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EFFECTS OF MINIMUM WAGES ON POPULATION HEALTH

New research indicates that an increase in minimum wages can have important health benefits—a finding that is relevant to public debates about both health and economic policy.

Key Points

- Research into the effects of minimum wages on health is rapidly expanding. At least three mechanisms could link higher wages to changes in health status. Higher wages could allow workers to afford both health-improving and health-harming products and services; result in greater job satisfaction, which would improve health; or increase economic incentives to work more hours, which could either improve or harm health.
- The preponderance of evidence suggests that increases in minimum wages decrease smoking and the number of days with health limitations and increase birthweights among infants of low-wage or low-skilled workers. Effects are more mixed for other populations such as teenagers and noncontinuously employed adults.
- Policy makers should consider both the possible health and economic effects of raising minimum wages. Future research should more precisely distinguish between groups likely to be affected by such a change and those not likely to be affected.

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Stagnant wages are at the forefront of US policy debates. It is widely acknowledged that increases in minimum wages lift the earnings of employed low-wage workers, although there is less agreement about the effects on poverty and employment. Research into the effects of minimum wages has typically addressed economic concerns, and it has addressed health only recently. This brief primarily addresses three questions: Why does the minimum wage matter? What does research over the past fifty years suggest about the effects of minimum wage increases on unemployment and poverty (two factors that can affect health)? What does recent research suggest about the effects of minimum wage increases on the health of low-wage workers and their families?

The current federal minimum wage is $7.25 per hour ($2.13 for tipped workers). The current highest state minimum wages for nontipped workers are $11.50 in Washington; $11.00 in California and Massachusetts; and $10.00–$10.50 in Arizona, Colorado, Connecticut, Hawaii, Maine, New York, Oregon, Rhode Island, and Vermont. Thirty-nine states have minimum wages above the federal $7.25. In twenty-one states the wage is $7.25. In addition, an increasing number of cities and counties have established local minimum wages.

Why Does The Minimum Wage Matter?

Proponents of raising the minimum wage point to the decades-long decline in the inflation-adjusted value of the federal minimum wage and corresponding declines in inflation-adjusted wages for lower-skilled workers. Exhibit 1 shows inflation-adjusted wages for three groups of workers: those with very low wages (those in the tenth percentile of wages), middle wages (in the fiftieth percentile), and the highest wages (in the ninety-fifth percentile). While from 1979 to 2013 wages have risen for workers with the highest wages, they have remained relatively stagnant for those with middle wages and fallen for those with very low wages.

Proponents also argue that in a time of ever-rising corporate profits and falling shares of national income going to workers, an increase in minimum wages would

transfer some profits to low-wage workers. In addition, proponents point to the disproportionate number of women, African Americans, and Hispanics who hold low-wage jobs. They also note the number of people who are low-wage workers. Approximately 29 percent of the workforce—forty-seven million people—earns no more than 1.5 times the minimum wage. Finally, proponents cite polls showing that a majority of Americans favor increases in minimum wages. For example, the Pew Center reported in March 2014 that 73 percent of Americans supported raising the federal minimum wage from $7.25 to $10.10.

Opponents of raising minimum wages argue that widening wage inequality and falling wages for low-skilled workers are the result of the decline in manufacturing jobs, not changes in minimum wages. In addition, opponents often cite research finding that increases in minimum wages will result in higher unemployment or fewer work hours for low-wage workers, with the burden falling heavily on women, African Americans, and Hispanics.

