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EXECUTIVE SUMMARY

Some advocates in Missouri would like to see the state's minimum wage increased to as much as $8.25, and to index it to the rate of inflation so that it will continue to climb in subsequent years. If Missouri was to increase the minimum wage to that level, it would be higher than all but one of its surrounding states. The main argument proffered in favor of a minimum wage increase is that it will help poor and low-income families. But a higher minimum wage is unlikely to achieve this goal.

A higher minimum wage will likely reduce employment among the very low-wage, low-skilled workers that minimum wage proponents are trying to help. A large body of research illustrates the disemployment effects of minimum wage.

Moreover, even if many workers affected by a higher minimum wage would see increased wages and suffer neither reductions in employment nor hours, minimum wages may do little or nothing to help poor and low-income families. Minimum wage laws mandate high wages for *low-wage workers*, rather than higher earnings for *low-income families*. But low-wage work and low family income are quite distinct, because many minimum wage workers are in higher-income families, and many poor families have no workers.

Mandating higher wages for low-wage workers in high-income families, such as teenagers from well-off families working a summer job, does nothing to help poor and low-income families. Indeed, if the job losses from a higher minimum wage are borne by minimum wage workers in poor, low-income families, minimum wages can have unintended harmful distributional effects — possibly increasing the number of poor or low-income families. Reflecting these issues, research fails to establish that higher minimum wages help poor or low-income families.

These are perennial issues in debates about a higher minimum wage. In the current economic environment, with unemployment remaining high and job growth fairly stagnant, it may be far wiser for policy to focus on increasing employment among the unemployed, rather than trying to increase the wages of the employed.

Minimum wages can even have unintended harmful distributional effects — possibly increasing the number of poor or low-income families.

INTRODUCTION

In 2006, the minimum wage in Missouri was raised to $6.50 per hour, putting it $1.35 above the federal minimum wage of $5.15 at the time. Subsequently, the federal minimum wage increased in three steps in 2007, 2008, and 2009, arriving at its current level of $7.25, the current prevailing minimum wage in Missouri.

The main argument proffered in favor of a minimum wage increase is that it will help poor and low-income families. A coalition of activists, Give Missourians a Raise, recently proposed an increase, arguing that "the reality is that thousands of Missourians depend on this minimum to help feed and clothe their children."[1] This argument echoes the motivation for minimum wages more generally in the United States. Massachusetts Sen. Edward Kennedy, who was a long-time advocate for raising the federal minimum wage, asserted that "The minimum wage was one of the first — and is still one of the best — anti-poverty programs we have" (quoted in Clymer, 1999, p. 449).

While there is no doubt that low wages are a contributing factor to the dire economic straits of many families, the argument that a higher minimum wage is an effective way to improve the economic circumstances of poor families is suspect, for many reasons.

First, a higher minimum wage may discourage employers from using the low-wage, low-skilled workers that minimum wage proponents are trying to help. This is the most commonly invoked argument against minimum wages, and most of the research is devoted to that aspect. A large body of evidence confirms that minimum wages reduce employment of the low-wage, low-skilled workers they are intended to help (Neumark and Wascher, 2007).

Second, even if many workers affected by a higher minimum wage would see increased wages and *not* suffer from disemployment effects, minimum wages may do little or nothing to help poor and low-income families. The simple reason is that minimum wages do a bad job of targeting benefits to poor and low-income families. Minimum wage laws mandate high wages for *low-wage workers*, rather than higher earnings for *low-income families*; and low-income families are the ones who need help if the intent is to alleviate poverty. But many minimum wage workers are not primary earners in poor or low-income families; instead, they are secondary workers, such as teenagers in higher-income families. The higher wages that go to these latter workers do nothing to help poor and low-income families. Furthermore, if the gains from minimum wages (in the form of higher wages) tend to accrue for minimum wage workers in higher income families, while minimum wage workers in poor, low-income families bear the losses, minimum wages can even have unintended harmful distributional effects — possibly increasing the number of poor or low-income families. These are not just hypothetical possibilities. Research for the United States generally fails to find evidence that minimum wages help the poor, and sometimes suggests that minimum wages increase the number of poor or low-income families (e.g., Neumark et al., 2005).

Minimum wages also may be ineffective at helping poor and low-income families because a principal reason families are poor is that they do not have employed workers. Mandating a higher minimum wage is unlikely to provide any assistance to families with no workers, and if it makes it harder for low-skilled workers to find jobs, a higher minimum wage can make things worse. One might reasonably ask whether, in a period of fairly stagnant job growth and high unemployment during the recovery from the Great Recession, a policy that focuses on the wages of the employed, rather than increasing employment among the unemployed, makes sense.

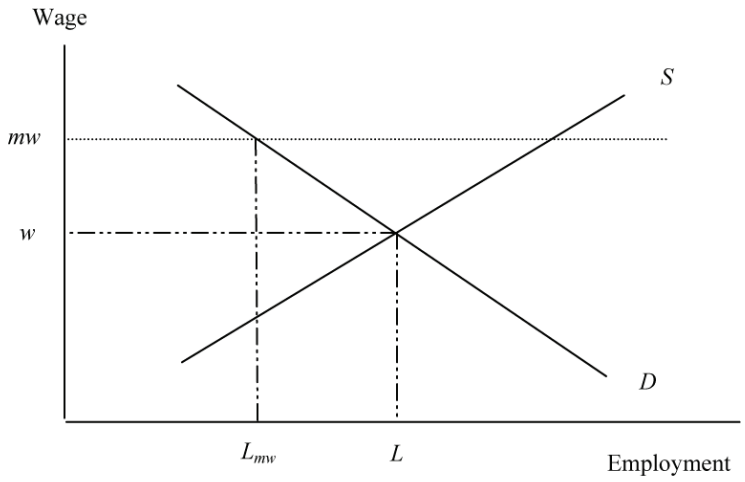
Although the desire to help poor and low-income families is understandable and likely widespread, the minimum wage is an ineffective way to achieve this goal. A higher minimum wage reduces employment among the least-skilled. Although offset in part by higher wages for some workers, poor and low-income families bear many of the costs of a higher minimum wage, and few of the gains go to these families. Thus, minimum wages are unlikely to achieve the goals of advocates for a higher minimum wage in Missouri. A policy that better targets poor and low-income families, and encourages work rather than discouraging employment, would be more effective.

