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A Minimum Wage Hike: Big Micro, Small Macro Effects

- For Democrats, who rolled to victory in last week's congressional elections, an increase in the federal minimum wage is near the top of their agenda. Leading Democrats have called for a minimum wage of \$7.25 per hour, up from \$5.15 currently.
- A 40% increase in the minimum wage will make a palpable difference to workers in this earnings bracket—at least, those who retain their jobs. But the macroeconomic effects are likely to be small, because a relatively small part of the workforce earns less than \$7.25 per hour, and these employees typically work part-time.
- Debate rages in the academic community over the degree to which a higher minimum wage reduces employment, if at all. In our view the preponderance of the evidence suggests that it does, but the nature of the industries affected makes the impact relatively modest.
- We have nudged down our near-term growth forecast a bit further and now expect real GDP growth of 2% (annualized) through the third quarter of 2007. Much of the near-term weakness remains concentrated in the housing sector, with starts and permits both down sharply in October. The worst of the downturn in starts is probably behind us, but there are now increasing signs that the housing weakness is spilling over into consumption.
- Inflation pressures are waning rapidly, with producer and consumer prices sharply lower than consensus expectations in October. We now expect the core PCE deflator to fall below 2% year-on-year by late spring, paving the way for Fed rate cuts in Q2.

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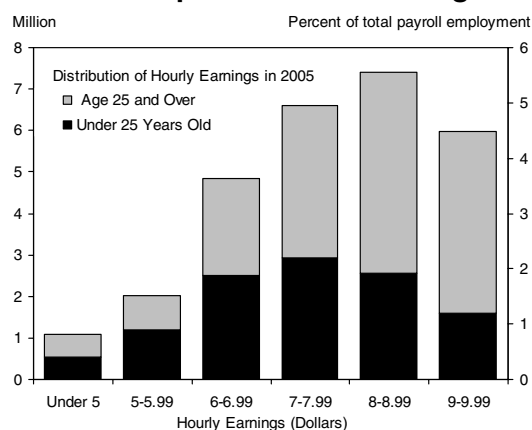
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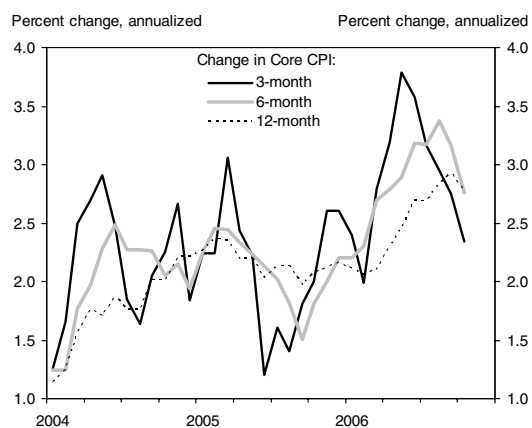
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Many Workers Make Less than Proposed Minimum Wage



Source: Department of Labor.

Core Inflation Starts to Fall



Source: Department of Labor.

Goldman Sachs

II. A Minimum Wage Hike: Big Micro, Small Macro Effects

For Democrats who rolled to victory in last week's Congressional elections, an increase in the federal minimum wage is near the top of their agenda. Leading Democrats have called for a minimum wage of \$7.25 per hour, up from \$5.15 currently, which probably would be phased in with 70-cent hikes over each of the next three years.

An increase in the minimum wage looks like a sure-fire political winner. Opinion polls show 80%+ support for a hike, and all six state-level minimum wage increases on the ballot last week passed. In fact, the outgoing Congress might even pass an increase into law in the next few weeks, allowing Republicans to take some credit.

Clearly, a 40% increase in the minimum wage will make a palpable difference to workers in this earnings bracket. But the macroeconomic effects are likely to be small, because a relatively small part of the workforce earns less than \$7.25 per hour, and these employees typically work part-time. Furthermore, there is little evidence that prior minimum wage hikes had a significant impact on the overall economy.

