitoring. Unfortunately, data limitations in the 2001 sample precluded us from determining whether or not contractors in New York City were covered by High monitoring. The detailed information was available for Southern California for 1998 and 2000; the frequency of High monitoring rose from about 24 percent in 1998 to 30 percent in 2000.

Given the way we have defined the different levels of monitoring, we can examine the incremental effects of having no monitoring, some (Low) monitoring or more stringent monitoring. In the following analysis, we measure the effects of having any monitoring in place, as well as the additional effects arising from more stringent monitoring. For the New York samples, we therefore estimate the effects of Low and Medium monitoring. For Southern California, we measure the incremental effects of Low and High monitoring.

\textit{Impact of monitoring on regulatory performance}

In order to estimate the independent impact of monitoring programs on regulatory performance, the contractor characteristics mentioned above (as well as other important factors such as the type of goods produced by the contractor) must be held constant. In order to do this, we estimated statistical models that allow us to separate out the effects of different factors on regulatory performance outcomes. In this section, we report the impact of different forms of monitoring on regulatory performance, holding constant the effects of contractor age, size, ability to affect price of goods sold, and other factors. An accompanying technical paper provides detailed information on the methods used to produce these estimates.\textsuperscript{21} We discuss interpretation of the monitoring estimates in the next section.

\textit{Southern California:} Monitoring programs instituted by the Wage and Hour Division in Los Angeles are associated with significant improvement in regulatory outcomes for both minimum wage and overtime violations. The estimates of the impact

\textsuperscript{20} We arrive at this particular combination of monitoring activities as the focus of subsequent empirical analysis through a factor analysis of the seven monitoring activities as predictors of compliance behavior. These results are available from the authors. The importance of the two attributes is also supported by discussions with WHD investigators.

of Low and High monitoring, holding constant the effects of other factors associated with regulatory performance, are shown in Figure 9a.\textsuperscript{22}

The type of monitoring covering an employer is of great importance. The Southern California results demonstrate that the mere presence of monitoring by one manufacturer (Low monitoring) is not associated with significant improvements in performance. Although low monitoring is associated with a decrease in the incidence and severity of violations, the impacts tend to be small and are not statistically significant. On the other hand, manufacturer monitoring that includes payroll review and unannounced inspections has consistently large and significant impacts on contractor behavior. Figure 9a shows that high monitoring (in which all manufacturers for whom a contractor works have such arrangements) is associated with a reduction of 16.9 violations per 100 employees in 2000. Since average incidence of minimum wage violations in that year was 27.3, this represents a more than 50 percent reduction attributable to monitoring. High monitoring is also associated with a significant reduction of back wages by $4.85 per worker per week, which is almost equivalent to the average severity of minimum wage violations per contractor in that year ($5.84).

The lower panel of Figure 9a presents the relation of monitoring on overtime outcomes in Southern California. As in the case of minimum wage, the results indicate that monitoring is linked to reductions in the incidence and severity of overtime violations. In the first time period (1998), the presence of any monitoring has a large and significant effect on reducing the incidence of overtime violations. In 2000, the pattern is more similar to that found in the case of minimum wage: holding constant the effects of other factors, Low monitoring is associated with a reduction of violations of 7.6 per 100 workers while High monitoring has a far larger impact on the incidence of overtime violations, reducing them by 17.4 per 100 workers. The effects of monitoring on the severity of overtime violations are more modest, although high monitoring in 2000 led to statistically significant reductions of average back wages by about $2.17 per worker per week (relative to overall average back wages owed for overtime violations of about $5.30 per worker per week).

The size of the estimated monitoring program effects grew substantially between 1998 and 2000. With only one exception, Figure 9a shows that for both minimum wage and overtime, the association between High monitoring increased between the two periods. This result suggests a growing relation between WHD monitoring program as it became better established and understood in Southern California between 1998 and 2000.

\textsuperscript{22} Figures 9a and 9b are based on statistical models of the factors that influence regulatory performance. Through these models, it is possible to estimate the independent effects of different types of monitoring on outcomes like the number of violations per 100 employees after holding constant the impacts of contractor size, age, product type, and pricing power. Weil and Mallo provide the complete technical detail on the methods used to estimate these relationships.
Other statistical analysis involving pooling the two survey periods further confirms the growing effect of high monitoring over time.\textsuperscript{23}

\textit{New York City Area:} Monitoring programs instituted by WHD also were significantly associated with higher regulatory performance among garment contractors in New York City (Figure 9b). Contractors with monitoring in place had substantially better performance than those without monitoring in 1999. Although changes in the method of survey data collection between 1999 and 2001 preclude testing the effect of High monitoring, we can test the incremental effect of Medium monitoring.