THE EMPLOYMENT EFFECTS OF MINIMUM WAGES

Theory

In the simplest economic analysis, as shown in Figure 1, there is a competitive labor market for a single type of labor for which there is an upward-sloping aggregate labor supply curve (S) and a downward-sloping aggregate labor demand curve (D). In the absence of a minimum wage, there is an equilibrium wage (w) and an equilibrium quantity of labor employed (L).

Figure 1
The Textbook Treatment of Minimum Wages



If a minimum wage (mw) is established at a wage higher than (w) — so the minimum wage is "binding" — then employers reduce their use of labor for two reasons. First, there is a substitution effect leading employers to use relatively less of the now more-expensive labor and relatively more of other inputs (such as capital). Second, because costs must be higher with this new input mix, the prices of the products that firms produce rise, reducing the demand for each firm's product and leading to a reduction in the scale of operation. These substitution and scale effects lead to lower employment, say at the level $L_{mw} < L$.

The key idea underlying the textbook model of minimum wages is that when something becomes more expensive, people use less of it, in part by substituting alternatives.

As a consequence of labor-labor substitutions, there may be rather sharp employment declines among the least-skilled workers, even though the overall employment decline is smaller because some more skilled workers are hired.

The scenario depicted in Figure 1 is based on a simple model. Economists use models not because they believe they are completely accurate descriptions of reality, but because they highlight key ideas. The key idea underlying the textbook model of minimum wages is that when something becomes more expensive, people use less of it, in part by substituting alternatives. One example is responses to higher gasoline prices, including reduced driving, increased demand for fuel-efficient cars (substituting alternative equipment for fuel), and increased demand for alternative fuels such as ethanol (substituting non-petroleum for petroleum products). The experience of gasoline price increases in the spring and summer of 2008, and the resultant increase in demand for smaller cars and hybrids, shows that this mechanism is real (Beresteanu and Li, 2011). Similarly, government taxes cigarettes heavily in order to discourage smoking — especially among teenagers, who are sensitive to the high price of cigarettes. Again, the evidence says that this works (Carpenter, 2008). By the same token, the model predicts that employers of low-skilled labor, when faced with a higher price for that labor, likely will substitute away from using low-skilled labor and toward other types of labor as well as labor-saving machinery.

An important difference between the model depicted in Figure 1 and the real world is that labor is actually heterogeneous, with workers having varying skill levels. Minimum wages are binding for the lowest-wage workers, but not for other workers. Though a simple graph may not be available, employers will most likely substitute away from the least-skilled workers toward more skilled workers in response to a minimum wage increase. This is referred to as "labor-labor substitution."[2] As a consequence of labor-labor substitutions, there may be rather sharp employment declines among the least-skilled workers, even though the overall employment decline is smaller because some more skilled workers are hired. Note that this story is still very much in the vein of the competitive labor market model. It just enriches the model in an important, realistic way to allow for the fact that many (indeed most) workers earn well above the minimum wage.

This consideration has important implications for empirical research on the effects of the minimum wage. If one looks at employment changes among a group that includes many minimum wage workers but *also* many workers earning above the minimum wage, the net disemployment effect may not be large. However, the *gross* disemployment effect among the lowest-skilled, lowest-wage workers may still be quite strong. From a public policy perspective, this is important because the whole idea of the minimum wage increase is to help the lowest-wage workers. If they are hurt substantially — even if that is masked by employment increases among higher-skilled workers — then it is hard to argue that minimum wages help the least-skilled.

A more fundamental argument against the model is that it is simply the wrong way to think about labor markets. Rather than using the competitive model outlined above, we should instead think in terms of a model in which employers have some market power to set wages — or what economists refer to

as "monopsony power." In their modern incarnations, monopsony models of the labor market introduce labor market frictions that tie workers to specific firms even if other firms might pay higher wages (Manning, 2003). Monopsony models in one way or another introduce one key feature — that when an employer goes out and hires another worker, the cost of employing the existing workforce is also increased. The consequence of this property is that in the absence of government intervention — that is, when we just let markets "work" — employment can end up below the economically-efficient competitive level. Moreover, a wisely chosen minimum wage may, in this case, lead to higher employment, rather than lower employment, as in the competitive model. However, in reality, anything can happen in the monopsony model — including disemployment effects.

The motivation for these monopsony models is that some studies of the employment effects of minimum wages have failed to confirm the prediction from the competitive model that a higher minimum wage reduces employment of low-skilled workers — although it is much rarer to find evidence that a higher minimum wage actually raises employment, as the monopsony predicts can sometimes happen. However, as discussed below, the vast majority of evidence on the employment effects of minimum wages is consistent with the direct prediction of the competitive model that employment of the least-skilled workers falls.

Evidence

Labor economists have written scores of papers testing the prediction that minimum wages reduce employment. Broadly speaking, three types of empirical studies focus on the employment effects of minimum wages.

Most of the earliest studies used aggregate time-series data for the United States to estimate the effects of changes in the national minimum wage on employment rates of young persons, typically focusing on 16-19-year-olds (teens) or 16-24-year-olds (young adults), many of whom have low skills. These time-series studies relied on changes in the federal minimum wage to identify the effects of minimum wages. The statistical models used in these studies measure the association between employment rates of these age groups and the level of the minimum wage relative to the average wage, attempting to account for changes in the aggregate economy (the business cycle) or other influences on youth labor markets aside from the minimum wage.

Minimum wage employment effects are typically summarized in terms of the "employment elasticity" — the ratio of the percent change in employment to the percent change in the wage that the minimum wage induces, or in terms of the notation from Figure 1:

Employment elasticity = $\{(L_{mw} - L)/L\} / \{(mw - w)/w\}$.

Thus, for example, an elasticity of –0.1 implies that a 10 percent increase in the wage floor reduces employment by 1 percent.

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the minimum wage, employment of teenagers fell by 1 to 3 percent. This range of elasticity estimates often has been referred to as the "consensus" estimate of the range of estimated minimum wage effects, and even though it is based on outdated literature, estimates from newer research often are compared to this range of estimates.

