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**Boosting the Earnings and Employment of Low-Skilled Workers in the United States:  
Making Work Pay and Removing Barriers to Employment and Social Mobility**

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## **Abstract**

This chapter documents the relative economic performance of low-skilled disadvantaged workers in the United States and identifies key factors that have either enhanced economic security or that have become increasingly important barriers to steady employment and self-sufficiency. Low-skilled men are currently participating in the labor force at rates that are extremely low by historical comparison, suggesting that procuring and maintaining steady employment has become a serious problem for this particular group. Moreover, this trend is only partially explained by the declining earnings. In addition, increasing proportions of low-skilled men are passing through the nation's prisons and jails, leaving behind a growing number of former inmates that face particularly challenges in finding employment and bettering themselves. This development has certainly had a negative effect on the life chances of many, especially among low-skilled minority men. I analyze and offer several policy proposals designed to boost the employment and earnings of the least skilled workers. First, I discuss several recent proposals to substantially expand the Earned Income Tax Credit (EITC) for childless adults, analyzing the likely costs, effects on take-home income, and the likely impacts on employment. Next, I offer several policy proposals intended to remove some of the educational and employment barriers that hinder the reentry of former prison inmates into mainstream non-institutionalized society. In particular, I propose: (1) removing summary disqualifications of former inmates from financial assistance for education or other public assistance; (2) basing publicly mandated employment bans of former felons for specific jobs on specific offenses rather than blanket bans; (3) expunging selected criminal records after a time period; (4) funding training intermediaries to prepare ex-inmates for employment.

## 1. Introduction

The last few decades of the 20<sup>th</sup> century witnessed fairly dramatic changes in the labor market outcomes and socioeconomic status of American workers at the bottom of the earnings distribution. Earnings of the least skilled adults either stagnated or fell. Moreover, labor force participation and employment have declined considerably, suggesting a reduction in demand for the labor of the least skilled and an accompanying withdrawal from the labor force on the part of many low-skilled workers unwilling to accept diminished wages.

Certain economy-wide developments have impacted the employment prospects of all low-skilled workers regardless of race or gender. For example, the well documented changes in the earnings distribution beginning in the late 1970s have increased the relative returns to schooling beyond a secondary education as well as the returns to experience (Autor and Katz 1999).<sup>1</sup> Nonetheless, certain social and institutional developments are likely to have had disproportionate impacts on the labor market prospects of certain sub-groups within the population of low-skilled adults. For example, the 400 percent increase in the prison incarceration rate between the late 1970s and the present has disproportionately impacted less educated black men and has left in its wake large groups of less educated men who are hampered by their criminal histories in their search for employment. As a further example, the expansion of the Earned Income Tax Credit (EITC), welfare reform, the Medicaid Expansions, and the introduction of the State Children's Health Insurance (SCHIP) program greatly increased the relative returns to work over welfare for poor women with children.

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<sup>1</sup> Among the many explanations for the increase in earnings inequality over the past three decades, some of the most common include skill-biased technological change that has increased demand for high skilled workers and reduced demand for low-skilled workers (Autor and Katz 1999), the erosion of the real value of the minimum wage (Dinardo, Fortin, and Lemieux 1996), increased international trade with less developed nations (Freeman, Katz, and Borjas 1997), and increased labor market competition with low-skilled immigrants (Freeman, Katz, and Borjas 1997, Borjas 2003).

This chapter documents the relative economic performance of low-skilled disadvantaged workers in the United States and identifies key factors that have either enhanced economic security or that are becoming increasingly important barriers to steady employment and self-sufficiency. As the introduction suggests, there are important differences by gender. Low-skilled men are currently participating in the labor force at rates that are extremely low by historical comparison, suggesting that procuring and maintaining steady employment has become a serious problem for this particular group. The analysis below demonstrates that the unprecedented decline in employment and participation among men is only partially explained by the decline in earnings potential. Thus, boosting the employment rates of low-skilled men will require both supply side incentives that make work pay as well as demand side efforts aimed at increasing employer willingness to hire from this particular labor pool.

Low-skilled women have fared better in recent decades, with more modest declines in earnings and changes in employment ranging from modest decreases to substantial increases. The greatest gains in employment are found for those women most likely to be impacted by the institutional changes to the nation's safety net during the 1990s, in particular, poor and near poor women with children.

