ABSTRACT: This essay discusses one of the major challenges of workplace policy in the US and many ILO member countries: Protecting the millions workers who are vulnerable to a variety of major risks in the workplace. After laying out the dimensions of this problem, I show that the vulnerable workforce is concentrated in a subset of sectors with distinctive industry characteristics. Examining how employer organizations relate to one another in these sectors provides insight into some of the causes as well as possible solutions for redressing workforce vulnerability in the US as well as other countries facing similar problems.

Keywords: Workplace regulation, low-wage workers, labor standards, employment

ACKNOWLEDGMENTS: This research was supported in part by a grant from the Russell Sage Foundation. I am grateful to colleagues at MIT’s Institute of Work and Employment Research and the University of Sydney’s Work and Organizational Studies group for helpful conversations during my sabbatical year regarding many of the ideas in this article.
I. Introduction: The vulnerable workforce

Whether one looks at the volatility of employment, erosion of earnings, compliance with labor standards regulations, exposure to workplace hazards or to a broader spectrum of social risks, a very large and growing proportion of the workforce in developed and developing nations has become ‘vulnerable’ to a variety of workplace and labor market risks. Workforce vulnerability can be defined in a variety of ways. In terms of employment security, it refers to the precarious nature of the employment relationships and increased risk of losing one’s job. In terms of earnings, it means receiving wages that are close to (or sometimes below) the statutory minimum and subject to de facto reductions via being asked to work ‘off the clock’, without being paid overtime as required by the law or, in extreme cases, simply not being paid for work performed (Shulman 2003, Greenhouse 2008).

Workforce vulnerability also relates to increased exposure to a variety of workplace and social risks. More often than not, vulnerable workers do not receive a critical set of workplace- based benefits. In the US, the focus of this essay, a 2006 survey by the Families and Work Institute found that low wage workers—a reasonable proxy for vulnerability as will be discussed below—have significantly lower health care coverage, more limited paid time off for sickness, vacation, or holidays, far lower pension coverage (either defined benefit or any form of retirement benefit) and lesser access to job training programs than middle- or high-wage workers (Families and Work Institute 2006, Table 2).
The vast majority of vulnerable workers do not receive health care benefits. Among low wage workers, the US Bureau of Labor Statistics in its 2007 National Compensation Survey reported that only 24 percent of workers in the bottom quintile of the wage distribution had employer-provided health coverage, compared to 62 percent in the middle wage quintile. The survey found similarly low absolute and relative rates of coverage for dental and vision care, prescription drug coverage, and disability insurance (see Boushey et al. 2007). Similarly, few vulnerable workers receive pension coverage. The rate of pension coverage in the US is particularly low among low wage workers: only 11 percent have defined benefits (versus 34 percent for workers in other wage brackets). Less than half of all low-wage workers have defined contribution programs (43 percent) meaning that most of these workers will be entirely dependent on government provided Social Security benefits for retirement income (Boushey et al 2007; Ghilarducci 2008).

In terms of occupational safety and health, vulnerability translates into exposure to hazards where there are existing regulatory protections and / or available practices to reduce risk, as well as to risks currently unregulated by health and safety standards such as musculo-skeletal disorders, occupational stress and exposure to a variety of workplace chemicals (Azaroff et al 2004; Clapp et al 2007).

Finally, vulnerability relates to treatment at the workplace, including not being afforded adequate protections against discrimination and capricious behavior by supervisors. This directly relates to the decreasing likelihood in most private sector workplaces that one is represented by labor unions. The rate of unionization of private sector workers over the last fifteen years fell from 10.4 percent in 1993 (less than half of
its post World War two era), down to 7.5 percent in 2007. In industries with large concentrations of low-wage workers such as food services and drinking, less than 1 percent of workers were union members in 2007.

This paper argues that workforce vulnerability is not evenly spread across the economy, but is concentrated in a subset of sectors, including industries as diverse as agriculture, accommodations, eating and drinking, and retailing. A common feature of these sectors is the presence of large, concentrated business entities that have greater market power than the large set of smaller organizations with which they interact. These monopsony markets have distinctive competitive dynamics that cause or exacerbate vulnerability. We identify four major industry structure types that share the above overall characteristics but differ in terms of the role played by business organizations with significant market power and the other firms with which they interact. Because the sources of vulnerability link to systemic effects of the way industries are structured, I argue that traditional policy approaches based on employer-focused enforcement are inadequate both because of the scale and complexity of the problem.

