

LABOR MARKET INSTITUTIONS

AND ECONOMIC MOBILITY

SETH ZIMMERMAN, THE URBAN INSTITUTE

KEY FINDINGS:

- Increasing the minimum wage has the potential to benefit a sizeable number of people whose wages would otherwise remain stuck at very low levels; however, decreases in overall employment or an increased incentive to choose work over education may offset these gains for some groups.
- Union members typically enjoy higher wages than non-members, though their upward mobility over time is slower. The children of union members also tend to be at a slight advantage, as a portion of union wage gains, as well as union status itself, tend to transfer from one generation to the next.

Labor market institutions like [unions](#) and [minimum wage laws](#) represent some of the most direct levers available to a policymaker with a mobility-focused agenda. Both have the potential to increase absolute mobility: minimum wage laws mandate that workers receive a slice of the economic pie, and unions give their members more leverage to bargain for increases in pay. At the same time, however, unions and minimum wage laws can lead to labor market rigidities that make it more difficult for people to move up the economic ladder. These rigidities can decrease relative mobility and, if they lead to outcomes like higher unemployment, can decrease absolute upward mobility as well.

Unfortunately, relatively little is known about the relationship between these labor market institutions and **intergenerational** and **intragenerational** economic mobility. Though many studies of unions and minimum wage laws include tangential discussions of mobility, direct evidence is difficult to come by. To the extent that consensus exists in a sparse research arena, the following statements seem fair:

- Increasing the minimum wage has the potential to benefit a sizeable number of people whose wages would otherwise remain stuck at very low levels; however, decreases in overall employment or an increased incentive to choose work over education may offset these gains for some groups.
- Union members typically enjoy higher wages than non-members, though their upward mobility over time is slower. The children of union members also tend to be at a slight advantage, as a portion of union wage gains, as well as union status itself, tend to transfer from one generation to the next.

The table below summarizes a few key papers that address the mobility consequences of unionization and minimum wage laws.

Labor Market Institutions and Mobility

Minimum Wage Laws

Intragenerational mobility

- Minimum wage workers have roughly a 40 to 50 percent chance of moving up to a higher-paying job in each of the first 10 years of their careers. Still, 15 percent of women and 16 percent of blacks spend at least 5 out of those 10 years at jobs paying close to the minimum wage (Carrington and Fallick 2001).
- Exposure to higher minimum wage levels at a young age decreases future earnings. For instance, each 10 percent increase in the minimum wage a 25- to 29-year-old experienced between the ages of 20 and 24 decreases his or her expected current earnings by 3.8 percent (Neumark and Nizalova 2004).

Unionization

Intragenerational mobility

- The wages of working-age men typically increase by 6 percent upon joining a union, with especially large gains for less-skilled workers (Card 1996).
- For white men, union membership lowers the annual probability of promotion by between 23 and 32 percent; not having a high school degree lowers that same probability by 37 to 48 percent (McCue 1996)

Intergenerational mobility

- Parents' union membership positively affects wage, earnings, and educational outcomes for children in low-income families (Shea 1997).

Studies relating changes in minimum wage and unionization levels to income and wage inequality are much more common. The reason for this is most likely practical: by definition, mobility can be measured only with longitudinal data, while assessments of economic inequality can rely on powerful cross-sectional datasets like the Current Population Survey. Standing on this fairly solid empirical ground, researchers today generally agree that declines in unionization and the real value of the minimum wage contributed substantially to the increase in wage inequality in the 1980s, but have had less of an impact in more recent years. The role played by labor market institutions in earnings and income inequality, however, is much less clear as shown in the table below.

Labor Market Institutions and Economic Inequality

Minimum Wage Laws

- Decreases in the real minimum wage accounted for 20 to 30 percent of the increase in inequality between the late 1970s and the early 1990s (Dinardo, Fortin and Lemieux 1996; Card and Krueger 1995, as cited in Morris and Western 1999).
- Recent increases in inequality owe more to wage growth at the upper end of the distribution than to wage losses at the lower end, and, therefore, cannot be traced directly to the falling real value of the minimum wage (Autor, Katz, and Kearney 2005).
- Increases in the minimum wage may lead to losses in hours and employment for low-wage individuals. If such losses do take place, increasing the minimum wage will have an ambiguous and perhaps slightly negative effect on the earnings and family incomes of low-wage individuals (Card and Krueger 2000; Neumark, Schweitzer, and Wascher 2004).

Unionization

- Lower levels of unionization accounted for 10 to 20 percent of the increase in men's wage inequality in the late 1970s and 1980s (Dinardo, Fortin and Lemieux 1996; Card and Krueger 1995, as cited in Morris and Western 1999).
- Changes in unionization rates had larger impacts on inequality in the 1970s and 1980s than in the 1990s and early 2000s (Bernanke 2007).

This review is divided into two sections. The first considers the [mobility consequences of changes in minimum wage](#), and the second focuses on the [mobility effects of changes in unionization levels](#). Each section examines the effects of the relevant institution on economic growth and absolute mobility, intragenerational mobility, intergenerational mobility, and inequality.