I analyze and offer several policy proposals designed to boost the employment and earnings of the least skilled workers. First, I discuss several recent proposals to substantially expand the Earned Income Tax Credit (EITC) for childless adults. I analyze the likely costs of several proposals, the degree to which the expansions would actually benefit workers at the bottom of the income distribution, the potential effect of such expansions on the incentive to marry, and the likely impact on take-home earnings and employment. My preferred proposal is a hybrid of a proposal by Edelman, Holzer, and Offner (2006) and Berlin (2007) that combines an

expanded credit for childless adults with a targeted liberalization of the benefits calculation for the poorest married couples. While the employment effects of such an expansion are likely to be modest, the impact on annual income and material poverty is substantial, and would go part of the way in reducing the real decline in earnings experienced by low-skilled workers over the past three decades. Moreover, modest changes to the current system could eliminate the marriage penalty inherent to the EITC for the poorest couples at relatively little public expense.

Second, I offer several policy proposals intended to remove some of the educational and employment barriers that hinder the reentry of former prison inmates into mainstream non-institutionalized society. Specifically, I propose

- Summary disqualification of former inmates and those with felony convictions from participating in federal public assistance programs and from receiving financial aid for education should be reversed.
- Employment bans based on former convictions and occupational licensing restrictions should be based on the content of one's criminal history record and not applied in a blanket manner. Moreover, when used, employment bans should be based on conviction rather than arrest records. Any bans on the employment of felons mandated by law should be based on the content of one's previous behavior as well as the time that has elapsed.
- We should increase investment in labor market intermediaries that specialize in building relationships with employers willing to hire ex-offenders and in placing former inmates into sustainable employment.
- States should incentivize desistance from criminal activity by expunging certain criminal records after a fixed time period has elapsed.

While the challenges faced by former inmates in the legitimate labor market are many, these modest proposals would eliminate key barriers to employment that impact increasing proportions of low-skilled men, at little cost in terms of public safety.

## 2. Who are low-earners in the U.S. and how have they fared?

Here I use data from the 1980, 1990, and 2000 Public Use Microdata Samples (PUMS) from the U.S. Census of Housing and Population to characterize the low-wage population and to document recent trends in earnings, employment, and institutionalization rates. I restrict the analysis to adults 18 to 55 years of age that are out of school, that are not in the military, and that do not report self-employment income. I measure each person's hourly earnings by dividing total annual wage and salary earnings by total annual hours worked (measured by weeks worked last year times usual hours worked). For those individuals who do not work in the previous year or who are institutionalized at the time of interview, I impute hourly earnings by assigning the median hourly wage for workers in the same year, gender, race/ethnicity, education, and labor market experience group.<sup>2</sup> Thus, average wages for all workers in the sample measure actual wages for some and the potential earnings of those who do not participate in the labor force based on the earnings of comparable individuals employed at some point during the year.

An important strength of the PUMS data concerns the fact that the data covers the institutionalized population (including inmates in jails and prisons and inpatients in mental hospitals) as well as the non-institutionalized. As will become evident shortly, the institutionalized population now comprises a sizable proportion of many demographic subgroups among the low-skilled adult population. Thus, the ability to characterize

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<sup>2</sup> The imputation is based on four mutually exclusive race categories (non-Hispanic white, non-Hispanic black, non-Hispanic Asian, and Hispanic), nine educational attainment groups (no schooling, fourth grade or less, 5<sup>th</sup> through 8<sup>th</sup> grade, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> grades, one to three years of college, and college plus), year (1980, 1990, or 2000), gender, and eight potential labor market experience groups (5 years or less, 6 to 10 years, 11 to 15 years, 16 to 20 years, 21 to 25 years, 26 to 30 years, 31 to 35 years, and 36 plus years). I measure labor market experience by assuming an entry age of 16 for workers with less than a high school education, 18 for high school graduates, 20 for those with some college and 22 for college graduates. For workers who are institutionalized, I assume that they have not worked in the previous year since for many of these workers, the long form of the PUMS is completed using administrative records that are likely to vary in quality across institutionalization (Butcher and Piehl 2006).

institutionalization trends is central to fully comprehending the current state of the low-skilled adult population in the U.S.