I explore the sector-related sources, consequences and responses to vulnerability in the following manner. Section II explores the concentration of vulnerable workers in a subset of industries. Section III then discusses the general factors contributing to vulnerability in those sectors and looks in greater detail at the relationship between specific market structures—in particular four dominant sector types—and workforce vulnerability. I then review in Section IV alternative US public policies that explicitly attempt to address how industries operate as a means of addressing this problem,
followed by a discussion in Section V of parallel international policies that draw on similar approaches. The final section provides concluding observations.

II. Sectoral concentration of workplace vulnerability

How pervasive is workforce vulnerability? Given the many different dimensions that may be used to describe vulnerable workers, it is difficult to provide a single measure regarding the extent of vulnerable employment in the US. One reasonable proxy is defining vulnerability in terms of low wage work. Low wage work is usually measured either in terms of earned income relative to what is required by a family to purchase basic needs, or by ranking jobs in the labor market based on the overall wage distribution. Using a definition related to the poverty level, Boushey et al. (2007) estimate that there were about 35 million low wage jobs in 2006. If one uses a definition based on the broader income distribution, where low wage work is defined as earning two-thirds of the male median wage, the number climbs to 44 million jobs.

Although either definition of low wage work is somewhat arbitrary, both of the above estimates represent a large percentage of total US employment. But the estimates mask the fact that the vulnerable workers are concentrated in certain segments of the labor market. One way to reveal this is comparing the distribution of low wage jobs against the overall distribution of employment across sectors. Using a definition based on the relation of earnings to the federal poverty level, Osterman (2008) finds that retail, food services and drinking places, and health care together account for more than 40 percent of all low wage workers.\(^1\) Table 1 compares Osterman’s estimates of the distribution of low wage workers with the distribution of total employment in 2006. For example, about 5 percent of all employment in 2006 was in construction, and about the
same percentage (4.7 percent) of low wage workers were found in that sector. Workers in health care segments accounted for about the same share of low wage workers as they did in the economy as a whole, while a slightly higher share of low wage workers (11.4 percent) were found in manufacturing than they accounted for in the economy as a whole (9.4 percent).

Table 1 demonstrates that several sectors accounted for a disproportionate share of low wage workers: while retail workers constituted 10.2 percent of the workforce, they made up more than 20 percent of all low wage workers in the US. Similarly food and drinking services accounted for 6 percent of employment but 12.5 percent of low wage workers; and workers in the accommodation (hotel and motel) and agriculture sectors account for twice the proportion of low wage work as they represent in the economy as a whole.

In addition, sectors with large concentrations of low wage workers constituted growing segments of the overall US labor market (see Table 2). More than 20 percent of US workers were employed in the retail and leisure and hospitality sectors, the sectors employing the largest concentration of low wage workers. Food services and drinking places (the major component of the leisure and hospitality sector) were projected to grow more than any industry sector between 2006 and 2016, with an estimated increase of more than 1 million jobs over that period (Franklin 2007, p. 60).

Sectors with significant concentrations of low wage workers also tended to have low union density (see Table 1). Retail, food and drinking, and health care all had levels of union representation that were below the average rate of unionization in the private sector as a whole. The absence of unions in this sector—though a focus of several major
union organizing efforts in recent years (Lerner et al 2008)—reduced bargaining pressures to raise wages and improve working conditions, as well as initiation of enforcement actions arising from worker complaints.

III. Sectoral sources of vulnerability

The sources of workforce vulnerability arise from a variety of economic and social factors that have been widely discussed (see Bernhardt et al 2008 for a useful summary of this literature). These include increasing levels of global competition; a large influx of immigrant (and in many cases undocumented) workers who are particularly vulnerable to exploitation; changes in the organization of work and in the structure of industries; long term declines in enforcement by federal and state government; and the emergence of joint employment relationships in many workplaces (see below).

Although all of the above factors play important - although varying - roles in affecting vulnerability; I want to focus here on those rooted in the sectors where those worker are concentrated, and particularly, those related to how those industries are structured. My contention is that particular interactions of firms in these markets provide important insight into the sources of workforce vulnerability as well as in relation to how those dynamics can be changed through public interventions to improve labor standards conditions for those workers.

