The Weak Jobs recovery: whatever happened to the great American jobs machine?

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During the 1990s, the US labour market drew plaudits around the world for the large number of jobs it created. The rate of unemployment fell to levels below those of most other advanced economies and the percentage of the population in employment rose to its highest level in history, as even the less skilled and former 'welfare mothers' found jobs. At the same time, productivity grew smartly, real wages rose after decades of stagnation or decline, the seemingly inexorable rise of inequality ended and poverty fell. Europe marvelled at the 'great American jobs machine' and sought solutions to European problems in US policies and practices.

What a difference a few years makes!

Over three years have passed since the Business Cycle Dating Committee of the National Bureau of Economic Research (NBER) declared that the economy had begun its recovery. Yet, compared to the last 5 recoveries, today, 3.1 million fewer people are working than at the outset of the recovery.[1] Although by historical standards, the percentage of the population in employment is high, it remains two percentage points lower than Spring 2000, the boom's peak. The weak jobs recovery since 2001 has created greater economic problems for Americans than the sluggish job performance of Europe in the 1990s created for Europeans. The United States has only a limited safety net for workers. Those who lose their jobs risk losing health care or seeing their family drop from the middle class into poverty.

This paper examines the operation of the US labour market in the 2001 recovery. Because the US is in the middle of the recovery ours is a real-time analysis, some of whose conclusions could change if the recovery stalled or employment grew suddenly. For instance, since August 2003, non farm payroll employment increased by 2.5 million for a monthly average of 146,000; while the household survey showed a comparable increase of 2.6 million.[2] However, 17 months of job growth that barely kept pace with civilian population growth does not gainsay the surprising US inability to generate jobs for so long in this recovery. It would take employment growth of some 300,00 per month each month over the next year and a half to bring the employment to population rate to the 64.4 level it held during 2000.

The Challenge of the Jobless Recovery

"How come we see recovery every place but in the labor market?" (adapted from Robert Solow)

Our first and most important finding is that the current recovery has been the worst in recent US economic history for employment creation. Figure 1 shows that employment growth is much slower in comparison to all previous post-World War II recoveries, including the 1990s recovery when employment also took an extraordinarily long period to recover.[3] Typically, employment growth lags business cycle recoveries by three to four months. In the 1990s recovery, the lag was a little over two years. In the current recovery, the lag is three to four years and, at the time of writing, the labour market has not yet clearly recovered.

During the 2004 Presidential campaign, it was natural that the Democrats stressed the lack of job growth while the incumbent Republicans downplayed the issue, directing attention at the relatively moderate rate of unemployment. But as Kevin Hassett, economic director at the American Enterprise Institute for Public Policy Research states, "It's not a partisan issue, it is a fact. The labor market is worse than in the typical recovery."[4] The poor recovery in the labor market goes beyond sluggish job growth. While the rate of unemployment has been moderate, the duration of joblessness has been high three years into the recovery; and an exceptional proportion of persons not participating in the labour market say that they want to work. (Schreft, Singh, and Hodgson, 2004). In addition, as Schreft, Singh and Hodgson stress, a large proportion of the jobs created in the recovery were for temporary work. Almost 30 percent of new jobs created from November 2001 to December 2004 were created in the temporary help services sector. During the 1990s recovery only 10 percent of new jobs were in temporary help services.[5]

Our second finding is that the slow growth of employment is not due to the strikingly weak job performance of a particular sector, for instance the "dot.com" sector in the aftermath of its boom-bust cycle. To be sure, there was an asset-price bubble component to the 1990s boom that can help explain job problems in some of the "new economy" sectors.[6] But we found that employment at the end of 2004 was markedly below employment at the start of the recovery in many private sector industries, not simply in those that were affected by the dot.com boom. Figure 2 reports that in December 2004, employment was 9.0 percent lower in durable manufacturing and 9.0 percent lower in non-durable manufacturing than when the recovery began. Employment showed no growth in the retail, wholesale and transportation sectors. It grew modestly in education and health services, government, financial activities, and some other services. But fell in many other service sectors, including the broad 'information' industries (telecoms, newspapers, movies, cable TV, etc.), a major part of the new economy that is supposed to be producing good jobs to replace declining employment in traditional manufacturing.

As further evidence of the breadth of the weak labour market in the boom, our third finding is that employment growth was down among groups especially sensitive to the swings of the business cycle, but unlikely to be affected by the dot.com bubble narrowly defined: African-Americans, new labour market entrants, out of school youth and less educated workers.[7] Historically, recessions take their first toll on these groups but in recoveries, they benefit from larger increases in employment than more advantaged groups. The evidence in Table 1 is that African-Americans, out of school youth and new labour market entrants had worse employment experiences relative to other workers than in the previous two recoveries, with the current recovery showing greater employment declines.[8] Out of school youth have borne the largest brunt of the weak recovery. The employment-population ratios of black and white men fell by 4.9 and 5.2 percentage points. The estimated drops for black and white women are 6.6 and 2.5 points.

Over the same period the labour market for the highly educated and skilled workers did not tighten as it has in typical recoveries. Table 1 illustrates this point for new entrant male and female black college graduates. Their employment-population ratios fell by 4.5 and 1.7 percentage points. At the same time some white-collar workers who normally have low unemployment even in recessions have had more trouble finding jobs than in virtually any other recovery. The rate of unemployment among electrical engineers, for example, has exceeded the national unemployment rate, while joblessness is also found among various workers in computer programming. Here possibly are footprints of the dot.com experience, though it is more likely that the problems in these job markets will be more long term due to outsourcing of computer related work to India and other developing countries.