*Who are low-earning adults in the United States?*

Tables 1 and 2 describe how the distributions of the male (Table 1) and female (Table 2) populations have changed between 1980 and 2000 for all adults in my sample and for adults in the bottom quarter of the earnings potential distribution. Each table presents the proportion of the population accounted for by four mutually exclusive racial/ethnic groups (non-Hispanic white, non-Hispanic black, non-Hispanic Asian, and Hispanic), the distribution of a given groups share by level of educational attainment, and the proportion immigrant, institutionalized, and who report a work-limiting disability.

The prime-age adult male population has become less white, more Hispanic, and more Asian. The fraction of all men that are black has increased slightly. Within racial groups, the distribution of educational attainment has shifted decisively towards higher levels for whites and blacks, while the proportional representation of Hispanics with the lowest level of educational attainment has increased absolutely. In addition to these changes, the proportion immigrant among the male population has more than doubled, the proportion with a work-limiting disability has increase by over 60 percent, while the proportion in institutions has increased by over 200 percent. The change in the proportion institutionalized reflects the net effect of two offsetting trends. The proportion of the male population in mental hospitals has declined continuously since 1980, while the proportion in local jails and state and federal prisons has greatly increased (Raphael and Stoll 2007).

For men in the bottom quarter of the earnings distribution there are some notable facts. In both 1980 and 2000 racial and ethnic minorities are considerably over-represented among low

earners while white males are under-represented. Changes between 1980 and 2000 have reinforced this pattern, with a decline in the proportion white of 0.12, an increase in the proportion black of 0.015, an increase in the proportion Asian of 0.016, and an increase in the proportion Hispanic of 0.081. Low earners are considerably more educated on average in 2000 relative to 1980. Roughly 49 percent of low-earning males in 1980 have less than a complete high school education, compared to 33 percent in 2000. Conversely, the proportion with a high school diploma increased from 33 to 41 percent. In contrast to the overall trend, the proportion of low-earning workers with a work-limiting disability declines from 0.35 to 0.25.

One of the most dramatic differences between the trends for low-income men and the trends for all men concerns the large absolute increase in institutionalization rates. In 2000, nearly one quarter of men whose earnings potential fall in the bottom quarter of the earnings distribution are institutionalized, with most of these men in state or federal prisons or jail. This represents a nearly 10 percentage point increase since 1980.

For women, Table 2 reveals that the overall distributions of the adult female population across racial/ethnic groups and levels of educational attainment are comparable to those of men in both years. For low-wage women, however, white women account for much larger proportions of the low-wage population in both years when compared to men. The proportion immigrant and the proportion disabled increase for women overall. Among low-wage women, the proportion immigrant more than doubles while the proportion with work limiting disabilities increases slightly. The most notable difference relative to men concerns institutionalization trends. There is a very slight increase from a very low level in 1980 in the overall proportion of women in institutions (from 0.004 to 0.005). Among low-earnings women, the increase is larger (from 0.010 to 0.018), yet much smaller than that observed for men.

*Trends in wages, employment, and institutionalization for disaggregated sub-groups*

Table 3 presents the average log wages for men and women for 1980, 1990, and 2000 by race/ethnicity and by level of educational attainment, as well as the change for each decade. Note, since wages are expressed in logs, the change between any two years is approximately equal to the proportional change in hourly earnings. For the entire period, potential wages decline for all men who do not have a college degree or more, with the largest declines occurring for men with less than a complete high school education. Among the least educated white men, wages decline by roughly 22 percent between 1980 and 2000, with most of the decline occurring during the 1980s. For black and Hispanic high school dropouts, hourly wages decline overall by 17 percent, again with most of the wage loss occurring in the earlier decade. There are also sizable declines in the hourly wages of male high school graduates. These patterns clearly reveal the growing returns to education among men and are consistent with the findings of previous research.<sup>3</sup>

Wage trends for women are quite different from those for men. Perhaps the most notable differences pertain to wage levels for a given group and at a given point in time. There are large inter-gender disparities favoring males in each year within each race/ethnicity education group. However, these within-group disparities decline between 1980 and 2000.