THE MINIMUM WAGE AND ECONOMIC MOBILITY

Minimum Wage and Growth/Absolute Mobility

Minimum wage laws aim to ensure that low-wage earners do not fall too far behind other workers. In theory, it is possible to achieve this goal either by shifting the bottom of the income distribution up or by shifting the rest of the income distribution down. Though the former option is preferable, it is not clear which to expect. On one hand, it is straightforward to imagine how the raising minimum wage could impede economic growth. If employers have to pay more for low-skill labor, they may employ fewer people and pass their higher costs on to consumers, lowering real incomes and slowing overall growth. On the other hand, a higher minimum wage could spark growth or at least prove growth-neutral if higher wages push employers to get more out of their workers through technological innovation, increased training, or improved efficiency (see, for example, Cahuc and Michel, 1996).

The most straightforward empirical work relating changes in the minimum wage to growth rates simply compares growth rates before and after changes in the minimum wage or across geographical differences in minimum wage levels. Studies of this type tend to find that increases in the minimum wage do little to impede growth, and in fact are often associated with high growth rates. For instance, the economies of Florida, Washington, and Oregon each grew more rapidly than the national economy in the years following state-level minimum wage increases (respectively, Schaefer and Nissen (2005); Smith (2003); and OCPP 2005; as cited in Fox (2006)). But relying on studies like these to determine causality is to engage in a *post hoc ergo propter hoc* fallacy.

Fortunately, a number of more sophisticated papers consider the impact of the minimum wage on employment, which reflects fairly directly on overall growth. Here, different approaches yield very different (and very controversial) results. Studies using quasi-experimental datasets to analyze state-by-state variation in minimum wage levels find no evidence of employment or hours losses. Card and Krueger (1994) surveyed 410 fast food restaurants in New Jersey and Pennsylvania before and after a 1992 increase in the New Jersey minimum wage. They found that, on average, restaurants in New Jersey added two to three more workers (measured in full-time-equivalents, or FTEs) over that period than did restaurants in Pennsylvania, indicating that, at the very least, raising the New Jersey minimum wage did not reduce employment. Studies using data from nationally representative surveys, on the other hand, often show pronounced negative effects. For example, Neumark, Schweitzer, and Wascher (2004) use CPS data to show that low-wage workers see their hours decline by an average of about 3 percent in the two years following a 10 percent increase in the minimum wage.

Two prominent and relatively recent contributions to this literature are Card and Krueger (2000) and Neumark and Wascher (2006), summarized in the table below. Card and Krueger reanalyze the 1992 increase in the New Jersey minimum wage using BLS employment data, and find that fast food restaurants in New Jersey increased their employment at least as fast as did comparable restaurants across the border in Pennsylvania. Just as importantly, Card and Krueger note that challenges to their original (1994) study do not hold up well to changes in sample choice and model specification. On the opposing side, Neumark and Wascher review 90 studies from 15 countries, and conclude that the best-executed research (which includes much of their own) consistently ties increases in the minimum wage to modest decreases in employment—on the order of a 2 percent reduction in employment for every 10 percent increase in the minimum wage.

Minimum Wage Effects on Economic Growth

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Card and Krueger 2000 (BLS and telephone interview data on restaurant employment in NJ and PA.)	<ul style="list-style-type: none"> ○ Re-analysis of the effects of the increase in the New Jersey minimum wage on fast-food industry employment, using neighboring Pennsylvania restaurants as a control group. ○ Following an increase in the New Jersey minimum wage, employment increased more quickly in New Jersey than in Pennsylvania. This increase was not statistically significant, however. ○ Though it is possible to obtain results indicating a slower increase in New Jersey employment, these depend heavily on the inclusion of restaurants owned by a single franchisee and the controls included in the regression analysis.
Neumark and Wascher 2006 (literature review)	<ul style="list-style-type: none"> ○ Qualitative synthesis of literature on the unemployment effects of minimum wage. ○ Finds that the majority of the most reliable studies estimate the elasticity of employment with respect to changes in the minimum wage as between -0.1 and -0.3 for low-skill subgroups. This implies that a 10 percent increase in the minimum wage will reduce employment by 1 to 3 percent for teens, young adults, or workers in low-wage sectors.

The debate thus boils down to the question of whether the survey or the quasi-experimental approach is more appropriate. Each methodology has its critics. The quasi-experimental geographic data used by Card and Krueger is open to charges of inaccuracy and irreproducibility, but survey data methods may confuse the effects of minimum wage laws with those of other time dependent variables. Though the issue is by no means resolved, it may be of relatively little importance from a policy perspective. Freeman (1996) characterizes the tussle over the unemployment effects of minimum wage as “a debate of values around zero.” In other words, though the effects of the minimum wage on employment may be either positive or negative, they are certainly modest. In this light, Joseph Stiglitz’ observation that potential repercussions from the 1996 increase in the federal minimum wage “[were] totally swamped by other factors going on in the economy” (in Chipman 2006) seems apt.

Minimum Wage and Intragenerational Mobility

Changes in the minimum wage can influence intragenerational mobility in a variety of ways. Some of these are straightforward: consistent increases in the minimum wage can ensure that low-wage workers who maintain a steady presence in the labor market see their wages rise over time. The magnitude of this effect depends on how likely individuals who earn the minimum wage at one point in time are to stay at that wage level. If the minimum wage typically represents the first step in a quick ascent of the wage scale, increasing it is unlikely to raise mobility above some baseline level. If people earning the minimum wage often leave the labor force, or if increases in the minimum wage increase the likelihood that they will be forced out, the minimum wage will be a similarly ineffective engine of upward mobility.