One cross-cutting factor commonly cited as a source of vulnerability is the growing use of various forms of subcontracting, temporary employment, self-employment, third party management and related contractual forms that make the tie between worker and employer tenuous (Carré et al. 2000; Ruckelshaus 2007; Zatz
The relationship between worker and employer has become more and more attenuated as businesses have contracted out, outsourced, subcontracted, and devolved many functions that once were done in house. The use of subcontracting, long used in construction and manufacturing, has become widespread in sectors ranging from building services to the hotel and motel industry.

The breakdown of traditional employment relationships did not occur in a vacuum, but in the context of specific markets and sectors. A problem of many accounts of low wage, contingent, or vulnerable work is that they emphasize either national-level, broad macro-factors operating across workplaces or at the employer / workplace-level where they dwell on micro-factors related to individual worker or employer choices. Some of the most salient forces linked to vulnerability arise at the industry-level, as suggested by its concentration in a subset of industries (see Bray and Waring 2009 for a related argument).

A common feature underlying many of the sectors where vulnerability appears to be most common is the presence of large, concentrated business entities that have greater market power than the large set of smaller organizations with which they interact. These sectors have characteristics of monopsony markets with distinctive competitive dynamics operating on buyers versus sellers (Erickson and Mitchell 2007). The asymmetric relationships and their impact on vulnerability can be broken into four major categories.

**Strong buyers sourcing products in competitive supply chains:** In some sectors - for example in many non-durable consumer product markets where retailers play a dominant role in driving supply chains - major players (e.g. retailers like Wal-Mart and Home Depot) set the overall terms of economic relationships in the product markets, yet
have no direct employment responsibility for large supply chains that provide products. As a result, pricing policies are set by one set of players who operate in markets where they hold significant pricing power because of scale economies, brand recognition, and geographic barriers to entry. However, the markets (supply chains) providing these goods are characterized by significant competition, low margins, low barriers to entry (including international markets) and therefore significant pressures for low wages and poor working conditions.\textsuperscript{2} Agricultural sectors driven by major food processors (e.g. Campbell soups), food retailers, or fast food companies are all examples of this type of industry structure.

\textit{Central production coordinators managing large contracting networks}: In this type of industry structure, large companies play a role as coordinators of production that entails large numbers of workers. However, few of those workers are directly employed by the coordinators. The US residential housing market is a prime example of this type of structure, where in the 1990s and early portion of 2000s (prior to the housing bust in 2006) a small number of national home builders came to dominate many housing markets. The top five home builders controlled more than one third of market share in rapidly growing areas like Las Vegas, Nevada, Fort Meyers, Florida, and Houston, Texas (and close to 50 percent in markets like Denver, Colorado and Austin, Texas) in 2005. Though major national homebuilders built more than 40,000 homes per year, they directly employed very few construction workers. Instead, construction was undertaken by large number of relatively small local contractors who, in turn, further subcontracted work to other, smaller firms engaged in competitive markets. While the large homebuilders created and managed the plans for developments, set the basic terms for
pricing, and establish standards for performance, terms of employment were set by the myriad of small contractors who bid the work (Abernathy et al. 2007).

Small workplaces linked to large, branded, national organizations: In a number of service providing industries—in particular in food services and hotels and motels—work is undertaken in small, geographically dispersed workplaces. Although these workplaces operate under the name of well known national brands (eg McDonalds; Hilton) the employment relationship is usually with a different entity, such as a franchisee in the eating and drinking industry or a complicated combination of local owners and third party management companies in hotel and motels. Conditions leading to workforce vulnerability arise because employment policies for the millions of workers in these sectors reflect the interdependent decisions of relatively small, local employers facing significant product market competition yet having a lower stake in reputation than the multinational brands of which they are a part. Ji and Weil (2009) show that this complex interaction of ownership and management result in about 40 percent non-compliance with minimum wage and overtime regulations among fast food outlets owned by the top twenty national chains in the US. Other industries employing franchising models of ownership (auto rental; segments of food retailing; and various service providers) have similar dynamics.

Small workplaces and contractors linked together by common purchasers: A final common form of industry structure occurs where a network of employers is tied together by a common purchaser of services, or a public, not-for-profit, or private entity that disperses payments to employers in that network. Vulnerability is an outgrowth of the fact that services are provided in smaller, more decentralized units whose decisions
reflect the concerns of local companies or contractors engaged in far more competitive markets than the larger entities that are the source of revenues. In contrast to the prior categories, the common purchaser is neither a coordinator of sales or production, nor a well known business entity. An example of this type of structure arises in the janitorial, landscaping, and related business services area where large end users (large building owners) contract out these activities to large numbers of competitive contractors. In many cases, prime contractors to building owners further subcontract work to even smaller business entities. A different, but related variant of this model occurs in child and home health care sectors where service is provided by small community-based facilities or at recipients homes, but paid for via public funds.

