

The EITC and minimum wage work together to reduce poverty and raise incomes

Report • By [Jesse Rothstein](#) and [Ben Zipperer](#) • January 22, 2020

Summary: Although simple theories of the labor market imply that employers may capture some of the Earned Income Tax Credit (EITC) by reducing wages, the empirical evidence is quite limited and dated. What evidence there is suggests that wage effects are important but that the EITC is nevertheless quite effective at raising the incomes of its intended beneficiaries: Even with the implied wage effects, the EITC makes recipients much better off. Thus, concerns about EITC effects on wages are not a strong argument against proposals to expand the EITC. When EITC expansions are coupled with minimum wages, the two policies work together to improve low-wage workers' economic situations.

After decades of rising income inequality and wage stagnation, the problem of inadequate wages for middle- and lower-income workers has only increased in urgency. Discussions of possible remedies have centered on expanding two existing policies: the Earned Income Tax Credit (EITC) and the minimum wage. Both the EITC and the minimum wage have been found to be quite successful at improving the lives of low-income families. The EITC—a refundable tax credit available to low-income families who have income from work—dramatically reduces child poverty, encourages single mothers to participate in the formal economy, and has important positive effects on a range of health, educational, and child developmental outcomes (Nichols and Rothstein 2016; Hoynes and Patel 2018). The minimum wage is more controversial, but the best evidence indicates that it, too, raises incomes and reduces poverty, including child poverty; improves health and public safety; and has little or no negative effect on employment (Dube 2019; Dow et al. 2019; Ruffini 2020; Cengiz et al. 2019).

Policy discussions often treat EITC expansions and minimum wage raises as alternatives, of which we should choose just one. This is a misconception. In economic terms, the two policies are complementary and may be more effective in combination than either is on its own. The EITC aims to supplement market earnings but risks being diluted if low-wage employers react to it by reducing wages. A sufficiently high minimum wage can prevent this dilution, ensuring that low-wage workers receive the full benefit of the EITC. In the other direction, an EITC can raise earnings above the low floor guaranteed by the minimum wage, which cannot plausibly be raised high enough to generate livable incomes for many families without additional supplementation.

The idea that employers may capture some of the EITC by reducing wages relates to the economic theory of tax incidence (how the costs of a tax are borne and how that affects behavior). This theory, and its application, is widely misunderstood in policy circles. This brief attempts to clarify it and explain its relevance to proposed EITC policies.

Although simple theories of the labor market imply that EITC expansions will lower wages, the empirical evidence

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is quite limited and dated. What evidence there is suggests that wage effects are important but that the EITC is nevertheless quite effective at raising the incomes of its intended beneficiaries: Even with the implied wage effects, the EITC makes recipients much better off. The evidence on the implied wage effects derives from decade-old studies that examine data from the mid-1990s. There have been important changes since then in our labor market and policies, and in our understanding of the operations of the labor market, that limit the applicability of this evidence to current proposals.

We conclude that concerns about EITC effects on wages are not a strong argument against proposals to expand the EITC. When EITC expansions are coupled with minimum wages, the two policies work together to improve low-wage workers' economic situations. Moreover, the policies complement each other more effectively the more they are designed to overlap: A high minimum wage protects more EITC workers from negative wage effects, and an EITC targeted to workers protected by the minimum wage is more fully passed on to workers and boosts their economic fortunes more than wages alone can.