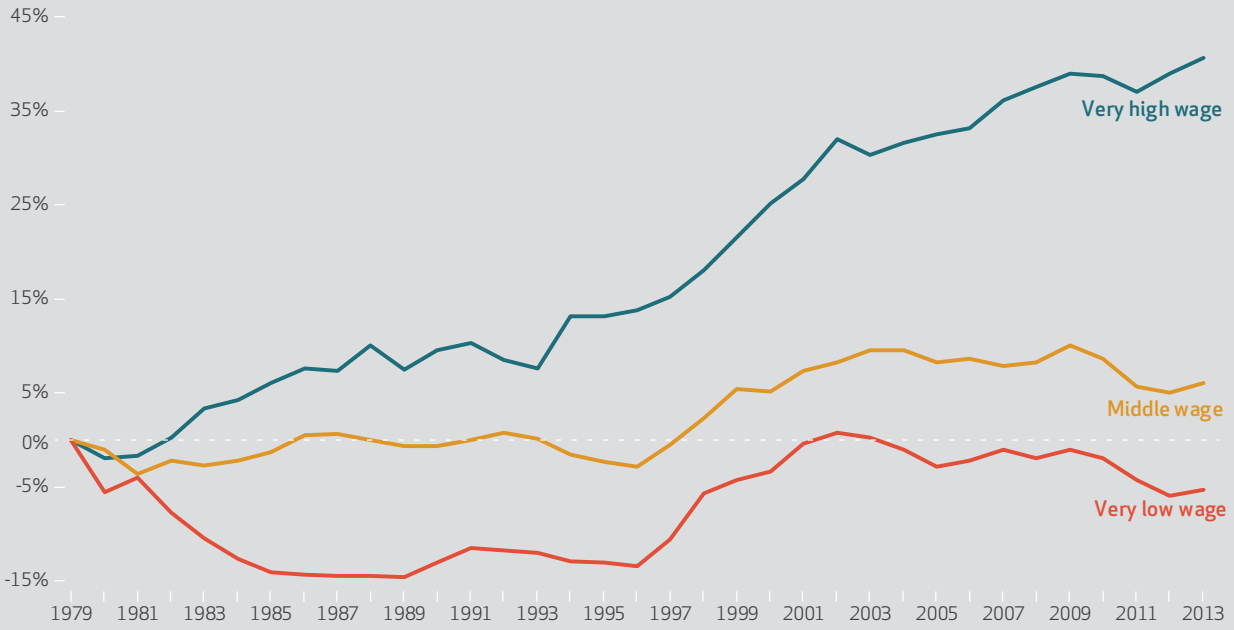
Finally, proponents and opponents disagree on the effects of minimum wages on poverty. All of the controversies above have implications for health because low wages, unemployment, and especially poverty can affect health. We address hypotheses and empirical findings pertaining to the health-related controversies in the next section.

How Minimum Wages Produce Effects

Standard economic theory regards the minimum wage as a price, and as with any price, an increase will be followed by a reduction in demand—in this case, for labor, both in terms of numbers of low-skilled workers employed and the hours they work. However, some dissenting economists argue that the labor market is not like the market for products. Increases in product prices do not normally affect the quality of the product, but increases in wages might improve the quality of the work done by improving workers' morale, reducing turnover, and increasing productivity. Some economists argue that an increase in quality can offset an increase in wages, so that businesses would not feel a need to reduce the numbers of employees or hours worked if the minimum wage went up. Finally, if companies are able to pass through

EXHIBIT 1

Percentage changes of wages for workers in three wage groups, 1979–2013



SOURCE: Mishel L, Gould E, Bivens J. Wage stagnation in nine charts [Internet]. Washington (DC): Economic Policy Institute; 2015 Jan 6 [cited 2018 Aug 20]. Used with permission.

the higher cost of labor by raising prices, effects on employment may be minimal.

Mechanisms whereby minimum wages influence the poverty rate depend on the effects on three different groups: the nonworking poor who are out of the labor market; the working poor, whose incomes could be raised above the federal poverty level by increased wages; and people who would be newly unemployed due to increases in minimum wages. Increases in minimum wages do not influence the incomes of the first group unless those increases induce members of the group to enter the labor market. In contrast, increases in minimum wages do increase incomes of the working poor (provided any reductions in work hours are modest), but they reduce incomes of people who become unemployed. The overall effect on the poverty rate depends on the combined effects on unemployment, hours worked, and wages of the working poor.

Researchers have postulated numerous potential mechanisms by which minimum wages could affect health, and we will mention three. First, on the one hand, higher wages could make it easier for workers and their families to afford medical care, health insurance, and homes in safe neighborhoods. On the other hand, higher wages could make cigarettes, alcohol, fatty foods, and illicit drugs more affordable. However, some research finds that higher wages correlate with lower cigarette use and lower obesity prevalence, which indicates that affordability is not the only factor that affects consumers' choices about purchasing health-harming products. Second, higher wages could improve job satisfaction, and epidemiologists have found that higher job satisfaction improves worker health. Third, higher wages could increase the "opportunity costs" of leisure: Workers might be encouraged to work more hours and have fewer leisure (nonwork) hours. If work increases health and safety risks, compared to leisure, this third effect could harm worker health. But if work involves exercise or enhances social contacts, or if leisure leads to health-harming activities such as consuming drugs or engaging in dangerous activities, this third effect could enhance health.