A small amount of evidence in the 1990s (most notably Wellington, 1991, and Card and Krueger, 1995) challenged the consensus from the earlier time-series studies, suggesting employment elasticities for both teenagers and young adults that were closer to zero and generally statistically insignificant. However, newer research using the time-series approach, based on more up-to-date methods, found stronger evidence of disemployment effects that are consistent with the earlier consensus. The best of these (Bazen and Marimoutou, 2002; but see also Williams and Mills, 2001) uses data through 1999, and estimates statistically significant teen employment elasticities of –0.12 in the short run and –0.27 in the long run. Thus, the time-series evidence confirms the negative effects of minimum wages on employment of young (and hence unskilled) individuals, and suggests that a range of the elasticity of about –0.1 to –0.3 is still a reasonable view of the likely effects of minimum wages.

The second, and most common type of research on the employment effects of minimum wages emerged in the early 1990s, as researchers began to re-examine the effects of the minimum wage on employment by exploiting newly emerging state-level variation in minimum wages from the types of state-level laws or initiatives passed in Missouri in 2006 (earlier in many other states).

State-level variation in minimum wages can provide more reliable evidence on the effects of minimum wages. In the aggregate time-series approach it can be hard to distinguish between the effects of a change in the federal minimum wage and the effects of the business cycle or other influences on youth employment. But with state-level data, some states where minimum wages do not increase can effectively serve as "controls" for the states where minimum wages increase by providing information on changes in youth employment for reasons aside from the minimum wage.

The final approach to estimating the effects of minimum wages on employment has focused on isolated examples of state minimum wage increases. The research strategy is the same as in the national studies that exploit state-level variation in minimum wages, but this "case study" approach offers the potential advantage of limiting the analysis to a state where the minimum wage increases and another very similar state (or even region of a state) that provides a more reliable control. The downside is that the results are less likely to generally apply to proposed increases in other states in other time periods.

It is a large task to walk the reader through a lengthy review of the large body of evidence on minimum wage effects on employment, moving beyond the older time-series evidence, which has been amassed since the early 1990s — a wave of research often referred to as the "new minimum wage research." My co-author William Wascher and I provide such a review in our 2008 book *Minimum Wages* (Neumark and Wascher, 2008), and in an even more

comprehensive study — focused only on employment effects — published a year earlier (Neumark and Wascher, 2007). It is most instructive to describe the overall findings from our extensive survey, which lead to rather clear conclusions, and then to provide a brief update based on newer evidence not covered in those surveys.

In our review of the new minimum wage research, we surveyed evidence from more than 100 studies of the employment effects of minimum wages. The preponderance of the evidence came from the United States, but we also reviewed evidence from many other countries, including developed and developing countries. We did not simply "record" the estimates each paper provides and summarize them — what is sometimes referred to as a "meta-analysis." Given the many types of employment effects estimated in the literature, and the considerable variation in approaches and in the quality of the research, lumping the studies into one meta-analysis did not seem the best way to make sense of the literature. And meta-analysis is even less useful when the underlying theory does not provide uniform predictions about the effects of the minimum wage in every study.

Most importantly, as discussed previously, the predicted effects of minimum wages on employment will depend on the extent to which a study focuses on the least-skilled workers who are most likely to be affected by the minimum wages. Because studies differ substantially in how they isolate effects on low-skilled workers, it is essential to bring out this dimension of variation across studies, and to clarify the answer for studies that correctly and successfully focus on the least-skilled. We therefore provide instead an analysis of the quality of each of the research studies, highlight and synthesize the findings that we regard as more credible, and distinguish estimates from studies depending on how well they isolate minimum wage effects on the least-skilled workers.

To assist in digesting what is a very lengthy review of the evidence, we collected nearly all of the studies we summarize into a set of tables covering different types of studies, including a brief summary of the minimum wage change variation and the group studied, the data used, the results, and what we regard as the most important criticisms. In these tables, we also highlight the studies that we regard as providing the most convincing evidence on the employment effects of minimum wages. These tables are not produced in this report, but are available in Neumark and Wascher (2007). Here, instead, I summarize the conclusions from this extensive and unprecedented review.[3]

One striking feature that emerges from the lengthy review of the new minimum wage research is the wide range of estimates of the effects of the minimum wage on employment, especially when compared to Brown et al.'s review in 1982 of the earlier literature. For example, few of the studies in the Brown et al. survey were outside of the so-called consensus range of –.1 to –.3 for the elasticity of teenage employment with respect to the minimum wage. In contrast, even limiting the sample of studies to those focused on the effects of the minimum wage on teenagers in the United States, the range of studies comprising the new minimum wage research extends from well below –1 to well above zero. This

The group likely most focused on in considering policies to reduce poverty is poor families with children, and the families with children most likely to be poor are those with single females as head of household.

When research studies focus on the least-skilled groups that minimum wages most likely affect, the evidence for disemployment effects is especially strong.

wider range for the United States is a reflection of the great variety of methods and sources of variation in minimum wage effects — such as the greater state-level variation in minimum wages — that has been used in the new research.

However, advocates for minimum wage increases often abuse this wide range of estimates. These advocates often use the range of estimates — or more frequently, selectively highlight the results most favorable to their position — to claim that the new minimum wage research fails to find evidence that minimum wage reduces employment of low-wage workers.[4]

In fact, the strong preponderance of the evidence points to disemployment effects. From the studies covered in our review, we end up extracting just more than 100 specific estimates of the employment effects of minimum wages.[5] Of these, nearly two-thirds give a relatively consistent (although not always statistically significant) indication of negative employment effects of minimum wages, while only eight give a relatively consistent indication of positive employment effects. In addition, the review highlighted 33 results that provide the most credible evidence. Among these, 28 — or 85 percent — point to negative employment effects.

Moreover, when research studies focus on the least-skilled groups that minimum wages most likely affect, the evidence for disemployment effects is especially strong. In contrast, very few — if any — studies provide convincing evidence of positive employment effects of minimum wages, especially among those that focus on groups for which the competitive model most sharply predicts disemployment effects. In other words, there seems to be substantial evidence of labor-labor substitution within low-skilled groups. Some recent literature has attempted to identify this type of substitution more directly or has focused more specifically on those individuals whose wage and employment opportunities are most likely to be affected by the minimum wage, and the estimates from this line of research provide the strongest evidence of disemployment effects.