The upper panel of Figure 9b indicates the comparative effects of Low and Medium monitoring on minimum wage incidence and severity. As was the case in Southern California, the stronger form of monitoring was more closely associated with regulatory performance. Holding constant other factors affecting regulatory performance, Medium monitoring is related to large and significant reductions in the incidence of violations (a reduction of 18.4 per 100 workers in 1999 and 12.4 violations per 100 workers in 2001). Similarly, the severity of minimum wage violations was also decreased significantly—particularly in 1999 when Medium monitoring was associated with a reduction of back wages owed by $11.10. The lower panel of Figure 9b shows the relation between monitoring and overtime. Once again, monitoring was associated with reductions in the incidence and severity of violations in most cases, although the patterns of effects are less consistent than under minimum wage. The impact of Medium monitoring decreases between 1999 and 2001, although Low monitoring seems to have the largest effects on overtime performance in 2001.

Taken together, the New York results show that although monitoring significantly improved regulatory performance, the relative size of its effects decreased between 1999 and 2001 in most cases. We believe this reflects the significant impacts of monitoring on compliance in 1999, and the resulting improvement in base level regulatory performance in both the percent of firms in compliance with the law (particularly minimum wage) as well as the incidence and severity among monitored contractors between 1999 and 2001. This base-level improvement links to smaller additional performance improvement in the more recent survey period.

The results in Figures 9a and 9b show that monitoring agreements take time to have an effect on contractor behavior but may, after a certain point, have decreasing effects.\textsuperscript{24} Efforts to create manufacturer monitoring agreements began at an earlier time in New York than in Los Angeles. From this perspective, monitoring effects in New York in 1999 (four years after efforts were started in earnest in that market) may be


\textsuperscript{24} The technical report by Weil and Mallo provides a detailed statistical analysis of this issue.
closer to those in Southern California in 2000. The increasing size of the High monitoring coefficients between 1998 and 2000 for Los Angeles may then reflect the growing impact of monitoring between adoption and implementation. Alternatively, the decreasing size of the Medium monitoring coefficients between 1999 and 2001 for New York may then reflect the substantial improvement in overall compliance between 1999 and 2001.

This is not an uncommon feature of regulatory interventions: large program effects that may continue, but diminish in the degree of improvement over time. This does not mean that monitoring will cease to be effective in the future, but simply that the predicted change in effectiveness in the future may not be as large as it has been in the past. As a result, at a certain point, WHD may decide it appropriate to move to a “maintenance” mode to preserve regulatory performance gains achieved while turning attention to new targets.

**Interpreting the monitoring effect**

There are several factors important to interpreting the association between monitoring and regulatory performance. The “direct” impact of monitoring arises when manufacturer (or third-party) review of contractor payrolls, wage policies, and related activities during unannounced visits lead directly to improvement in the practices of contractors—that is, contractors change their levels of compliance with FLSA as a direct result of monitoring. However, this is not the only way that monitoring might affect performance.

Manufacturers that sign monitoring agreements might also seek out contractors that are more likely to comply with FLSA as a means of lowering risks of future embargoes. If many of the manufacturers with monitoring agreements in place undertake this kind of activity, better contractors will end up sorting themselves or “matching” with manufacturers that undertake monitoring and worse contractors will end up with non-monitoring contractors.\(^{26}\)

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\(^{25}\) The survey data for 1997 unfortunately provide little information on monitoring. Consequently, we cannot estimate the early effects of monitoring on compliance for New York in 1997 and concentrate on the two subsequent rounds of survey data.

