

**Employment relations and growing income inequality:
Causes and potential options for its reversal**

Corresponding Author:

Thomas Anton Kochan
George Maverick Bunker Professor of Management
Sloan School of Management
Massachusetts Institute of Technology
100 Main Street, E62-334
Cambridge, MA 02142
617.253.6689
tkochan@mit.edu

Christine A. Riordan
Doctoral Student
Sloan School of Management
Massachusetts Institute of Technology
100 Main Street, E62-381
Cambridge, MA 02142
617.324.0476
criordan@mit.edu

Submitted November 19, 2015

Author biographical notes

Thomas A. Kochan is the George Maverick Bunker Professor of Management, a Professor of Work and Employment Research and Engineering Systems, and the Co-Director of Institute for Work and Employment Research at the Massachusetts Institute of Technology Sloan School of Management.

Christine A. Riordan is a doctoral student in the Institute for Work and Employment Research at the Massachusetts Institute of Technology Sloan School of Management.

Employment relations and growing income inequality: Causes and potential options for its reversal

Abstract

The growth of income inequality is now recognized to be one of the most important developments in employment relations of our time. While inequality has increased in many parts of the world, it has been most pronounced in the United States. In this paper we will review the factors that have been suggested to cause the growth in inequality and, given these multiple causes, suggest a set of actions that might begin to reverse this trend. We give special attention to the changes in the employment relationship related to labor market institutions - including unions and other forms of worker representation, wage regulations and enforcement, and safety net policy – as they relate to inequality, while also accounting for explanations and proposals that focus on technology, skills and education, and globalization. Additionally, we also argue that emerging forms of organizational restructuring are becoming increasingly important in understanding income inequality and how it might be addressed.

Keywords

Income inequality, labor market institutions, wage policies, skills and education, globalization, organizations

Introduction

The growth of income inequality is now recognized to be one of the most important developments in employment relations of our time. While inequality has increased in many parts of the world, it has been most pronounced in the United States. In this paper we will review the factors that have been suggested to cause the growth in inequality and, given these multiple

causes, suggest a set of actions that might begin to reverse this trend, with particular emphasis on the employment relationship and labor market institutions. While we focus mostly on the U.S., we place the discussion in a broader global context.

The paper proceeds as follows. We first present the stylized facts on trends in income inequality and wage stagnation with a focus on what appears to be a turning point in the 1980s. Then we review the alternative explanations proposed for the rise in inequality, starting with changes in markets and technology and then turning more directly to changes in institutions and employment relationships. In the final section we suggestion some options for reversing the observed trends.

Trends in inequality in the U.S.

The most widely used indicators of the growth in income inequality in the United States come from Piketty and Saez (2013, 2003). Using detailed tax data from the U.S. Internal Revenue Service, the authors show a remarkable pattern of income transfer – of over 15% of national aggregate income – from the bottom 90% of the income distribution to the top 10% over roughly the past three decades (Figure 1). The authors show that even within the top decile of the income distribution, it is the top 1% that increasingly accumulated growing levels of income: almost 60% of income growth between 1976 and 2007 went to this group. In contrast, income growth of the bottom 90th percentile was relatively flat (Figure 2).

Figure 1 about here

Figure 2 about here

A second widely used indicator focuses specifically on long-term trends in compensation and labor productivity (Figure 3). For three decades following World War II real compensation (wages and fringe benefit costs) moved roughly in tandem with productivity. From 1979 to 2014, productivity grew by approximately 63%, while real compensation for hourly workers in the U.S. increased by only about 8%. This widely used graph leads to the obvious question of what accounts for the changed relationship between wages and productivity.

Figure 3 about here

A third indicator of growing inequality is the shift in labor's share of national income – the distribution of income, in other words, allocated to labor as opposed to capital. A declining labor share reflects uneven growth in productivity returns to labor. Since the 1950s, labor income share by wages and salary declined rapidly, falling nearly six full percentage points (Figure 4).

Figure 4 about here

Focusing on corporate income illustrates just how significant these changes are: the decline in labor's corporate income share, from a peak of 84% in 2001 to 75.5% currently, represents an estimated US\$535 billion *less* distributed to workers over the last 15 years (Bivens, 2015; Figure 5). The shift from labor- to capital-intensive industries is part of the reason for this shift, but also important is the growing decline of labor share within industries – especially those where profits have grown tremendously, such as in finance (ILO, 2015) and the simultaneous accumulation by the very top of wage earners.

Figure 5 about here

Global trends in inequality

The U.S. is not alone in its declining wage growth and growing inequality over recent decades. Many industrialized countries – such as Japan, Canada, and those in Europe – have followed a similar trajectory. In particular, dramatic growth patterns at the very top are observed in other English-speaking countries such as the United Kingdom and Canada, although to a lesser degree. Notably, however, in countries such as Japan and throughout Europe, this top-heavy accumulation is not quite as pronounced as it is in the U.S. In contrast to the “U-shaped” trajectories illustrated in Figures 1 and 2, these countries have “L-shaped” trajectories shaped by the fact that the very top has not pulled away from the rest of earners at an increasing clip (Piketty and Saez, 2006, 2004; Alvaredo, Atkinson, Piketty and Saez, 2013).

Scholars attribute these observations to a convergence in labor market institutions in countries such as the U.S. and the U.K. – the decline of collective bargaining, for example, or the declining real value of minimum wages (Gosling and Lemieux 2004) – but also point to significant change in bargaining among CEOs and other top executives in large companies (Bivens and Mishel, 2015). Still, there is concern that as countries seek to mimic U.S.-style compensation structures and labor market policies, their patterns of inequality will become more closely aligned with that of the U.S. – as has been the case, for example, with growing inequality in the U.K. (Gosling and Lemieux, 2004). Although these concerns are widespread across countries, we focus here on the causes and consequences of inequality in relation to the employment relationship in the United States, as it is the country with the most extreme growth in inequality and the one for which we have the most expertise.

Is inequality a problem?

While the trends in wage stagnation and inequality are clear, should they be viewed as problematic? We offer two grounds for concern.

The first ground arises directly out of the normative premises or values underlying our field of industrial relations (now better known as work and employment). This field has historically valued efficiency and equity as equally important underlying objectives for work and employment relationships (Barbash, 1964; Kochan, 1980; Melz, 1989; Budd, 2004). Historically and currently religious leaders have also provided a deep moral or theological basis in arguing for fairness and equity at work (Kochan, 2012). While equity and fairness are not easily reduced to specific standards, various simulations and polls show a majority of Americans find the current income distribution as unacceptable even while underestimating the true magnitudes of differentials that exist (for example, see Newport, 2015). Thus, there intellectual, moral, and political reasons for concern about the distribution of income.

There may also be a more straightforward economic policy concern. There is growing evidence that high levels of income inequality are associated with slower economic growth (Stiglitz, 2015; Cynamon and Fazzari, 2014). A recent cross national study by the International Monetary Fund estimated that a one percentage point increase in the income share of the top 20% reduces economic growth by 0.08 percentage points over five years, whereas a 1% rise in the income share of the bottom 20% *increases* growth approximately 0.38 percentage points (Dabla-Norris, Kochhar, Suphaphiphat, and Tsounta 2015).

Explanations for income inequality

Not surprisingly, the growth in inequality has gained significant attention and been the source of considerable debate among researchers from multiple disciplines. We will review the evidence generated by this research below, starting with traditional explanations in economics focused on the external market and technological change before turning to institutional and organizational factors that arise from various disciplines. In so doing, we aim to arrive at an explanation of inequality that reflects the fundamental ways in which the organization of the employment relationship has changed. In other words, how do we explain the divergence of wages and productivity in terms of organizations and institutions? And, how does this reflect the changing nature of the employment relationship, particularly since the 1980s?

Skill-biased technological change

One of the first factors economists turned to in search of an explanation for the rise of inequality is skilled biased technological change (SBTC). As described by Card and DiNardo (2002), SBTC is when “a burst of new technology cause[s] a rise in the demand for highly skilled workers, which in turn [leads] to a rise in earnings inequality” (734). This rise in inequality is argued to occur in two ways: first, through demand for skilled workers who are needed to fill more technologically advanced jobs yet who are in short supply; and later, by the displacement of lower- and middle-skilled workers who intensify competition for lower-wage jobs (Autor, Katz and Kearney, 2008; Autor, 2010).