Based on our review of the literature, we also highlight some important considerations to keep in mind when assessing the empirical evidence from the large body of literature. This is relative to the findings from Card and Krueger's (1995) oft-cited book *Myth and Measurement*, which highlighted the case-study approach of examining an isolated minimum wage increase in one area and nearby comparison or "control" area. First, these case-study analyses may encompass too short of a time period with which to capture the full effects of minimum wage changes given the time that is often needed to adjust the production process to economize on low-skilled labor (a point Brown, 1995, and Hamermesh, 1995, emphasized earlier). Second, because these case studies typically focus on a narrow industry, it is not clear what to make of the evidence. The standard competitive model does *not* predict that employment will fall in every narrow industry or sub-industry when the minimum wage goes up; whether this will happen depends on the share of minimum wage labor in that industry's costs, and how minimum wages affect its prices relative to competitors. Thus, it is not clear to us that these studies have

much to say either about the adequacy of the neoclassical model or about the broader implications of changes in either the federal or state minimum wages.

In sum, the large body of literature extending from roughly the early 1990s through the late 2000s — when read broadly and critically — solidifies the conventional view that minimum wages reduce employment among low-skilled workers, and suggests that the low-wage labor market is well-approximated by the neoclassical competitive model.

What about new evidence since then? We have just argued that the state-level panel data approach provides the most compelling evidence on the employment effects of minimum wages, and that the evidence from this approach points to disemployment effects. Indeed, the range of estimates from these studies is often in the earlier "consensus" range of elasticities — for teenagers or other low-skilled groups — of –0.1 to –0.2.

Recently, however, Dube et al. (2010) and Allegretto et al. (2011) have put forward a severe critique of the state panel-data approach.[6] These authors argue that the panel data studies are flawed because of "spatial heterogeneity." What that means, according to their perspective, is that minimum wages have been adopted in states where employment of teenagers or other low-skilled workers has been declining for other reasons. And they argue that the statistical models on which the findings of disemployment effects are based do not account for these other reasons for employment declines among teens and other low-skilled workers, and hence generate spurious evidence of negative effects of minimum wages on employment.

Allegretto et al. (2011) argue unequivocally that their study overturns the conclusions from the earlier research: "Interpretations of the quality and nature of the evidence in the existing minimum wage literature, such as those in Neumark and Wascher . . . must be revised substantially. Put simply, our findings indicate that minimum wage increases — in the range that have been implemented in the United States — do not reduce employment among teens" (p. 238). Similarly, Dube et al. conclude quite broadly that there are "no detectable employment losses from the kind of minimum wage increases we have seen in the United States" (2010, p. 962).

The key story underlying the arguments of these papers is that the existing studies fail to account for other changes in state economies that may be associated with which states adopt higher minimum wages. The story that is offered — in Allegretto et al. (2011) explicitly — is the following: "[A]s Reich (2009) shows, they [minimum wages] are often enacted when the economy is expanding and unemployment is low. But, by the time of implementation, the economy may be contracting and unemployment increasing, possibly leading to a spurious time series correlation between minimum wages and employment" (p. 212, brackets added). This is an odd argument, for a number of reasons. First, the statistical models that are used to estimate the employment effects of minimum wages *include* controls for how the aggregate labor market is doing — typically in the form of controlling for movements in the adult unemployment rate. Second, the evidence from Reich that the authors cite actually argues

Because a higher minimum wage is easy to implement, and because a higher minimum wage is a mandate for higher costs on businesses, rather than an item in the budget on which states would have to spend more money, minimum wages are a popular policy for trying to help poor and low-income families.

The fundamental problem with using minimum wages to try to increase incomes of poor and low-income families is that the policy targets *low-wage workers*, not *low-income families*, and these are far from the same thing.

the opposite position. Reich writes, based on his evidence: "Minimum-wage increases are voted almost without exception and are mostly implemented in times of growing employment. This pattern holds for both federal and state increases" (2009, p. 366). Given that implementation usually occurs when employment is growing, there is no good reason to expect the spurious negative correlation that Allegretto et al. claim this pattern will create.[7]

Most importantly, though, there is other, more compelling evidence suggesting that accounting for the economic conditions prevailing when minimum wage increases are implemented leads to evidence of *stronger* disemployment effects of minimum wages. Specifically, Baskaya and Rubinstein (2011) work in the state-level panel data framework for estimating the effects of minimum wages on teenagers. What distinguishes their study is an explicit focus on the potential problem of "endogeneity" of state minimum wages — that minimum wages are typically increased by state policymakers under particular economic conditions, which can obscure the actual effects of the minimum wage increase. Note that this endogeneity problem is exactly the one at the core of the Dube et al. and Allegretto et al. papers — whether minimum wages are adopted in states with particular economic trends than can result in misleading estimates of the effects of minimum wages. But whereas these other two papers fail to tell a consistent story of what underlies this endogeneity or spatial heterogeneity, and fail to present compelling evidence that their estimates provide more accurate evidence, Baskaya and Rubinstein appear to succeed at both.

The core of the authors' approach is to note that in states that have tended to let the federal minimum wage be binding (by having a lower or no state minimum wage), the variation in the effective minimum wage is primarily federal. In these states, the minimum wage variation used to identify minimum wage effects is less likely to be endogenously determined along with state economic conditions, and is therefore more likely to reveal the causal effects of minimum wages. Conversely, in states where the effect of binding minimum wage tends to be determined by the state minimum wage, because the state tends to have a minimum wage above the federal level, endogeneity is more likely to be a problem.

Baskaya and Rubinstein take a couple of empirical approaches, but their main estimates seek to eliminate the endogeneity of minimum wages because they use the variation in the state minimum wage that the federal minimum wage predicts and the state's propensity to let the federal minimum wage be binding, rather than the contemporaneous variation in the minimum wage level that the state has chosen. (The variables that underlie the propensity to let the federal minimum wage be binding are the political ideology of the state in the 1960s, per capita income in the 1960s, and, in some specifications, lagged data on whether the federal minimum wage was binding in the state.) The idea behind this approach is to generate variation in state minimum wages *not* from the contemporaneous decisions of state legislators or voters — which could be responsive to current economic conditions — but instead to generate variations off of decisions made at the national level, which are

much less likely to take account of economic conditions in any one state. As a result, the evidence in Baskaya and Rubinstein should not suffer from the spatial heterogeneity with which the Allegretto et al. and Dube et al. papers are concerned.