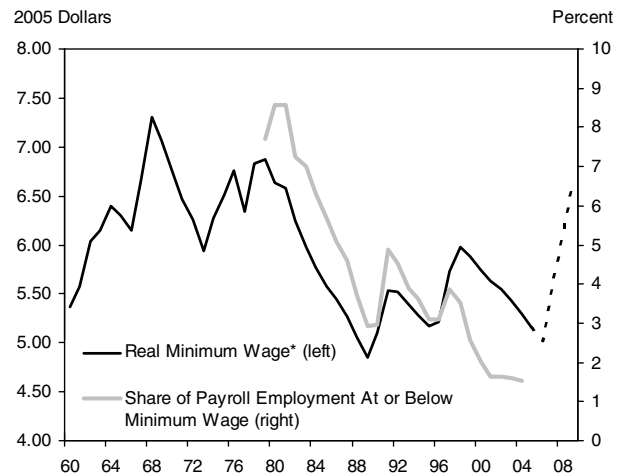
Debate rages in the academic community over the degree to which a higher minimum wage reduces employment, if at all. In our view the preponderance of the evidence suggests that it does, but the nature of the industries affected (hard-to-automate, non-tradable services) makes the ultimate impact fairly small.

The Minimum Wage and Who Earns It

The minimum wage has followed a tortuous path in its nearly 70-year existence, boosted occasionally by Congress but eroded steadily by inflation (Exhibit 1). The current level of \$5.15 per hour is the lowest in inflation-adjusted terms since 1990. Partly as a result, only about 1.8 million workers—about 1½ percent of US employment—currently earn the minimum wage or less, the lowest percentage on record.

The minimum wage varies widely across the United States, with a patchwork of local and state laws enforcing higher minimums. Twenty-one states covering half of the hourly workforce already have minimum wages above the federal level, and four—Washington, Oregon, Connecticut, and Vermont—already have minimums above \$7.25 per hour. This latter group will be joined by California, Hawaii, Massachusetts, and Pennsylvania next year. Several municipalities have also instituted higher minimum wages, with Santa Fe, New Mexico's \$9.50 per hour (rising to \$10.50 in 2008) the nation's highest.

Exhibit 1: Few Workers Make the Minimum



* Deflated by PCE price index. Dotted line denotes proposed increase.
Source: Department of Labor. Department of Commerce.

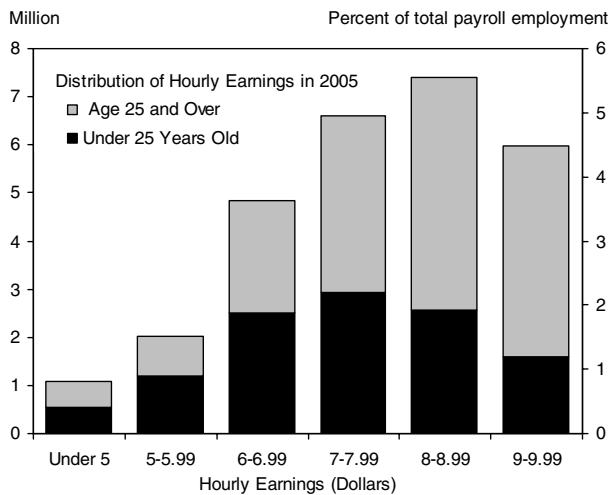
Although a relatively small share of the work force currently earns the minimum, about 10 million Americans make between \$5.15 and \$7.25 per hour. (Exhibit 2 illustrates the lower end of the wage distribution for hourly workers; the chart is divided by dollar ranges but we used more detailed data for our calculations. Workers receiving tips can be paid less than the minimum wage in some cases.) Some “ripple effects” are also likely for workers that already earn more than \$7.25 per hour, as firms try to preserve the relative pay of different occupations. The set of workers likely to be affected by the rise in the federal minimum is concentrated in the South, where living costs are generally lower and only Florida currently imposes a minimum wage above \$5.15 per hour.

The vast majority of low-wage workers are concentrated in a few service sector industries, with more than half of those earning \$5.15 per hour or less working in the restaurant sector (Exhibit 3). The retail industry is another large employer.