**IV. Sectoral policies to address vulnerability**

The long term reduction in government resources towards enforcement of occupational health and safety, wages and hour standards and other workplace regulations has contributed to the growth of vulnerable workers. Through reduction in the size and role of the federal and state inspectorates, employers and industry sectors face trivial likelihood of investigation in a calendar year. The overall statistics in the US are indicative: while the number of workplaces covered by federal workplace regulations increased by 112 percent over the period 1975-2005, the number of investigators declined by 14 percent (Bernhardt and McGrath 2005). That means even well known employers (to say nothing of the ‘garden’ variety workplace) face little chance of seeing an investigator: for example that the likelihood that one of the top twenty fast food restaurants (e.g. McDonalds, Burger King, Subway) is about 0.008 in a given year (Ji and
Weil 2009). But the more pernicious impact is that employers operate under an expectation where government inspectors or other regulatory agents like unions are simply not seen as a matter of first order concern.³

Fissuring in employment relations further complicates the regulation of workplace conditions. The workplace policies of many countries assume clear relationships between employees and employers (or at least managers representing employers). Those setting workplace policies, supervising production, setting schedules, and evaluating workers are assumed to directly represent and report to the owners (private) or responsible parties (public / non-profit) of record. As a result, many of the traditional presumptions underlying workplace regulation no longer hold, leading to ambiguity around some basic questions: Who is the employer (or joint employers) ultimately responsible for establishing workplace conditions? How much latitude does the employer of record (for example a small janitorial contractor to a large building owner) have to change conditions for their workforce? In a growing number of industries, workplace policies must act on webs or networks of employers, not on single, fixed organizations. The enforcement problem begins to resemble more the regulation of a construction worksite - with its many small employers and indirect forms of coordination between owners, project managers, and individual contractor - rather than the stable factory setting often assumed by workplace policies.

I have argued that conditions leading to workforce vulnerability arise in sectors with distinctive characteristics. Policies that attempt to act on and change those conditions can potentially have systemic and sustainable effects that go far beyond traditional enforcement approaches focused on individual employers. Although
interventions relating to other factors relating to vulnerability must also be considered -
immigration policies, the need for skill development, increasing opportunities for union
representation⁴ - a sector-level approach to regulation provides a critical means for
changing the underlying conditions driving vulnerability.

Understanding how industry structures relate to the creation of vulnerable work,
also provides insight into how those same dynamics could be used as a regulatory
mechanism to bring systemic compliance to an entire industry rather than on an
employer-by-employer basis. I illustrate this by describing policies that are - or could be
- built around the industry structures described in the previous section.

Strong buyers sourcing products in competitive supply chains: A highly effective
method of dealing with vulnerable workers in industries with this structure is illustrated
by a program developed by the Wage and Hour Division (WHD) of the US Department
of Labor to enforce labor standards in the US apparel industry in the late 1990s. As in
most countries, production in garments is splintered among different enterprises that
carry out the design, cutting, and sewing and pressing / packaging of apparel products.
Contractors compete in a market with large numbers of small companies, low barriers to
entry, limited opportunities for product differentiation (sewing), and intense price-based
competition. As a result, about one-half of apparel contractors in Los Angeles in 1998,
and one-third of contractors in New York City in 1999 failed to comply with minimum
wage laws.

Regulatory activity historically focused at that contractor and subcontractor level
of the apparel industry. The primary means of inducing compliance was through direct
inspection and the effects of deterrence through the levying of civil penalties for those
repeatedly found not complying. This led to an endless ‘cat and mouse’ game between the WHD and small contractors.

This regulatory model was altered substantially in the mid-1990s. New forms of ‘lean retailing’ 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. Apparel suppliers, in turn, must operate with far greater levels of responsiveness (suppliers must replenish some products in less than a week) and accept a great deal more risk than in the past. Any disruptions in the weekly replenishment of orders become a major problem—one that can lead retailers to assess penalties, cancel orders, and potentially drop ‘unreliable’ suppliers (Weil 2005). This increasing importance of time translates into a potential tool of regulatory enforcement.