The increase in the college-to-high-school wage premium in the 1980s was the first indicator that led researchers to examine this issue in some detail. In the 1980 the college/high school wage premium was 39%; in 1990 it was 54%. However, during the 1990s the growth in the college/high school differential slowed and stood at 61% in 2000, where it approximately

remains today (Goldin and Katz, 2008; James, 2012). This stagnation, along with the failure to explain differences in education returns by age as well as other demographic factors such as gender and race, led a number of scholars to critique the theory of SBTC as incomplete at best (Card and DiNardo 2002; Lemieux, 2008).

Still, however, the debate around SBTC persists. Current arguments regarding SBTC have shifted focus from skills measured by education to the changing composition of tasks pertinent to technologically changed work (Autor, Levy and Murnane, 2003; Acemoglu and Autor, 2010). This emphasis led to the emergence of the “job polarization” thesis: namely, that a “hollowing out” of middle skill jobs is occurring at the same time that jobs characterized by low- and high-skill levels (and, correspondingly, relatively low- and high- wage levels) are growing (Autor, 2010). Existing empirical evidence continues to challenge this idea: Holzer (2010), for example, finds that middle-skilled jobs are actually projected to *grow* over the near future. Others argue that the job change patterns in the most recent decade fail to reflect the job polarization thesis – most notably as job growth in low-wage sectors has outstripped that of high-wage sectors throughout the 2000s.

Globalization

The next favorite explanation was globalization. Since 1980, America has lost just over one-third of its manufacturing jobs. A number of studies have shown that workers displaced from manufacturing jobs who regain employment experience wage reductions of 20% or more (Holzer, Lane, Rosenblum and Anderson, 2011;125). A different study documents the negative effects experienced in communities exposed to increased import competition from China. In addition to declining wages, these communities experienced significant increases in disability

and other income transfer payments, higher unemployment, and larger reductions in labor force participation (Autor, Dorn, and Hanson, 2013). These community effects are more persistent than economic theory would predict: the same study found relatively little geographic mobility among those displaced. More recently, offshoring undertaken by U.S. firms during the 2002-2008 period is shown to advantage higher-skilled workers who undertake relatively more abstract and communication-dependent tasks in their jobs. These also tend to be higher-wage workers: the wage gap between those at the 75th percentile of the wage distribution and those at the median increased, while the opposite occurred relative to wage earners at the median and 25th percentile (Oldenski, 2014).

Composition of the labor supply

Finally, we briefly note that growing inequality is also attributed to the changing demographic composition of the labor supply. These arguments primarily revolve around gender, immigration, or education levels – the influx of women, for example, or immigrants into certain sectors is argued to drive down wage levels. Research has challenged such findings (Lemieux, 2008) while also situating the disparity in outcomes among different demographic groups in the context of labor market institutions, as described more fully in the next section.

Labor market institutions

Over the years, scholars in various disciplines have established linkages between labor market institutions – such as wage laws, labor unions, and regulatory regimes – and patterns of growing wage inequality. Below we review the main labor market institutions that we deem important to understanding inequality.

Minimum wages. The first institutional feature thoroughly examined was the decline in purchasing power of the national minimum wage. The current US\$7.25 per hour federal minimum stands at about 25% below the purchasing power of the minimum wage at its peak in 1968, which, if it had kept up with inflation, would currently stand at approximately US\$10.94 per hour. As would be expected, the decline of the federal minimum wage's real value is particularly deleterious to those at the bottom of the wage distribution. During the 1980s, for example, most of the growth in wage inequality among those in the lower tail of the wage distribution is attributed to the decline of the minimum wage (Di Nardo, Fortin and Lemieux, 1996; Lee, 1999).

During the 1980s, the minimum wage's decline affected women more acutely than men. Women entering the labor force at the beginning of this period were less likely to be employed in unionized industries that were able to offset wage loss through collective bargaining agreements (Lemieux 1993; Lee 1999). In addition to their growing ranks, women also experienced a growing within-group dispersion in wage levels. Fortin and Lemieux (1997) estimate that had the real value of the minimum wage in 1979 been maintained in 1988, the variance in female log wages would have increased by 32.1% *less* than it actually did, compared to the 24.2% lesser increase in men's wage dispersion under the same conditions.

The story of the minimum wage and income inequality changed markedly during the 1990s and 2000s. During this period, the explosive growth of top incomes became the primary driver of disparity in income (Lemieux 2008). Even so, the out-of-date federal minimum wage is still an important institutional feature affecting inequality, particularly among those at the bottom of the U.S. wage distribution.

Decline in unions and bargaining power. More recently, analysts have recognized that the long term decline in unions and worker bargaining power account for a sizable portion of the problem. By 1980 union membership had been declining slowly for two decades and international competition was eating away at unionized manufacturing firms. The Federal Reserve's efforts to break the back of rampant inflation; President Reagan's firing of striking air traffic controllers and signaling of a new, harder management line against unions; a deep recession; and the growth of non-union domestic competition initiated a steep decline in unions in the early 1980s – one that persisted for the following three decades.

Tables 1 and 2 report previously unpublished data from research done as part of an analysis of the changes in industrial relations in the 1980s (Kochan, Katz, and McKersie, 1986). Specifically, we show that collective bargaining wage outcomes changed after 1980 compared to the two decades prior, namely due to a decline in informal pattern bargaining arrangements that helped spread negotiated wage settlements within local labor markets and industries. At the root of this decline was the lost power of the threat of strikes and centralized bargaining structures. The analysis is based on regressions on wage changes negotiated in 242 collective bargaining units in manufacturing firms with 1,000 or more employees from 1957 to 1984. Prior to 1980, the coefficients on strikes, centralized (firm wide rather than single plant level negotiations) and on regional and intra-industry pattern bargaining were positive and significant. In contrast, from 1980 to 1984 (the last year these data were collected) the coefficients are mostly either insignificant or negative.

Table 1. Wage change regressions: 1957-1984¹

	Full Sample		Pre-1980		Post-1980	
Multi-plant, Single firm structures	.0039** (.0012)	.0037** (.0012)	.0058** (.0012)	.0055** (.0012)	-.0067 (.0038)	-.0067 (.0039)
Multi-firm structures	.0042** (.0013)	.0043** (.0014)	.0046** (.0014)	.0046** (.0014)	.0031 (.0043)	.0028 (.0043)
Region-wide pattern bargaining	.0046** (.0013)	.0050** (.0014)	.0036** (.0014)	.0039** (.0014)	.0085* (.0043)	.0090* (.0043)
Industry-wide pattern bargaining	.0045** (.0014)	.0046** (.0014)	.0043** (.0015)	.0042** (.0014)	.0057 (.0046)	.0063 (.0046)
Strike 1-14 days		.0075* (.0031)		.0080** (.0030)		.0039 (.0157)
Strike 15-24 days		.0054 (.0046)		.0020 (.0046)		.0164 (.0158)
Strike 25 or more days		.0052** (.0019)		.0060** (.0019)		-.0029 (.0072)
R ²	.50	.50	.55	.55	.31	.30

Note: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
Standard errors in parenthesis.

These traditional sources of power no longer served as means of driving and spreading wage increases throughout the economy. The magnitude of the effects are shown in Table 2. Overall, the model of wage determination under collective bargaining that dominated in the 1957-79 time period over-predicted wage settlements in the early 1980s by 1.35 percent. Consistent with the results shown in Table 1, the model over-predicted wage changes more in units with centralized bargaining structures and intra-industry pattern bargaining traditions. Thus, the key sources of power that unions used to increase wages and spread these gains within industries had declined. This decline is substantial: extrapolating from these findings, if the magnitude of these wage outcomes persisted in bargaining, the 1.35% estimate would account for nearly 20% of the difference in growth of productivity and wages from 1980 through 2015.

¹ All equations in Tables 1 and 2 contain controls for changes in rates of inflation, employment growth/decline, unemployment, and presence/absence of wage and price guidelines or controls.

Although imprecise, this is in the same range as more recent studies of the effects of union decline.

Table 2. Over-predictions of post-1980 wage changes using pre-1980 model

Structure/Pattern Cell	N	Without Strikes (%)	With Strikes (%)
Overall Sample	414	1.35	1.36
Single Plant	169	0.79	0.83
Multi Plant/Single Firm	163	2.10	2.09
Multi-firm	82	0.94	0.96
No Pattern	83	1.20	1.24
Regional Pattern	162	0.89	0.90
Industry Pattern	169	1.85	1.83

Other scholars illustrate the importance of unions in wage-setting in different ways. Freeman (1980, 1982), for example, shows that leading up to the 1980s, unions played an important role in reducing wage inequality within organizations, finding that the dispersion of wages within unionized organizations of given industries was five to 50% lower than that found within non-unionized organizations. This effect is attributed to uniform, automatic wage policies that set and increased wages throughout organizations – the types of policies, in other words, favored by unions over those which relied upon individual-level determinations. Similarly, Erickson (1992; 1996) documented the demise in the 1980s of specific union contract clauses that had helped maintain pattern bargaining within and across the aerospace, automobile, and agricultural implement industries organized by the same unions.