The minimum wage may also help low-skill workers by altering the incentive structure for decisions about labor force participation. If an increase in the minimum wage makes people more likely to enter or remain in the labor force, not only will it increase their immediate earnings, it will also pay future dividends in the form of returns to experience. Of course, this benefit depends directly on the availability of jobs that pay the minimum wage, and so the standard caveat about the potential negative impact of the minimum wage on the availability of low-skill employment applies here as well.

Minimum Wage Effects on Intragenerational Mobility

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Smith and Vavrichek 1992 (1984 and 1985 SIPP panels)	<ul style="list-style-type: none"> ○ Descriptive comparisons of outcomes for low-wage workers over time. ○ 63 percent of minimum wage workers saw their wages rise over the course of the year. ○ 37 percent of minimum wage workers who were still paid by the hour one year later received no wage gains; roughly 50 percent received wage gains that did not keep pace with inflation.
Carrington and Fallick 2001 (NLSY79, CPS ORGs 1993 and 1994)	<ul style="list-style-type: none"> ○ Tabulations of longitudinal wage data by wage category. ○ Minimum wage workers have roughly a 40 to 50 percent chance of finding a non-minimum-wage job the following year in each of the first 10 years of their careers. ○ 15 percent of women and 16 percent of blacks spend at least 5 out of the first 10 years of their career at jobs paying close to the minimum wage.
Chaplin, Turner, and Pape 2003 (state minimum wage data, Common Core of Data on public school enrollment 1989-1996)	<ul style="list-style-type: none"> ○ Regression of continuation ratios (current enrollment in grade x divided by last year's enrollment in grade x-1) on state- and school-level variables, including the local minimum wage. ○ Higher minimum wages exert a negative effect on continuation ratios between ninth and tenth grade in states where students are allowed to drop out before the age of 18.
Neumark and Nizalova 2004 (CPS ORGs 1979-2001)	<ul style="list-style-type: none"> ○ Assembles state-based minimum wage "histories" for each individual, distinguishing between exposure at younger and older ages. Computes regression estimates of the effects of the average minimum wage over these personal histories on wages, earnings, and hours. ○ In general, exposure to higher minimum wage levels decreases future (but not current) wages, earnings, and hours. For instance, each 10 percent increase in the average minimum wage 25- to 29-year-olds experienced while they were 20 to 24 decreases their expected current weekly earnings by 3.8 percent.

Little direct research on the impacts of minimum wage laws on intragenerational mobility is available. The table above summarizes several key findings from this relatively limited body of work. One thing is clear: many earners at the very bottom of the wage distribution are essentially stuck there. Smith and Vavrichek (1992) and Boushey (2005) point out that roughly a third of minimum wage workers who remain employed do not see their incomes increase over time periods of up to three years. Along similar lines, Carrington and Fallick (2001) find that approximately 15 percent of women and 16 percent of blacks spend at least 5 out of the first 10 years of their career at jobs paying close to the minimum wage. So, all things being equal, an increase in the minimum wage seems likely to lead to real upward mobility for a substantial minority of workers. At the same time, a majority of workers do see their wages rise above the minimum, and many other minimum wage workers leave the workforce or become unemployed. Smith and Vavrichek, for example, put the latter number at 27 percent over one year. These workers are less likely to benefit from an increase in the minimum wage, and may even be hurt by it if it raises the hurdles to labor force entry.

Evidence on the incentive effects of increases in the minimum wage is even murkier. Studies of the employment and hours effects of minimum wage laws touch on the issue tangentially; i.e., if increasing the minimum wage results in the employment of more low-skill workers, an increased incentive to work could be construed as one of the causes. Katz and Krueger (1992) and Card and Krueger (1994) do indeed find that increasing the minimum wage has a modestly positive effect on employment, but a series of studies by Neumark and Wascher find the opposite. For more detail, see the [Minimum Wage and Growth/Absolute Mobility](#) section above. In any case, confounding factors like changes in the availability of low-skill work limit the usefulness of this research for the study of incentive effects.

Other studies address the issue of incentives more directly, analyzing the impact of minimum wage laws on the choice between work and welfare. Pavetti (1993) presents results indicating that some women want to leave welfare for the workforce, but find the costs associated with employment too steep. Both Turner and Bicakova (2003) and Page, Spetz, and Millar (1998) seek to resolve the opposing tugs of increased incentives and (potential) decreased opportunity empirically. Turner and Bicakova use PSID data from for the years 1979–1992 and find that a 10 percent increase in the minimum wage increases the likelihood of a welfare exit by 7.8 percent for short-term welfare recipients and 15.7 percent for long-term welfare recipients. Page, Spetz, and Millar use CPS data from the year 1983–1996, and peg the elasticity of the welfare caseload with respect to the minimum wage at 0.15, implying that a 10 percent increase in the minimum wage will lead to a 1.5 percent increase in the welfare caseload.