Our fourth finding is that the jobless recovery has no particular geographic dimension. Analysing employment growth by state, we find that compared with the current recovery, the typical state's employment grew 2.6-4.8% faster in the 1990s recovery and 4.5-6.3% faster in the 1980s recovery. Current employment growth is substantially weaker across the board, with two distinct patterns emerging (Appendix 1). Employment growth in states that have experienced any increase in jobs during the current recovery has been slower than in past recoveries. Arizona and Florida exemplify this pattern: employment growth in these states was just over 1 percent between 2001 and 2003. During comparable periods in earlier recoveries, it was two to four times higher. Elsewhere, in contrast with the 1980s and 1990s recoveries, there has been a contraction in employment. Michigan and Ohio fit this pattern. During the current recovery, employment in these states fell by 1-4 percent compared with modest increases in the earlier recoveries.

Wages, inequality and poverty

In the 1980s recovery and in the early part of the 1990s recovery, slow productivity growth and loose labour markets led to slow growth of earnings relative to inflation. This trend ended after 1995 when productivity growth began to accelerate and labour markets tightened. For the first time in two or more decades, real wages rose even for those at the bottom of the earnings or skill distributions. In the 2001 to present recovery, productivity has performed well while wages have shown a disparate pattern of change. Table 2 shows that from 2001 to 2003, men's earnings stagnated, while women's earnings grew modestly. Looking across a variety of earnings series, some show modest gains; others do not, making it hard to pin down what has happened to wages and inequality in the weak jobs recovery. Published earnings data from the Current Population Survey suggest that the median weekly earnings of full-time employees barely kept pace with inflation in 2004, while the real earnings of the groups most vulnerable to a weak labour market fell into the recovery. The median earnings of all workers fell by 0.5 percent, while the real earnings of high school dropouts and graduates fell by 2.2 and 0.8 percent, respectively. Earnings of workers at the bottom of the distribution also dropped through the third quarter of 2004. Between the third quarter of 2003 and the third quarter of 2004, real earnings for the bottom 10 percent of the wage distribution fell by 1.7 percent.

But slow rises of pay are not the fundamental problem of the weak jobs recovery. The problem is sluggish employment growth. The combination of stagnant employment and sluggish real wage growth has meant that poverty rose through 2003, albeit modestly. This contrasts with the usual pattern of poverty falling as GDP grows. Moreover, several key labour market statistics correlated with poverty show no improvement at the time of writing. The employment of Americans who are high school dropouts or who African-Americans have not improved since the Census Bureau collected the poverty data. Specifically, from December 2003 to December 2004, the percentage of high school dropouts and African-Americans in employment remained at 36 and 56 percent.[9] If the recovery does eventually reduce poverty, it is unlikely to be by much.

Explaining the weak jobs recovery

Why did the US "jobs machine" run out of steam in the 2001 recovery?

One possibility is that the NBER incorrectly dated the end of the recession. While there is a range of uncertainty around the dating of a recovery, the current recovery looks reasonably normal outside of the labour market. Corporate profits have risen. The cumulative growth in profits during the 8th and 11th quarters of the current recovery exceeds the average during the previous five recoveries. Real GDP has grown at a more rapid pace than during 1990s, particularly since the 8th quarter of the recovery. But this cumulative growth is well below the average during the previous 5 recoveries. Industrial production has also grown albeit at much slower rates than past recoveries, though still a healthy 5+ percent. The slower growth of industrial production partially reflects the continuing shift toward a service economy.

Is it possible that the weak jobs recovery reflects increased rigidity in the US labour market, consistent with the orthodox explanation of weak employment growth in Europe in the 1990s? Clearly not. Neither the current administration nor the Clinton administration enacted new regulations on unemployment insurance or welfare benefits that might affect adversely the level of employment.

Could the weak jobs recovery reflect conservative central bank policy of the type that the European Central Bank adopted during the 1990s? Again, clearly not. Although the Federal Reserve has been raising rates over the past few months and will likely continue, they kept interest rates quite low during the recovery.

So how come the great American jobs machine has stalled?

It's not productivity growth

At the outset we reject the seemingly attractive idea that increased productivity explains the weak jobs recovery. This is a circular argument. Increases in productivity due to technological and other innovations shift out the country's aggregate supply curve, which increases the growth of potential GDP and permits greater growth of employment without inflation than would otherwise be the case. The puzzle is why increased productivity coupled with a record growth in fiscal stimulus and record low interest rates have not generated enough GDP growth to crank up the great American jobs machine as quickly as in all previous recoveries.

Here are some factors that seem to have had some effect in creating the weak recovery: performance in the international economy, domestic and foreign investment in the US; rising health care costs; the nature of the fiscal stimulus; and structural economic change.

US performance in the international economy

The first factor is the poor performance of the US in the international economy. In the current recovery, the trade deficit has risen to levels that are unprecedented in recent US experience. Between the fourth quarter of 2001 and the third quarter of 2004, Table 3 reports that the ratio of exports minus imports relative to GDP increased from -4.2% to -5.4%. As a share of GDP, this is the largest trade deficit in US economic history and a larger than normal increase in trade deficits in a recovery, but it is not the largest increase on record. In the 1980s recovery, the trade deficit rose from -0.5% to -2.4%.