\(^{26}\) In an extreme case of pure selection, this sorting could lead to the appearance of an improvement of monitoring impacts, even though contractors have not changed their behavior at all, but simply sorted themselves between monitored and non-monitored contractors. For example, imagine that there are 30 “good” contractors and 70 “bad” contractors all of whom work for two manufacturers, so that the overall percent of good contractors is 30%. Prior to the implementation of monitoring, assume that good and bad contractors are distributed equally between the two manufacturers. Now imagine that one manufacturer signs a monitoring agreement and the other does not. If there is pure sorting, all 30 good contractors will end up pairing with the monitored manufacturer while the 70 bad contractors will pair with the non-monitored contractor. Even after sorting, the overall percent of good contractors will still be 30%. However, if one measured the impact of monitoring on contractors, one would find that monitored contractors had far better performance than non-monitored contractors. In this pure selection case, program effect would be incorrectly ascribed to monitoring.
Both effects could contribute to the results depicted in Figures 9a and 9b. Because the survey data pertain to a group of randomly selected contractors in a given year rather than the same set of companies followed over time, it is not possible to directly observe whether the measured effect arises from behavior changes induced via monitoring or sorting behavior. However, we have undertaken several different analyses to try to distinguish the direct effect of monitoring from those arising from manufacturer selection.

One method for separating out the direct impact of monitoring from the effect of selection is to compare the association between monitoring and regulatory performance for contractors with prior WHD violations and for those without prior violations. Manufacturers during the survey periods had access to information about violators through government records and publications. Once provided this information, one would expect that most of improvement in performance for the subset of prior FLSA violators would predominately arise from direct effects of monitoring rather than from sorting. Conversely, if sorting was predominately responsible for the measured effect of monitoring, one would expect little association between monitoring and performance. In fact, in an analysis of Southern California data for 2000, we find that the presence of High monitoring is still associated with a reduction in minimum wage violation incidence of 26.7 per 100 workers and a reduction in back wages owed per worker per week of $3.44 (both results are statistically significant).

Another method of discerning the direct from sorting effects involves separating the sample between recent entrants and established contractors. There is a high level of entry into and exit from the garment industries in both New York City and Southern California. New contractors (defined in our analysis as those that had been in business less than two years) have no real track record and because of this lack of information, are less likely to be sorted. An association between monitoring and performance among this group would therefore arise primarily from direct monitoring effects on behavior. Once again, we find significant evidence of an association between monitoring and performance after separating by the contractors’ years in operation. Using data from Southern California in 2000, we find strong and large associations between High monitoring and improvements in the incidence and severity of minimum wage violations. For example, among contractors that had been in business less than 2 years, High monitoring was associated with reductions of 22.3 violations per 100 workers. Conversely, we find strong evidence of sorting among established contractors (those in business more than two years): for these contractors, we find no statistical association between High levels of monitoring and performance.

Finally, it should be noted that sorting itself represents a positive program effect if the prevalence of monitoring increases over time. That is, if manufacturers seek out only contractors that they believe to be compliant with FLSA provisions, and the percent of manufacturers undertaking monitoring increases over time, selection effects can drive real improvements in overall performance alongside the direct effects of monitoring. Table 8 shows that the percentage of High monitoring in Southern California and
Medium monitoring in New York increased, contributing to overall performance improvement. As we discuss below, selection/sorting effects are also potentially important contributors to ongoing improvement in regulatory performance.

VI. Implications for the future of garment enforcement and beyond

Monitoring and the entry and exit of firms

The high level of contractor “cycling” in garments—that is, the large number of companies entering into and leaving the industry each year—has contributed to the long-term difficulty of controlling labor standards. However, in the face of successful monitoring efforts, contractor turnover could lead to longer-term improvements in compliance. As noted above, monitoring effects arise from both the behavior change that monitoring induces among contractors, and from a “sorting” effect whereby manufacturers seek out contractors that have a lower chance of experiencing supply disruptions.

Sorting, when coupled with the regulatory performance of firms either entering or exiting the industry, can lead to improvements in overall regulatory performance. If sorting increases the likelihood that incoming contractors will use better employment practices in order to be selected by existing manufacturers at the same time that “exiting” contractors leave because of their inability to find manufacturing partners (or simply to compete at all), the overall level of performance in the industry will improve over time. More generally, if new entrants to the industry have better compliance behavior than those leaving the industry, the average level of compliance in the industry will improve.

The survey results in Figures 7a and 7b show that in most cases, the regulatory performance of new contractors improved between earlier and later time periods. For example, the average New York City contractor with less than two years of operation had a violation rate of 26.5 per 100 workers in 1999. By 2001, the average violation rate for new contractors fell to 4.5. Given the high rate of turnover in the industry, if those exiting the industry have higher violation rates than the new entrants, overall industry performance will improve.