Using more recent data, Western and Rosenfeld (2011) estimate the decline in unionization accounts for as much as 20 to 30% of the rise in wage inequality since the 1980s. The impact is strongest among less educated and blue collar workers. Research from the early and mid-1990s also finds a much more pronounced effect of deunionization on men’s wages compared to those of women, largely because of the industries in which men were employed.

Unions also *reduced* inequality within this group prior to the 1980s, in part by mitigating the deleterious effects of a falling minimum wage that impacted women more intensely (Western and Rosenfeld, 2011; Freeman, 1993; Card, 1992) – making their decline more sharply felt in terms of wage levels among men.

Deteriorating labor enforcement regimes and safety net. Unions play yet a different role in curbing inequality: particularly in low-wage, hard-to-police sectors, they act as one sure deterrent against wage theft and other forms of labor standards violations that contribute to inequality (Bernhardt, McGrath and DeFillipis, 2007) and that otherwise are alarmingly commonplace. A 2008 survey of over 4,000 low-wage workers in Chicago, Los Angeles, and New York found that around 67.5% of respondents – who worked in car washes, retail and food service, and domestic work, among other sectors – experienced some form of wage violations in their previous week of work, either through underpayment of wages, lack of overtime pay, or working off the clock. Such violations cost workers, who earned US\$331 per week on average, a loss of US\$50.28 in wages– amounting to nearly US\$3,000 in lost wages over a year of full-time work (Bernhardt, Spiller and Polson, 2013). National surveys of day labor workers find similar patterns, reporting that around of half workers surveyed experienced nonpayment and/or underpayment of wages in the prior two months (Valenzuela et al., 2006; Theodore et al., 2008).

Compounding the problem is weakened enforcement capacity of the state. While the number of workers and establishments covered by the Fair Labor Standards Act has steadily risen over the last two decades, the number of labor inspectors of the U.S. Department of Labor’s Wage and Hour Division (WHD) declined from 1,300 in 1978 to 700 in 2008 before experiencing some growth since then (Fine and Gordon, 2010; Weil, 2005). Enforcement of

wage standards is also hindered by the overall nature of the enforcement regime, which in the U.S. relies overwhelmingly on complaints from workers. In 2008, approximately 70% of investigations at WHD resulted from complaints (Weil, 2008). Given the precarious nature of work in low-wage sectors and worker concerns of retaliation, the complaint-driven system is ineffective: researchers have found a mismatch between industries where complaints are made and where violations occur (Weil and Pyles, 2005).

Scholars also point to a number of specific safety net programs that indirectly affect growing inequality. Compared to other developed economies, for instance, the lack of paid family leave (Ray, Gornick and Schmitt, 2009) and programs that promote flexibility during fluctuations in business cycles, such as work-sharing (Appelbaum 2012), in the U.S. is argued to contribute to inequality. Other scholars have pointed to poor outreach and education regarding eligibility and application to programs such as Unemployment Insurance as a key determinant of low take-up among low-wage, disadvantaged workers (Schaefer, 2010) – a consequential shortcoming, as such programs are shown to be effective in maintaining income levels above the poverty line (DeNavas-Walt and Proctor, 2014).

Organizational and Employment Relationship Changes

The factors discussed above have produced quantitative evidence of their effects on wage stagnation and income inequality. While the profound changes in the behavior of organizations and their effects on employment relationships have yet to generate the same scope of evidence, some may be as, if not more, important in explaining specific parts of the stagnation of wages and increases in income inequality.

First and foremost, recent scholarship underscores the importance of organizational characteristics in accounting for patterns of wage inequality. A growing body of work demonstrates that organizational characteristics account for significant portions of variation both within and across industries, over and above any differences in the characteristics of individual workers and, in some studies, their occupations. Groshen (1991), for instance, makes this argument in her analysis of various manufacturing sectors, demonstrating that wage variation at the establishment level not only accounts for greater portions of intra-industry wage variation but also that such patterns persist over time. Davis and Haltiwanger (1991) point to the association of observable firm characteristics, such as size, with wage differentials within and among industries. More recently, Barth et al. (2014) show that increased variance in wages among individuals is significantly and positively associated with increased wage variance within the establishments at which they work. Together, these studies demonstrate that organizations matter in explaining patterns of wage inequality. They also highlight the need for a more robust understanding of the precise mechanisms within organizations that facilitate such outcomes. Below, we point to two factors that explain at least part of this organizational story: the changing environment and interests of firms, specifically that which is related to financialization, and organizations' growing use of "fissured" employment relationships.

Financialization of corporate behavior. A number of researchers have documented the rise of financialization, i.e., the growing importance of maximizing shareholder value, in corporate behavior that began in the 1980s (Jacoby, 2004; Lazonick, 2009; Appelbaum and Batt, 2014; Kochan, 2016). The argument is that this shift has persisted since then as (1) new debt instruments (often referred to as junk bonds because they were offered at high interest rates with

little collateral) became available to support highly leveraged and sometimes hostile buyouts and takeovers of firms (Lazonick, 2009; Appelbaum and Batt, 2014); (2) new models for pricing stock options became available that led firms to increase the portion of CEO pay tied to share price improvements (Merton, 1971; Black and Scholes, 1973); and (3) the decline of unions and increased pressures for shareholder returns increased the influence of finance specialists in corporate decision-making (Useem, 1993; Jacoby, 2004). These developments in turn led to substantial growth in CEO pay and to an increase in the ratio of CEO to average worker wages as gains were diverted from reinvestment in the internal labor force to the benefit of shareholders and corporate officers. Although estimates vary, economists calculate that the current ratio of CEO pay to the average hourly worker is now nearly 300:1, compared to only 20:1 in the 1960s (Mischel and Davis, 2015).

Fissurization of employment relationships. One result of financialization and increased focus on shareholder value can be observed through the restructuring of organizations from the vertically integrated, bureaucratic enterprise of the past to a more networked, decentralized, and horizontally organized firm of today. Early forms of flexibility realized through restructuring included the use of temporary labor or contract workers – sources of labor that could easily vary depending on levels of product or service demand, or that could temporarily provide specialized expertise or skill that was costly to employ full time. Increasingly, however, the notion of “fissured” work has come to include other organizational structures, such as those resulting from subcontracting, outsourcing, and franchising (Weil, 2014). The common thread throughout all these forms of fissured work is that they involve the “the process of moving various aspects of the employment relationship outside the organization” (Kalleberg, Reynolds and Marsden,

2003:526), and increasingly employ workers who labor afar from “the locus of value production” (Weil, 2014:15).

A key dimension of fissured work is thus the growing importance of secondary actors and the workers they employ in firms’ organization. This is significant not only in terms of the networked structures that result, but also because such arrangements introduce a new element into the internal organizational logic that governs human resources and, importantly, wage-setting: that of the competitive market. When a Silicon Valley technology firm, for example, contracts out its janitorial positions, those jobs – and decisions regarding their wage levels - are no longer included in an enclosed system characterized by norms of internal equity among high- and low-wage workers who labor for the same employer. Rather, the external, competitive market of janitorial contractors becomes a reference point through which wages are set as janitorial contractors vie for business. Simultaneously, organizations that contract out perceive such arrangements as representing a *price* for an input or process, as opposed to wages for labor power (Weil, 2014).

How does this dynamic contribute to inequality? The clearest illustration of such comes from a 2010 study of subcontracting of janitorial and building service workers (Dube and Kaplan, 2010). Between 1983 and 2000, the occupational percentage of building security guards working for subcontractors increased from 40.1% to 49.7%, and of janitors from 16.4% to 21.6%. This growth in contracting was accompanied by simultaneous wage loss: janitors experienced a US\$1.33 wage penalty per hour (and earned 14% less than directly-employed workers in the same occupation) and guards a penalty of US\$2.34 per hour (earning 21% less). Similar trends in subcontracting have been reported in the petrochemical industry (Kochan et al., 1994), call centers (Batt et al., 2004), hotels (Hertz, 2010), and school cafeterias (McCain, 2009).