There has been a lot of discussion about jobs being 'off shored' in the weak recovery. Government statistics do not provide even crude measures of the number of jobs being off shored in the service industries. For example, while Indian exporters report several billion dollars of exports in computer related and telecoms services and many major US companies proudly proclaim off shoring of service sector work as way to improve profits, government statistics record less than a billion dollars of service sector imports from India and show them declining over time. Estimates of the magnitude of off-shoring from business groups suggest that upwards of 300,000-400,000 jobs are being off shored per year, [10] which would make off shoring a substantial contributing factor to the jobless recovery. By contrast, BLS surveys on job displacement record only a minuscule number of job losses attributable to off shoring, in part because the displaced workers questions are not asked in such a way as to obtain the appropriate statistic. The Government Accounting Office recently examined the quality of official statistics and found them virtually useless in measuring job losses. [11]

What is well measured and unprecedented is the huge drop in foreign direct investment in the United States as a share of GDP during the current recovery. In 2001 FDI was 1.6 percent of US GDP. In 2003, FDI was 0.3 percent of GDP. In the two previous recoveries, foreign direct investment rose as a share of GDP, presumably directly creating jobs in the United States. But in this recovery, FDI fell, largely reflecting a decrease in Europe's direct investment in the U.S.

But simply ascribing some of the weak jobs growth to international factors like trade, domestic and foreign direct investment and off shoring does not give a complete explanation. That the value of the dollar fell relative to the euro and pound despite rapid increases in productivity demands some deeper explanations as to why the United States did not do better in international markets.

The impact of health care costs

The second factor behind the weak jobs recovery may be the US mode of funding medical insurance. Health insurance spending per employee has risen sharply in the United States, albeit over a longer period than in the current recovery. It adds a substantial marginal cost to employing workers, and many firms have sought ways to operate without committing themselves to permanent workers who obtain such benefits.

The Kaiser Family Foundation finds that between 2000 and 2003, employment of people with employer-sponsored health care coverage fell by 2.8 percent, which is considerably greater than the overall fall in employment in that period. This is consistent with the notion that some of the stagnant employment growth may be associated with rising health care costs, and ultimately with the country's distinct mode of financing health insurance. Sarah Reber and Laura Tyson also find support for rising health insurance cost as a deterrent to employment growth. Further, Elise Gould and others continue to document the decline in employer-provided health coverage. The high cost of medical care may contribute to the tendency for firms to increased employment of temporary workers rather of full-time workers in the recovery.

Less bang for the fiscal stimulus buck?

The third factor is the nature of the fiscal stimulus, which gave the vast bulk of the tax cuts to wealthy people whose propensity to spend quickly is likely to be less than that of people on middle incomes and below. Table 4 shows that between 2001 and 2004, the US fiscal deficit rose by 3.5 percentage points relative to potential GDP: from a surplus of 1.1 percent to a deficit of 2.4 percent. This exceeds the increase in the deficit and the size of stimulus in both the 1990s, 1980s and 1970s recoveries. Yet actual GDP grew by just 8 percent between 2001 and 2003 despite the huge stimulus. This is a lower growth rate than in the two previous recoveries when the fiscal stimulus was weaker. We suspect that the larger stimulus had a smaller impact on GDP growth because the tax cuts were slanted to the super-wealthy. The table also shows that if current policies are continued, the stimulus will rival the growth that occurred from 1982 to 1986. The table reports the CBO's forecasted budget deficit as a share of potential GDP for 2005. It is predicted to fall slightly to 2.6 percent of potential GDP.

Further, three forms of government spending that might have been expected to provide a more direct impact on employment fell relative to GDP: federal government consumption expenditures and gross investment, and state and local spending. Table 3 shows that as a share of GDP, expenditures and investment have fallen by 0.4 percent from the first quarter of the recovery to the third quarter of 2004. The cumulative change in the fiscal stimulus tells the same story. State and local expenditures also dropped as a share of GDP from 12.1 to 11.2 percent. This 0.9 percent drop exceeds the 0.4 percent decline during the 1990s recovery.

The increase in government spending that added to the fiscal deficit came through greater federal government expenditures on national defence, which may have less impact on the labour market than other forms of spending. As a share of GDP, expenditures on national defence increased from 4.0 to 4.5 percent during the current recovery compared to a drop from 6.9 to 5.5 percent during the 1990s recovery. The combination of spending money to finance the war on terror, which probably has a smaller job multiplier than other forms of public investment and the drop in state and local expenditures arguably weakened the impact of fiscal policy on job creation.

Other analysts have proposed two other explanations, on which the data seem ambiguous.

Structural change?

Erica Groshen and Simon Potter have argued that the permanent relocation of workers from declining industries to growing ones has contributed to the jobless recovery. Their measure of structural change is the proportion of workers in industries that experience similar changes in recession and boom. They found that by this definition the share of total employment in industries undergoing structural change was 51 percent during the mid-1970s and 1980s recoveries and 57 percent during the 1990s recovery; it is 79 percent during the current recovery, arguably in reaction to the booming1990s. Groshen, Potter, and Sela note further, however, that this division depends on the dating of the recovery. Using employment turning points, the recession is deeper, longer and more balanced between structural and cyclical flows. Using a different measure – a cyclically adjusted variant of the Lillien measure of structural change (the variance of net employment growth by industry weighted by each industry's average share of employment), Aaronson, Rissman, and Sullivan find no evidence that structural change contributed to the jobless recovery.

Greater uncertainty?

The growth of temporary employment in the 2001 recovery could reflect increased uncertainty about the economic future post September 11, 2001. To get some handle on this hypothesis, we compared the path of the University of Michigan's Consumer Sentiment Index during the current recovery to its path in the two previous recoveries. Figure 3 reports that the level of Consumer Sentiment remains in the range of the two earlier recoveries. The path does not look wildly different from the past, suggesting that greater uncertainty can't explain employer's growth in the use of temporary workers.

