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## *policy brief*

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## Fiscal Stimulus in the Form of Lower Payroll Taxes

*By Mark Bills and Pete Klenow*

In the wake of massive financial shocks, rigid prices and wages may cause the current U.S. recession to be deeper than it otherwise would be. Because of high prices and wages, demand for goods and labor may fall below supply, leading to unwanted inventories and rising unemployment. As a result, fiscal stimulus proposals by the president and Congress have focused on lifting demand for goods, either directly through government spending or indirectly through household tax rebates. But it is not clear that these are effective policies for expanding employment and hours.

Economists are unsure whether the biggest problem is rigidity in prices, rigidity

in wages, or some other distortion entirely. Recent work has documented that U.S. consumer and producer prices are more flexible than previously believed, changing more than once a year: See Bills and Klenow (2004) and Nakamura and Steinsson (2008), for example. And wage rates for new hires have been found to display quite large cyclical movements: See Pissarides (2007); Bills, Chang, and Kim (2007); Kudlyak (2008); and Haefke, Sonntag, and Van Rens (2008).

The textbook treatment of labor markets explains that firms hire workers to the point where the value of the added output justifies

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### About The Author

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the added cost in payroll. This implies that expanding employment requires (i) expanding labor's productivity, (ii) reducing the pay to workers (wages or benefits), or (iii) reducing the government taxes that are incurred by adding, or maintaining, workers on the payroll. Clearly the third is most amenable to short-run government policy. But the current stimulus proposal, despite the massive budget implications, fails to address any of these factors directly.<sup>1</sup>

In light of the uncertainty on the importance of market failings (e.g., price rigidities) for explaining the past and current recessions, it makes sense to pursue stimulus on many fronts at once: credit supply, goods demand, labor demand, and labor supply. Credit supply is the purview of the Federal Reserve, of course. We think a temporary cut in the payroll tax rate (say for the rest of 2009) would

advance the other three fronts. In this policy brief, we discuss three aspects of a cut in payroll taxes as a stabilizer in a recession.

- (1) Why any policy that aims at increasing employment in a recession should try to reduce the tax burden on employment.
- (2) Whether a payroll tax cut should be applied to the tax paid by workers, firms, or both.
- (3) What is the plausible quantitative impact of a temporary payroll tax cut on employment and hours worked.

## **(1) Why cut the payroll tax rate?**

Any stimulus policy should provide incentives to work more today than otherwise, consume more today than otherwise, or invest more today than otherwise. If one thinks of inter-temporal decisions (consumption,

investment), the key price is the real interest rate. Again, the Federal Reserve is hard at work on this margin. If one thinks of intra-temporal decisions (employment), the key price is the real wage.

In a frictionless labor market, firms equate the marginal revenue from hiring another worker to the wage, and workers equate the wage to the marginal value of consumption relative to leisure. But neither condition appears to hold during recessions. The productivity of labor falls relative to the wage, suggesting wages are not fully flexible. Because wages do not decline fast enough, layoffs spike and job hiring plummets. Meanwhile, the marginal value of consumption rises relative to leisure (because consumption falls and leisure rises). Many workers would prefer to keep their jobs, even at a flexibly lower wage, but do not.

In short, the labor market functions (or malfunctions)

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<sup>1</sup> The initial stimulus proposal suggested an employer credit of \$3,000 for adding a worker. But this element was deemed impractical (how do you define a new employer for a firm with substantial churning and perhaps multiple units?) and discarded without any discussion of achieving its goals with a simpler, workable policy.



as if there is a sharp increase in an implicit tax on working during recessions. This account of recessions is standard, but we do not know exactly why this happens. As mentioned, it could reflect wage rigidities, search frictions, pricing rigidities, some combination of these, or other distortions entirely. Absent a deeper structural understanding, we believe it makes sense for any policy that aims at expanding employment in recessions to focus on counteracting this implicit tax on working. A cut in the payroll tax rate would reduce the tax rate on working.

The current fiscal stimulus proposals offered by the president and Congress do not fit this mold. The central features of the proposed stimulus (increased government spending, lump-sum rebates to households) would not reduce the implicit tax on working.