The WHD dramatically shifted the focus of enforcement efforts by exerting regulatory pressure on manufacturers in the apparel supply chain rather than on individual small contractors. Invoking a long ignored provision of the law regulating labor standards, WHD embargoed goods that were found to have been manufactured in violation of the Fair Labor Standards Act (FLSA), the federal law that sets minimum wages, overtime rules, and child labor restrictions. Although this provision had limited impact in the traditional retail-apparel supply chain, when long delays in shipments and large retail inventories were expected, embargoes now quickly raise costs to retailers and their manufacturers of lost shipments and lost contracts, creating implicit penalties that
dwarf those arising from the civil monetary penalties faced by repeat violators of the FLSA.\textsuperscript{5}

WHD used embargoes to persuade manufacturers to augment regulatory activities by making the release of goods contingent on the manufacturer’s agreement to create a compliance program for its subcontractors. The agreements stipulate basic components of a monitoring system that will be operated by the manufacturer. Statistical analyses of these monitoring arrangements demonstrate that they led to very large and sustained improvements in minimum wage compliance among apparel contractors in Southern California (Weil 2005) and New York City (Weil and Mallo 2007), improving conditions in the sector as a whole.

\textit{Central production coordinators managing large contracting networks:} In many cases, an end user (e.g. public or private company undertaking a major construction project) or a company paid to act as project manager plays a critical role in coordinating production, yet often does not have the status of employer of the many people involved in the project. Changing the relationship of the end user or project manager can alter the dynamics that otherwise lead to workforce vulnerability. To some extent, this is recognized in publicly-funded construction projects where prevailing wage laws at the federal and state level require that workers are paid wages and benefits at levels far above the statutory minima. A more comprehensive approach used in public and some private projects are ‘Project Labor Agreements’ which set standards on wages and benefits as well as a wide range of outcomes (training, health and safety, drug screening) for all contractors and subcontractors working on a project.\textsuperscript{6} The challenge is to create arrangements that similarly engage the coordinator at the top of this type of structure in
cases involving entirely private financing, or in non-construction sectors that have similar
dynamics.

*Small workplaces linked to large, branded, national organizations:* Major fast
food companies spend millions of dollars each year burnishing their image with
consumers. They also utilize the private capital of local franchisees to provide resources
for the majority of their outlets. These two components of strategy lead to conflict in
regard to the behavior of company owned outlets (those owned and managed by the
branded company) and franchised outlets that bear the name and products of the branded
company, but are owned and managed by another party. This manifests itself in higher
levels of health code violations by franchisees than by company owned units (Jin and
Leslie 2008). More pertinent to this discussion, franchisees violate labor standards far in excess of company owned enterprises. On average, franchisees owe $800 more in back wages (wages below the required statutory minimum) per worker found in violation than comparable company-owned units (Ji and Weil 2009).

Companies have a substantial interest in maintaining brand image given their
investments. Although most franchise agreements leave responsibility for labor
standards violations, branded companies have an incentive to improve the behavior of
their franchisees. One method to do so is to make the violations more transparent to the
public. This, in fact, was the approach taken in Southern California in regard to health
code violations, where outlets were required to post their health code inspection records
in the form of an ‘A’ ‘B’, or ‘C’ grade, in their front window. The requirement led to the
gap between franchisee and company owned hygiene ratings disappearing (Jin and Leslie
2009). A similar approach could be used regarding public disclosure of past labor standards violations.

An alternative approach would be to negotiate agreements with national branded enterprises in the fast food industry that have similar characteristics to those in the garment program discussed above. Drawing on the same incentives that lead branded companies to comply with labor standards in outlets they directly own, the government could negotiate private monitoring arrangements to oversee compliance among franchisees. Progress could be monitored via similar randomized inspections as used in apparel.

**Small workplaces and contractors linked together by common purchasers:** The Justice for Janitor campaign, a strategy originally developed in the mid-1980s by the Service Employees International Union (SEIU) and now employed in fourteen cities to improve conditions for janitors and other building service workers is a well known intervention to deal with this type of market structure (see Milkman 2006; Lerner et al 2008 for recent accounts). The approach entails bringing pressure on major building owners (including, in one of the most recent campaigns directed at the University of Miami) to make them a party to collective agreements, rather than focus on the far more competitive and fractured service providers operating at the bottom of this sectoral structure.