Shifting the focus from the tradeoffs between welfare and work to the tradeoffs between education and work, Chaplin et al. (2003) find that higher minimum wages may reduce school enrollment in states that allow students to leave school before the age of 18. This finding underscores the potentially powerful incentive effects of the minimum wage, but also introduces a level of normative ambiguity: while policymakers would like to make the transition from welfare to work more attractive, they would prefer not to increase the immediate rewards available to people who drop out of high school. Research on the incentive effects of increases in the minimum wage has yet to converge.

Minimum Wage and Intergenerational Mobility

The intergenerational impacts of minimum wage laws have seen precious little study. In theory, such impacts depend on the interaction between the growth and inequality effects of minimum wage laws. If increasing the minimum wage decreases inequality without lessening overall growth, the children of individuals at the low end of the income distribution will likely have better chances of economic success than they would have without policy intervention. If minimum wage laws decrease inequality but dampen growth in a given generation, it is likely that individuals in the next generation will be more equal in terms of relative opportunity but perhaps less able to advance beyond current levels of well-being. And, of course, if minimum wage statutes limit growth while failing to reduce inequality, both relative and absolute intergenerational mobility will likely suffer.

The research discussed above indicates that, historically, the impact of minimum wage laws on economic growth has been negligible. The suggestion that modest changes in the minimum wage will greatly depress absolute mobility rates therefore seems implausible. But, as is discussed in the [Minimum Wage and Economic Inequality](#) section, it is unclear that minimum wage laws have succeeded in lessening earnings and income inequality, even in the short term. This fact places arguments over the intergenerational impacts of the minimum wage squarely in the realm of speculation.

Minimum Wage and Economic Inequality

In theory, increases in the minimum wage improve the relative position of workers at the bottom of the wage spectrum, whether through mandated pay hikes for people earning wages below the new minimum or through so-called ripple effects, in which employers raise the wages of employees earning just above the minimum wage as well. But these benefits come with a potential cost: if employers are forced to pay more for each hour of labor, they may decide to pay for fewer hours, limiting the earnings of their employees and making it more difficult for unemployed low-skill workers to find jobs. If these effects on employment and hours are of sufficient magnitude, increases in the minimum wage could prove a net loss for low-income workers, and raise overall levels of income inequality. Motivated by this simple model, researchers have devoted much empirical energy to assessing the size and significance of the benefits and the costs of increases in the minimum wage. The table below summarizes several of the more important recent studies.

Minimum Wage Effects on Wage, Earnings, and Income Distributions

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Dinardo, Fortin and Lemieux 1996 (1979-1992 CPS ORGs, 1973-1978 May Supplements)	<ul style="list-style-type: none">○ Reweights 1988 sample to match 1979 sample in terms of various worker characteristics.○ Minimum wage explains 25 percent of increase in standard deviation of men's log wages, 30 percent of increase in standard deviation of women's log wages.<ul style="list-style-type: none">○ For comparison: unionization rates and "individual attributes" each accounted for about 15 percent of the increase in the standard deviation of men's wages.
Neumark, Schweitzer, and Wascher 2004 (1979-97 CPS ORGs)	<ul style="list-style-type: none">○ Examines the wage, hours, and earnings responses to a 10 percent increase in the minimum wage at various points in the wage distribution.○ Near the minimum wage, a 10 percent increase in the minimum wage leads to about a 4 percent increase in wages, but about a 3 percent reduction in hours over two years and a 1 to 2 percent reduction in employment over one year. Earned income declines by about 6 percent over two years.
Neumark, Schweitzer, and Wascher 2005 (matched CPS 1986-1995)	<ul style="list-style-type: none">○ Difference-in-difference estimates of densities at various points in the income/needs distribution.○ Finds that a 10 percent increase in the minimum wage increases the number of poor/near poor individuals by about 4 percent. Most of these individuals seem to begin with income/needs ratios between 1.5 and 3; higher income groups remain relatively unaffected.

These studies seek to assess the inequality impacts of the minimum wage directly. In each case, the authors measure inequality by examining changes in the income, earnings, and wage distributions over time, and employ a regression framework to relate these changes to changes in the minimum wage. Using such techniques, researchers focusing on inequality in the wage distribution generally find that raising the minimum wage produces large, positive effects, while those investigating the distribution of income or earnings tend to find modest impacts at most. An alternative approach concentrates on quantifying the negative effects of increases in the minimum wage on employment and hours. If these effects are positive or close to zero, increasing the minimum wage will likely prove a net benefit for low-income workers and thus reduce overall inequality. Findings here are extremely controversial: some authors report that raising the minimum wage reduces low-wage employment, while others observe the opposite effect. This

debate is discussed in more detail in the [Minimum Wage and Growth/Absolute Mobility](#) section.