## **(2) Cut the rate paid by firms, workers, or both?**

In frictionless markets, it does not matter whether one cuts the tax rate paid

by workers, firms, or some combination. All that matters is the combined tax. But deviations from frictionless markets provide arguments for cutting the employer and employee portions.

First, sticky wages would argue for cutting the employer portion of the payroll tax. We assume the wage that is sticky is the wage exclusive of employer payroll taxes but inclusive of employee payroll taxes. Hall (2005) has argued convincingly that the job finding rate is highly procyclical because sticky wages make employer profits from hiring workers highly procyclical. Cutting the employer portion of the payroll tax should increase employer profits from employing workers, giving a boost to the job finding rate and lowering the layoff rate.

Second, lumpy hiring and firing costs may leave some employers in the inaction region on hiring. Employers in the inaction region may “pocket” a cut in the employer portion of payroll taxes in the short run – while wages adjust. A similar scenario could occur if firms are con-

strained on the product demand side due to sticky prices. As employers may have lower marginal propensities to consume (MPCs) than workers, the goods demand stimulus might be smaller from employer tax cuts. The higher MPCs of employees, not to mention progressivity, would argue for cutting the employee portion. Parker (1999) finds that households respond in their consumption expenditures to a temporary cut in payroll taxes. He estimates a marginal propensity to spend of one-half. We do not have a comparable estimate to point to for the MPC for employees under the cap but imagine it could well be higher.

Cutting the employer portion of the payroll tax boosts labor demand (helping to offset sticky wages), and cutting the employee portion boosts labor supply and goods demand (helping to offset sticky prices).

## **(3) How many jobs might this save or create?**

President Obama has announced the goal of saving

or creating some 3 million jobs. In a labor market of 145 million workers, this requires boosting employment a little more than 2 percent.

What follows are calculations suggesting that cutting the payroll tax rate roughly in half (or by 6 percentage points combined) would boost employment by approximately 3 million.

First note that the marginal tax rate on labor income is around 30 percent. Thus each percentage point reduction in the payroll tax rate raises the after-tax wage by about 1.4 percent ( $0.71/0.70-1$ ).

We calculate the elasticity response of employment and hours first assuming that (a) wages are flexible, (b) consumers ignore any wealth effect from the temporary tax cut, (c) the real interest rate is little affected, so consumption is little affected, and (d) the short-run impact on capital is negligible. We then discuss at the end how the answer might differ if we relax assumptions (a), (b), or (c).

Under assumptions (a)–(d), the response of labor input to a 1 percentage point cut

in the payroll tax rate should be an (increasing) function of two elasticities: the responsiveness of labor demand and labor supply to the after-tax wage. With estimates of both elasticities around 1, each percentage point cut in the payroll tax rate might increase total hours worked by  $1.4/2 = 0.7$  percent. The expected response in employment is about two-thirds of this, or about 0.5 percent. The remainder, 0.2 percent increase, is through hours per worker.

Suppose we consider then a 6 percentage point cut in the payroll tax for 2009. (That's about 40 percent of the payroll tax, or just under half the Social Security component.) Given the above response of 0.5 percent, the impact would be to raise employment by 3 percent. For national employment of 145 million, this translates to an increase in employment of more than 4 million workers. (We might scale this down a bit based on not all wages being subject to payroll taxes because of the cap at about \$100,000.)

If we drop the assumption of little response in consumption (say because consumers view the transitory tax cut as increasing their wealth, or because the extra output drives down real interest rates), then the tax cut has the elements of a standard lump-sum cut in taxes aimed at stimulating consumption spending. Under flexible wages, the impact on employment will be diminished. The increase in consumption will reduce labor supply, driving up wages and causing a smaller expansion in employment. We believe this channel matters, but the ability of the temporary cut in payroll taxes to stimulate net exports lessens its impact.

If wages are sticky, then it matters whether the temporary cut in payroll tax is aimed at employer or employee payments, as mentioned above. To the extent the employee tax is cut, it would act more like a traditional stimulus tax cut of sending checks out to consumers. We expect that to have less posi-

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tive impact on employment under sticky wages. But if it is required that an important share of the cut (half, anyway) falls on the employer, then this is less of a concern.

To sum up, a temporary cut in the payroll tax rate would boost employment under many different theories for what market failures contribute to recessions: sticky prices, sticky wages, and search frictions, to name a few.

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