To explore the possibility that the Consumer Sentiment Index is not accurately capturing the uncertainty, we compared the Consumer Sentiment Index to the Consumer Confidence Index, another widely watched index. The Consumer Confidence Index does show more variability, but both tell a similar story about attitudes toward the economy. We think that the greater variation is due to each survey's sampling framework. The Consumer Sentiment Index keeps a portion of its sample from month to month, while the Consumer Confidence Index is based on a new random sample each month, making month-to-month comparisons problematic.[12]

Our final figure plots the components of the Consumer Confidence Index, the present situation and expectations indices. Figure 4 shows that throughout the recovery the two indices move with one another, with both indicating cumulative gains. The Expectation Index, which is probably a better measure of economic and geopolitical uncertainty, has shown cumulative gains since the 19th month. If firms' unwillingness to expand employment is due to greater uncertainty of consumers, these data do not show the expected patterns.

The Challenge

The jobless recovery poses a challenge to analysts to determine if the weak jobs recovery represents a major shift in the link between the labour market and the rest of the economy over the business cycle – a new business cycle reality -- or is just an idiosyncratic break in historic patterns, possibly due to the peculiarities of the 1990s boom. Our analysis has favoured the former notion -- that something fundamental underlies the jobless recovery -- but only a more complete accounting of the factors that caused the jobless recovery can resolve the issue.

The jobless recovery also poses a challenge to economic policy. As long as the US makes full employment its main "welfare state" protection for workers, the country has to attain something akin to the late 1990s tightness in the labour market for economic growth to be shared among the entire population. Nothing short of that high rate of employment and low level of unemployment seems powerful enough to improve the employment and earnings opportunities

facing vulnerable groups. It is this that makes the jobless recovery particularly challenging to our economic well-being and brand of capitalism.

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Table 1: Changes in Employment-Population Rates, from end of recession through 2nd year of recovery, for vulnerable groups

	Men						Women					
	Unadjusted			Educ., Pot. Exp. and Region Adj.			Unadjusted			Educ., Pot. Exp. and Region Adj.		
All	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**
Black	0.030	-0.007	-0.033	0.022	-0.018	-0.032	0.027	0.000	-0.025	0.018	-0.008	-0.028
	(0.005)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)
White	0.015	-0.004	-0.021	0.010	-0.005	-0.025	0.022	0.007	-0.007	0.015	0.001	-0.010
	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
B-W	0.015	-0.003	-0.012	0.012	-0.013	-0.007	0.005	-0.007	-0.018	0.004	-0.009	-0.019
	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)	(0.005)	(0.006)
Out of School Youth												
Black	0.059	-0.015	-0.048	0.039	-0.027	-0.049	0.003	-0.006	-0.068	-0.004	-0.008	-0.066
	(0.014)	(0.017)	(0.019)	(0.014)	(0.017)	(0.019)	(0.014)	(0.018)	(0.021)	(0.014)	(0.017)	(0.020)
White	0.036	-0.009	-0.047	0.008	-0.015	-0.052	-0.015	-0.021	-0.024	-0.014	-0.028	-0.025
	(0.005)	(0.007)	(0.007)	(0.005)	(0.007)	(0.007)	(0.006)	(0.008)	(0.009)	(0.005)	(0.008)	(0.009)
B-W	0.023	-0.006	-0.001	0.031	-0.012	0.003	0.018	0.014	-0.045	0.010	0.020	-0.041
	(0.015)	(0.018)	(0.021)	(0.014)	(0.018)	(0.020)	(0.015)	(0.020)	(0.023)	(0.015)	(0.019)	(0.022)

Notes: Authors' calculations from assorted years of the CPS ORG files. "All" denotes individuals 16 and over. "Out of School Youth" denotes individuals with no more than a high school degree, 16 to 24 years of age, and not enrolled in school. The columns labeled "Unadjusted" are constructed from regressions that pool the years 1982, 1984, 1991, 1993, 2001 and 2003 where the variables are the following: white dummy variable, year dummy variables and the interactions between the white dummy variable and the year dummy variables. The columns labeled "Adjusted" are constructed from the same specification, but controls for years of school, potential experience and census division of residence are included.

Table 1 cont.: Changes in Employment-Population Rates, from end of recession through 2nd year of recovery, for vulnerable groups