An effort that uses legislation rather than private pressure as a means to change the economic dynamics of the sector has been used in California, Washington, Oregon and more recently in Massachusetts and Illinois (Dresser 2008). As is generally the case with home-based services (cleaning, day care), home health care is isolated work and
subject to many of the ‘vulnerability’ issues raised here. Many home health care aids - who usually act as independent contractors - receive payment for their services from state and country governments via two programs: Medicare and Medicaid. Legislation in those states, backed by the SEIU and other worker advocates, changes the status of the state to become the ‘employer of record’ for home care workers because of its role in purchasing home healthcare services. This change in employment status allows the SEIU to organize homecare workers and to bargain on their behalf. This approach could be used in other areas where public revenues are used to purchase private services.

V. International parallels

Although this essay has focused on the US, many of the observations about the extent, sector-based causes, and new approaches to redressing vulnerability apply to other developed countries. The erosion of traditional employment relationships and industrial relations institutions has occurred throughout developed economies. In particular, most of the so-called Anglo-American countries—Great Britain, Australia, New Zealand, Canada, Ireland—have experienced a long term decline in union density in the private sector and significant reduction in the government’s presence in the workplace (Boxall, Haynes, and Freeman 2007; Brigden 2009 for Australia; Charlwood and Haynes 2008 for New Zealand). Declining union membership has decreased the political leverage of labor in many countries, reducing legislative support for workplace-related policies while also reducing the ability of trade unions to play crucial roles in assisting workers exercise statutory rights (eg Cooper and Ellem 2008; Oliver 2008 in Australia).7

The balance of economic activity has also shifted from good-producing and toward service-providing industries in most of these countries and traditional
employment relationships have been supplanted with various forms of outsourcing, subcontracting, and other forms of restructuring that have increased the ambiguity of who is the employer of record (see for example, Quinlan et al., Mayhew, and Bohle 2001 and Johnstone, et al. Mayhew, and Quinlan 2001 in regard to Australia). Changes in the composition and structure of industries also means that employment often takes place in smaller, more decentralised units than typically envisioned in workplace laws (e.g. see Lamm and Walters 2004 in regard to small employers in New Zealand) even though those smaller entities compete in order to supply large and concentrated organizations in supply chains or similar structures. These factors have led to a parallel growth in vulnerable workforce conditions in sectors like eating and drinking and hospitality as described above for the US (e.g. in Australia see Barnes and Fieldes 2000 for hospitality and Bray and Underhill 2009 regarding hospitality and construction).

As in the US, traditional policy interventions are either no longer available or applicable to the industries with large concentrations of vulnerable workers. The New Zealand experience of a Labor government’s efforts to reestablish labor standards mechanisms in the wake of radical labor market deregulation shows how difficult it can be revive old or create new standards setting mechanisms to protect workers in vulnerable sectors (Barry and Wailes 2004). Industries like hospitality in Australia historically depended on the awards system to ensure minimum wage and working conditions standards in the hospitality sector, given low union density in that industry. The dramatic scaling back of the awards system under the Howard government meant that important public role was severely undercut (Bray and Underhill 2009). Even with the Rudd government’s revocation of the Work Choices policies, low union density and
the diminished role of awards mechanisms means that new principles of creating sustainable standards setting mechanisms will be required.

Nonetheless, common problems lend themselves to common responses—and the opportunity for cross-national learning—and there are numerous examples of sectoral-based approaches to protecting vulnerable workers in these countries. In Australia, ‘supply-chain’ focused strategies have been created to deal with similar dynamics in the garment industry as described above in the US. These strategies impose liability for entitlements to workers throughout the garment supply chain including on principal manufacturers. They also required greater transparency regarding the use of subcontracting and created tripartite structures to create retailer codes of conduct. (Nossar, et al Johnstone, and Quinlan 2004; Rawling 2007). A related strategy emerged in transport where increasingly small owner-drivers truckers compete to provide long haul road freight transportation services to major retailers and other concentrated purchasers. Under regulations passed in New South Wales, employers, retailers, and lead carriers are required to keep records regarding contracting as well as maintain ‘driver fatigue management plans’. The requirement to create these plans as well as to keep detailed records of who is contracting for whom allows the lead union in the industry, the Transport Workers Union, to ‘increase its capacity to improve safety for truck drivers. Retailers and head transport companies at or near the apex of transport supply chains now have direct responsibilities in relation to truck driver safety.’ (Kaine and Rawling 2009, p.14; James et al. 2007).

Related strategies have been devised in New Zealand in order to deal with shortages in the supply of labor for horticulture and viticulture industries while assuring
compliance with core workplace regulations and improving overall productivity among contractors employing both domestic and immigrant workers to those industries (Hill et al 2007). One example of this approach is to create a ‘return worker scheme’ for non-domestic seasonal workers that simultaneously seeks to improve conditions for guest workers, reduce labor turnover and increase productivity for contractors, and address recurrent labor supply shortages overall (Whatman 2007).