Wage inequality. A broad consensus holds that, at least in the 1980s, higher minimum wages tended to reduce wage inequality. Fortin and Lemieux (1997) use a straightforward visual comparison of wage distributions from 1979 and 1988 to show that the higher real minimum wage in 1979 produced a “spike” in the wage distribution at the minimum level. As the real value of the minimum wage declined, the low end of the wage distribution expanded downwards, increasing inequality. Dinardo, Fortin, and Lemieux (1996) conduct a more formal analysis over the same time period, reweighting the 1988 wage distribution to match demographic and labor market characteristics from prior years. The authors find that the minimum wage explains up to 25 percent of the increase in the standard deviation of men’s log wages, and up to 30 percent of the increase in the standard deviation of women’s log wages. Card and Krueger (1995) offer a similar estimate, arguing that the 1990 increase in the minimum wage reduced wage inequality by about 30 percent. Each of these papers uses data from CPS outgoing rotation groups, which, along with the CPS March Supplement, make up what in practice amounts to an industry standard dataset for minimum wage research.

Researchers have been more hesitant to associate minimum wage laws with recent changes in wage inequality. Indeed, some argue that wage inequality in the bottom half of the distribution—the portion of the distribution most directly affected by minimum wage laws—has held relatively flat since the late 1980s (Autor, Katz, and Kearney 2006; Autor, Katz, and Kearney 2005).

Earnings and income inequality. Wages, of course, are at best a crude measure of economic status, and at worst may be a misleading one, if, for instance, increases in wages correspond to decreases in hours worked or job loss. With this in mind, researchers have focused much recent attention on the reaction of the earnings and income distributions to changes in the minimum wage. The findings here are mixed. On one hand, most research based on national surveys holds that increases in the minimum wage have no significant effect on inequality. Horrigan and Mincy (1993) use CPS data from 1981 and 1988 to simulate the effect of changes in the minimum wage on the share of earnings in each earnings quintile, and find no substantial impacts. Neumark, Schweitzer, and Wascher (2004) do not deal explicitly with inequality, but find that low-wage workers actually suffer earnings losses within two years after changes in the minimum wage. Family incomes seem to react similarly to changes in the minimum wage. Using CPS data, Neumark, Schweitzer, and Wascher (2005) find that, once lagged effects are taken into account, increases in the minimum wage tend to push some near-poor people into poverty while leaving the upper end of the income distribution relatively untouched.

But findings from quasi-experimental research by Card and Krueger (1994) dispute the contention that minimum wage increases lead to reductions in hours and employment for low-wage workers. Though vociferously challenged, these results remain relatively intact (see Card and Krueger 2000). As discussed in the [Minimum Wage and Growth/Absolute Mobility](#) section, the apparent discrepancy between these results and those of Neumark and Wascher can be traced to methodological differences that have yet to be resolved. Within this vein of research, then, the general consensus holds that increases in the minimum wage decrease wage inequality. However, because raising the minimum wage may also create modest job and hours losses, its effect on income and earnings inequality remains unclear.

UNIONS AND ECONOMIC MOBILITY

Unions and Growth/Absolute Mobility

As with the minimum wage, the ability of unions to reduce inequality is of little interest if they do so by crippling the economy in general. In other words, to get an accurate of idea of impact of unions on absolute mobility, one must consider their relationship to economic growth. Although classical economic theory holds that unions raise wages above competitively set levels and thus decrease productivity, the last 20 years have seen a shift towards a more nuanced theoretical framework in which unions can have either positive or negative effects on productivity. Freeman and Medoff (1984) gave early voice to this duality by differentiating between the “two faces” of union behavior. In their *monopoly face*, unions behave according to the classical model, raising wages to artificial levels and functioning as taxes on investments in future productivity. In their *collective voice face*, however, unions may improve productivity by allowing for more effective communication between workers and management. With the clout of a union behind them, workers may have an easier time passing suggestions for improved workplace practices along to management. Unions also provide workers with a means to express discontent without quitting or resorting to absenteeism, thus reducing turnover and increasing productivity. Empirical results are consistent with the idea that unions perform both of these functions. The table below highlights several key results.

Union Effects on Economic Growth

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Doucouliaigos and Laroche 2003 (quantitative meta-analysis)	<ul style="list-style-type: none"> ○ Metaregression of the effects of unions on productivity using data from 73 statistically independent studies. ○ 45 studies found a positive relationship between unionization and productivity, and 28 found a negative relationship ○ Controlling for differences in specifications, unionization appears to have slightly positive affect on productivity in the U.S. in general and U.S. manufacturing in particular, but a negative affect on U.K. productivity.
Hirsch, MacPherson, and Schumacher 2004 (CPS and ECI/ECEC portion of the National Compensation Survey 1986-2001)	<ul style="list-style-type: none"> ○ Compares trends in the gap between union and non-union wages produced by various datasets using a regression framework. ○ Findings: CPS and ECI data estimate the union wage gap decreased by approximately 10–12 percent between 1986 and 2001. ECEC data indicates the wage gap grew slightly. ○ Authors place more stock in the CPS/ECI findings.
Lewin 2005 (qualitative literature review)	<ul style="list-style-type: none"> ○ Reviews literature on the changes in worker turnover associated with unionization. ○ Most researchers agree that unionization significantly lowers quit rates; estimates of the size of this effect range from 31 percent to 65 percent.