When Baskaya and Rubinstein implement their approach to avoid the problem of states choosing to raise the minimum wage based on state economic conditions, using data from 1977 through 2007, they find robust evidence of negative effects of minimum wages on teenage employment, with elasticities that are as large as –1, although smaller in some specifications. This evidence points to, if anything, *stronger* disemployment effects of minimum wages than most earlier studies find. Baskaya and Rubinstein's study is concerned with the same issues as Allegretto et al. (2011) and Dube et al. (2010). However, the latter two papers simply posit — with little supporting evidence or even much of a coherent argument — alternative ways of estimating minimum wage effects. In contrast, Baskaya and Rubinstein both present a compelling argument for their identification strategy, and present auxiliary evidence that backs it up. Moreover, their answer differs sharply and is consistent with state minimum wages being set higher in a fashion that is pro-cyclical with respect to teen employment, so that failure to account for endogeneity *masks* the negative effect of minimum wages, biasing the estimates toward zero.

This is, in fact, a more plausible direction of the bias from failure to account for when state policymakers raise the minimum wage. We know that minimum wages are very popular, and we therefore might expect politicians to approve minimum wage increases when labor markets for low-skilled workers are strong, so that any disemployment effects may be less likely to occur (or be noticed). Buskaya and Rubinstein present evidence consistent with this logic. First, lagged state unemployment rates predict lower minimum wages, indicating that state minimum wages tend to be set lower — or not raised — when the labor market is weak. And second, this effect is attenuated (essentially completely) in states that let the federal minimum wage be binding.

Thus, despite efforts to undermine the conclusion from a very extensive literature that says a higher minimum wage reduces employment of low-skilled workers, the conclusion still very much stands. Minimum wages may deliver benefits to some workers who earn higher wages and still have or find jobs (or do not have their hours reduced). But minimum wages do present tradeoffs, as these higher wages come at the cost of disemployment effects for other workers.

DISTRIBUTIONAL EFFECTS

The tradeoffs that arise because of the disemployment effects of minimum wages imply that policymakers and voters have to weigh the distributional effects of minimum wages. Given that there are some disemployment effects, minimum wages create "winners" and "losers." The winners get a higher wage with no reduction in employment (or hours); the losers, in contrast, bear the burden of the disemployment effects — losing their job, having hours reduced, or finding it more difficult to enter employment.

Only 12.7 percent of workers earning a wage less than $7.25 were in poor families, while 44.6 percent — or nearly half, most of whom are likely teenagers or other secondary workers — were in families with incomes three times the poverty line (or approximately $63,000 in 2008 for a family of four) or higher.

The weak relationship between low-wage work and low family income implies that even if there are gains to low-wage workers, these do not necessarily go to the low-wage workers in the poorest families.

Table 1
Low-Wage Workers and Household Income-to-Needs, 2008

Income-to-needs ratio	Percent of all workers	Percent of workers with wages below $7.25	Percent of workers with wages below $9.50
< 1	4.4	12.7	11.4
1 to 1.24	2.6	5.0	5.9
1.25 to 1.49	2.5	6.5	6.0
1.5 to 1.99	6.4	10.3	13.1
2 to 2.99	16.3	20.9	21.0
> 3	67.8	44.6	42.7

Source: Calculations based on numbers in Sabia and Burkhauser (2010), Table 2.

It is not enough to simply point out that minimum wages entail some job losses to conclude that a minimum wage increase is a bad policy. Voters and policymakers may often adopt policies that entail costs for some people but also offer gains that exceed the costs. As examples, anti-pollution efforts no doubt impose costs on the owners of polluting businesses, and the employees of those businesses. But if the gains from reducing pollution are large — that is, if the benefits outweigh the costs — then the anti-pollution laws and regulations would constitute good policy.

The same goes for minimum wages. If the gains to the "winners" from minimum wage increases are large, if these "winners" are disproportionately in the poor and low-income families that need help, and if the losses are concentrated among higher income workers or others from whom we might be willing to redistribute income, then the losses to the "losers" from minimum wage increases may be deemed acceptable.

Because a higher minimum wage is easy to implement, and because a higher minimum wage is a mandate for higher costs on businesses, rather than an item in the budget on which states would have to spend more money, minimum wages are a popular policy for trying to help poor and low-income families. And if they deliver large gains to these families, while imposing smaller costs on others, they might be a sensible policy as well. However, research for the United States on state minimum wage increases generally fails to find evidence that minimum wages help the poor, and sometimes even suggests that minimum wages increase the number of poor or low-income families.

The fundamental problem with using minimum wages to try to increase incomes of poor and low-income families is that the policy targets *low-wage workers*, not *low-income families*, and these are far from the same thing. This problem has been recognized for decades, stemming from Gramlich's (1976) seminar paper on the topic, and extending through the recent work of Burkauser and Sabia (2007) and Sabia

and Burkhauser (2010). Moreover, researchers whose work minimum wage advocates often cite even acknowledge the point; specifically, Card and Krueger acknowledged that the minimum wage is, at best, a "blunt instrument" (1995, p. 285) for helping low-income families.

Table 1 illustrates vividly that *many* low-wage workers are not in poor families. First, focusing on the current federal minimum wage of $7.25, it shows the distribution of all workers and workers earning below $7.25 across family income-to-needs categories for 2008. "Needs" is defined as the level of family income that puts a family of a given size and age structure at the poverty line, so families with income-to-needs of one are right at the poverty line, and so on. Although 13.2 percent of people lived in poor families in 2008, only 4.4 percent of all workers were in poor families. Moreover, many minimum wage workers are in non-poor and even relatively high-income families. Only 12.7 percent of workers earning a wage less than $7.25 were in poor families, while 44.6 percent — or nearly half, most of whom are likely teenagers or other secondary workers — were in families with incomes three times the poverty line (or approximately $63,000 in 2008 for a family of four) or higher. Thus, if the benefits of minimum wages are spread equally across all affected low-wage workers, then only 12.7 percent of these benefits go to poor families, and nearly half of these benefits go to families who are roughly in the top half of the family income distribution.