The declines in hourly wages for women with the least skills are considerably more modest than the comparable declines experienced by men. For example, the hourly wages of white women with less than a high school diploma decline by 10 percent between 1980 and 1990

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<sup>3</sup> See Autor and Katz (1999) for a general discussion of wage trends in the United States. Juhn (2003) also imputes wages for non-participants using the average wage of workers in matching demographic groups who work fewer than 13 weeks for the imputation. Here I match to median wages for workers in one's demographic group without placing a restriction on weeks worked due to the fact that preliminary analysis revealed worked with unusually high wages among those working few weeks. This latter pattern most likely reflects measurement error in the weeks worked variable in the IPUMS data base.

and then increase by 3 percent over the subsequent decade. The comparable changes for similarly educated white men are declines of 18 percent between 1980 and 1990 and 4 percent thereafter. Similarly, the hourly wages of white female high school graduates increase by roughly 2 percent between 1980 and 2000 while the wages of corresponding white men decline by 14 percent.

Prior research on the labor supply responses of men and women suggests that declines in hourly wages should result in a decline in employment among those experiencing the wage change. A decrease in wages reduces the rate at which an individual can convert his or her non-market time into money by supplying one's time to the formal labor market. To the extent that people value their time, a decline in the wages that one's labor will command is likely to induce one to either supply less time or withdraw from the labor force entirely.<sup>4</sup> Thus, in conjunction with the patterns in Table 3, this simple theory predicts that employment rates should have declined considerably for low-skilled men, and less so for low-skilled women.

Indeed, employment does tend to decline for those demographic groups experiencing the largest declines in earnings. Table 4 presents the proportion of each group employed at the time of the census interview for the same race/ethnicity-education-gender groups displayed in Table 3. There are sizable declines in the employment rates of the least skilled male workers. Between 1980 and 2000, the employment rate for white high school dropouts declines by 14 percentage points, while the decline for white high school graduates is roughly 7 percentage points. For black men, there are large declines in employment for all groups with the exception of college

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<sup>4</sup> That is to say, the substitution effect associated with a decline in wages militates towards supplying less time to the labor market. The income effect of lower wages however, will in isolation induce one to supply more time to the labor market and consume less free time. While these two effects are offsetting and thus imply that a decrease in wages may correspond to an increase in time supplied, much of the recent empirical research on the labor supply effects of diminished low-skilled wages suggests that the net effect on labor supply has been negative (Devereux 2003, Juhn 1992, 2003, Pencavel 1997, 2002).

educated black men, with an especially larger decline (27 percentage points) for black high school dropouts. By 2000, only one one-third of prime-age, black male high school dropouts are employed on a given day, compared to nearly two thirds in 1980.

For the least skilled men the declines in employment rates during the 1990s are of equal magnitude to, or larger than the declines observed during the 1980s. By contrast, nearly all of the wage losses for these groups occur during the 1980s, suggesting that factors beyond declining wages are also driving the poor employment outcomes of less skilled men.

Low-earning women experienced smaller wage losses than men from comparable demographic groups and with similar levels of educational attainment, and thus, one would expect a priori that declines in employment would be more modest for women. In fact, with the exception of black and Asian women with less than a high school degree, the employment rates of all other groups increased during the 1980s. Juhn and Potter (2006) demonstrate that this increase in labor force participation represents the tale-end of a long trend towards greater participation among women of all skill levels. Between 1990 and 2000, this trend appears to have slowed, with modest to moderate declines in employment among women from all racial/ethnic groups and all levels of educational attainment.

One very interesting pattern evident in Table 4 concerns the within-group gender disparities in employment rates. In 1980 and 1990, men are more likely to be employed than comparable women among every group displayed in the table, with the sole exception of black college graduates in 1990. While this gender disparity varies considerably across groups, differentials on the order of 10 to 15 percentage points are typical. In the year 2000, comparable gender differences are observed among whites, Asians, and Hispanics. For blacks however, the

employment rates of males have deteriorated far enough to render the male-female employment rate differentials negative for most educational groups.

Finally, Table 5 presents the proportion institutionalized at the time of the census survey. The proportion institutionalized is comprised disproportionately of inmates of local jails and state and federal prisons. The table reveals stark inter-gender, inter-racial, and cross-educational group disparities in the incidence of incarceration and the change in this incidence over this two decade period. The largest increases are observed for black males with less than a high school degree. Between 1980 and 2000, the proportion institutionalized increases from roughly 8 percent to 27 percent of this population, a number similar in magnitude to the 33 percent of this group that is employed. The incarceration rates for men without a high school diploma more than doubles for whites and Asians, and nearly doubles for Hispanics, although the levels are considerably lower than those observed for blacks. The incarceration rates for women are quite low, although the rate for black women triples from 0.01 to 0.03 between 1980 and 2000.