The minimum wage and the EITC: Two strategies for raising low incomes

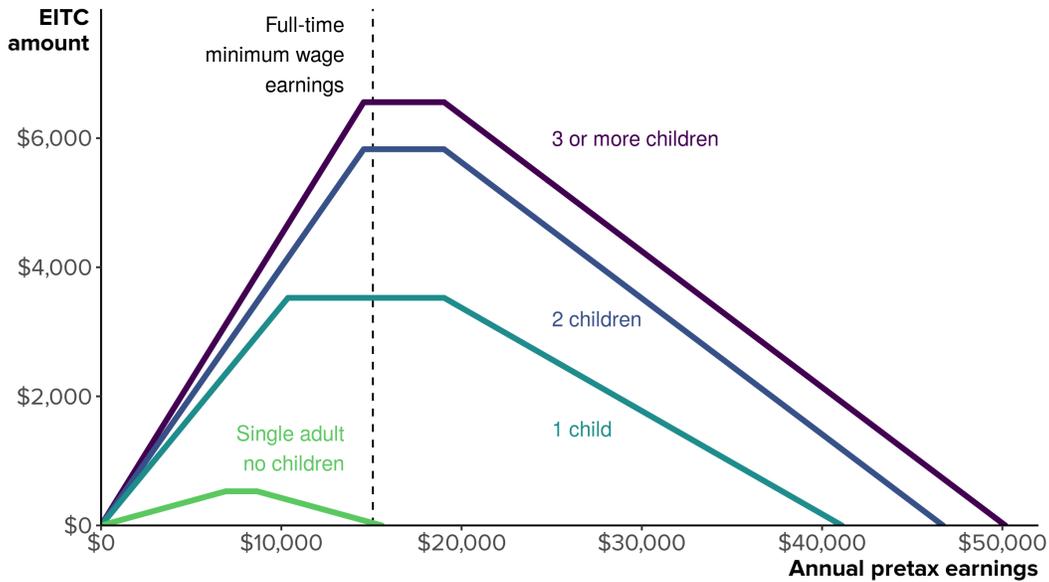
The Fair Labor Standards Act of 1938 established the first federal minimum wage, setting a floor for the amount a covered worker is paid on an hourly basis. The federal minimum wage is now \$7.25 per hour, which is low in real, inflation-adjusted terms compared with historical levels (Cooper, Gould, and Zipperer 2019). Because the minimum wage directly raises wages for those workers who otherwise would have earned less than the minimum, and because it also has indirect effects on wages a bit above that level, the low real value of the minimum wage has increased inequality between low- and middle-wage workers (Autor, Manning, and Smith 2016). As a result, many states and municipalities have reacted to the eroding value of the federal minimum wage by setting their own higher levels (EPI 2019). Dube 2019 estimates that a \$12 minimum wage in 2017—only slightly lower in real terms than proposed national targets for a gradual \$15 minimum wage—would have raised more than six million individuals out of poverty.

A full-time, full-year worker at the current federal minimum wage would earn about \$15,000 per year, far too little to support a family. Even if current proposals to raise the minimum wage to \$15 were enacted, the resulting annual wage would be barely enough to lift a family of four out of poverty—and many minimum wage workers do not work full-time hours (Cooper 2019).

The Earned Income Tax Credit represents a different strategy for raising incomes. The EITC is a refundable tax credit available to low-income families and very-low-income individuals who have a positive earned income (Hoynes and Rothstein 2016). Eligible households receive a net tax refund that supplements their earnings. The value can be substantial. For a single parent with two children who works full time for the full year at the current federal minimum wage, the current EITC refund is about \$5,800 and adds 39% to

Figure A

Value of the 2019 Earned Income Tax Credit for a single-parent family, by pretax earnings and number of children



Source: Center on Budget and Policy Priorities, *Policy Basics: The Earned Income Tax Credit* (June 2019)

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pretax earnings, lifting the family just above the poverty line. **Figure A** shows the value of the 2019 EITC for a single-parent family, by pretax earnings and number of children.

In 2018, over 22 million working families and individuals received the credit, with an average value of \$3,191 for families with children (CBPP 2019). The additional income is extremely valuable to recipient families, and evidence indicates that it improves maternal and child health as well as children’s educational outcomes (Nichols and Rothstein 2016).

An important aspect of the EITC is that it is available only to those who work. This is designed to reward and encourage participation in the labor market. As Figure A illustrates, the EITC begins at \$0 for families who do not work, and then it gradually phases in, increasing in value as pretax earnings grow. Eventually, the EITC reaches its maximum value and plateaus at this level before gradually phasing out down to \$0 again. (Although Figure A shows the 2019 tax year EITC schedules for a single parent, the shape is similar but ranges vary for different numbers of children for married couples. As shown, workers without dependent children in the home receive relatively small credits.

The structure of the EITC refund is designed to increase the incentive to work: A potential beneficiary evaluating an option to work would receive not only her market earnings but a tax credit worth several thousand dollars if she does. Indeed, an extensive body of research finds that the EITC contributed substantially to a dramatic rise in single mothers’ labor force participation in the 1990s, just as intended.¹

The economics of incidence

On its face, the minimum wage in a simple economic model has an important downside that the EITC lacks: It provides higher incomes for workers by charging employers more for labor, potentially reducing employer demand and therefore employment. The EITC, by contrast, costs employers nothing, and it encourages potential beneficiaries to work where many might otherwise not have worked. But this contrast is a mirage. For example, in a simple economic model, the two policies would have the same potential downside, though it manifests differently: For the same reason that the minimum wage might reduce employment—that the demand for workers is limited—the EITC may reduce wages. This happens because the additional workers that the EITC encourages to enter the labor market create more competition for jobs, potentially bidding down wages and diluting the contribution of the EITC to families' budgets. Thus, the model predicts that the two policies have similar limitations: Both can lead to an imbalance in the low-wage labor market, with an excess of labor supply over labor demand. This imbalance potentially limits the effectiveness of each.