Lastly, it is worth noting that the fissurization of work presents additional challenges to the various other institutional factors we have identified as important and relevant to wages and inequality. For instance, jobs in subcontracted arrangements are subject to greater risks of injuries and accidents (Kochan, 1992) and violations of labor law (Bernhardt, McGrath, and DeFilippis 2008), as the triangular employment relationship - among workers and *de facto* and *de jure* employers – escapes regulatory checks on wage and hour compliance through ambiguous legal standards defining the employer (or joint employers) of workers (Zatz 2008). In such contexts, voice also becomes more difficult to exercise, particularly when ambiguous legal standing of the employer challenges traditional forms of worker organization, such as unionization (Kalleberg, Reskin, and Hudson, 2000).

Limited adoption and diffusion of high road business models. A large body of empirical research has documented the positive effects of sets of workplace practices often labeled “high performance work systems” on productivity and other indicators of organizational performance (Appelbaum, Hoffer Gittell, and Leana, 2011). These work systems in turn are supported by so-called “high road” business strategies that compete on the basis of achieving high productivity and service quality rather than by minimizing and tightly controlling labor costs. A key hypothesis underlying this body of work is that these business strategies and workplace practices are necessary conditions for supporting high wages. The evidence on the relationship between these strategies and practices and wages is, however somewhat mixed (Osterman, 2004): positive wage effects are more likely to be experienced in unionized than nonunionized firms (Bailey, Berg and Sandy, 2001). Moreover, while there are case examples in almost all industries of high road firms that pay above-average wages, (e.g., Hoffer Gittell, 2003; Kochan, Eaton, McKersie,

and Adler, 2009; Appelbaum, Bailey, Berg and Kalleberg, 2000; Cascio, 2006; Ton, 2014), the reality is these strategies have not widely diffused across American industry. The mental model that labor is a cost to be minimized continues to dominate the behavior of many business decision-makers and analysts. If the hypothesis that these high road strategies and workplace practices are necessary conditions for achieving high productivity needed to support high and increasing wages, the limited diffusion of these strategies and practices could serve as another cause of wage stagnation.

Options for reversing trends in inequality

While there is now widespread public recognition and concern about income inequality and persistent wage stagnation, action at the national policy level has been slow in coming, in large part because of the deep political gridlock that has blocked any efforts to reform or modify prevailing labor and employment policies (Kochan, 2016). There has, however, been increased activity at local levels, both by city and state level governments and by some private sector firms and unions. In this section we review actions that have either been proposed or are underway that seek to address one or more of the causes of increased inequality reviewed above.

Education and skills

While skill biased technological change has lost some of its power as the primary explanation for growing inequality, there is little doubt that the long term effects of technological change is to increase demand for skills and education. Thus, education is a critical starting point—a necessary but far from sufficient solution for reversing these trends.

A highly educated, skilled, and innovative workforce is essential to generating the technological breakthroughs and continuous improvements needed to drive productivity and to support a high wage economy. Yet there is considerable evidence that the U.S. educational system needs significant reforms and improvements to produce a world class workforce with both the technical (science, technological, engineering, and math or so-called “STEM”) and behavioral (communications, problem-solving, and coordination/negotiations) skills employers indicate they are calling for today. U.S. high school students lag behind many of their international peers in science and math achievement tests and the numbers of high school graduates continuing on to obtain technical skills and STEM related college degrees appear to be inadequate to meet future demand.

There is, however, considerable momentum in the U.S. focused on addressing these challenges, starting with efforts to expand access to early childhood education. The Obama Administration’s and equivalent state-level pressures and incentives to either reform and improve public elementary and secondary schools or expand funding of private alternative schools have generated a wave of innovation aimed at, among other things, promoting collaborative teacher-union-school district improvements (Rubinstein and McCarthy, 2014; Bluestone and Kochan, 2011), diffusion of a new common core of curriculum standards, and expansion of the school day or year.

There also is a growing recognition of the need to strengthen community colleges, vocational schools, and labor-management apprenticeships and other training programs that focus on building technical or so called “middle skills” that some employers claim to be in short supply. But consistent with the evidence reviewed above, the key actions needed are to better coordinate middle skill educational and training programs with other labor market

intermediaries, employers, and labor organizations that constitute what are now popularly described as the “eco-system” for workforce development and training (Weaver and Osterman, 2014).

Globalization and trade

Globalization of economic activity will undoubtedly continue and generate benefits for the aggregate global economy, for workers in developing economies, and for those with the skills needed to compete in high productivity, innovation-based economies, firms and occupations. This implies that efforts to promote a high productivity-high wage economy and business strategies must feature prominently in the approach taken to deal with the effects of globalization in the U.S. and other advanced economies.

The major globalization related policy issue currently under debate in the U.S. (and other countries) is the Trans Pacific Partnership (TPP) trade agreement. It is highly controversial because some estimates of its likely impact on domestic employment and income suggest it will most likely favor corporations and those in the higher parts of the income distribution and possibly reduce job opportunities of lower income workers (Baker, 2015). The TPP does, however, have stronger explicit provisions for minimum labor standards in signatory countries than contained in most prior multilateral trade agreements. Enforcement of labor protection provisions of trade agreements is very difficult and, as a growing body of research suggests, requires complementary strategies of national governments, multinational companies that monitor and work with their global suppliers, local and transnational non-governmental organizations and unions on the ground, and international labor organizations (Locke, 2013). Building and sustaining these types of effective multi-stakeholder systems are equally difficult

challenges but appear to be essential to raising income and other employment standards in the developing world and avoiding further reductions in wages and job opportunities in advanced economies.

Global trade will continue to create both risks to lower wage and low-skilled workers in advanced economies and pressures to develop advanced manufacturing technologies, industries, and jobs. The Obama Administration has taken steps in this direction by creating and funding a set of advanced manufacturing institutes. The key to the success of these initiatives lies in combining investments aimed at developing the next generation technologies and products with investments in education, training, and promotion of high road business strategies that will support high wage jobs and careers. Yet, the need to promote high road strategies goes beyond the next generation manufacturing firms, and there is no consensus strategy for doing so. Certainly continued efforts to educate business leaders and investors about the strategic choices open to them and the consequences of their strategies for job and career quality need to continue.

Employment and labor policy initiatives

These educational and high-road strategies need to be complemented with government policies that bring up minimum labor standards, in turn reducing the incentive to compete on the basis of minimizing labor costs, and that provide incentives to compete with high productivity-high wage strategies. In this section, we review examples of such initiatives and stress the importance of looking to policy's role in supporting local initiatives and new institutional forms as promising ways in which to reverse inequality.

Minimum and living wages. Starting in the 1990s, advocates have relied on minimum and living wage campaigns to raise the wage floor in localities, cities, and states. By many measures, these have been effective. Twenty-nine states currently have minimum wage levels that are higher than the federal minimum; of these, 15 have indexed their minimum wages to inflation, thus ensuring that the wage floor remains adequate as the cost of living increases. A growing number of cities – such as San Francisco, California and Seattle, Washington – have followed suite, and have recently passed or are pursuing legislation to increase their local minimum wage to US\$15 per hour over a number of years. Advocates also increasingly rely on living wages campaigns – that is, those which are tailored to a local cost of living, and which invoke norms of equity and fairness in the wage-setting process – in order to raise the wage floor among jobs connected to public services and spending. Currently, over 140 cities and counties have enacted such laws (Bernhardt and Osterman, forthcoming). Despite their spread, however, many of these policies have remained relatively targeted in their implementation, thus challenging their capacity to generate large-scale patterns of change.

Yet, in a hopeful sign, demands for change to the federal minimum wage are flourishing at the national level. In many respects, these demands have been led by workers and labor unions. The now-international “Fight for 15” is one such example, rooted in early efforts among fast food workers to increase their wages and realize the right to organized in franchised, fissured work settings. Such efforts have become a powerful force: not only has the Obama Administration proposed legislation to raising the federal minimum wage, but potential presidential candidates the upcoming 2016 election are also actively debating and formulating policy proposals concerned with wage standards.