The proportion of men who have ever served time in prison is certainly larger than the proportions captured at a point in time. The U.S. prison population is characterized by a high rate of turnover with nearly one half of the population being released each year and slightly over half being admitted (Raphael and Stoll 2007). Thus, the Bureau of Justice Statistics estimates that a black male born in 2001 has a 33 percent chance of serving prison time at some point in his life. The BJS also estimates that roughly one fifth of all adult black males and 3 to 4 percent of white males have served time at some point in their lives (Bonczar 2003). In previous research on the California state prison system, I estimated the proportion of adults males by race, age, and education who had served time in the state prison system. Roughly one third of prime age (25 to 44) white men with less than a high school education had been through the state prison

system. For black men with less than a high school education, a prior prison spell was nearly certain (Raphael 2005).

These trends indicate that to a greater extent than ever before, low skilled men who are not institutionalized are likely to have felony conviction and prior prison experience in their past. Combined with relatively easy access to criminal history records and employers actively screening on this factor, this trend indicates that this particular development has become an increasingly important handicap for low-skilled men in the legitimate labor market.

### **3. To What Extent Do Changes in Wages Explain Recent Employment and Incarceration Trends?**

Thus, relatively less educated men and women have both experienced declines in earnings since 1980, with men experiencing the most severe declines. These wage patterns have corresponded to uniform decreases in the employment rates of the least educated men, with particularly large declines for black men, and mixed patterns with regards to the changes in employment for the least educated women. Concurrently, the proportion of males incarcerated and not working has increased, by a great amount for certain sub-groups (black men in particular), and by a more moderate yet significant amount for less skilled men more generally.

Certainly, these changes in earnings, employment, and institutionalization rates are related, with the direction of causality running in multiple directions. Declining wages are likely to induce some to withdraw from the labor force. Moreover, decreases in the returns to legitimate work increases the relative returns to criminal activity, a factor that will increase the proportion of the population at risk of becoming incarcerated and, ultimately, the incarceration rate. Finally, men fail to accumulate human capital while incarcerated (Raphael 2005), may be stigmatized by the label of ex-offender when seeking legitimate employment (Holzer et. al. 2006,

2007, Pager 2003), and may experience an erosion of their legitimate work skills and an augmentation of their propensity to engage in crime while incarcerated. These factors are all likely to negatively influence employment and earnings.

The first two factors suggest that diminished wages are likely to be partially responsible for the low employment rates of low-skilled men and perhaps their newly high incarceration rates. Put simply, if people at the bottom of the earnings distribution are not working because working pays less than it used to, and are engaging in more criminal activity as a side product, than addressing this problem requires making legitimate work pay. Tables 3, 4, and 5 do indeed suggest that those groups suffering the largest wage losses also exhibit the largest employment declines and the largest increases in incarceration, although the patterns across groups and the timing aren't perfect. Hence, to the extent that society could alter existing taxes and subsidies to impact the take home pay of low-earning workers, policy makers may be able to turn the tides on some of these more adverse developments.

In this section, I address two related questions that will provide the analytical research findings to more thoroughly investigate this policy idea. Specifically, to what extent are recent employment trends driven by falling wages? Concurrently, how much of the increase in institutionalization rates can be attributed to poorer labor market opportunities?

#### *Declining wages and the employment rates of low-skilled men and women*

To assess the extent to which declining wages drive declining employment rates, one needs to assess the degree to which labor supply behavior is responsive to changes in potential earnings. The theoretical concept used by economists to describe this behavioral response is the labor supply elasticity. The supply elasticity is defined as the percentage change in employment among a given group caused by a one percentage point change in wages.

In appendix A, I describe the details of a procedure that I use to estimate the labor supply responsiveness of men and women to changes in wages. While I will not discuss the details here, I will note that the estimation method accounts for the institutionalized and the possibility that the labor supply decision may ultimately impact the probability of an incarceration spell. The elasticity estimates from this analysis are presented in Figures 1 and 2. The estimates from a model that uses all men indicates a moderate degree of responsiveness of employment to wages, with a high-end labor supply elasticity estimate of roughly 0.2 (indicating that a 10 percent decrease in wages would cause a two percent decrease in employment). Race-specific estimates suggest that black men are most responsive to changes in wages.