Evidence Of Minimum Wage Effects

Broadly speaking, researchers have used three methods to investigate minimum wages: They have compared US states, contiguous US counties, and the United Kingdom in 1998 versus 1999. In the first case, aggregate data or worker survey data have been collected for the fifty states and measured over multiple years. Data from all states that raised minimum wages (the treatment group) are compared to data from all states that did not raise them (the control group).

In the second case, survey data have been collected for workers in a specific industry (such as the fast-food industry) living in counties in one state that

> "Approximately 29 percent of the workforce—forty-seven million people—earns no more than 1.5 times the minimum wage."

raised the minimum wage (the treatment group) and for similar workers in contiguous counties in an adjacent state that did not raise the minimum wage (the control group). Typically, researchers analyze data for only 2–30 states (not all 50) and for only some of their counties. The treatment and control groups minimize geographic differences and likely cultural ones. This method is therefore viewed by many researchers as superior because it more closely resembles a randomized controlled trial than does the first method—which may be biased due to large geographic and cultural differences across the fifty states.

In the third case, researchers use unique UK survey data on individual workers before and after the first UK minimum wage was established in 1999. Changes in labor market or health outcomes from 1998 to 1999 for low-wage or low-skilled workers receiving

the new minimum wage (the treatment group) are compared with changes in outcomes for similar workers not receiving the new minimum wage (the control group).

Most studies using any of these three methods have focused on either low-wage work (defined, for example, as jobs paying just below the minimum wage, slightly above the minimum, or 1.5–2.0 times the minimum) or low-skilled workers (often defined in the US as people with at most a high school diploma). Labor market and poverty studies use all three methods; to date, health studies have used only the first and third.

FINDINGS ON THE LABOR MARKET, POVERTY, AND OTHER FACTORS

There is no consensus among economists on the effect of minimum wages on unemployment and hours worked, in part because the most frequently used US research methods have produced conflicting findings. Comparisons across all fifty states generally find that increasing minimum wages modestly increases unemployment among low-wage or low-skilled people. Comparisons across contiguous counties in a few states generally find no effect on employment or hours worked, although there are exceptions—for example, a recent study of the Seattle minimum wage using the cross-county method found reductions in hours worked. One meta-analysis that combined findings from sixteen prominent US studies that used one of these methods found that the effects on employment to be "too small to be statistically detectable." The UK Commission on Low Pay reviewed the literature, generated its own estimates, and concluded that "there remains little evidence of a significant adverse effect of the [UK] minimum wage on employment."

While there is some disagreement among economists, a large research literature suggests that minimum wages reduce poverty rates. According to one estimate, an increase in the federal minimum wage from $7.25 to $12.00 would lift 6.6 million people out of poverty. A recent Congressional Budget Office report that includes a literature review found reductions in poverty. But an emphasis on the poverty rate understates the overall effects on low-wage workers and their families. For example, an increase from $7.25 to $9.00 for continuously and fully employed heads of household may not lift family incomes above poverty, but it would undoubtedly increase them.

Although the evidence on the impact of minimum wages on the labor market and poverty is fairly robust, there is reason to be cautious in extrapolating the findings to settings outside of those studied. First, though it is likely that large versus small increases in minimum wages have differential effects on outcomes, no threshold for the magnitude of increases has been discovered. However, the vast majority of state and federal increases in minimum wages from 1980 to 2011 were relatively modest—no more than 15 percent. Furthermore, adverse effects on unemployment and hours worked were found to be weaker or nonexistent in rapidly expanding local economies versus shrinking or stagnant ones. Finally, effects on all factors differ depending on the cost of living in the region.

FINDINGS ON HEALTH EFFECTS

Studies of the impact of minimum wages on health have several shortcomings. It is widely acknowledged that to the extent that minimum wages have any effects, they will occur primarily among workers who actually receive the new minimum wages, not among similar low-wage or low-skilled workers who do not. Accordingly, the best-designed studies on minimum wages and health conduct separate analyses on workers whose wages increased due to the new minimum wages and similar workers whose wages did not increase. Three UK studies come closest to this design. For example, Aaron Reeves and colleagues compared low-wage workers who were eligible for the new 1999 UK minimum wage and who worked in firms that complied with the law to those who were eligible but worked in firms that did not comply. The second-best-designed studies (typically from the US) compare low-wage or low-skilled workers, whom researchers define as "likely affected," with middle- to high-wage or high-skilled workers, whom researchers define as "not likely affected." Other studies with third-best designs analyze low-wage or low-skilled workers alone, without comparing them to any groups "not likely affected." Studies with the weakest designs analyze all people—of all wage and skill levels, including some who are not even working—and thereby dilute researchers' ability to estimate unbiased effects on the group most likely to be affected.