VI. Conclusion

With at least 35 million workers in the US employed predominately in small workplaces and connected through a hazy web of employment relationships, the task of redressing vulnerable employment is daunting and does not comport itself to quick and simple solutions. Even with the significant infusion of resources towards enforcement of core workplace laws provided in the first budget of the Obama administration, there will never be sufficient resources (even when economic recovery begins) to significantly reduce vulnerability simply by hiring more inspectors. And public policies will never be able to turn back the clock on the macro-level factors that fostered vulnerability in the first place.

Institutions connected to the workplace - labor unions, worker advocates, and other worker intermediaries - need to be engaged in these efforts. Unions play critical roles in undertaking ongoing monitoring and representation functions in several of the sector-based approaches discussed above. Public policies that strengthen these institutions are therefore essential. The proposed Employee Free Choice Act - endorsed by President Obama and supported by the majority of Democrats and a significant
number of moderate Republicans in Congress - would correct longstanding problems in US labor law regarding employer conduct during union elections (eg Freeman and Kleiner 1990; Logan 2006) where only 1 in 7 union organizing drives ultimately result in first contracts (Ferguson 2008). But given the size of the vulnerable workforce, the long-term decline in private sector union density (even in countries where labor laws have been changed to improve the climate for unions and collective bargaining as has happened in the UK and New Zealand), and particularly low union density in the industries of concern, a robust approach to vulnerability must rest on a vigorous government role.

To do so, government institutions must undertake workplace regulation in very different ways than have characterized enforcement in the past (Weil 2008). Central to that role is building and acting on a deep understanding of how industries and sectors operate and how those dynamics affect workplace outcomes generally and employment vulnerability in particular (Bray and Waring 2009). To truly redress this problem, government agencies can no longer play the traditional ‘cat and mouse’ game of inspection and compliance. They must instead attempt to change those aspects of industry operation that lead to deleterious social outcomes in the first place and then allow the parties to act within that changed landscape.
References


### Table 1: Distribution of employment, low wage workers and union density by selected industry sectors, United States, 2006

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employment *a</th>
<th>Low wage workforce distribution b</th>
<th>Union density c</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Employed (Millions)</td>
<td>Percent of total employment</td>
<td>Percent of all low-wage workers</td>
</tr>
<tr>
<td>Construction</td>
<td>7688.9</td>
<td>5.1%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14197.3</td>
<td>9.4%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Retail</td>
<td>15319.4</td>
<td>10.2%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Professional and business services</td>
<td>17551.6</td>
<td>11.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Food and drinking services</td>
<td>9382.9</td>
<td>6.2%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Health</td>
<td>14919.8</td>
<td>9.9%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>2138.6</td>
<td>1.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Accommodation</td>
<td>1833.4</td>
<td>1.2%</td>
<td>2.6%</td>
</tr>
<tr>
<td>All other sectors</td>
<td>67588.1</td>
<td>44.9%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Total</td>
<td>150,620</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>