	Men						Women					
	Unadjusted			Educ., Pot. Exp. and Region Adj.			Unadjusted			Educ., Pot. Exp. and Region Adj.		
New Entrants	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**
Black	0.048	-0.007	-0.054	0.042	-0.021	-0.045	0.039	-0.004	-0.055	0.032	-0.010	-0.054
	(0.009)	(0.010)	(0.010)	(0.008)	(0.009)	(0.007)	(0.009)	(0.009)	(0.010)	(0.008)	(0.010)	(0.007)
White	0.033	-0.003	-0.038	0.029	-0.014	-0.035	0.027	0.005	-0.018	0.023	-0.002	-0.022
	(0.003)	(0.003)	(0.004)	(0.009)	(0.016)	(0.015)	(0.003)	(0.004)	(0.004)	(0.009)	(0.017)	(0.016)
B-W	0.015	-0.004	-0.016	0.013	-0.007	-0.010	0.012	-0.009	-0.037	0.009	-0.009	-0.032
	(0.009)	(0.010)	(0.011)	(0.008)	(0.009)	(0.010)	(0.009)	(0.010)	(0.011)	(0.009)	(0.010)	(0.011)
New Entrant HS Dropouts												
Black	0.028	-0.017	-0.050	0.030	-0.011	-0.041	0.014	-0.005	-0.035	0.007	-0.008	-0.016
	(0.015)	(0.019)	(0.020)	(0.015)	(0.019)	(0.014)	(0.019)	(0.024)	(0.026)	(0.018)	(0.024)	(0.018)
White	0.021	-0.029	-0.062	0.024	-0.028	-0.063	0.029	0.021	-0.044	0.029	-0.006	-0.040
	(0.007)	(0.008)	(0.008)	(0.017)	(0.032)	(0.030)	(0.008)	(0.010)	(0.011)	(0.021)	(0.042)	(0.040)
B-W	0.008	0.012	0.012	0.006	0.017	0.022	-0.015	-0.026	0.008	-0.021	-0.002	0.023
	(0.017)	(0.020)	(0.021)	(0.016)	(0.019)	(0.020)	(0.021)	(0.026)	(0.028)	(0.019)	(0.024)	(0.027)
New Entrant HS Graduate[13]s												
Black	0.055	-0.061	-0.052	0.050	-0.055	-0.053	0.029	-0.014	-0.041	0.027	-0.015	-0.045
	(0.014)	(0.015)	(0.017)	(0.013)	(0.015)	(0.012)	(0.014)	(0.015)	(0.017)	(0.014)	(0.017)	(0.013)
White	0.050	-0.011	-0.038	0.044	-0.006	-0.039	0.028	-0.023	-0.028	0.028	-0.023	-0.030
	(0.005)	(0.006)	(0.006)	(0.015)	(0.026)	(0.026)	(0.005)	(0.007)	(0.007)	(0.015)	(0.029)	(0.029)
B-W	0.005	-0.050	-0.013	0.006	-0.049	-0.014	0.001	0.009	-0.013	-0.001	0.008	-0.015
	(0.015)	(0.016)	(0.018)	(0.014)	(0.016)	(0.017)	(0.015)	(0.017)	(0.019)	(0.014)	(0.017)	(0.019)
New Entrant College Graduates												
Black	0.050	-0.008	-0.046	0.056	-0.019	-0.045	0.019	0.023	-0.017	0.025	0.020	-0.017
	(0.020)	(0.022)	(0.020)	(0.019)	(0.020)	(0.014)	(0.021)	(0.022)	(0.020)	(0.021)	(0.021)	(0.014)
White	0.007	0.005	-0.020	0.007	-0.005	-0.018	0.020	0.011	-0.006	0.021	0.007	-0.006
	(0.004)	(0.005)	(0.005)	(0.020)	(0.036)	(0.031)	(0.006)	(0.006)	(0.006)	(0.022)	(0.038)	(0.032)
B-W	0.043	-0.013	-0.026	0.048	-0.013	-0.026	-0.001	0.013	-0.011	0.004	0.013	-0.011
	(0.020)	(0.022)	(0.020)	(0.020)	(0.021)	(0.020)	(0.022)	(0.023)	(0.021)	(0.022)	(0.023)	(0.020)

Notes: See first part of table.

Table 2: Changes in Log Hourly Earnings, from end of recession through 2nd year of recovery, for vulnerable groups

	Men						Women					
	Unadjusted			Educ., Pot. Exp. and Region Adj.			Unadjusted			Educ., Pot. Exp. and Region Adj.		
All	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**
Black	-0.034	-0.020	0.004	-0.039	-0.032	-0.002	0.000	0.000	0.033	-0.012	-0.010	0.021
	(0.011)	(0.011)	(0.010)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.007)
White	-0.029	-0.022	0.003	-0.039	-0.040	-0.005	-0.005	0.006	0.027	-0.017	-0.001	0.012
	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
B-W	-0.005	0.002	0.001	-0.001	0.008	0.003	0.005	-0.006	0.006	0.004	-0.009	0.009
	(0.011)	(0.011)	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)	(0.008)	(0.007)
Out of School Youth												
Black	-0.066	-0.038	0.046	-0.090	-0.037	0.023	-0.041	-0.009	-0.025	-0.080	-0.002	-0.050
	(0.020)	(0.024)	(0.024)	(0.017)	(0.021)	(0.021)	(0.020)	(0.023)	(0.022)	(0.018)	(0.021)	(0.020)
White	0.010	-0.045	-0.006	-0.049	-0.041	-0.017	0.015	-0.029	-0.012	-0.035	-0.027	-0.019
	(0.006)	(0.008)	(0.007)	(0.005)	(0.007)	(0.007)	(0.006)	(0.008)	(0.008)	(0.005)	(0.007)	(0.008)
B-W	-0.076	0.007	0.052	-0.042	0.004	0.040	-0.056	0.021	-0.014	-0.045	0.025	-0.031
	(0.020)	(0.025)	(0.025)	(0.018)	(0.022)	(0.022)	(0.021)	(0.024)	(0.024)	(0.019)	(0.022)	(0.022)

Notes: Authors' calculations from assorted years of the CPS ORG files. "All" denotes individuals 16 and over. "Out of School Youth" denotes individuals with no more than a high school degree, 16 to 24 years of age, and not enrolled in school. The columns labeled "Unadjusted" are constructed from regressions that pool the years 1982, 1984, 1991, 1993, 2001 and 2003 where the variables are the following: white dummy variable, year dummy variables and the interactions between the white dummy variable and the year dummy variables. The columns labeled "Adjusted" are constructed from the same specification, but controls for years of school, potential experience and census division of residence are included.

Table 2 cont.: Changes in Log Hourly Earnings, from end of recession through 2nd year of recovery, for vulnerable groups