Wage standards enforcement and administrative action. Paired with growing numbers of campaigns to raise the wage floor are innovative approaches to assessing and enforcing wage regulations. In the state of New York, for example, the current Governor responded to the Fight for 15 campaign by creating a state-wide wage board, and recently approved the board's recommended US\$15 minimum wage for the fast food industry – while also proposing a state-wide minimum wage at the same level (NYSDOL, 2015b, 2015c). After the *New York Times* released findings regarding rampant wage theft (and other poor job quality measures) throughout New York City's nail salon industry (Nir, 2015), the Governor also created a multi-pronged, industry-specific initiative to address such problems (NYSDOL, 2015a). In another example, advocates in San Francisco, California successfully created a new city entity, the Office of Labor Standards Enforcement (OLSE), in 2001. The agency uses innovative means of information-sharing and enforcement strategies among various departments to address wage violations and other infractions related to labor standards. To date, it has recovered over US\$17 million in back wages and collected over US\$2 million in employer penalties (Dietz, Levitt and Love, 2014). Notably, the OLSE also relies upon an innovative approach demonstrated to be effective throughout the literature on enforcement – that is, increasing the effectiveness of enforcement activities by directly engaging with community-based and worker organizations (Gordon and Fine, 2010).

In the face of the congressional gridlock the Obama Administration has also taken a number of actions to strengthen enforcement of wage and hour legislation. It has proposed new overtime rules that would raise the salary threshold (from US\$23,600 to US\$54,440) for salaried workers to be exempt from coverage for overtime. It has issued a clarifying administrative letter detailing the criteria it will use to determine whether a worker is classified as an employee

(subject to coverage under wage and overtime rules) or an independent contractor (exempt from coverage). The National Labor Relations Board likewise issued a recent decision broadening the definition of “employer” for the purpose of determining whether subcontracted work is covered under the nation’s labor relations statute. Numerous cases addressing this issue are also working their way through state and federal agencies and the courts, including companies as diverse as Federal Express and Uber.

Government contracting rules. One area of considerable discussion is whether government can or should use its power as a purchaser of goods and services as a means of enforcing and improving employment standards. The model for doing so comes from the U.S. experience in enforcing and promoting equal employment opportunities. The 1964 Civil Rights Act prohibited discrimination in employment on the basis of race and sex (and expanded in following years to cover other protected groups), and in 1965 was accompanied by an Executive Order requiring government contractors to demonstrate steps they are taking to achieve affirmative actions via their employment practices. Subsequent research demonstrated these affirmative action requirements had substantial effects in promoting diffusion of workplace practices that support nondiscrimination and equal opportunities (Leonard, 1990). The question under debate in government and academic circles is whether this model could be applied to promote diffusion of high productivity-high wage practices among government contractors. President Obama signed an executive order in 2015 requiring contracting firms to disclose their records of compliance and violation of labor and employment law. This order is expected to take effect in 2016. Some are suggesting expanding this order by inserting high productivity-high wage criteria in the specifications used to select competing bidders for government contracts.

This might be one of the strategies for substituting for the role pattern bargaining played in spreading wage norms prior to the 1980s.

Next generation unions and sources of power. One of the biggest open questions facing both America and to some extent other countries is what will fill the void left by union decline. Presently less than 7% of private sector workers have union representation, down from a peak level of about one third of the workforce in the 1950s. While reproducing unions and collective bargaining in the mirror image of their past is neither likely nor viable, some alternative means will be needed to provide the next generation workforce the voice and bargaining power needed to assert and achieve its interests. Indeed, unions are pursuing new strategies to this end. New forms of unions, such as those that organize freelancers, represent non-traditional ways of organizing labor. A number of unions have also launched or connected with large-scale organizing efforts that target some of the largest employers in low-wage sectors with very low rates of union membership. These include, for example, union-supported worker organizations in the fast food industry as well as with the retailer Walmart (Bernhardt and Osterman, forthcoming).

The crisis in worker representation has also sparked considerable innovation in labor and community group coalitions, and among an expanding number of networks at local, national, and global levels. These range from religious based groups (Bobo, 2009), to students mobilizing against sweatshop conditions, to international coalitions of NGOs, governments, international agencies, employers, and unions aimed at upgrading conditions in global supply chains (Locke, 2013). One of the most promising new strategies at organizing, however, comes through worker centers, which are typically organized around specific, often low-wage, industries such as

restaurants or construction. By some estimates, there are currently 225 such organizations throughout the country, up from only five in 1992 (Fine, 2006, 2011). Perhaps most importantly, the federation of many local worker centers within fragmented industries – examples exist in the restaurant industry, domestic work, and taxi work – is establishing larger-scale organizations that can more effectively transform standards in low wage industries (Fine, 2011).

Lastly, communities are also relying on sustainable economic development to advance wage norms and floors, particularly in low-wage sectors such as construction or retail. These efforts tie economic development and the use of public funds to wage requirements and other high road practices, and include both minimum and living wage ordinances as well as broader agreements, such as community benefit agreements, which tie various economic, community, environmental, and job-related standards to specific development projects (Bernhardt and Osterman, forthcoming).

Alternative wage setting criteria and norms. As noted above, the tandem movement of productivity and real wages and compensation in the pre-1980s era was driven by, among other factors, union agreements that aligned productivity gains and cost of living clauses into collective bargaining contracts. The decline of union bargaining power and simultaneous increase in international competition suggests that it is unlikely that processes for spreading a wage norm can be resurrected with the same force. New approaches to wage setting at the level of the enterprise will be needed to ensure that those who work together to generate productivity and profits have a fair chance of sharing in the gains produced. Profit sharing, productivity gains sharing, and broad-based employee stock ownership plans (Blasi, Freeman and Kruse, 2014) are

alternative ways of embedding this principle in the wage setting processes within specific enterprises.

Another issue related to salary norms involves the salary ratios separating CEOs and average employees. New federal rules will soon require publication of these ratios in corporate reports. Whether this effort to increase transparency will be powerful enough to change corporate practices remains to be seen. Corporate boards may need stronger pressures to change the ways CEOs are paid (such as changes in marginal income tax rates (Piketty, 2014)) given the embedded roles that compensation consultants play in spreading CEO compensation patterns across firms and industries.

Labor policy. While each of the options reviewed above can contribute to stimulating wage growth and reducing inequality, sustained progress will require a fundamental change in national labor and employment policy. There are a number of dimensions to such change: updating minimum wage laws and clarifying the definition of the employer in fissured work settings, as described above, are two glaringly necessary changes to employment policy and labor law. Expansion of safety net programs - such as the Earned Income Tax Credit, the Affordable Care Act, and paid family and medical leave – can provide low-income workers better access to employment opportunities while promoting overall economic growth (Lower-Basch, 2014). Additionally, updating current laws that govern collective bargaining is yet another step towards fundamental change. This is important for two reasons: current law cannot provide all workers who want union representation coverage to get it (Ferguson 2008), and traditional forms of bargaining can no longer generate patterns of high wages and high road practices needed to close the gap between productivity and wages. It remains to be seen whether

changing labor relations policy is possible, given that, both historically and recently, it has been the most difficult aspect of U.S. employment policy to change (Kochan, 2016).

Summary

The widespread recognition and growing public debates over income inequality and its consequences for an economy and society are producing a growing body of research on the causes of wage stagnation and options for policy makers and private sector decision makers to address it. Until recently most of the academic debate has focused on the relative importance of technology and globalization as the underlying causal forces and on education and to a lesser extent trade policies as remedies. More recently, however, attention has turned to institutional forces including the role of minimum wages, unions and their bargaining power, and employment policies and their enforcement. We extend this literature here to focus on some of the key changes in employment relationships and organizational practices that affect wages and related employment conditions at the enterprise or workplace level.

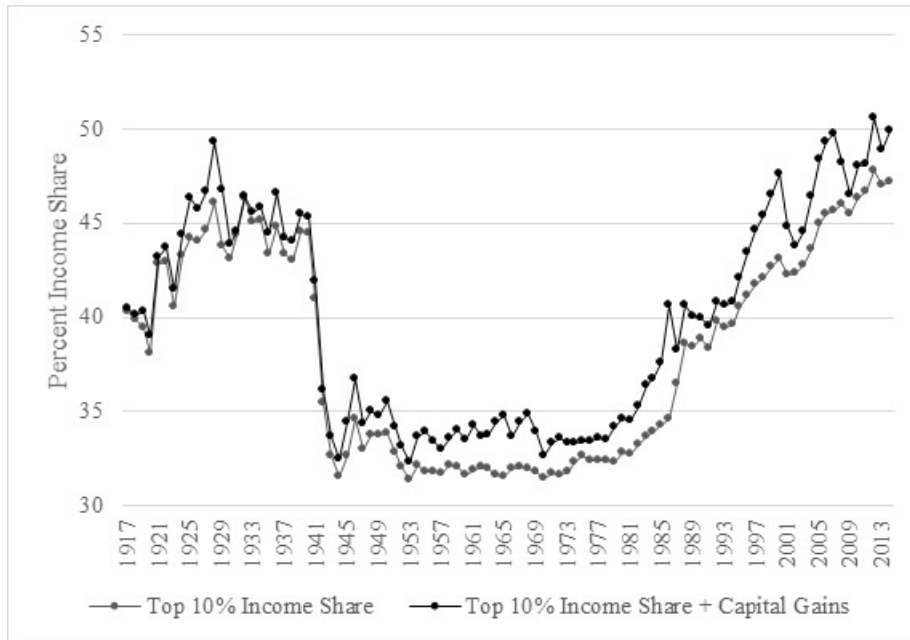
It is clear that these causal forces are closely interrelated and that no single change in policy or organizational practice will suffice to reverse these long term trends in wages. Investments in education, and especially investments and programmatic efforts to increase the supply of workers with strong technical and advanced STEM skills and abilities, are a necessary but far from sufficient component of a broader strategy. So too are more direct efforts to build the next generation manufacturing industries in ways that support and sustain high wage jobs. Equally important, however, are actions focused on in this paper that are aimed at bringing up the floor on the wage structure through raises in minimum wages and better enforcement of employment standards in both domestic economies and in developing nations, modernization of