Evidence of the monopoly face can be found in the persistence of a wage gap between union and non-union workers: union workers are typically paid more than non-union workers for similar jobs. However, the size of this wage gap appears to have decreased over time. Blanchflower and Bryson (2004) compare private sector union/non-union wage gaps calculated using 1974–1979 May CPS files to wage gaps calculated using 1996–2001 matched CPS ORGs. They find that union workers in the 1974–1979 sample typically made about 21 percent more than non-union workers, compared to 17 percent more between 1996 and 2001. Hirsch, MacPherson, and Schumacher (2004) assess changes in the private sector union wage gap between 1986 and 2001

using a variety of datasets (the CPS, and the ECI/ECEC portion of the National Compensation Survey). Though they highlight the discrepancies between results from the different datasets, these authors prefer estimates from the CPS and ECI that place the decline in the size of the wage gap between union and non-union workers at roughly 10 percentage points.

Unions also appear to reduce turnover and absenteeism, as the collective voice model predicts. For instance, Addison and Belfield (2004) use workplace- and individual-level data from the 1998 British Workplace Employer Relations Survey to find that unions reduce quit rates by 34 percent. Lewin (2005) reviews the literature on the subject, and cites estimates of quit rate reductions that range from 31 to 65 percent. (It should be noted, however, that Lewin disputes Freeman and Medoff's claims that unions allow employees to resolve grievances more effectively.)

The net effects of unionization on productivity are ambiguous and highly controversial. Doucouliagos and Laroche (2003) review 73 articles on the union productivity effect. Of these, 45 found a positive relationship between unionization and productivity, and 28 found a negative relationship. A meta-regression indicates that most of the differences between these studies were attributable to variations in model specification, and that, controlling for these differences, unions had a generally positive impact on U.S. productivity. Clearly, though, the jury is still out on this matter.

And even if one accepts a given conclusion about the effects of unions on present-day productivity, there are further complications to consider. Freeman and Kleiner (1999) and Dinardo and Lee (2004) find that unions may lower employment growth without increasing the risk of plant or firm closure, suggesting that unions reduce investment in future growth without affecting current productivity. A number of authors frame unions' negative effect on investment in terms of a tax; i.e., unionized firms may be less likely to make a given investment than non-unionized firms because they can expect to pay a "tax" on the returns to that investment in the form of higher wages. For instance, Fallick and Hassett (1999) assess changes in firms' investment patterns following union certification elections between 1962 and 1984, and find that the effects of unionization on the average ratio of investment to capital are similar to those of a 30 percentage point increase in the corporate income tax rate. Menezes-Filho and van Reenen (2003) review more than 40 relevant studies and reach a similar conclusion, arguing that, in the United States, unionization tends to decrease investment in research and development. They also find a smaller but still noticeable negative effect on productivity growth.

As a rejoinder to this line of research, Freeman (2005) posits that unions may balance out the reduction in firm-level investments by encouraging workers to save. In the 1979 CPS, 83 percent of union workers were covered by a pension plan, compared to 39 percent of non-union workers. This gap persisted through the 2002 CPS, in which 76 percent of workers covered by union contracts reported pension coverage, compared to 46 percent of other workers. Since savings and investment rates are closely related at the national level, Freeman argues, this may be a pathway through which unionization increases investment. Here again, then, research remains unsettled—although negative effects of unions on firm investment are much better documented than Freeman's proposed link between unions and aggregated national investment.

Another strand of literature concerns the optimum level of unionization. It is possible, on the one hand, that the productivity benefits of unions arise from competition between union and non-union firms. On the other, researchers have argued that unions negotiating on behalf of some workers and not others may promote policies that benefit their clients at the expense of the overall economy. If, as these theories hold, the rate of unionization plays a role in determining the

productivity effects of unionization, the effects of policies aimed at promoting or discouraging unionization become increasingly difficult to assess. Imagine a situation in which productivity benefits from competition between union and non-union firms. If the unionization rate increases beyond some competitively optimal level, productivity could decrease even if unions raised productivity prior to the uptick in unionization. Pencavel (2005) reviews the pertinent literature, which typically focuses on international comparisons of the relationship between bargaining regimes and productivity. He characterizes this work as “fickle” and argues that it has produced “few robust results.” The reasons for this, Pencavel continues, include very small sample sizes (typically on the order of 20 countries) and a lack of consensus regarding the measurement of bargaining systems.

On the whole, it appears that unionization at its current level has a small but perhaps slightly positive effect on U.S. productivity at a given point in time. Over the long run, however, unionization may dampen growth by lowering the incentive for unionized firms to make investments aimed at enhancing future productivity. Moreover, it is possible that each of these outcomes depends on a particular level and type of unionization. That is, as unionization rates and union bargaining strategies change, union effects may change as well.

Union Membership and Intragenerational Mobility

The potential impact of union membership on intragenerational mobility is double-edged. On the one hand, unions may be able to use their negotiating power to assure workers higher wages and steady gains over time. On the other, because unions tend to favor seniority over productivity, highly skilled workers may be less able to achieve large wage increases.

Union Membership’s Effects on Intragenerational Mobility

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Wunnava and Okkunade 1996 (PSID 1981-1989)	<ul style="list-style-type: none"> ○ Regressions of wage levels on longitudinal measures of union status and current and one- and two-period lagged unemployment rates. ○ The cumulative effect of unemployment on the wages of non-union individuals was -0.6 percent, but unemployment did not affect union wages.
McCue 1996 (PSID 1976-1988)	<ul style="list-style-type: none"> ○ Hazard model of the probability that workers will receive a promotion, with union status included among the covariates. ○ For white men, union membership lowers the annual probability of promotion by 23–32 percent, depending on model specification. ○ For comparison: not having a high school degree lowered the annual risk of promotion for white men by 37–48 percent.