Recent proposals have called for raising the federal minimum wage to $9.50. Table 1 shows that if we redo the calculations based on that minimum wage, the results are similar. This higher minimum wage would affect many more workers, because in these data, roughly twice as many workers earn a wage between $7.25 and $9.50 compared to a wage below $7.25. Nonetheless, this higher minimum wage would target a smaller share — 11.4 percent — of individuals in poor families. Again a large share — 42.7 percent — of affected workers would be in families with incomes above three times the poverty line.

Burkhauser and Sabia (2007) also provide some historical perspective on the relationship between low-wage work and whether one's family is poor. Decades ago, the link was much tighter, in large part because workers at the minimum wage were much more likely to be heads of household — so if they were low-wage workers, their families likely were poor. Specifically, going as far back as 1939, 85 percent of low-wage workers (defined as earning less than half the average private sector wage) were in poor families. But this percentage declined dramatically over the decades, to 42 percent in 1959, 20 percent in 1979, and into the mid-teens in the last two decades.

As Burkhauser and Sabia show, the weakening of the relationship between low-wage work and low family incomes is attributable to many factors, including the growth of other sources of income support for poor families, and the increased likelihood that low-wage workers were the second or third earners in families. Even if the household head was a low-wage worker, the likelihood that the family was poor declined, from 94 percent in 1939 to around 33 percent in recent decades. Additionally,

The data are consistent with teens in middle- and high-income families earning a greater share of the higher wages from minimum wage increases, while poor or low-income primary breadwinners bear more of the disemployment costs.

The only study of which I am aware that finds that minimum wages help the poor is by Addison and Blackburn (1999). . . . one interpretation of this study is that one has to look really hard to find a group for which family incomes rise as a result of a higher minimum wage.

an increasing share of low-wage workers were not heads of poor families; the share of low-wage workers who headed poor households declined from 31 percent in 1939 to under 10 percent in recent decades. Thus, even if long ago minimum wages targeted poor families well, they no longer do.[8]

Moreover, in addition to there being many low-wage workers in non-poor and even well-off families, the other reason minimum wages may fail to help low-income families is that many low-income families have *no* workers. Computations from Current Population Survey (CPS) data for the United States for 2010 show that of families with the household head below age 65, 52 percent of families below the poverty line had no one with labor income, as compared with only 6 percent of families above the poverty line. Clearly, a higher minimum wage — especially if it makes it harder for a non-employed person to find a job — will not help families that are poor by dint of there being no workers in the family.

Of course, if the winners from minimum wage increases are the low-wage workers in poor, low-income families, whereas the losers are the low-wage workers in high-income families, then minimum wages would redistribute income to low-income families. But the opposite is also plausible, in which case, the distributional effects could even be adverse. To determine what actually happens, paralleling studies of the employment effects of minimum wages, research has directly estimated the effects of minimum wage increases on the distribution of family incomes.

The most comprehensive study of this question is by Neumark et al. (2005) covering state and federal minimum wage increases over the period 1986-1995. This study used data only through 1995 to avoid confounding the effects of minimum wages with welfare reform, which began in 1996. The evidence indicates that minimum wage increases do not reduce the number of families in poverty, and instead may even increase this number slightly. More specifically, when the minimum wage increases — for the purposes of these calculations, by 10 percent — the evidence points to a slight *increase* in the number of poor families; there is a 0.0071 increase in the proportion of poor families, representing a 3.9 percent *increase* in the number of poor families. The answer is similar if we look instead at the number of families below 1.5 times the poverty line, sometimes referred to as a marker of "near-poverty."

Some find this result puzzling and perhaps even counterintuitive. Put simply, if we raise the wage for the lowest-wage workers, how can poor families *not* be helped? The key reason, of course, is the one covered in the first part of this report. Given that minimum wage increases lead to some loss of jobs, the gains in wages are offset by jobs lost. There also is evidence of hours reductions for low-wage workers who remain employed (Neumark et al., 2004).

In addition, the weak relationship between low-wage work and low family income implies that even if there are gains to low-wage workers, these do not necessarily go to the low-wage workers in the poorest families. It is even possible that, among low-wage workers affected by the minimum wage, employers favor

teenagers over older heads of household. After all, teenagers typically earn low wages simply because, at the moment, they have low skills; many high-income people earn low wages as teenagers but earn higher wages not much later. In contrast, an older adult who is earning the minimum wage is far more likely to be a low-wage earner permanently, and thus have little potential for further productivity growth.[9]

In this case, it is possible that the employment (or hours) reductions from the minimum wage are concentrated on low-wage adults, for whom the minimum wage serves as more of a long-run constraint on employers, whereas the wage gains are concentrated among teenagers, for whom the higher minimum wage may be only a temporary constraint. The implication is that the adverse effects of minimum wages for low-income families could be worse than implied by the simple average disemployment effects, as low-wage adults are more likely to be heads of household or important secondary earners in low-income families, whereas teenagers may often provide a very small share of income in higher-income households.

There is no direct evidence on this question. But the evidence that minimum wages do not reduce poverty and may even increase it is consistent with this idea. That is, the data are consistent with teens in middle- and high-income families earning a greater share of the higher wages from minimum wage increases, while poor or low-income primary breadwinners bear more of the disemployment costs. This is hardly the stated goal of those advocating for a higher minimum wage.

The evidence just discussed is a bit dated. However, other evidence — some of it newer — supports the overall conclusion that minimum wages do not help low-income families. Wu et al. (2006) estimate the effects of a wide array of policies on a variety of income inequality measures, and find that higher minimum wages either fail to help or they hurt low-income families. Gunderson and Ziliak (2004) study the determinants of poverty rates for all families as well as for a number of subgroups using state-level poverty measures for 1981-2000 (calculated from March CPS files). Part of their analysis focuses on the effects of minimum wages on both the poverty count and what is called the "squared poverty gap," which captures not only the number of poor families, but how far families are below the poverty line (the "depth" of poverty) and inequality among the poor. This study is unusual, also, in looking at results for both pre-tax income and after-tax income. The after-tax income results are potentially valuable because after-tax income provides a better measure of families' economic well-being. Gunderson and Ziliak report a variety of evidence. But in their preferred analysis using the squared poverty gap measure and after-tax income, the effect of minimum wages on poverty is small and statistically insignificant in the aggregate, sometimes positive and sometimes negative across the other subgroups, and never statistically significant. Thus, this study also provides no compelling evidence of beneficial distributional effects of minimum wages, and indeed no compelling evidence of effects one way or the other.