In general, women's supply behavior is more responsive to wage changes than that of men. The low-end overall elasticity estimate for women is nearly double the high-end estimate for men (0.4 vs 0.2). In addition, the elasticity estimates for black and Hispanic women are particular large. This range of elasticity estimates for both men and women is in line with the results discussed in Juhn and Potter (2007), Devereux (2003), Juhn (1992) and Pencavel (1997, 2002).

With these elasticity estimates and the wage changes documented in Table 3, it is possible to calculate the degree to which declining wages explain recent employment patterns.<sup>5</sup> I present the results from these calculations in Table 6. The first column presents actual changes in employment rates between 1980 and 2000 for the race/education groups depicted in Tables 3 through 5. The second column presents the change in employment predicted by the actual change in wages for this group using the high race-specific elasticity estimate from the values

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<sup>5</sup> I calculate the predicted change in employment attributable to declining wages by multiplying the supply elasticity by the actual proportional decline in wages and by the base employment rate for each group in 1980.

presented in Figures 1 and 2. The final column presents a similar calculation using the low elasticity estimate for the given race and gender group.

For the least educated men, declining earnings explains relatively small, but not unsubstantial, portions of the decline in employment rates. For white men without a high school degree the predicted changes in employment attributable to declining wages range from no change to a decline of 3 percentage points. For black men without a high school degree, 4 to 6 percentage points of the 27 percentage point decline can be attributed to a negative supply response to falling wages, constituting 16 to 22 percent of the decline. Similarly, for black men with high school diplomas (the modal category for this group of men), declining wages explain 3 to 5 percentage points of the 16 percentage point decline between 1980 and 2000 (roughly 18 to 30 percent of the decline). Thus, reversing wage trends for low-skilled men would likely lead to increases in employment rates, but the increase would fall far short of undoing the employment declines witnessed in recent decades.

Among women, only black and Hispanic women experience substantial declines in employment between 1980 and 2000, and even for these groups, the declines are modest in comparison to those for men. For black women with less than a high school degree, roughly 16 percent of the decline in employment is attributable to declining wages. For comparable Hispanic women, however, half to all of declining employment can be attributed to lower wages in 2000.

To be sure, the relative returns to work for the less skilled have been influenced by various policy developments over this time period that are not reflected in their hourly wages. For poor women with children, welfare reform, the expansion of the EITC, Medicaid expansions, and the introduction of the State Children's Health Insurance Program (SCHIP) have greatly

increased the returns to work. In fact, with the EITC impacting take home pay by as much as 40 percent for some workers, the hourly wage provides a rather imprecise measure of the marginal return to an additional hour of work for the least skilled women.

The wages of childless men as well as those of men who are non-custodial fathers have not been influenced by these developments. In fact, for many of these men, the marginal return to working has likely been eroded by child support policies that garnish the wages of men with arrearages, impose large marginal taxes on legitimate labor market earnings, while (in the case where their former partners and children are receiving public assistance) passing little to none of the collected revenues onto their dependents (Edelman et. al. 2006, Primus 2002). Thus, for low skilled men as well, observable hourly wages provides a noisy, and perhaps biased, gauge of the after tax rewards from work.

Nonetheless, these tabulations do indicate that falling wages provides a partial explanation for the eroding employment rates of the least skilled, especially for less educated African Americans.

#### *Declining wages and the increased incarceration rates of men*

There is now considerable evidence that economically-motivated crime increases with unemployment and decreases with average wages, especially the average wages of low skilled workers (Freeman 1987, Grogger 1998, Fagan and Freeman 1999, Raphael and Winter-Ebmer 2001, and Gould et. al. 2002). A higher propensity to engage in crime also corresponds to a larger incarcerated population (Raphael and Stoll 2007). These two effects jointly describe the pathway between the eroding labor market position of low-skilled adults and the increase in incarceration. Simply stated, when work pays less, more people shun work and turn to crime.

The more people that commit crime, the higher the proportion at risk for incarceration and the greater the incarceration rate.