A Very Small Macroeconomic Effect

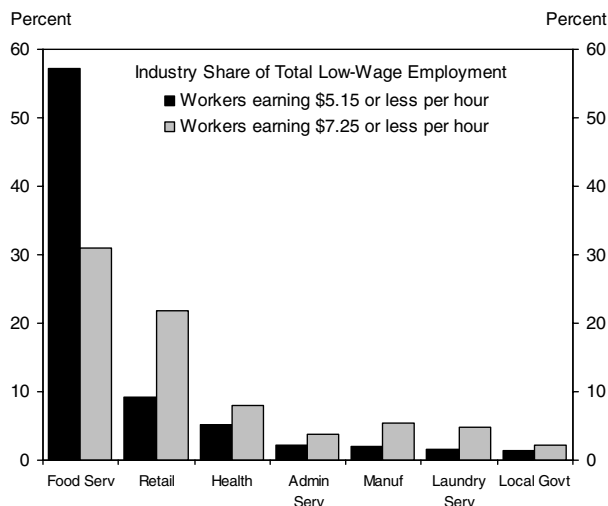
The rise of the minimum wage is effectively a transfer of income from employers and consumers to low-wage workers. Estimating the size of this transfer is straightforward: the maximum boost, for those currently earning the federal minimum wage, would be \$2.10 per hour or a 40% increase (we assume those earning sub-minimum wages see the same increase). For those between \$5.15 and \$7.25 we assume wages are raised to \$7.25. We also assume a ripple effect—a \$0.50 per hour increase for the roughly 3 million workers currently earning \$7.25-8.00 per hour.

Exhibit 2: Many Workers Make Less than Proposed Minimum Wage



Source: Department of Labor.

Exhibit 3: Restaurants, Retail Are Primary Low-Wage Employers



Source: Department of Labor.

With these assumptions, the income boost for the 14 million workers affected either directly or indirectly averages about 85 cents per hour, or about 13% of the current average hourly pay in this group. If working hours remain steady at roughly 30 per week, the total boost to income should be roughly \$18 billion—pocket change in an economy with a GDP of over \$13 trillion. The incremental effect is actually smaller, because the change is likely to take place over three years, during which time wages presumably would have risen somewhat even without the new minimum.

Other macroeconomic effects are similarly tiny:

1. Consumer spending. Studies typically show a very high propensity to consume out of wage income, particularly in lower income brackets. Assuming for

simplicity’s sake that 100% of the incremental wage income is spent, the total boost to spending would be only about 0.2%—and would be spread over three years given the proposed three-phase increase.

2. Employer costs. The additional labor income would represent about 0.2% of total US labor compensation, and would therefore push unit labor cost growth up by less than 0.1% per year. The aggregate profit impact would be immaterial.

3. Inflation. Given the tiny change in unit labor costs mentioned in the previous point, the overall inflation impact would also be insignificant.

Who Are the Losers?

It’s clear who the winners are from a higher minimum wage: the workers who get a raise. Some other workers (for example, more highly skilled labor or undocumented immigrant laborers who are not necessarily paid the minimum) might also be winners if the higher minimum wage makes them more competitive vis-à-vis minimum wage labor.

But there are also losers. The clearest losers, and generally the most vociferous protestors against higher minimum wages, are firms which will either have to absorb the higher wages with lower profit margins, or raise output prices and suffer a loss of demand.

The other set of possible losers are low-skilled workers who lose their jobs or confront fewer job opportunities because of the higher minimum wage. Because the macro effects of minimum wage hikes appear to be small—particularly now that such a small share of workers actually earn the minimum wage—research on the minimum wage has focused on specific industries (such as restaurants) and worker types (such as teenagers) most likely to be affected.

For several decades, it was accepted academic wisdom that minimum wage hikes result in lower employment. Typically, studies found that a 10% increase in the minimum wage would result in a 1-5% drop in employment in the most-affected groups.