Sabia and Burkhauser (2010) . . . find no evidence that minimum wages on net help poor families.

Minimum wages do not deliver beneficial distributional effects that might offset the negative employment effects they cause.

The only study of which I am aware that finds that minimum wages help the poor is by Addison and Blackburn (1999). However, the sole group for which they find much evidence of poverty reductions is junior high school dropouts ages 25 and older. This group is relatively old (based on CPS data for 1996 — the end of their sample period — an average age of 59.9, compared with 47.9 for the overall population ages 25 and older), and hence, much less likely to live with children. Moreover, this group is a small share of the population ages 16 and older (6.6 percent in 1996). There is little compelling reason to be particularly interested in this group as the beneficiaries of a higher minimum wage. Moreover, one interpretation of this study is that one has to look really hard to find a group for which family incomes rise as a result of a higher minimum wage.

Indeed, the group likely most focused on in considering policies to reduce poverty is poor families with children, and the families with children most likely to be poor are those with single females as head of household. Policies to help poor children may command more universal political support than policies to help poor adults, because even if one views adults as partly responsible for the decisions that land them in poverty, this is clearly not the case for children. In 2003, the poverty rate of families with single mothers as head of the household was 32.1 percent, compared with 6.7 percent of all other household heads. The combination of high poverty rates for families that single mothers head, and the overriding policy concern with children, suggests that the distributional effects of minimum wages can best be judged by whether minimum wages reduce poverty among these families. However, here, too, empirical research fails to find that minimum wages reduce poverty (Burkhauser and Sabia, 2007).

Finally, in evidence updating the estimated relationship between state minimum wages and poverty through 2007, Sabia and Burkhauser (2010) again find no evidence that minimum wages on net help poor families. The estimates for the proportion of families below the poverty line, or below 1.25 or 1.5 times the poverty line, are all very small and statistically insignificant.

Thus, the existing research literature provides *no* solid evidence of beneficial distributional effects of minimum wages for poor or low-income families on the whole. As a result, there is no basis for concluding that minimum wages reduce the proportion of families living in poverty or near poverty. Minimum wages do not deliver beneficial distributional effects that might offset the negative employment effects they cause.

WHAT, NOW?

Even for those who might dispute some of the evidence, one could seriously question whether it makes any sense to raise the minimum wage while the economy is still recovering from the Great Recession. While Missouri's unemployment rate is a bit below the national average, it is still far higher (more than 2 percentage points) than it was prior to the Great Recession. Even if one rejects the accumulated evidence that, in my view, undermines the case for minimum wages even in the best of

times, there is a serious question about the wisdom of raising the minimum wage given the current state of the economy.

Suppose that one accepts that the minimum wage creates some winners and some losers, but still feels that the gains to the winners are of value. Or perhaps one supports the minimum wage for other reasons, such as the view that a society should set a wage floor for moral or ethical reasons. It seems that one could still seriously question whether now, when so many are struggling to find jobs, it makes sense to enact a policy that makes it more difficult for them to do so.

There is one counter-argument minimum wage advocates make — that a higher minimum wage will actually help stimulate the economy.[10] There is simply no evidence to support this claim. The evidence on employment effects has already been discussed.[11] And although a recent study by economists at the Federal Reserve Bank of Chicago (Aaronson et al., 2011) is cited in support of this position, that paper says nothing about aggregate effects; it only pertains to spending changes among families with minimum wage workers. The authors state explicitly that "our estimates are silent about the aggregate effects of a minimum wage hike" (p. 4).[12]

To summarize, we know two things. First, in general, one of the major contributors to poverty is the lack of work, rather than low-wage work. And second, especially now, the problem of finding work, especially for the less-skilled, is particularly challenging. Thus, even if disagreements continue about the merits of a higher minimum wage in good economic times, it seems like those claiming to be champions of those who are having trouble finding a toehold in the labor market should seriously question whether raising the minimum wage is wise in these economic times.

ARE THERE BETTER POLICIES TO HELP THE POOR?

The inability to help poor and low-income families through a higher minimum wage is understandably frustrating to those who would like to help these families. However, there is a tried-and-true policy that is far more effective. Specifically, the Earned Income Tax Credit (EITC), which the federal government enacted in the 1970s, and which many states (but not Missouri) supplement, pays a subsidy — effectively a higher wage — to workers in families with low earnings.

The top panel of Table 2 (see page 20) presents the parameters of the federal EITC program as of 2010. In 2010, the federal credit rate for a family with two qualifying children was 40 percent over the "phase-in" range, as earnings climb from $0 to $12,590. For families with one child, the incentives were weaker, and a very small EITC has been available to those without children (since 1993).[13] However, to cap benefits, there was a maximum amount the credit could reach — $5,036 in 2010 for a family with two qualifying children. The benefit then stayed fixed at this maximum over some range, called the "plateau" (from $12,590 of income to $16,450). Finally, the benefit was phased out at a rate of 21.06 percent, until it was eliminated at $40,363.

It seems that one could still seriously question whether now, when so many are struggling to find jobs, it makes sense to enact a policy that makes it more difficult for them to do so.

Table 2
The Federal Earned Income Tax Credit (EITC) and Selected State Programs, 2010

A. FEDERAL EITC (2010)				
	3 or more children	**2 children**	**1 child**	**No children**
Phase-in rate (percent subsidy to earnings)	45 percent	40 percent	34 percent	7.65 percent
Maximum credit	$5,666	$5,036	$3,050	$457
Income at which maximum credit reached	$12,590	$12,590	$8,970	$5,980
Income at which phase-out begins	$16,450	$16,450	$16,450	$7,480
Phase-out rate (percent reduction in credit with additional earnings)	21.06 percent	21.06 percent	15.98 percent	7.65 percent
Income at which credit eliminated	$43,352	$40,363	$35,535	$13,460