Table 2: Employment trends in major sectors, United States, 1996-2016

<table>
<thead>
<tr>
<th>Sector</th>
<th>1996</th>
<th></th>
<th>2006</th>
<th></th>
<th>2016 (Projections) a</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Employment</td>
<td>Percent of</td>
<td>Employment</td>
<td>Percent of</td>
<td>Employment</td>
<td>Percent of</td>
</tr>
<tr>
<td></td>
<td>( Millions)</td>
<td>workforce</td>
<td>( Millions)</td>
<td>workforce</td>
<td>( Millions)</td>
<td>workforce</td>
</tr>
<tr>
<td>Goods-producing (exc. Agriculture)</td>
<td>23,328.5</td>
<td>19.4%</td>
<td>22,504.9</td>
<td>16.4%</td>
<td>21,772.6</td>
<td>14.3%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>17,236.6</td>
<td>14.3%</td>
<td>14,197.3</td>
<td>10.4%</td>
<td>12,694.5</td>
<td>8.4%</td>
</tr>
<tr>
<td>Service providing</td>
<td>97,042.9</td>
<td>80.6%</td>
<td>114,407.3</td>
<td>83.6%</td>
<td>130,189.7</td>
<td>85.7%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>14,142.6</td>
<td>11.7%</td>
<td>15,319.4</td>
<td>11.2%</td>
<td>16,006.4</td>
<td>10.5%</td>
</tr>
<tr>
<td>Health care &amp; social assistance</td>
<td>11,604.8</td>
<td>9.6%</td>
<td>14,919.8</td>
<td>10.9%</td>
<td>18,954.1</td>
<td>12.5%</td>
</tr>
<tr>
<td>Leisure and hospitality</td>
<td>10,776.5</td>
<td>9.0%</td>
<td>13,143.3</td>
<td>9.6%</td>
<td>15,016.7</td>
<td>9.9%</td>
</tr>
<tr>
<td>Food services &amp; Drinking</td>
<td>7555.5</td>
<td>6.3%</td>
<td>9,382.9</td>
<td>6.9%</td>
<td>10,406.5</td>
<td>6.8%</td>
</tr>
<tr>
<td>Accommodation</td>
<td>1698.9</td>
<td>1.4%</td>
<td>1,833.4</td>
<td>1.3%</td>
<td>2,087.7</td>
<td>1.4%</td>
</tr>
<tr>
<td>Retail, health care &amp; leisure / hospitality (combined)</td>
<td>36,523.9</td>
<td>30.3%</td>
<td>43,382.5</td>
<td>31.7%</td>
<td>49,977.2</td>
<td>32.9%</td>
</tr>
</tbody>
</table>

*Ten year projections by the Bureau of Labor statistics (see Franklin 2007 for details on methodology).
Notes

1 Osterman uses the Current Population Survey (CPS), Outgoing Rotation Group, to make his estimates. The CPS is based on a household survey conducted by the Census Department. The estimates there for pertain to the number of workers employed in low wage work. This contrasts with the approach used in Boushey et al. (also quoted in the article) that base their estimates on the Current Employment Statistics survey, which counts the number of low wage jobs. Since some workers may hold multiple jobs, the two measures are not synonymous. The figures for the economy as a whole used in Tables 1 and 2 combine both sources in presenting estimates of total employment.

2 This set of relationships has spawned a very large literature on international supply chains, the different variants of them, and their dynamics. For an overview, see Gereffi, Humphrey, and Sturgeon (2005).

3 Other industrial nations face the same enforcement challenge due to the declining presence of government regulators and growing number of workplaces. For example in the UK, “Each year since 1999-2000, HM Revenue and Customs [the government agency in charge of minimum wage enforcement] has made around 5000 visits to an employer…There are around 1.6m employers in the UK. Therefore a typical employer can expect a visit from HMRC once a millennium.” (Metcalf 2008, p.499).

4 Osterman (2008) usefully lays out a framework that delineates policies dealing with low wage work that recognizes their origins in both labor supply and labor demand. This essay focuses on the nature of labor demand. However, there are a separate and important set of policies regarding education, training, and private and public efforts to enhance the human capital of low wage workers by focusing on the supply side of the labor market (e.g. Holzer 2004).

5 The maximum penalty for a repeated and willful violation of minimum wage or overtime standards is $1100(US) per violation. In contrast, I estimate the implicit cost of an embargo to be over $100,000 (Weil 2005).

6 During the Clinton administration, parties were required to negotiate Project Labor Agreements on all major federally funded construction. The Bush administration rescinded this requirement. It is likely to reinstated and possibly expanded as part of the wider economic stimulus efforts of the Obama administration.

7 Many of the observations from this section arise from conversations while a Visiting Professor at the University of Sydney, Department of Work and Organisation Studies in Australia during the summer of 2008. I am particularly grateful to Russell Lansbury, Richard Hall, Ray Markey, Michael Quinlan, Rae Cooper, Sarah Kaine, Bradon Ellem, and Marian Baird for their insights.

8 The Obama administration significantly increased expenditures for enforcement for the Wage and Hour Division (which enforces minimum wage, overtime, and child labor standards and other basic labor standards programs); the Occupational Safety and Health Administration; and the Mine Safety and Health Administration. The administration in its first budget, supplemented by money from the economic stimulus
bill, has increased real federal spending on enforcement to its highest level since the Carter administration in the late 1970s.

9 The Employee Free Choice Act would allow workers to form unions by signing cards authorising union representation; increase penalties for violation of employee rights during organizing drives; and allow parties to request mediation if they are unable to reach agreement on a first contract after 90 days and after 30 days of mediation, if there is still no agreement, the contract would be referred to arbitration (for background, see American Rights at Work 2009).