The effect of better regulatory performance among incoming contractors relative to those leaving the industry is illustrated through a simulation in Figures 10a and 10b. Given high employer turnover, the overall level of compliance at any point in time will be affected by the characteristics of contractors entering and exiting the industry. In Figure 10a, we predict the overall level of compliance (percent of contractors in violation of FLSA) given different regulatory performance of entering contractors. We assume that contractors leave and enter the industry at a constant rate, that in the first time period, 55 percent of contractors are in violation of the law, and that 55 percent of contractors exiting the industry in each period are violators. The figure shows that if those entering the industry have higher rates of noncompliance than those exiting (entering = 65 percent or 85 percent) the overall rate of noncompliance climbs and plateaus at the rate of
entrants (the two upper lines). However, if incoming contractors have better performance than those leaving, the overall level of regulatory performance improves, once again approaching the rate of incoming contractors (the lower two lines).  

Figure 10b plays out a slightly different story that leads to the same conclusion. Here we predict the overall percent of contractors in violation given that 35 percent of new contractors are in violation, a starting level of 55 percent of contractors in violation, and different rates of violations among those exiting. Here we see that the higher the rate of violations among those exiting the industry, the more quickly the average rate of violations of those remaining in the industry approaches the level of incoming contractors. That is, the better that new entrants are relative to those exiting the industry, the more quickly overall regulatory performance will improve.

Figures 10a and 10b imply that an important feature for future efforts in garment program (as well as in WHD efforts more generally) is affecting the level of regulatory performance among incoming contractors. Policies that would help in this regard include continuing to expand monitoring efforts, increasing awareness of monitoring among entrants to the industry, and providing information about prior violations among contractors to manufacturers (see below). It might also include WHD assessment of the activities of manufacturers and their third-party monitors. The impact of monitoring on contractors depends on those agreements being implemented in practice. Future analysis should compare the relation between formal DOL / manufacturer agreements and actual monitoring practice as revealed in future garment surveys. In addition, future strategic planning benchmarks and GPRA goals should include assessments of the relative performance of entering and exiting employers in high turnover industries like garment.

**Monitoring and competitiveness**

Efforts to improve labor standards frequently cite the “race to the bottom” problem, where the presence of firms violating standards undermines other firms that choose to comply with laws because of the cost advantage that the former set of employers achieve from noncompliance. As a result, as long as some firms are able to thwart regulatory pressures, a race to the bottom will ensue.

On one hand, the pressure to undermine labor standards is particularly intense in the garment industry. In particular, the impact of competition from countries with wage rates that are a fraction of the U.S. minimum wage would seem to undermine efforts to

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27 Note also that if those exiting the industry had an average level of violations above the average rate at the beginning of the simulation period, the rate of overall compliance in the industry would rise even more quickly than depicted in Table 10a.

28 We have undertaken a comparison of this sort for the Southern California in 2000. It indicates a number of instances where the terms of manufacturer-DOL agreements are not perceived by the contractors working for those manufacturers. We also find that in other instances, contractors report more stringent monitoring practices by manufacturers than would be suggested by the agreements that manufacturers have signed with the DOL.
improve regulatory performance. These pressures will become even more acute with the phase-out of quota protections on all apparel products in 2005.

However, the results of our analysis, in concert with a larger study of the apparel industry suggest a more complicated—and hopeful—picture. First, given the nature of international competition in apparel, successful U.S. producers will be those who take advantage of their proximity to the U.S. retail market and are able to produce flexibly and with short lead times to meet fashion and replenishment demands. This subset of the overall apparel market will be characterized by manufacturers and contractors adept at responding rapidly and efficiently to changing retail demand. Such firms may be able to sustain competitive advantage by charging a price premium (relative to offshore producers) for the ability to respond more quickly to shifts in consumer tastes (thereby reducing their exposure to the risk arising from variation in product demand).

If flexibility and responsiveness represent the basis of competitive survival for U.S.-based firms that remain viable, it is clear to see why monitoring arrangements may be sustainable to their competitive strategy: if responsiveness is a hallmark for the domestic “niche” market, supply disruptions arising from embargoes are particularly problematic. Thus, positive regulatory performance and competitiveness are sustainable for these firms. This conclusion also suggests that a strategy focused on low prices alone (without capabilities to provide flexible and responsive manufacturing capacity) may not be competitively sustainable for a U.S.-based manufacturer, given increasing global competition.