labor policies that allow workers to build new sources of bargaining power consistent with the modern economy and labor force, and organizational changes that challenge the financialization of corporations and encourage broader diffusion of firms that embrace high road business strategies and associated workplace practices.

The historical trends in inequality and particularly in productivity-wage growth patterns suggest two final points. The current situation is the product of trends of over thirty years duration and therefore it will take a sustained period of wage growth to make up for lost ground. But the fact that turning points as clear as the ones that reversed the high level of inequality in the U.S. observed just prior to the passage of the New Deal labor legislation in the 1930s and the beginning of the productivity-wage gap around 1980 suggest that a broad based, systematic strategy that is well informed by research can change these long run trends and put the economy on a different path. Doing so again is the defining challenge facing our field today.

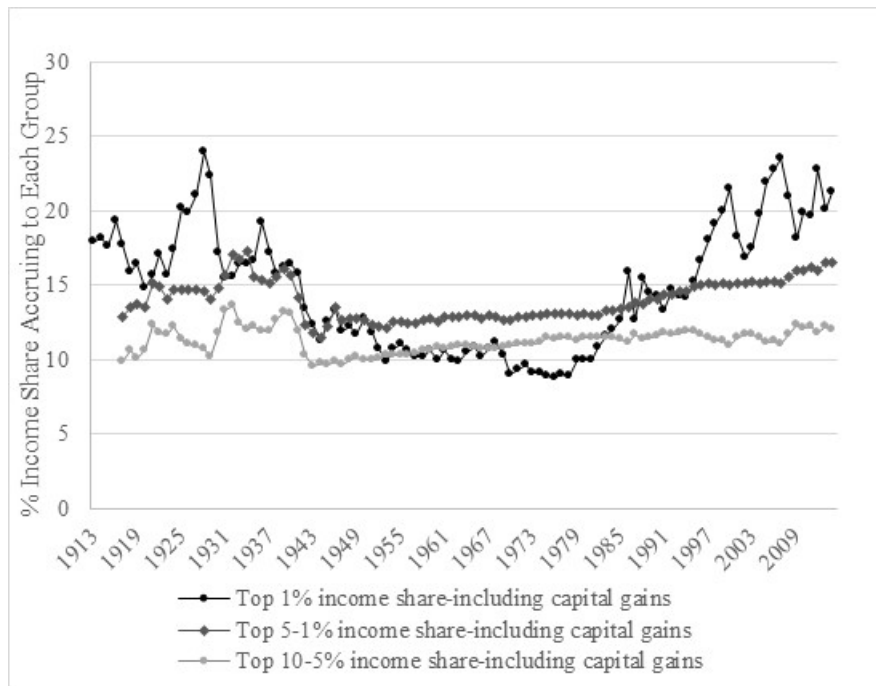
Figures

Figure 1. Top decile income share in the United States, 1917-2014.



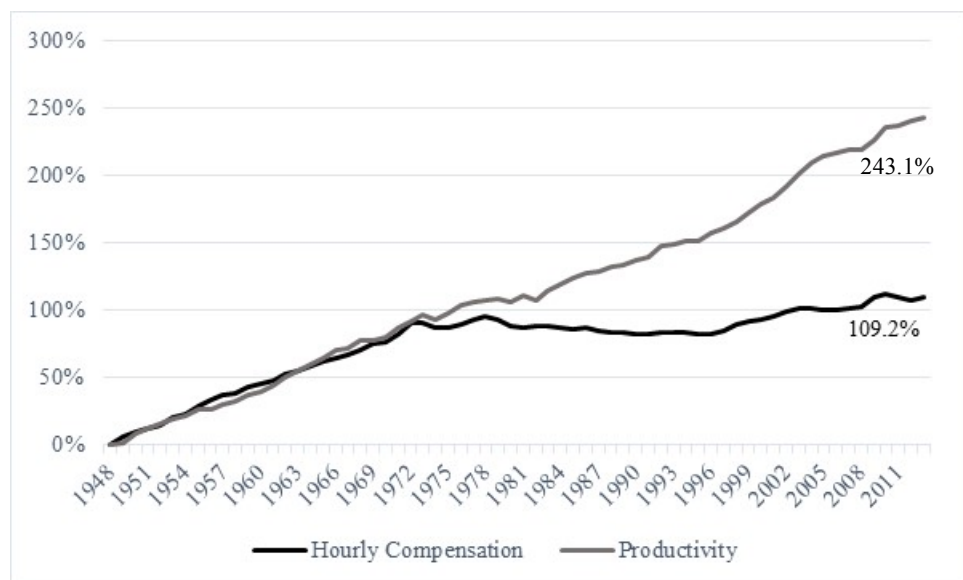
Source: Piketty T and Saez E (2007 (2015)).

Figure 2. Decomposing the top decile US income shares into three groups, 1917-2014.



Source: Piketty T and Saez E (2007 (2015)).

Figure 3. The growing gap between productivity and workers' hourly compensation, 1948-2013.



Source: Economic Policy Institute analysis of data from BLS Labor Productivity and Costs program, Bureau of Labor Statistics Current Employment Statistics public data series and Employer Costs for Employee Compensation, and Bureau of Economic Analysis National Income and Product Accounts (Tables 2.3.4, 6.2, 6.3, 6.9, 6.10, and 6.11) (Bivens and Mishel, 2015).

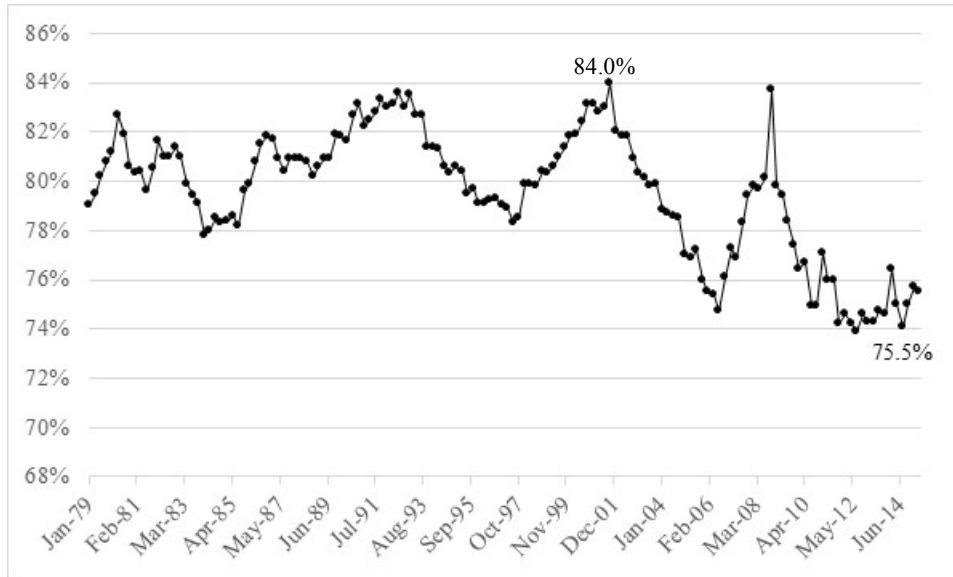
Figure 4. Declining shares of labor compensation and wages, 1955-2014.



Note: Compensation includes all forms of remuneration, including wages and salaries and employer contributions (to employee pension and insurance funds, as well as government social programs). Wages and Salaries does not include any such contributions.

Source: U.S. Bureau of Economic Analysis. Table 1.12. National Income by Type of Income. Last revised: October 29, 2015.