In appendix B, I outline a strategy for estimating the effect of the decline in wages described in Table 3 on the increase in incarceration rates discussed above. The method requires drawing on existing estimates of the responsiveness of criminal activity to changes in wages, estimating the risk of incarceration conditional on engaging in crime, and the time one is likely to serve conditional on being caught and incarcerated. The results of this exercise are presented in Table 7. The table presents estimates for men only since the changes in institutionalization rates are quite modest for women. The first column of figures presents the actual change in the proportion institutionalized, the next column presents the change predicted by wage changes between 1980 and 2000, and the final column presents the ratio of the predicted to the actual change. For relatively less educated white men, declining wages predict an increase in the institutionalization rate equal to approximately 15 percent of the actual increase. By comparison, the proportion of the actual increase for low-educated black men predicted by their change in wages is quite small (on the order of 2 to 3 percent). This is driven largely by the much larger increases in institutionalization rates for black men. The figures for Asian and Hispanic men are more in line with those for whites. For Hispanic high school dropouts, declining wages predict roughly 18 percent of the increase in incarceration rates for this group.

These results suggest that declining earnings explains a small portion of the overall increase in incarceration. In previous research with Michael Stoll (Raphael and Stoll 2007), I have estimated that declining wages for low-skilled men is responsible for no more than 13 percent of the increase in incarceration rates between 1980 and 2000. Nonetheless, small decreases in incarceration caused by, for example, a wage subsidy may generate substantial

social savings. Correction expenditures per prison year are on the order of \$35,000 per year (Donohue 2007). In 2005, there were approximately 1.5 million prison inmates. If a targeted wage subsidy were to reduce the prison population by a modest five percent, 75,000 fewer inmates would be incarcerated on any given day, generating savings in corrections expenditures of roughly \$2.6 billion. Moreover, accounting for some of the harder-to-price social costs of incarceration (including the impact on families and public health) as well as the value of the crimes averted would increase this figure considerably. Thus, even small effects such as those in Table 7 deserve serious consideration.

#### **4. Criminal History Records and the Employment Prospects of Low-Earning Males**

To be sure, the relatively poor labor market outcomes for very low-skilled men and women are driven largely by skill deficits and a general lack of job readiness. This is true of low earners in years past as well as present and to workers at the bottom of the earnings distribution in other market economies. Nonetheless, the recent U.S. experience is one where earnings and employment have eroded while the formal level of educational attainment among the least skilled has actually increased. These offsetting trends suggest that factors beyond skills have operated to chip away at the relative and absolute economic position of these adults.

In this section, I discuss the likely impacts of the large increases in the proportion of low-skilled men with criminal history records on their employment and earnings prospects. We have already seen that male incarceration rates have increased considerably as has the proportion of men with prison time in their past. Here, I explore the mechanisms through which a prior incarceration experience is likely to impact future as well as lifetime earnings and employment.

*Incarceration and the accumulation of work experience*

Serving time interrupts one's work career. The extent of this interruption depends on both the expected amount of time served on a typical term as well as the likelihood of serving subsequent prison terms. The average prisoner admitted during the late 1990s on a new commitment faced a maximum sentence of three years and a minimum of one year (with many serving time closer to the minimum) (Raphael and Stoll 2004). If this were the only time served for most, than the time interruption of prison would not be that substantial.<sup>6</sup>

However, many people serve multiple terms in prison, either due to the commission of new felonies or due to violation of parole conditions post-release. A large body of criminological research consistently finds that nearly two thirds of ex-inmates are rearrested within a few years of release from prison (Petersilia 2003). Moreover, a sizable majority of the re-arrested will serve subsequent prison terms. Thus, for many offenders, the typical experience between the ages of 18 and 30 is characterized by multiple short prison spells with intermittent, and relatively short, spells outside of prison.

In prior longitudinal research on young offenders entering the California state prison system, I documented the degree to which prison interrupts the early potential work careers of young men. I followed a cohort of young men entering the state prison system in 1990 and gauged the amount of time served over the subsequent decade (Raphael 2005). This analysis is summarized in Table 8. Panel A presents estimates of the distribution of the total amount of time served accounting for multiple prison terms. The median inmate serves 2.8 years during the 1990s, with the median white inmate (3.09 years) and median black inmate (3.53 years) serving

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<sup>6</sup> Of course, I am not saying that a year in prison is not costly. However, a year absence from the labor market during the beginning of one's career would have only a small effect on accumulated experience.

more time and the median Hispanic inmate (2.23 years) serving less time.<sup>7</sup> Roughly 25 percent served at least 5 years during the 1990s while another 25 percent served less than 1.5 years.

However, as a gauge of the extent of the temporal interruption, these figures are misleading. Cumulative time served does not account for the short periods of time between prison spells where inmates may find employment, yet are not able to solidify the employment match with any measurable amount of job tenure. A more appropriate measure of the degree to which incarceration impedes experience accumulation would be the time between the date of admission to prison for the first term served and the date of release from the last term.