	Men						Women					
	Unadjusted			Educ., Pot. Exp. and Region Adj.			Unadjusted			Educ., Pot. Exp. and Region Adj.		
New Entrants	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**	**1984-82**	**1993-91**	**2003-01**
Black	-0.071	-0.040	0.004	-0.067	-0.037	-0.009	-0.024	-0.023	-0.016	-0.035	-0.009	-0.023
	(0.016)	(0.017)	(0.017)	(0.013)	(0.014)	(0.010)	(0.015)	(0.015)	(0.015)	(0.012)	(0.012)	(0.009)
White	-0.050	-0.036	-0.008	-0.057	-0.039	-0.016	-0.024	-0.019	0.005	-0.032	-0.017	-0.009
	(0.005)	(0.005)	(0.005)	(0.014)	(0.025)	(0.022)	(0.005)	(0.005)	(0.005)	(0.013)	(0.022)	(0.020)
B-W	-0.021	-0.004	0.012	-0.010	0.002	0.008	0.000	-0.004	-0.021	-0.003	0.008	-0.014
	(0.017)	(0.018)	(0.017)	(0.013)	(0.015)	(0.014)	(0.016)	(0.016)	(0.015)	(0.013)	(0.013)	(0.013)
New Entrant HS Dropouts												
Black	-0.090	-0.058	-0.011	-0.074	-0.032	-0.022	-0.088	-0.023	0.017	-0.100	-0.016	0.003
	(0.025)	(0.029)	(0.028)	(0.020)	(0.024)	(0.018)	(0.028)	(0.032)	(0.027)	(0.026)	(0.030)	(0.019)
White	-0.054	-0.040	0.002	-0.054	-0.021	-0.008	-0.041	-0.044	-0.014	-0.043	-0.028	-0.015
	(0.007)	(0.008)	(0.008)	(0.022)	(0.044)	(0.039)	(0.008)	(0.009)	(0.009)	(0.028)	(0.054)	(0.042)
B-W	-0.036	-0.018	-0.013	-0.020	-0.011	-0.014	-0.047	0.021	0.031	-0.057	0.012	0.018
	(0.026)	(0.031)	(0.029)	(0.021)	(0.025)	(0.024)	(0.029)	(0.034)	(0.029)	(0.027)	(0.032)	(0.027)
New Entrant HS Graduates												
Black	-0.080	-0.052	0.002	-0.074	-0.040	-0.002	-0.039	-0.036	-0.038	-0.039	-0.028	-0.040
	(0.021)	(0.023)	(0.023)	(0.018)	(0.020)	(0.015)	(0.018)	(0.019)	(0.019)	(0.017)	(0.018)	(0.014)
White	-0.061	-0.050	-0.014	-0.070	-0.045	-0.014	-0.044	-0.026	-0.012	-0.048	-0.023	-0.017
	(0.006)	(0.008)	(0.008)	(0.020)	(0.036)	(0.034)	(0.006)	(0.007)	(0.007)	(0.017)	(0.033)	(0.030)
B-W	-0.020	-0.002	0.016	-0.004	0.005	0.013	0.005	-0.010	-0.026	0.009	-0.005	-0.023
	(0.022)	(0.024)	(0.025)	(0.019)	(0.021)	(0.022)	(0.019)	(0.021)	(0.021)	(0.018)	(0.019)	(0.019)
New Entrant College Graduates												
Black	-0.106	-0.070	-0.060	-0.109	-0.023	-0.055	0.083	0.020	-0.014	0.076	0.051	-0.008
	(0.072)	(0.076)	(0.060)	(0.066)	(0.065)	(0.041)	(0.055)	(0.055)	(0.044)	(0.051)	(0.048)	(0.030)
White	0.002	-0.018	-0.041	-0.003	-0.004	-0.031	0.021	-0.023	-0.009	0.020	-0.007	0.006
	(0.018)	(0.019)	(0.017)	(0.069)	(0.122)	(0.090)	(0.016)	(0.016)	(0.014)	(0.052)	(0.088)	(0.066)
B-W	-0.108	-0.052	-0.019	-0.106	-0.019	-0.024	0.062	0.043	-0.005	0.056	0.057	-0.013
	(0.074)	(0.079)	(0.063)	(0.068)	(0.073)	(0.058)	(0.058)	(0.057)	(0.046)	(0.053)	(0.053)	(0.043)

Notes: See first part of table.

Table 3: Components of GDP in the 2001 and Earlier Recoveries
Seasonally Adjusted at Annual Rates

Quarter of Recovery	Start of Recovery					
(X-M)/GDP	**Nov-01**	**Mar-91**	**Nov-82**	**Mar-75**	**Nov-70**	**Feb-61**
1st	-4.2%	-0.3%	-0.5%	0.0%	-1.4%	-0.2%
12th	-5.4%	-0.8%	-2.4%	-1.4%	-1.1%	-0.4%
Change	-1.2%	-0.6%	-1.9%	-1.4%	0.3%	-0.2%
Exports/GDP						
1st	9.9%	8.0%	5.5%	5.4%	4.4%	3.7%
12th	10.4%	8.7%	5.3%	4.9%	4.8%	3.7%
Change	0.5%	0.7%	-0.2%	-0.5%	0.5%	0.0%
Imports/GDP						
1st	14.1%	8.3%	6.0%	5.4%	5.8%	3.9%
12th	15.7%	9.6%	7.7%	6.3%	5.9%	4.1%
Change	1.7%	1.3%	1.7%	0.9%	0.1%	0.2%
Government consumption expenditures and gross investment/GDP						
1st	18.3%	22.0%	22.5%	24.1%	26.9%	29.6%
12th	17.9%	20.2%	21.9%	21.7%	22.4%	28.7%
Change	-0.4%	-1.8%	-0.6%	-2.4%	-4.5%	-0.9%
Federal/GDP						
1st	6.2%	9.5%				
12th	6.7%	8.0%				
Change	0.5%	-1.4%				
National defense/GDP						
1st	4.0%	6.9%				
12th	4.5%	5.5%				
Change	0.5%	-1.4%				
Nondefense/GDP						
1st	2.2%	2.5%				
12th	2.2%	2.5%				
Change	-0.1%	0.0%				
State and local/GDP						
1st	12.1%	12.5%				
12th	11.2%	12.1%				
Change	-0.9%	-0.4%				

Notes: Authors' calculations from Bureau of Economic Analysis, Table 1.1.6.