These predictions derive from the economic theory of tax incidence (though as we discuss below, the empirical evidence in support of either prediction is extremely thin). This theory describes how taxes (including tax credits like the EITC) affect individual choices, and how those choices may in turn have ripple effects on the labor market. **Figure B** illustrates this. Point A represents the labor market equilibrium without the EITC or minimum wage, with labor supply exactly balancing labor demand at wage W . The EITC raises the effective return to work and consequently induces many people to enter the labor market, increasing the supply of labor. Because in the model the demand for labor is limited, this creates imbalance: too many workers searching for a fixed number of jobs. In order for employers to demand all of the additional labor, the market wage must fall. A new labor market equilibrium is reached at point B, with a lower wage W' that balances demand with the EITC-induced labor supply, resulting in employment level E' . Thus, the theory predicts that both total income (including the credit) and labor supply will be higher than they would have been without the EITC, but both will be somewhat lower than they would have been had wages not moved from W .

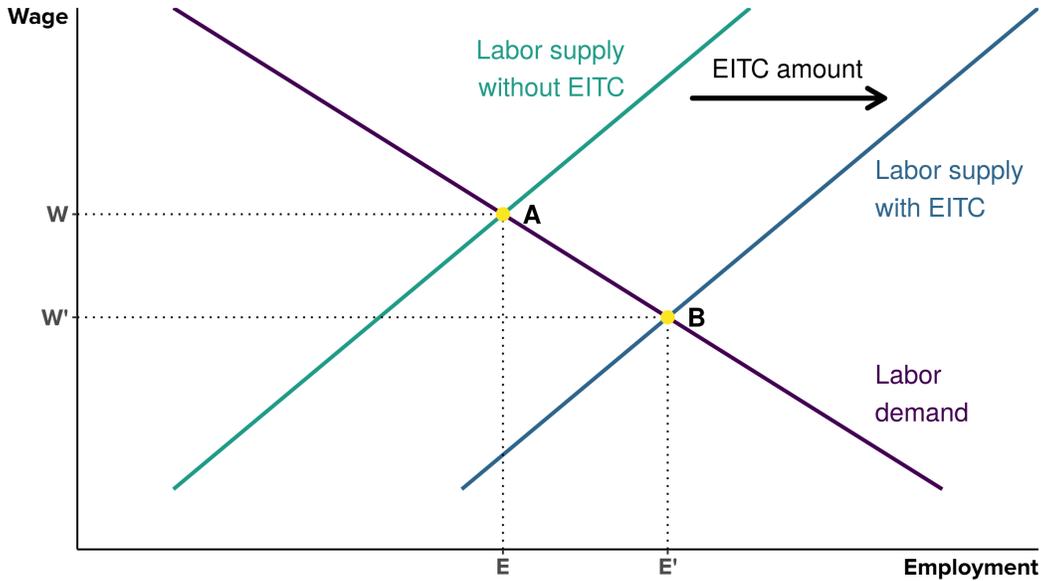
This illustration is based on a very simple model of the labor market in which supply and demand always balance and there is only one market-clearing wage. It is important to recognize that in this model, *any* policy to improve living standards of low-wage workers creates distortions and reduces their general well-being. As we discuss below, economists have increasingly come to recognize that this model is too simple to capture reality. In richer models, policies that intervene in the labor market can correct market failures from other sources, thereby improving well-being.

There is very little empirical evidence about the incidence of the EITC. (Similarly, as we discuss below, the simple model's predictions for the minimum wage have not been found in careful empirical studies.) Many of the research designs that have been used to understand the EITC's impact on labor force participation, health, education, and other outcomes cannot be used to study market-level impacts like those illustrated by the very

Figure B

The Earned Income Tax Credit increases employment at the expense of lowering pretax wages

Labor supply effects of EITC in a perfectly competitive labor market



Source: Authors' analysis of EITC incidence in a perfectly competitive labor market