The seminal finding regarding the links between unions and intra-generational mobility is that the age-earnings profiles of union members are flatter but higher than those of non-union workers. That is, union workers typically make more than non-union workers, but their earnings increase less with age (Lazear 1979). This conforms to both the positive and negative predictions about union impacts.

Research comparing the finer-grain dynamics of earnings and wage mobility for union and non-union workers is much rarer. Extant findings, however, also tend to confirm that unions increase wage levels and stability. For instance, Wunnava and Okkunade (1996) uses PSID data for the years 1981–1989 to examine the impacts of unemployment on the wages of union and non-union workers. They find that union membership decreases the size of wage losses following periods of

high unemployment: while the long-term effect of unemployment on the non-union wages of people in their sample was -0.6 percent, unemployment did not significantly affect the wages of union members. Card (1996) explores the mobility consequences of union entry and exit. Using statistically matched data from the 1987 and 1988 CPS ORGs, he finds that wages typically increase by 6 percent upon union entry, with the largest gains accruing to low-skill individuals. Along similar lines, wages decline steeply for low-skill individuals who leave unions. Though Card cautions that some of the variation across skill groups may be due problems in the measurement of union status, his broader conclusions—that union entry increases wages and union exit decreases wages—hold even after controlling for potential error.

These advantages, however, do come at the cost of decreased upward mobility. McCue (1996) uses PSID data from 1976–1988 to estimate a hazard model of the probability of workplace promotion. She finds that, for white men, union membership lowers the annual probability of promotion by 23 to 32 percent, depending on model specification. Additionally, union membership lowers the returns to additional education, and plays a significant role in determining overall promotion rates within racial groups: black men are more likely than white men to be union members, and, as a consequence, are less likely to receive promotions.

Union Membership and Intergenerational Mobility

The theoretical connections between union membership and intergenerational mobility are quite strong. Because, *ceteris paribus*, union members tend to earn more than other workers, and income levels tend to persist from generation to generation, children with parents who are union members could be expected to have higher incomes than demographically equivalent children with non-union parents. The social consequences of union membership may also be beneficial over multiple generations. Children with parents who have union connections may enjoy increased community support while growing up, or improved access to union work as adults.

Each of these positive effects results from parents' ability to pass along the perks of their union status to their children. Though such behaviors may increase absolute intergenerational mobility, the likely cost is an increase in social rigidity; i.e., decreasing relative intergenerational mobility. This could prove particularly problematic for low-skill, non-union workers, who stand to lose out if employers or social institutions favor their unionized peers. Clearly, this subject cannot be parsed thoroughly without an empirical investigation. But studies examining the intergenerational effects of union membership are few and far between.

Shea (1997) is one of the few authors to directly consider the effects of union membership on intergenerational outcomes. With the goal of separating the effects of income from those of unobserved characteristics correlated with income, Shea considers the impact of parents' union membership on children's wages, earnings, and years of schooling. The underlying hypothesis is that union membership represents a financial boon that is uncorrelated with unobservable skills. Using PSID data, Shea finds that low-income children whose parents are union members tend to do better than their counterparts whose parents reported similar observables but were not union members. This finding does not hold for the fully representative sample, and, just as importantly, does not reflect on the impact of unionization on societal mobility. But Shea's results are, at the very least, suggestive: parents' union membership translates into better outcomes for children. Blanden and Machin (2003) suggest that one of the mechanisms driving this effect may be the intergenerational transmission of union membership itself. Using British BHPS data for the years 1993 to 1998, the authors find that young adults with fathers who are union members are nearly twice as likely as young adults without union fathers to be union members themselves (21 percent to 12 percent). Neither Shea nor Blanden and Machin sheds much light on the broader

intergenerational effects of labor unions, but, taken together, they do suggest that the financial and social aspects of union membership are both moderately heritable.

Union Membership and Economic Inequality

Unions offer workers a powerful tool with which to capture profits from owners and shareholders. The advantages of unionized negotiating are likely to be particularly pronounced for workers trying to capture value that does not depend directly on labor, like returns to capital or windfall profits. Taken at face value, the shift of income from employers to employees equates to a tightening of the income distribution. Because they tend to confine workers to standard pay schedules, unions may further reduce inequality by tightening income distributions within occupation categories. But unions may produce other, less desirable effects. For instance, unions may discourage employers from expanding their payrolls, potentially raising overall unemployment levels and discouraging long-term growth. The net effect of unions on inequality must therefore be resolved empirically. Many researchers have attempted to do so, often with a particular emphasis on wage inequality. The table below summarizes several important studies.