Table 4: The fiscal stimulus as a percentage of potential GDP was larger in the weak jobs recovery than in two preceding recoveries
(Standardized-Budget Deficit or Surplus as Percentage of Potential GDP)

Recovery	Surplus or Deficit (-)
2001	1.1
2002	-1.1
2003	-2.7
2004	-2.4
2005*	-2.6
2003-2001	-3.8
2004-2001	-3.5
2005*-2001	-3.7
1991	-2.5
1992	-2.9
1993	-2.9
1994	-2.1
1995	-2.0
1993-1991	-0.4
1994-1991	0.4
1995-1991	0.5
1982	-1.1
1983	-3.0
1984	-3.6
1985	-4.3
1986	-4.8
1984-1982	-2.5
1985-1982	-3.2
1986-1982	-3.7
1975	0.2
1976	-2.0
1977	-1.1
1978	-1.5
1979	-0.7
1977-1975	-1.3
1978-1975	-1.7
1979-1975	-0.9
1970	0.2
1971	-0.9
1972	-1.7
1973	-1.6
1974	0.1
1972-1970	-1.9
1973-1970	-1.8
1974-1970	-0.1

Notes: *CBO Forecast for 2005 are from Table 1: Measures of the Federal Budget Surplus or Deficit, 2000 to 2005, The Cyclically Adjusted and Standardized Budget Measures: Updated Estimates, September 2004, Section 2 of 3.

Appendix 1: A Comparison of Growth in State Total Nonfarm Employment by Recovery

	End Year: First 6 months of 2004					
	Benchmark: Start of Recovery			Benchmark: End of Recession		
State	2002-2004	1992-1994	1983-1985	2001-2004	1991-1994	1982-1985
AL	-0.3%	5.0%	7.4%	-1.7%	7.1%	8.7%
AK	1.8%	4.9%	7.6%	3.8%	6.8%	15.1%
CA	0.0%	0.0%	8.6%	-1.0%	-1.6%	9.8%
CO	-1.7%	9.9%	6.9%	-3.6%	13.6%	7.8%
CT	-1.6%	1.1%	7.9%	-2.6%	-0.7%	9.1%
DE	0.3%	4.3%	10.2%	-0.9%	4.1%	13.1%
DC	0.6%	-2.2%	5.4%	2.2%	-2.7%	5.2%
GA	0.2%	9.3%	12.7%	-1.7%	11.2%	16.7%
HI	3.5%	-1.2%	4.8%	3.8%	-0.6%	6.6%
ID	1.8%	10.7%	5.7%	1.9%	15.8%	7.6%
IL	-1.7%	4.4%	5.0%	-3.5%	4.4%	3.5%
IN	0.1%	6.2%	6.9%	-1.0%	8.2%	6.9%
KS	-1.5%	4.6%	5.0%	-2.4%	6.4%	5.0%
KY	-0.1%	5.9%	8.5%	-1.0%	8.3%	7.7%
MD	1.0%	3.1%	9.5%	1.3%	2.2%	12.7%
MA	-2.9%	3.9%	8.7%	-5.2%	2.9%	10.9%
MN	0.2%	5.7%	8.6%	-0.8%	8.1%	9.3%
MS	-0.2%	9.9%	5.8%	-0.8%	12.6%	6.1%
MT	1.5%	7.5%	1.1%	2.6%	12.0%	1.9%
NE	-0.4%	6.1%	6.5%	-1.2%	7.7%	6.7%
NJ	0.7%	2.7%	7.9%	0.3%	1.5%	10.4%
NY	-0.5%	1.3%	6.0%	-2.0%	-0.7%	6.8%
NC	-0.4%	7.5%	9.6%	-1.9%	9.3%	13.0%
ND	0.9%	6.4%	0.5%	0.9%	8.9%	0.9%
OK	-2.2%	4.7%	-0.5%	-3.5%	5.7%	-4.2%
PR	1.9%	4.7%	7.3%	1.0%	7.2%	7.9%
RI	1.3%	2.2%	8.3%	1.5%	3.0%	9.9%
SC	1.3%	5.2%	9.0%	0.3%	6.2%	11.5%
SD	0.7%	7.6%	6.0%	0.3%	12.0%	8.4%
TX	-0.1%	6.6%	7.6%	-1.1%	8.0%	6.4%
UT	0.9%	11.8%	10.1%	0.2%	15.4%	11.3%
VT	0.2%	5.1%	8.9%	-0.7%	6.0%	10.7%
VA	2.0%	5.4%	11.2%	1.3%	6.2%	14.4%
VI	-3.6%	-1.0%	1.4%	-6.3%	1.4%	1.1%
WY	1.4%	5.4%	2.2%	2.4%	6.8%	-4.9%
AZ	2.9%	11.5%	18.6%	2.9%	13.5%	24.2%
AR	0.0%	7.4%	7.5%	-0.7%	10.4%	10.7%
FL	3.1%	8.2%	12.9%	3.2%	9.5%	17.2%
IA	0.2%	5.4%	3.2%	-1.1%	6.6%	3.1%
LA	0.6%	5.8%	1.7%	-0.4%	6.8%	-1.0%
ME	-0.3%	3.8%	7.8%	-0.6%	3.5%	10.3%
MI	-2.4%	5.6%	10.5%	-4.1%	6.6%	11.5%
MO	0.2%	5.9%	8.1%	-1.0%	7.0%	9.0%
NV	6.5%	15.6%	10.8%	6.6%	17.4%	11.3%
NH	0.1%	7.4%	13.8%	-1.3%	8.5%	18.2%
NM	2.4%	9.3%	8.5%	3.6%	12.3%	9.9%
HI	-1.5%	4.7%	6.8%	-3.2%	5.3%	6.0%