Employment trends in the garment industry over the last decade provide support for this view. Figure 11 presents apparel employment from 1993-2002 in California and New York. Employment in both markets fell substantially over the decade, however the rate of decline differed dramatically: while New York employment fell by almost 52 percent (or about 7.0 percent annually), California lost only 16.6 percent (or about 1.8 percent annually) over the same period. In fact, while New York’s losses paralleled those of overall apparel employment in the U.S. (which fell by 47.3 percent over the period or about 6.2 percent per year), California’s experienced an increase in the first half of the 1990s and a more gradual decline in the latter half. Additionally, much of that loss was concentrated in the San Francisco area while the Southern California apparel market sustained lower employment losses.

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31 This does not mean that monitoring and improved regulatory compliance will make firms more competitive. It is true, however, that a competitive strategy premised on responsiveness to the market (rather than based solely on achieving lowest price) is compatible with monitoring and contractor compliance with FLSA.
32 The annual employment loss in the Los Angeles / Long Beach area—which represents the bulk of the California market—was 1.4%; the rate of decline elsewhere in the state is higher than for the Los Angeles / Long Beach region. Data were not available for Orange County, so we do not characterize the entire Southern California region.
Evidence from the inspection-based surveys indicates that Southern California manufacturers tend to be more diversified than their New York counterparts. The Southern California market is less rigidly structured than the older New York market, which has historically been very concentrated on the women’s sector. A larger number of contractors in Southern California report providing services to men’s, women’s, and “unisex” markets. The smaller job losses in Southern California may then reflect the enhanced ability of companies in that area to adopt the flexible competitive strategies described above. Thus, although the overall market in which U.S.-based garment producers operate will most likely continue to shrink, those who remain need not be forced into an inevitable race to the bottom. In fact, just the opposite may be true, particularly if WHD continues to inform manufacturers and retailers of the monitoring program.

Other garment related issues

Using transparency to further the effects of monitoring: The two implications discussed above also suggest that the effects of monitoring could be further amplified. Those domestic manufacturers that remain competitively viable will attach considerable importance to preventing supply disruptions. Manufacturers who seek out contractors with low probabilities of supply disruption will benefit from information about (1) whether a contractor is currently operating under a monitoring arrangement; and/or (2) whether a contractor has in the past been cited for a violation of FLSA provisions. Thus, by providing low cost methods for manufacturers to access information about the past FLSA violation history of contractors, WHD could have significant impacts on regulatory performance.

Currently, the WHD provides limited information about contractors found in violation of FLSA beyond what is contained in press releases regarding high profile cases. A means of increasing the effects of the monitoring program on firms in the industry as well as those entering and exiting would be the provision of web-based information (based on WHISARD data and/or past garment reports), easily searchable using a contractor name, with which a manufacturer could quickly ascertain the past performance of contractors. The same or a related database could provide information on contractors currently operating under a WHD agreement. Such transparency about current and previous contractor behavior would be a means to further leverage the sorting effects that occur under monitoring and serve to continue the significant effects of monitoring going forward.

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33 The quarterly Garment Enforcement Reports produced by the Wage and Hour Division between 1996 and 2000 provided information on the names of contractors found in violation of FLSA and the manufacturers for whom they worked. However, the report was only available in publication form and not as a searchable database.
Perceived versus actual monitoring: Another potential means of enhancing current WHD efforts arises from contractors’ perceptions about monitoring. We have found evidence that some of the contractors in New York City and Southern California perceive that they are under High monitoring even though the manufacturers to which they provide products are not currently signatory to WHD Compliance Monitoring Agreements. Despite the absence of an “actual” agreement, these contractors report that monitoring activities take place and exhibit improved regulatory performance relative to other contractors who are not covered by actual agreements or perceived monitoring. This suggests that the perception by contractors that they are being monitored can be as effective as actual agreements. At the same time, we have found that formal agreements have little impact on regulatory behavior if contractors are unaware that manufacturers have signed them.\(^{34}\)

We are not suggesting that the WHD reduce its efforts to sign new manufacturers (or other parties such as factors) into such arrangements. Quite the contrary: the more such arrangements exist, the higher the perceived need to improve performance on the part of contractors. However, our analysis suggests that significant spillover effects of monitoring may exist if contractors perceive that they are subjected to scrutiny that might not, in fact, be present. On the other hand, it suggests that if manufacturers do not actively implement the terms of monitoring and subject contractors to the provisions of those agreements, they have little impact on contractor behavior. This therefore reinforces the importance of WHD efforts to educate manufacturers and contractors about monitoring efforts.