Figure 5. Decline of labor share of corporate income, 1979-2015.



Source: EPI analysis of Bureau of Economic Analysis *National Income and Product Accounts* (Tables 1.14 and 6.16D) (Bivens, 2015).

Works cited

- Acemoglu, D and Autor, D (2010) Skills, tasks, and technologies: Implications for employment and earnings. In Ashenfelter O and Card DE (eds.) *Handbook of Labor Economics*, Vol. 4. North Holland.
- Alvaredo F, Atkinson AB, Piketty T and Saez E (2013) The top 1 percent in international and historical perspective. *Journal of Economic Perspectives* 27(3): 3-20.
- Appelbaum E (2012) Reducing inequality and insecurity: Rethinking labor and employment policy for the 21st century. *Work and Occupations* 39(4): 311-320.
- Appelbaum E and Batt R (2014) *Private equity at work: When Wall Street manages Main Street*. New York: Russell Sage Foundation.
- Appelbaum E Bailey T Kalleberg A and Berg P (2000) *Manufacturing Advantage: Why High Performance Work Systems Pay Off*. Ithaca, NY: Cornell University Press.
- Appelbaum E Hoffer Gittell J and Leana C (2011) High performance work practices and economic recovery. Report, Employment Policy Research Network. Available at: <http://www.employmentpolicy.org/page-1797725#sthash.yEFch5zl.dpbs>.
- Autor D (2010) The future of American jobs: The polarization of job opportunities in the U.S. labor market. Report, Center for American Progress. Available at: <https://www.americanprogress.org/issues/labor/report/2010/04/30/7687/the-future-of-american-jobs/>
- Autor D, Katz L and Kearney MS (2008) Trends in U.S. wage inequality: Revising the revisionists. *The Review of Economics and Statistics*, 90(2): 300-323.
- Autor DH, Levy F and Murnane RJ (2003) The skill content of recent technological change: An empirical exploration. *Quarterly Journal of Economics*, 116(4): 1279-1333.
- Bailey T, Berg P and Sandy C (2001) The effect of high-performance work practices on employee earnings in the steel, apparel, and medical electronics and imaging industries. *Industrial and Labor Relations Review*, 54(2A): 525-544.
- Batt R, Doellgast V and Kwon H (2004) The US call center industry 2004: National benchmarking report. Report, Ithaca, NY: Cornell University.
- Barth E, Bryson A, Davis JC and Freeman R (2014) It's where you work: Increases in earnings dispersion across establishments and individuals in the U.S. IZA Discussion Paper No.8437.
- Barbash J (1964) The elements of industrial relations. *British Journal of Industrial Relations*, 2(1): 66-78.

- Bernhardt A (2014) Labor standards and the reorganization of work: Gaps in data and research. Institute for Research on Labor and Employment, University of California at Berkeley Working Paper #100-14. Berkeley, CA.
- Bernhardt A, McGrath S and DeFilippis J (2008) The state of worker protections in the United States: Unregulated work in New York City. *International Labour Review*, 147(2-3): 135-162.
- Bernhardt A and Osterman P (forthcoming) Organizing for good jobs: Recent developments and new challenges. *Work and Occupations*.
- Bernhardt A, Spiller MW and Polson D (2013) All work and no pay: Violations of employment and labor laws in Chicago, Los Angeles, and New York City. *Social Forces*, 91(3): 725-746.
- Bernhardt A, Spiller MW and Theodore N (2013) Employers gone rogue: Explaining industry variation in violations of workplace laws. *ILR Review*, 66(4):808-832.
- Bivens J (2015) The decline in labor's share of corporate income since 2000 means US\$535 billion less for workers. Report, Economic Policy Institute. Available at: <http://www.epi.org/publication/the-decline-in-labors-share-of-corporate-income-since-2000-means-535-billion-less-for-workers/>
- Bivens J and Mishel L (2013) The pay of corporate executives and financial professional as evidence of rents in top 1 percent incomes. *Journal of Economic Perspectives*, 27(3): 57-78.
- Bivens J and Mishel L (2015) Understanding and explaining the historic divergence between productivity and a typical worker's pay: Why it matters and why it's real. Report, Economic Policy Institute. Available at: <http://www.epi.org/publication/raising-americas-pay/>.
- Blasi JR, Freeman RB and Kruse D (2014) *The Citizen's Share: Reducing Inequality in the 21st Century*. New Haven, CT: Yale University Press.
- Bluestone B and Kochan TA (2011) Toward a grand new bargain: Collective bargaining approaches to labor-management reform in Massachusetts. Report. Boston, MA: The Boston Foundation.
- Bobo K (2009) *Wage Theft in America*. New York: The Free Press.
- Budd JW (2004) *Employment with a human face: Balancing efficiency, equity, and voice*. Ithaca, NY: ILR Press.

- Card D (1992) The effect of unions on the distribution of wages: Redistribution or relabelling? NBER Working Paper no. 4195. Cambridge, Mass.: National Bureau of Economic Research, October.
- Card D and DiNardo JE (2002) Skill-biased technological change and rising wage inequality: Some problems and puzzles. *Journal of Labor Economics* 20(4):733-783.
- Cascio W (2006) Decency means more than ‘Always low prices.’ A comparison of Costco to Wal-Mart’s Sam’s Club. *Academy of Management Perspectives*, August: 25-28.
- Cynamon BZ and Fazzari SM (2014) Inequality, the Great Recession, and slow recovery. Available at SSRN 2205524
- Dabla-Norris E, Kochhar K, Suphaphiphat FR and Tsounta E (2015) Causes and consequences of income inequality: A global perspective. Report, International Monetary Fund Staff Discussion Note. Available at: <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1513.pdf>
- Davis GF, Diekmann KA and Tinsley CH (2004) The decline and fall of the conglomerate firm in the 1980s: The deinstitutionalization of an organizational form. In Dobbin F (ed.) *The New Economic Sociology: An Anthology* (pp. 188-226). Princeton, NJ: Princeton University Press.
- Davis SJ and Haltiwanger J (1991) Wage dispersion between and within U.S. manufacturing plants, 1963-1986. *Brookings Papers on Economic Activity: Microeconomics* 1991:115-200.
- DeNavas-Walt C and Proctor BD (2014) Income and poverty in the United States: 2013. Current Population Reports. U.S. Bureau of the Census. Available at: <https://www.census.gov/content/dam/Census/library/publications/2014/demo/p60-249.pdf>
- Dietz M, Levitt D, and Love E (2014) Enforcement of labor standards. In Reich M, Jacobs K and Dietz M (eds). *When Mandates Work: Raising Labor Standards at the Local Level*. Berkeley, CA: University of California Press.
- DiNardo J, Fortin NM and Lemieux T (1996) Labor market institutions and the distribution of wages, 1973-1992: A semiparametric approach. *Econometrica* 64(5):1001-046.
- Dube, A and Kaplan E (2010) Does outsourcing reduce wages in the low-wage service occupations? Evidence from janitors and guards. *Industrial and Labor Relations Review*, 63(2): 287-306.
- Erickson CL (1992) Wage rule formation in the aerospace industry. *Industrial and Labor Relations Review* 45(3): 507-522.

- Erickson CL (1996) A reinterpretation of pattern bargaining. *Industrial and Labor Relations Review* 49(4): 615-634.
- Ferguson JP (2008) The eyes of the needles: A sequential model of union organizing drives, 1999–2004. *Industrial and Labor Relations Review* 62(1): 3-21.
- Fine JR (2006) *Worker centers: Organizing Communities at the edge of the Dream*. Ithaca, NY: Cornell University Press.
- Fine JR (2011) New forms to settle old scores: updating the worker centre story in the United States. *Relations Industrielles/Industrial Relations* 66(4): 604-630.
- Fine JR and Gordon J (2010) Strengthening labor standards enforcement through partnerships with workers' organizations. *Politics and Society* 38(4):552-585.
- Freeman R (1980) Unionism and the dispersion of wages. *Industrial and Labor Relations Review* 34(1):3-23.
- Freeman R (1982) Union wage practices and wage dispersion within establishments. *Industrial and Labor Relations Review* 36:3-21.
- Freeman R (1993) How much has de-unionization contributed to the rise in male earnings inequality? In Danziger S and Gottschalk P (eds) *Uneven Tides: Rising Inequality in America*. New York: Russell Sage Foundation.
- Fortin NM and Lemieux T (1997) Institutional change and rising wage inequality: Is there a linkage? *The Journal of Economic Perspectives* 11(2):75-96.
- Goldin C and Katz L (2008) *The Race between Education and Technology*. Cambridge: Harvard University Press.
- Gosling A and Lemieux T (2004) Labor market reforms and changes in wage inequality in the United Kingdom and the United States. In Card D, Blundell R and Freeman RB (eds) *Seeking a Premier Economy: The Economic Effects of British Economic Reforms, 1980-2000*. National Bureau of Economic Research. Chicago: University of Chicago Press.
- Groshen EL (1991) Sources of intra-industry wage dispersion: How much do employers matter? *The Quarterly Journal of Economics* 106(3): 869-884.
- Hertz R (2010) Economic crisis and new social realities: Bait and switch and the American Dream – Presidential Address 2010. *Sociological Forum* 25(4): 643-654.
- Hoffer Gittel, J (2003) *The Southwest Airlines Way*. New York: McGraw Hill.
- Holzer HJ (2010) Is the middle of the U.S. job market really disappearing? A comment on the “polarization” hypothesis. Report, Center for American Progress, Washington, DC.