	End Year: First 6 months of 2004					
	Benchmark: Start of Recovery			Benchmark: End of Recession		
State	**2002-2004**	**1992-1994**	**1983-1985**	**2001-2004**	**1991-1994**	**1982-1985**
OR	0.2%	7.5%	6.6%	-1.1%	9.5%	7.2%
PA	-0.8%	2.3%	4.6%	-1.5%	2.1%	3.3%
TN	0.6%	7.9%	8.7%	-0.3%	11.0%	9.7%
WA	1.2%	3.7%	7.8%	-0.4%	5.8%	9.0%
WV	-1.4%	5.4%	2.6%	-1.8%	7.2%	-1.7%
WI	0.6%	5.6%	6.2%	-0.5%	8.2%	6.2%

ENDNOTES

[1] Authors' tabulations from the CPS household survey, www.bls.gov. From November 2001 to December 2004, the number employed increased by 3.9 million individuals. The average increase after thirty-eight months during the previous five recoveries was 7.0 million. In percentage terms employment in the household survey grew by 2.9 percent and 8.0 during the previous recoveries.

[2] For a discussion of differences in changes in employment between the establishment and household surveys, see http://www.bls.gov/cps/ces_cps_trends.pdf.

[3] The published monthly employment figures come from the establishment-level Current Employment Statistics (CES), www.bls.gov. The monthly time series used in the analysis spans from February 1961 to December 2004, covering five boom, bust, and recovery episodes. We use the NBER Dating Committee's designations to identify the episodes. The period of expansion, recession, and recovery that is the length of current recovery are as follows: 3/1991 to 3/2001, 3/01 to 11/01, and 11/01 to 11/2004; 11/82 to 7/90, 7/90 to 3/91, and 3/91 to 3/1994; 3/75 to 1/80, 1/80 to 7/80, and 7/80 to 7/1984; 11/70 to 11/73, 11/73 to 3/75, and 3/75 to 3/1978; and 2/61 to 12/69, 12/69 to 11/70. The 36th month after 11/70 is in the midst of the 11/73 to 3/75 recession.

[4]New York Times, January 9, 2005, "for Unemployed, Wait for New Work Grows Longer," by John Leland.

[5] Authors' tabulations from the CES. Figures for temporary help services are only available starting with the 1990s recovery.

[6] Examining the hypothesis that an excessive boom in the new economy underlies the recession, Federal Reserve Vice Chairman Roger Ferguson in a recent speech to the Stanford Institute for Economic Policy Research concludes "detecting asset-price overvaluations and undervaluations is controversial in hindsight and arguably impossible in real time." He further concludes that asset-price bust recession, such as the March 2001 to November 2001 period are not necessarily any longer, deeper and associated with a larger drop in output and investment than previous recessions.

[7] Rodgers and Freeman (2005) goes into greater depth in documenting the fragility of the gains that these groups made during the 1990s.

[8] The micro data used for this analysis come from the annual Merged Outgoing Rotation Group Files of the Current Population Survey (1979 to 2003). We use the data files and extraction software produced by Unicon Research Corporation. These files allow us to describe the experiences of specific demographic groups (e.g., new entrants). However, this gain in heterogeneity comes with costs. The files start in 1979. Further, the annual nature of the data means that we must approximate the recoveries, which are 1982 to 1984; 1991 to 1993, and 2001 to 2003. Our samples are comprised of all men and women that are at least 16 years of age, new entrants (0 to 10 years of potential experience), and nonenrolled 16 to 24 year olds. Potential experience is defined as Age – years of schooling – 5. In years where educational attainment is measured by degree, years of schooling is approximated by using Jaeger's (2003) imputation approach. Our nonenrolled youth sample is based on individuals who respond "no" to being enrolled in school (School enrollment question). The employment-population ratio is the ratio of the number of employed to the sum of the number looking for work, the number working, the number with a job but not working, and all those who are out of the labor force. The ratio is constructed from the MLR (Monthly Labor Force Recode) variable in the Unicon Research Corporation CPS Utilities files. In these files, the variable has been made consistent across time to reflect changes in the question. The natural logarithm of real hourly earnings is constructed from the respondent's pay status. If the respondent reported that they are paid on an hourly basis, we took the logarithm of their hourly wage. If the respondent reported that they are paid on a weekly basis, we took the logarithm of the ratio of their usual weekly earnings and usual hours worked per week. We deflated nominal hourly wages using the CPI-UX-1 deflator. It is important to note that these two labor market outcomes correspond to the respondent's labor market activity during the last week and hourly wages at their current job.

[9] Authors' weighted tabulations using the U.S. Census data FERRET.

[10] John C. McCarthy, "3.3 Million US Services Jobs to Go Offshore," Forester Research Brief, November 11, 2002, at http://www.forrester.com/ER/Researc...,15900,00.html. Goldman Sachs Global Economic Research Report, "Offshoring: Where Have all the Jobs Gone?" Issue No. 03/38, September 2003.

[11] GAO "Current Government Data Provide Limited Insight into Offshoring of Services" September 2004, http://www.gao.gov/new.items/d04932.pdf

[12] The Consumer Confidence Index is developed from a Conference Board monthly survey of 5000 households (http://biz.yahoo.com/c/terms/conf.html). The Index of Consumer Sentiment is constructed from the monthly Survey of Consumers. The survey is an ongoing nationally representative survey based on approximately 500 telephone interviews with adult men and women living in households in the coterminous United States (48 States plus the District of Columbia). In each month, an independent cross-section sample of households is drawn. The respondents chosen in this drawing are then reinterviewed six months later, creating a rotating panel. The total monthly sample is typically 60% new respondents, and 40% reinterviewees (http://www.sca.isr.umich.edu/).