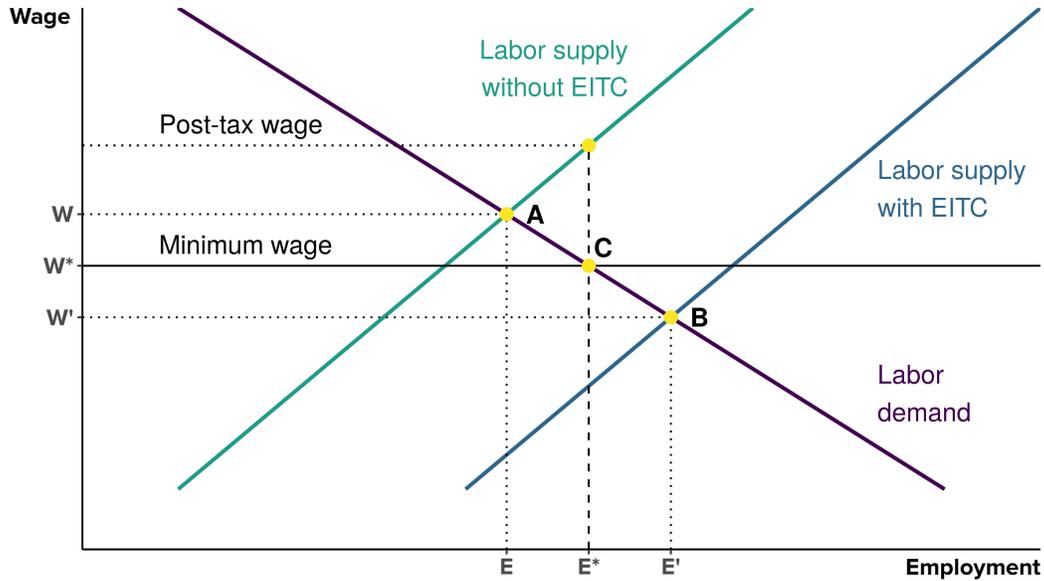
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simple model in Figure B. The best estimates of the EITC's effects on wages come from simulations in Rothstein 2010, which examines a large EITC expansion in the mid-1990s. Relying on estimates of labor market responsiveness from other settings, Rothstein (2010) estimates that a quantitatively important component of federal spending on the EITC flowed to employers via reduced wages. This diluted the benefits of the EITC, but even with this dilution these benefits remained large. For every dollar of EITC benefits paid to single mothers (the main beneficiaries at that time), their total family incomes went up by \$1.05, with the additional income deriving from increased work. This is not as high as the \$2.11 that they would have received without effects on wages, but it still represents a substantial increase in family incomes.²

Figure C

The minimum wage prevents pretax wages from falling due to increased labor supply

Employment and wage effects of the minimum wage in the presence of the EITC



Source: Authors' analysis of EITC incidence in a perfectly competitive labor market with a minimum wage

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How the programs interact—the minimum wage can limit dilution of the EITC

In the simple economic incidence model, the EITC is diluted because the influx of new workers floods the labor market and wages fall as employers discover that they can fill their jobs at lower cost than they paid previously. Importantly, a minimum wage can limit this dilution. A floor under wages prevents employers from lowering wages in response to a more generous EITC, ensuring that all of the benefits from the EITC flow through to workers.

Figure C illustrates this. Here, we show the interaction of an EITC with a minimum wage. Where previously the EITC led to wages declining to W' , now the minimum wage prevents this. Wages fall only to the wage floor, not lower. This maintains take-home pay and reduces the dilution of the EITC's benefits to households.

To be sure, in this simple model the combination of the EITC and minimum wage is not perfect. There are more workers wanting to work at the minimum wage than there are jobs available, so some job seekers are unable to work and benefit from the EITC. This limits

the benefits that the two policies can produce, a limitation that can be relieved only by increases in labor demand.³ This points to the importance of policies influencing labor demand: The combined minimum wage and EITC policies will be more effective in an economy in which demand is sufficient to ensure full employment than in one where demand is inadequate.

Updating the analysis—shortcomings of existing research

The analysis of incidence described above derives from a very simple model of the labor market, and the Rothstein 2010 estimates are based on data from the mid-1990s. A number of factors that were not taken into account in these estimates make the impact of the EITC on wages quite uncertain.

First, because many states and localities have raised the real value of their local minimum wages since 1993, many more EITC workers are paid the minimum wage than in the 1990s. Under proposals to raise the federal minimum wage to \$15 per hour, the overlap between the two policies would grow. The more workers who are receiving both the EITC and the minimum wage, the more the minimum wage acts to prevent wage declines that might otherwise derive from EITC-supported increases in labor supply. In ongoing analysis, we are investigating the degree of overlap between workers benefiting from both current and proposed EITCs and minimum wages to obtain better estimates of their interaction, though it is clear that this overlap will be more important than it was in the 1990s.