Future survey work: There are a number of important issues that should be considered for upcoming garment surveys. These issues primarily revolve around providing complete information about characteristics of monitoring arrangements (similar to the format used in the 2000 Southern California survey), as well as information about business characteristics that will be important in discerning the long-term sustainability of contractor and monitoring arrangements in the future. Clarification on these issues will help the WHD ascertain how it can sustain the successful monitoring efforts in garment into the future, particularly as the industry faces greater competitive pressure after 2005.

Implications beyond the garment industry

Use of supply chains as a critical regulatory tool: The use of supply chain pressure to foster internal monitoring by contractors and subcontractors within it leads to changes in contractor behavior by altering the basic regulatory calculus. In particular, it introduces substantial private penalties that easily dwarf in magnitude the civil penalties

\(^{34}\) Our analysis compared inspection-based survey records listing the names of manufacturers and provisions of their monitoring arrangements with Southern California and New York City administrative files regarding formal compliance monitoring agreements. In both areas, we found significant numbers of contractors that indicated they were operating under strong monitoring arrangements with a manufacturer even though that manufacturer had not signed a formal agreement.
available to the government, as well as appreciably increases the implicit probability of inspection facing contractors.

Using supply chain dynamics as a regulatory lever has a number of implications beyond its direct use by the WHD in the domestic apparel market. Supply chains link the U.S. retail market with international sources of apparel production, thereby providing potential analogs for those considering international labor standards regulation. Retail restructuring and the growing compression of time in supply chain relations characterize a growing set of industries, from food to computers to home building supplies. At the same time (and in some cases related to the diffusion of information technologies), many companies are spinning off parts of their production processes and ceding them to networks of contractors and subcontractors. This trend is well known in the manufacturing sector, for example the spinning off of suppliers formerly owned by the major car companies. The creation of multiple layers of subcontracting relationships has also become common in service sectors, from the health care industry to the provision of janitorial services in commercial building.

Understanding developments in industry supply chains in this way may provide new opportunities to use private incentives to achieve public ends. Establishing where these dynamics are occurring across different industries and harnessing them to serve public policy objectives therefore may prove a fertile means for achieving public purposes in a wide variety of regulatory arenas. The emergence at key positions within supply chains of powerful players that can exert pressures throughout them also bears attention as a potential source for both education and influencing adherence to labor standards.

Regulatory efficacy: In prior work on developing seriousness measures, we set out the need for developing measures that capture regulatory efficacy. Regulatory efficacy regards how the WHD might attempt to change behavior once a target has been chosen. The WHD garment program provides a prime example of the need for sophisticated analyses of industry dynamics in crafting effective interventions. Future industry-based interventions should similarly draw on evaluations of the overall structure of an industry, its relation to other industries and the competitive dynamics between employers within that industry. This would allow the WHD to assess how it might best draw on industry forces to improve regulatory performance or to decide that it lacks the tools to effectively change the behavior of employers in certain industry cases.
References


Figure 1: Structure of retailer-manufacturer-contractor relations
Figure 2: Regulatory performance in Southern California, 1998 and 2000

Minimum wage regulatory performance—Southern California

[Bar chart showing compliance and violations per 100 workers, BW per worker/week, and BW per affected worker/week for 1998 and 2000.]

Overtime regulatory performance—Southern California

[Bar chart showing compliance and violations per 100 workers, BW per worker/week, and BW per affected worker/week for 1998 and 2000.]
Figure 3: Regulatory performance in New York City area, 1997, 1999 and 2001

Minimum wage regulatory performance—New York City

Overtime regulatory performance—New York City
Figure 4: Regulatory performance in Southern California and New York City area combined

Minimum wage regulatory performance—Southern California and New York City area

Overtime regulatory performance—Southern California and New York City area
Figure 5a: Minimum wage regulatory performance and ability to affect product price (pricing power)


Minimum wage regulatory performance by pricing power—New York City area: 1999, 2001

Weil, Mallo and Pyles: Boston University
Regulating Labor Standards in the Garment Industry—Final Report
Figure 5b: Overtime regulatory performance and ability to affect product price (pricing power)