This view was challenged by a series of studies beginning in the early 1990s, many co-authored by David Card of UC-Berkeley and Alan Krueger of Princeton. Their studies focused on “natural experiments” where one state raised minimum wages and another did not—most famously finding that fast-food restaurant employment rose faster in New Jersey following a minimum wage hike than next door in Pennsylvania, where no hike occurred. As one possible explanation for this phenomenon, they suggested that fast-food employers might have sufficient power (monopsony in economic lingo) in

the low-wage labor market to restrict labor demand and push wages below a market-clearing level. In such an environment, a moderate increase in the minimum wage could move the labor market closer to a competitive equilibrium, increasing both labor supply and wages.¹

The most prolific researchers in recent years espousing the conventional view of minimum wage effects have been David Neumark of UC-Irvine and William Wascher of the Federal Reserve Board.² Their work and that of other authors suggests several ways of reconciling the Card-Krueger results with the conventional wisdom:

1. Lags. Firms might react only slowly to a change in the minimum wage, or the effect might show up in the growth rate of new firms rather than existing ones. Card and Krueger found no effect on new entry; other research has found that employment effects become more significant with lags of one year or more.

2. Hours versus employment. Another possibility is that employment stays relatively constant while hours per low-wage employee fall. However, the evidence for such effects is mixed at best.

3. Data. Follow-up research on the New Jersey-Pennsylvania study questioned the accuracy both of the original data (a telephone survey of fast-food outlets) and an alternative set of payroll data used by Neumark and Wascher. That said, both teams have found comparable results in other work.

A useful alternative perspective on the issue can be gained by thinking about the impact of a minimum wage on firms rather than individuals. For a typical fast-food restaurant, hourly labor makes up roughly 30% of costs. If we assume the hike to a \$7.25 minimum wage increases average hourly wages of affected workers by roughly 13%, as we calculated above, then total costs would increase by about 4%.

How does the firm react to this labor cost increase? The simplest response would be to pass it on to the consumer in the form of higher prices for burgers and fries. Indeed, the aforementioned Card-Krueger study found some evidence that fast food prices increased in

New Jersey following the minimum wage hike. In practice, the degree of pass-through depends on the level of competition. In perfect competition—in our view, a good approximation for the fast food industry—the long-run industry supply curve would shift up by the full amount of the cost increase.

The more sensitive the firm's customers are to price, the larger the resulting decline in demand, sales volume, and employment. Our restaurant analyst's views on consumer demand behavior imply perhaps a 1%-2% drop in sales volume with our hypothetical cost and price increase of 4%. Ultimately, this reduction in business activity could be expected to reduce labor hours by roughly the same proportion.

Besides adjusting prices, a restaurant facing higher minimum wages could substitute away from low-skilled labor, replacing it either with capital (e.g. more automated kitchen equipment) or different types of labor (e.g. replacing low-skill workers with fewer high-skill workers, or with undocumented immigrants who would be unlikely to complain about sub-minimum wage pay). However, low-wage employment is concentrated in industries that have seen relatively low productivity growth in the past, and the scope for these activities seems fairly limited beyond what is already occurring.

The bottom line: a hike in the minimum wage to \$7.25 per hour will have little macroeconomic effect. Low wage workers will see a net gain in income as a group—even if our simple estimate of a 1%-2% drop in working hours is off by a factor of five, it would still be eclipsed by the 13% average increase in hourly pay—and some may be lifted out of poverty. However, increased employer costs are likely to result in a slight long-term decline in employment and hours worked by low-skill laborers, relative to what would have occurred without the wage hike. This sets up a policy tradeoff between a benefit to the majority of low-skill workers and a potentially significant cost to a minority (likely new entrants or particularly low-skill workers) who could end up working fewer hours.

Regardless of one's view on the desirability of the minimum wage, its current implementation has two clear problems: the periodic debates about raising the wage consume politicians' (and economists') time and energy, and the unpredictability of the law—irregular large hikes followed by gradual erosion through inflation—makes business planning more difficult. If a minimum wage is desired, indexing it to inflation would avoid these problems. Several states have already taken this step.

Andrew Tilton

¹ "Minimum Wages and Employment: A Case Study of the Fast Food Industry in New Jersey and Pennsylvania," *American Economic Review*, September 1994, pp. 772-793. The emphasis here is on moderate changes at the low end of the wage distribution. Any economist would agree that a \$50 minimum wage would be a disaster for employment.

² See "Minimum Wages and Employment: A Review of Evidence from the New Minimum Wage Research," *NBER Working Paper 12663*, November 2006.