A recent literature review found fewer than thirty-five published studies on the health effects of minimum

wages, with the majority published since 2016. Unlike the economic studies that focus on employment and poverty, the health studies do not focus on any one or two outcomes. The literature review recorded more than twenty different outcomes, including self-reported overall health, smoking, obesity, self-reported mental health, mortality, employer-sponsored insurance, birthweight, alcohol abuse, alcohol-related traffic deaths among teenagers, and absence from work due to illness.

We draw several conclusions from this literature review. First, whereas increases in minimum wages are unlikely to affect all measures of public health, the preponderance of evidence from studies with at least a third-best design suggests that the increases improve three measures: smoking; birthweight; and days with health limitations, including absence from work due to illness. Illustrative estimates from the literature include the following: Among adult women, a 10.0 percent increase in minimum wages led to a 1.6 percent reduction in smoking prevalence; among pregnant mothers, a $1 increase led to a 1.1 percent decrease in prevalence of low birthweights; and among employed adults, a $1 increase led to a 16.1 percent reduction in absences from work due to illness. We could not draw any conclusions from this literature regarding health harms caused by increases in minimum wages.

Second, findings differ depending upon whether researchers considered only teenagers, only employed low-skilled people, or employed and unemployed low-skilled people combined. The findings of studies of teenagers and of unemployed and employed people combined are inconsistent. For example (again, drawing on studies with at least a third-best design), after increases in minimum wages, one study found increases in alcohol-related traffic fatalities among teenagers, while another found reductions in births to teen mothers. Overall, the evidence suggests that increases in minimum wages improve health for low-wage or low-skilled continuously employed adults.

Lack of access to medical care can also be harmful to the public's health. Most people younger than age sixty-five have such access through employer-sponsored insurance. However, the literature does not support any strong conclusions about the effects of minimum wages on the provision of such insurance.

In light of the findings and shortcomings listed above, we offer several suggestions for future researchers. Family economic security is an important social determinant of health, and it influences health outcomes across the life course. Accordingly, researchers should investigate whether minimum wages have varying effects across populations (such as teenagers, continuously employed adults, and families) and health outcomes, and whether varying magnitudes of increases (for example, $11 versus $13) have different impacts. Nevertheless, we would ultimately like to know whether increases in minimum wages improve the public's health on average. Research that combines findings from many studies therefore seems useful. In addition, best and second-best research designs are more compelling than other designs. Finally, research about how minimum wage effects on health interact with the health effects of the Earned Income Tax Credit (EITC) or the Affordable Care Act (ACA) expansions of eligibility for Medicaid would be especially fruitful.

> "A large research literature suggests that minimum wages reduce poverty rates."

Policy Implications

During the 2016 presidential campaign, stagnant wages—especially for people with at most a high school education—were hotly debated. Minimum wages are viewed by many politicians as one policy response to stagnant wages. At the beginning of 2018, eighteen states and twenty cities increased their minimum wages. California's minimum wage is scheduled to increase to $15.00 by 2023. Most policy debates about increasing minimum wages focus on economic outcomes, such as unemployment and poverty. Although the research cited above demonstrates no consensus among investigators, numerous studies have found little or no effects on employment, while others have found reductions in poverty.

The health-related research highlighted in this brief should also inform public discussions. It is difficult to summarize this new research because so few studies are available, and such a great variety of health outcomes have been investigated. However, some evidence indicates that increasing minimum wages reduces smoking prevalence and decreases days with health limitations, including absence from work, among low-wage or low-skilled workers and increases birthweights among their newborns. The most salubrious effects are likely among such workers who are continuously employed and their families. This research is in its infancy—most studies were published between 2016 and 2018—but it will likely expand rapidly.

> "Family economic security… influences health outcomes across the life course."

As policy makers weigh the merits of various antipoverty programs, they should keep in mind that, compared to many other social supports, minimum wages are generally not viewed as handouts, they generate no direct burden on taxpayers, and the job satisfaction associated with higher wages may translate into improved health. It could nevertheless be argued that combinations of minimum wages, the EITC, and other antipoverty programs may be the most effective approach to achieving desired economic and health outcomes.

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