	B. STATE EITCs (2009)
	Percent Of Federal EITC
Delaware	20 percent (non-refundable)
District of Columbia	40 percent
Illinois	5 percent
Indiana	9 percent
Iowa	7 percent
Kansas	17 percent
Louisiana	3.5 percent
Maine	5 percent (up to $125 refundable for joint filers)
Maryland	50 percent non-refundable or 25 percent refundable
Massachusetts	15 percent
Michigan	20 percent
Minnesota	Varies with number of children, averages 33 percent
Nebraska	10 percent
New Jersey	25 percent
New Mexico	10 percent
New York	30 percent
North Carolina	5 percent
Oklahoma	5 percent
Oregon	6 percent
Rhode Island	25 percent (non-refundable, but 15 percent of amount is refundable)
Vermont	32 percent
Virginia	20 percent (non-refundable)
Wisconsin	4 percent (1 child), 14 percent (2 children), 43 percent (3 or more children)

Notes: The separate credit for three or more children is a temporary measure for the 2009 and 2010 tax years, after which the numbers for families with two children apply to families with two or more children. Numbers shown are for those filing singly. Phase-in and phase-out rates are the same for those filing jointly; incomes at which phase-out rate begins and incomes at which the credit is eliminated are higher by $5,010 for those filing jointly. In Panel B, if not noted, state EITC is refundable. The dollar amounts are indexed.
Sources: Tax Policy Center, Urban Institute and Brookings Institution (http://www.taxpolicycenter.org/briefing-book/key-elements/family/eitc.cfm, viewed July 20, 2010); State EITC Online Resource Center (http://www.stateeitc.com/map/index.asp, viewed July 20, 2010).

Many states have their own EITCs, which typically specify a percentage supplement to the federal EITC that states provide to families, although state EITCs can differ along a number of dimensions. The states with their own EITC as of 2009 are listed in the bottom panel of Table 2.[14]

The effects of the EITC can be complicated, but for one critical group they are not. The EITC unambiguously creates an incentive for an individual who is not working to enter the labor market. Moreover, because the EITC targets families based on *low family income*, it creates these incentives for precisely the families we are trying to help — in contrast to the scattershot targeting of the minimum wage. I have already noted the importance of female-headed households with children in the poverty statistics, and indeed there is overwhelming evidence of positive employment effects of the EITC for single mothers (Eissa and Hoynes, 2011; Meyer, 2010).[15] Most of this evidence comes from changes in the generosity of the federal EITC, although some of it uses changes in state supplements to the federal EITC (Neumark and Wascher, 2011). Moreover, the latter study shows that the EITC helps families it affects to escape poverty—— and not simply through the EITC payment, but through the incentive effects that the EITC creates to work more.[16]

The EITC has two problems. First, the government has to fund the EITC; if Missouri were to supplement the federal EITC, this would impose a cost on taxpayers. This may make it more difficult to muster support for the EITC than for the minimum wage, as the latter is a cost that can be forced onto businesses with no apparent cost to taxpayers — and certainly no direct implications for state legislators concerned about the budget. But it is unwise to choose an ineffective policy over an effective policy just because the ineffective policy can be implemented. It is better to make the argument for the superior policy, and engage in the necessary efforts to enact that policy.

The second problem is that the effects of an expanded EITC are likely to be quite weak during the recovery from the Great Recession. This is a period in which most economists think the problem is insufficient *demand* for labor, in which case a policy that increases the supply of labor would likely do little to increase employment. In contrast, a policy to increase job creation or employment in the short term would have to focus on incentives to increase labor demand.[17]

But to be clear, a minimum wage has the opposite effect. By raising the cost of labor to employers, a higher minimum wage reduces employers' demands for workers — and in particular, low-skilled workers. That is, a higher minimum wage destroys jobs instead of creating jobs. Some workers would, of course, earn a higher wage as a result of a higher minimum. But past experience indicates that minimum wages fail to help poor and low-income families as a result of the large earnings losses from those who lose jobs and the distribution of those losses across families. The bottom line: better policy options are available — both to increase employment and to help poor and low-income families.

[A] higher minimum wage destroys jobs instead of creating jobs.

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NOTES

[1] See http://www.givemoaraise.org/content/missouri-voters-should-back-two-petition-proposals (viewed May 27, 2012).

[2] For evidence of labor-labor substitution in response to a higher mandated wage floor, see Fairris and Bujanda (2008).

[3] The following summary of the review draws liberally from Neumark and Wascher (2007).

[4] For example, see http://www.americanprogressaction.org/issues/2011/06/higher_minimum_wage.html (viewed May 29, 2012).

[5] This count does not include every single paper discussed in the review. In particular, a few papers using similar data and estimators to other studies, but which largely comment on or replicate the latter or present a narrower set of estimates, are not included.

[6] This discussion is based on work in progress with J.M. Ian Salas and William Wascher.

[7] This is possible, of course, if employment growth slows in the implementation period. But contrary to the quote from Allegretto et al. (2011) above, Reich shows no such evidence on spurious negative correlations. What he shows is that there is generally growth during periods of approval and implementation of minimum wages.

[8] See Burkhauser and Sabia (2007, Table 1).

[9] Carrington and Fallick (2001) provide evidence on the variation in early career paths of minimum wage workers.

[10] See, for example, the website of the National Employment Law Project (NELP): http://raisetheminimumwage.org/pages/qanda (viewed May 28, 2012).

[11] The NELP website cited in the previous footnote disputes the employment evidence, of course. But it cites only the two studies discussed above, Allegretto et al. (2011) and Dube et al. (2010).

[12] In fact, this paper is a study of different behavioral hypotheses about consumer spending rather than an analysis of the merits of raising the minimum wage.

[13] The phrase "without children" means that there are no children who qualify the family for the higher EITC payment.

[14] An implication is that the federal EITC already provides substantial resources to low-income families with workers. Thus, the simple statement cited in the introduction that "thousands of Missourians depend on this minimum to help feed and clothe their children" is a bit misleading. Indeed, a common argument about raising the minimum wage is that we have let the minimum wage decline in real terms over the past few decades. This ignores the fact that we have at the same time introduced a substantial EITC program that provides an earnings floor (and one that better targets low-income families).

[15] For earlier reviews, see Hotz and Scholz (2003) and Hoffman and Seidman (2003).

[16] Neumark and Wascher (2011) also show that in some cases a higher minimum wage coupled with a more generous EITC can increase incomes more among a subset of families, and the evidence indicates that it does this for female-headed households with children, although this same policy combination then hurts other types of people more.

[17] Neumark (2011) discusses policies to change labor supply or labor demand incentives to help with recovery from the Great Recession.

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