Second, over the last decade, economists and policymakers have increasingly come to recognize that the perfectly competitive model of the labor market that has been used to understand incidence is vastly oversimplified and can yield dramatically incorrect predictions. An illustration is the debate over the minimum wage. Many have argued, based on the simple perfectly competitive model, that higher minimum wages will destroy jobs as employers decide not to hire workers at the higher price. But the evidence does not bear this out. Even relatively high minimum wages have not had meaningful disemployment effects (Cengiz et al. 2019; Deroncourt and Montialoux 2019; Nadler et al. 2019; Godøy and Reich 2019). One thing that is missing from the simple model is market power: It is increasingly clear that individual employers often have some latitude in setting wages and choosing employment levels, where in the simple model of a perfectly competitive labor market employers do not. This latitude, known as monopsony power, can lead to inefficiently low employment, as employers may choose low employment levels in order to avoid the higher wages they would need to pay to attract more workers. In many models of the labor market that account for monopsony, minimum wages can actually increase employment over what it would otherwise be. We do not have a clear understanding of how tax policies affect wages in monopsonistic markets, but dilution of the EITC due to reduced wages is likely to be smaller in the monopsonistic model than in the competitive model.

Third, existing analyses of the EITC's impact are based on a program that primarily

benefits single parents. The simple incidence model implies that such a program can have negative effects on workers without children, who face extra competition in the labor market from EITC-induced labor supply but who do not receive offsetting benefits from the EITC. Recent proposals would expand the EITC for childless workers. This would likely strengthen the interaction between the EITC and the minimum wage, making the two more complementary.

Fourth, one recent analysis calls into question the claim that the EITC has important effects on labor supply (Kleven 2019). This still-unpublished paper argues that the increase in labor supply among single mothers in the mid-1990s was due entirely to welfare reform and a strong economy, not to the EITC. Importantly, in the perfectly competitive model of the labor market, the EITC affects wages only through its impact on labor supply, so if Kleven proves correct that there is no labor supply effect, then there is no dilution of the EITC benefit to recipients. In our view, the weight of the evidence still points to important labor supply responses, but the jury remains out.

Finally, the simple incidence model assumes a full employment economy—one in which supply and demand balance perfectly. The experience of the last decade belies that assumption: We were below full employment for a full decade following the onset of the Great Recession. Our models of labor market policy impacts need to take more seriously the reality that the labor market can be in a sustained slump, and that wages are much slower to adjust than is assumed in simple models. Limited wage adjustment again suggests that the simple model overstates the potential dilution of the EITC's benefits through labor market impacts.

Conclusion: The EITC and minimum wage are both effective policies to reduce poverty and raise incomes, and should be seen as complements rather than substitutes

The evidence is overwhelmingly clear that the EITC is a successful, effective policy. While simple, theoretical models indicate that work-promoting policies like the EITC can be somewhat diluted by changes in market wages, allowing employers to capture some of the benefits, our understanding of these effects is at a very early stage. The simple theoretical model fails to capture important aspects of the real-world labor market, and there is good reason to think that it overstates the potential for employer capture of the EITC. Moreover, even in simple models, the dilution is small enough that workers derive clear, important benefits from the EITC that are only partially offset by changes in wages. That is, even in these models the EITC remains a strong policy for boosting low-wage workers' economic security. Moreover, to the extent that incidence considerations are important, the minimum wage is an effective complement that limits any dilution and

ensures that workers retain larger shares of the EITC. Though the political system often sees the EITC as an alternative to the minimum wage, incidence considerations suggest that they may be best used together. In fact, all six states that expanded their state-level EITCs in 2019 also already have or will have state minimum wages that are significantly above the federal floor (Waxman 2019). Both policies reduce poverty and raise incomes and are more effective at accomplishing those goals when working together.

Endnotes

1. See, for example, the review in Nichols and Rothstein 2016. The work incentives of the EITC are less straightforward for married couples, as well as for single parents deciding how many hours or weeks to work per year.
2. This calculation is based on Table 4 of Rothstein 2010, using the estimates from column 2 (single mothers) and dividing the change in after-tax income (1.16) by the intended tax transfer (0.55).
3. The best existing model of the interaction between the two policies is in Lee and Saez 2012, which finds that, under reasonable assumptions, the optimal policy combines an EITC and a minimum wage.

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