Unions' Effects on Wage Inequality

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Freeman 1993 (1978 and 1988 March CPS)	<ul style="list-style-type: none"> ○ Decomposes the variance impacts of unions on the white-collar/blue-collar wage gap, the blue collar wage gap within unionized industries, and the wage gap between union and non-union workers. ○ Findings: decrease in union density responsible for roughly 20 percent of the increase in the dispersion of the natural log of men's earnings.
Card, Lemieux, and Riddell 2004 (US: 1973, 1974, 1984, 1993, 2001 CPS ORGs.UK: 1983 GHS, 1993 and 2001 UKLFS. Canada: CLFS)	<ul style="list-style-type: none"> ○ Compares changing rates of unionization in U.S., U.K., and Canada to increasing wage inequality. ○ Findings: deunionization responsible for about 14 percent of increase in wage inequality in the United States between 1973 and 2001. ○ For comparison: deunionization responsible for between 9 percent and 29 percent of growth in U.K. inequality between 1983 and 2001; inequality did not grow in Canada between 1984 and the early 2000s.
Dinardo, Fortin and Lemieux 1996 (1979-1992 CPS ORGs, 1973-1978 May Supplements)	<ul style="list-style-type: none"> ○ Reweights 1988 sample to match 1979 sample in terms of various worker characteristics. ○ Unionization rates and "individual attributes" each accounted for about 15 percent of the increase in the standard deviation of men's wages. ○ For comparison: minimum wage explains 25 percent of increase in standard deviation of men's log wages, 30 percent of increase in standard deviation of women's log wages.

Freeman (1993) lays out the basic terms of inequality decomposition, using CPS data from 1978 and 1988 to decompose union-related earnings variance into three components: (1) the change in white-collar, blue-collar differential, (2) the decrease in earnings inequality within unionized blue-collar workers, and (3) the earnings gap between union and non-union workers. These correspond, in order, to the interactions between unionization and income inequality described in the preceding paragraph. In total, Freeman estimates that the decrease in unionization is responsible for roughly 20 percent of the increase in the standard deviation of log male earnings. Dinardo, Fortin, and Lemieux (1996) employ the reweighting techniques described here and conclude that deunionization explained roughly 10 percent of the increase in wage inequality between 1979 and 1988. (The same study found that changes in the minimum wage explained 25

to 30 percent of the increase.) Card (2001) reports similar results, as do Card, Lemieux and Riddell (2004). In a review of 20 years of research, Freeman (2005) characterizes the inequality-reducing effect of unionization on wages as “robust across time, models, and data.”

Though robust, this effect is not uniform. Unionization levels vary widely across employment sector, skill level, and gender, and the impact unions have on wage inequality also varies along these dimensions. Card (2001) assesses union wage gaps across skill deciles, finding that union participation for men follows an “inverted U” shape across skill deciles; i.e., moderately-skilled men are the most likely to join unions. Unionization tends to compress the distribution of payoffs for skill: Card finds that unions exert positive pressure on wages at the lower end of the skill spectrum, and negative pressure at the top. Other studies use more sophisticated methods that allow for differences in unobserved skill between union members and non-union workers, a modeling choice motivated by the perception that union members may bring more intangibles—like trade-specific expertise—to the bargaining table. Card, Lemieux, and Riddell (2004) estimate such a model and report similar results. Summarizing the available literature, Katz and Autor (1999) describe how “the concentration of deunionization on the less-educated contributed to the enormous increase in educational wage differentials and overall male wage inequality in the 1980s.”

Card (2001) also finds large differences between union impacts in the public and private sector—between 1973 and 1993, the public sector became increasingly unionized, while private sector unionization rates decreased. Card, Lemieux, and Riddell (2004) extend this work through the 1990s, and attribute 50 to 80 percent of the slower inequality growth in the public sector (as compared to the private sector) to the disparate trends in unionization.

Differences in trends in and effects of unionization vary by gender as well. Fortin and Lemieux (1997) find that men are much more likely than women to be in a union, and that unionization only has significant inequality reducing effects on men’s wages. Card, Lemieux, and Riddell (2004) go further, arguing that unionization actually has a disequalizing effect on women’s wages. In any case, it is clear that the equalizing effects of unionization come primarily as a result of changes in the distribution of men’s wages.

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PROJECT PRINCIPALS

Marvin Kusters, Ph.D., American Enterprise Institute
Isabel Sawhill, Ph.D., *Center on Children and Families*, The Brookings Institution
Ron Haskins, Ph.D., *Center on Children and Families*, The Brookings Institution
Stuart Butler, Ph.D., *Domestic and Economic Policy Studies*, The Heritage Foundation
William Beach, *Center for Data Analysis*, The Heritage Foundation
Eugene Steuerle, Ph.D., *Urban-Brookings Tax Policy Center*, The Urban Institute
Sheila Zedlewski, *Income and Benefits Policy Center*, The Urban Institute

PROJECT ADVISORS

David Ellwood, Ph.D., *John F. Kennedy School of Government*, Harvard University
Christopher Jencks, M. Ed., *John F. Kennedy School of Government*, Harvard University
Sara McLanahan, Ph.D., Princeton University
Bhashkar Mazumder, Ph.D., Federal Reserve Bank of Chicago
Ronald Mincy, Ph.D., Columbia University School of Social Work
Timothy M. Smeeding, Ph.D., *Maxwell School*, Syracuse University
Gary Solon, Ph.D., Michigan State University
Eric Wanner, Ph.D., The Russell Sage Foundation

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