Overtime regulatory performance by pricing power—Southern California, 1998, 2000

Overtime regulatory performance by pricing power—New York City area: 1999, 2001

Weil, Mallo and Pyles: Boston University
Regulating Labor Standards in the Garment Industry—Final Report
Figure 6a: Minimum wage regulatory performance and contractor size


Figure 6b: Overtime regulatory performance and contractor size

### Overtime regulatory performance by contractor size—Southern California: 1998, 2000

<table>
<thead>
<tr>
<th>Violations per 100 workers</th>
<th>BW per worker/week</th>
<th>BW per worker/week</th>
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<tr>
<td>Violations per 100 workers</td>
<td>33.1</td>
<td>36.2</td>
</tr>
<tr>
<td>Violations per 100 workers</td>
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<td>35.8</td>
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</table>

### Overtime regulatory performance by contractor size—New York City area: 1999, 2001

<table>
<thead>
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<th>Violations per 100 workers</th>
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<th>BW per worker/week</th>
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<tbody>
<tr>
<td>Violations per 100 workers</td>
<td>1999</td>
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<tr>
<td>Violations per 100 workers</td>
<td>56.8</td>
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<td>Violations per 100 workers</td>
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<td>Violations per 100 workers</td>
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<td>Violations per 100 workers</td>
<td>$8.21</td>
<td>$7.10</td>
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</table>
Figure 7a: Minimum wage regulatory performance and contractor age


Figure 7b: Overtime regulatory performance and contractor age

**Overtime regulatory performance by contractor age—Southern California: 1998, 2000**

**Overtime regulatory performance by contractor age—New York City area: 1999, 2001**
### Figure 8: Frequency of different monitoring practices, Southern California and New York City area

<table>
<thead>
<tr>
<th>Monitoring Activity</th>
<th>Southern California</th>
<th>New York City area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of contractors who report being subject to activity, 1998</td>
<td>% of contractors who report being subject to activity, 2000</td>
</tr>
<tr>
<td>Payroll review</td>
<td>65.3%</td>
<td>56.5%</td>
</tr>
<tr>
<td>Time cards review</td>
<td>72.2%</td>
<td>61.3%</td>
</tr>
<tr>
<td>Employee interviews</td>
<td>61.1%</td>
<td>52.8%</td>
</tr>
<tr>
<td>Provision of information</td>
<td>63.9%</td>
<td>53.7%</td>
</tr>
<tr>
<td>Disclosure of problems</td>
<td>31.9%</td>
<td>42.8%</td>
</tr>
<tr>
<td>Recommend corrective action(s)</td>
<td>30.6%</td>
<td>42.4%</td>
</tr>
<tr>
<td>Unannounced inspections</td>
<td>54.2%</td>
<td>58.5%</td>
</tr>
<tr>
<td><strong>Degree of monitoring</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: One or more monitoring activities by one or more manufacturer</td>
<td>77.8%</td>
<td>72.1%</td>
</tr>
<tr>
<td>Medium: Payroll review and unannounced inspections, but not necessarily by same manufacturer</td>
<td>48.6%</td>
<td>46.9%</td>
</tr>
<tr>
<td>High: Payroll review and unannounced inspections by all manufacturers</td>
<td>23.9%</td>
<td>30.3%</td>
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Figure 9a: Impact of low and high monitoring on regulatory performance, Southern California: 1998, 2000

Monitoring effects on minimum wage regulatory performance —Southern California: 1998, 2000

Monitoring effects on minimum wage regulatory performance—New York City area: 1999, 2001

Monitoring effects on overtime regulatory performance—New York City area: 1999, 2001
Based on a model where percent of violators are set at the following levels: Beginning level = 55%; exiting contractors = 55%. Violation rates of entering contractors set at different levels as shown in above table; 65% turnover of contractors per period.
Based on a model where percent of violators are set at the following levels: Beginning level = 55%; entering contractors = 35%. Violation rates of exiting contractors set at different levels as shown in above table; 65% turnover of contractors per period.
Figure 11: Apparel industry employment in California, New York, and the U.S., 1993-2002

![Employment in apparel: New York vs. California, 1993-2002](chart)

**Compound Annual Growth Rates:**
- US: -6.2%
- New York City: -7.0%
- California: -1.8%