Available at: https://cdn.americanprogress.org/wp-content/uploads/issues/2010/05/pdf/Holzer_memo.pdf

- Houseman SN (2001) Why employers use flexible staffing arrangements: Evidence from an establishment survey. *Industrial and Labor Relations Review* 55(1): 149-170.
- International Labour Organization (2015) Global wage report 2014/15: Wages and income inequality. International Labour Office. Geneva: ILO.
- James J (2012) The college wage premium. *Economic Commentary*, vol.10. Federal Reserve Bank of Cleveland.
- Kalleberg AL, Reynolds J and Marsden PV (2003) Externalizing employment: Flexible staffing arrangement in US organizations. *Social Science Research* 32(4): 525-552.
- Kalleberg AL, Reskin B and Hudson K (2000) Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review* 65: 256-278.
- Kochan TA (1980) Historical development of industrial relations. *Collective Bargaining and Industrial Relations* (pp.1-23). Homewood, IL: Irwin.
- Kochan TA (2012) Building a new social contract at work: A moral and economic imperative. *Journal of Catholic Social Thought* 9(1): 1-16.
- Kochan TA (2016) *Shaping the Future of Work*. New York: Business Experts Press.
- Kochan TA, Katz HC and McKersie RB (1986) *The transformation of American industrial relations*. 2nd ed. 1994 Ithaca, NY: ILR Press.
- Kochan TA, Eaton A, McKersie RB and Adler P (2009) *Healing together: The Kaiser Permanente Labor Management Partnership*. Ithaca, NY: Cornell/ILR Press.
- Kochan TA, Smith M, Wells J and Rebitzer J (1994) Human resource strategies and contingent Workers: the case of safety and health in the petrochemical industry. *Human Resource Management* 33: 55-78.
- Lemieux T (1993) Unions and wage inequality in Canada and the United States. In Card D and Freeman RB (eds) *Small Differences that Matter: Labor Markets and Income Maintenance in Canada and the United States*, 69-107. Chicago: University of Chicago Press.
- Lemieux T (2008) The changing nature of wage inequality. *Journal of Population Economics* 21: 21-48.

- Lee D (1999) Wage inequality in the United States during the 1980s: Rising dispersion or falling minimum wage? *Quarterly Journal of Economics* 114(3): 977-1023.
- Leonard JS (1990) The impact of affirmative action regulation and equal employment law on black employment. *Journal of Economic Perspectives* 44(4): 47-63.
- Locke RM (2013) *The Promise and Limits of Private Power: Promoting Labor Standards in a Global Economy*. New York, NY: Cambridge University Press.
- Lower-Basch E (2014) How today's safety net promotes work – and how to do more. Report, Center for Law and Social Policy. Available at: <http://www.clasp.org/resources-and-publications/publication-1/How-Todays-Safety-Net-Promotes-Work-And-How-To-Do-More-1.pdf>
- Meltz NM (1989) Industrial relations: Balancing efficiency and equity. In Barbash J and Barbash K (eds.) *Theories and Concepts in Comparative Industrial Relations* (pp.109-13). Columbia: University of South Carolina Press.
- Mishel L and Davis A (2015) Top CEOs make 300 times more than typical workers: Pay growth surpasses stock gains and wage growth of top 0.1 percent. Issue Brief #399. Washington, D.C.: Economic Policy Institute.
- McCain M (2009) Serving students: A survey of contracted food service work in New Jersey's K-12 public schools. Report, Rutgers Center for Women and Work.
- Nir SM (2015) The price of nice nails. *The New York Times*, 15 May.
- Newport F (2015) Americans continue to say U.S. wealth distribution is unfair. Gallup Poll Social Series. Report. Available at: <http://www.gallup.com/poll/182987/americans-continue-say-wealth-distribution-unfair.aspx>
- NYSDOL (2015a) Governor Cuomo introduces legislation and comprehensive plan to protect nail salon workers and educate employers. New York State Department of Labor Press Release: 18 May 2015. Available at: <http://www.labor.ny.gov/pressreleases/2015/may-18-2015.shtm>
- NYSDOL (2015b) Governor Cuomo instructs State Labor Department to convene wage board to investigate and make recommendations on raising the minimum wage for fast food workers. New York State Department of Labor Press Release: 07 May 2015. Available at: <http://www.labor.ny.gov/pressreleases/2015/may-07-2015.shtm>
- NYSDOL (2015c) Governor Cuomo, joined by Vice President Biden, announces push to raise New York's minimum wage to \$15 an hour. New York State Department of Labor Press Release: 10 September 2015. Available at: <http://www.labor.ny.gov/pressreleases/2015/september-10-2015-1.shtm>

- Oldenski L (2014) Offshoring and the polarization of the U.S. labor market. *ILR Review* 67(Supp.): 734-761.
- Osterman P, Kochan TA, Locke RM and Piore MJ (2002) *Working in America: A Blueprint for the New Labor Market*. Cambridge, MA: MIT Press Book.
- Piketty T (2014) *Capital in the Twenty-First Century*. Cambridge, MA: President and Fellows of Harvard College, Harvard University Press.
- Piketty T and Saez E (2006) The evolution of top incomes: A historical and international perspective. National Bureau of Economic Research Working Paper 11955.
- Piketty T and Saez E (2007 (2015)) Income and wage inequality in the United States 1913-2002; in A.B. Atkinson and T. Piketty. (Eds.) *Top Incomes over the Twentieth Century. A Contrast between Continental European and English-Speaking Countries*, Oxford University Press. Data series updated by the same authors. Accessed at: <http://topincomes.g-mond.parisschoolofeconomics.eu/>.
- Piketty T and Saez E (2013) Top incomes and the Great Recession: Recent evolutions and policy implications. *International Monetary Fund Economic Review* 61(3): 456-478.
- Piketty T and Saez E (2014) Inequality in the long run. *Science* 344(6186): 838-843.
- Ray R, Gornick JC and Schmitt J (2009) Parental leave policies in 21 countries: Assessing generosity and gender equality. Report, Center for Economic and Policy Research. Available at: http://www.cepr.net/documents/publications/parental_2008_09.pdf
- Rubinstein SA and McCarthy JE (2014) Teachers Unions and Management Partnerships: How Working Together Improves Student Achievement. Report, Center for American Progress. Available at: <https://cdn.americanprogress.org/wp-content/uploads/2014/03/Rubinstein-EduReform-report.pdf>
- Stiglitz JE (2015) The origins of inequality, and policies to contain it. *National Tax Journal* 68(2): 425-448.
- Ton Z (2014) *The Good Jobs Strategy*. New York: Houghton Mifflin, Harcourt.
- Useem M (1993) *Executive Defense: Shareholder Power and Corporate Reorganization*. Cambridge, MA: Harvard University Press.
- Weaver A and Osterman P (2014) The new skill production system: Policy challenges and solutions in manufacturing labor markets. In Locke R and Wellhausen R (eds) *Production in the Innovation Economy*. Cambridge, MA: MIT Press.
- Weil D (2014) *The Fissured Workplace*. Cambridge, MA: Harvard University Press.

Western B and Rosenfeld J (2011) Unions, norms, and the rise in US wage inequality. *American Sociological Review* 76(4): 513-537.

Zatz ND (2008) Working beyond the reach or grasp of employment law. In Bernhardt A, Boushey H, Dresser L and Tilly C (eds.) *The Gloves-Off Economy: Workplace Standards at the Bottom of America's Labor Market*. Champaign, IL: Labor and Employment Relations Association.