Panel B of Table 8 presents the quartile values from the distribution of this variable. For the median inmate, five years elapses between the first date of admission and the last date of release. For median white, black, and Hispanic inmates, the comparable figures are 6.2, 6.5, and 3.2 years, respectively. For approximately one quarter of inmates, nine years pass between their initial commission to prison and their last release. In other words, one quarter of these inmates spend almost the entire decade cycling in and out of prison.

Spending five years of one's early life (6.5 years for the median black offender) cycling in and out of institutions must impact one's earnings prospects. Clearly, being behind bars and the short spans of time outside of prison prohibits the accumulation of job experiences during a period of one's life when the returns to experience are the greatest.

*Does having been in prison stigmatize ex-offenders?*

The potential impact of serving time on future labor market prospects extends beyond the failure to accumulate work experience. Employers are averse to hiring former prison inmates and often use formal and informal screening tools to weed ex-offenders out of the applicant pool.

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<sup>7</sup> The California inmate population is roughly evenly distributed between whites, Hispanics, and Blacks and is overwhelmingly male.

Given the high proportion of low-skilled men with prison time on their criminal history records, such employer sentiments and screening practices represent an increasingly important employment barrier, especially for low-skilled African-American men.

Employers consider criminal history records when screening job applicants for a number of reasons. For starters, certain occupations are closed to felons under local, state, and in some instances, federal law (Hahn 1991). In many states employers can be held liable for the criminal actions of their employees. Under the theory of negligent hiring, employers can be required to pay punitive damages as well as damages for loss, pain, and suffering for acts committed by an employee on the job (Craig 1987). Finally, employers looking to fill jobs where employee monitoring is imperfect may place a premium on trustworthiness and screen accordingly.

In all known employer surveys where employers are asked about their willingness to hire ex-offenders, employer responses reveal a strong aversion to hiring applicants with criminal history records (Holzer, Raphael, and Stoll 2006, 2007; Pager 2003). For example, over 60 percent of employers surveyed in the Multi-City Study of Urban Inequality (MCSUI), indicated that they would “probably not” or “definitely not” hire applicants with criminal history records, with “probably not” being the modal response. By contrast, only eight percent responded similarly when queried about their willingness to hire for current and former welfare recipients.

The ability of employers to act on an aversion to ex-offenders, and the nature of the action in terms of hiring and screening behavior, will depend on employer accessibility to criminal history record information. If an employer can and does access criminal history records, the employer may simply screen out applicants based on their actual arrest and conviction records. In the absence of a formal background check, an employer may act on their aversion to hiring ex-offenders using perceived correlates of previous incarceration, such as age,

race, or level of educational attainment to attempt to screen out those with criminal histories. In other words, employers may statistically profile applicants and avoid hiring those from demographic groups with high rates of involvement in the criminal justice system (Holzer, Raphael, and Stoll 2006).

The audit study by Pager (2003) offers perhaps the clearest evidence of employer aversion to ex-offenders and the stigma associated with having served time in prison. The study uses male auditors matched on observable characteristics including age, education, general appearance, demeanor, and race, to assess the effects of prior prison experience on the likelihood that each auditor is called back for an interview. The author finds consistently sizable negative effects of prior prison experience on the likelihood of being called back by the employer, with callback rates for the auditor with prior prison time one half that of the matched co-auditor.

### *Summary*

Incarceration is likely to negatively impact the earnings and employment prospects of former inmates. On the supply side, incarcerated felons fail to accumulate work experience during a period of life when earnings tend to increase the fastest. The time out of the labor force while incarcerated, as well as the longer time of tenuous attachment to the labor force while cycling in and out of prison, permanently alters the lifetime earnings path of prior inmates for the worse. On the demand side, employers consistently express a strong reluctance to hire workers with criminal history records. This reluctance is driven in part by liability fears, by a premium placed on trustworthiness, but also by public policy that legally prohibits employers from hiring convicted felons into certain job categories. In total, the greater incidence of involvement with the criminal justice system occurring over the past three decades has most certainly negatively impacted the prospects of the least skill U.S. adults.

## **5. Improving the Employment and Earnings Prospects of Low-Skilled Adults: Expanding the EITC and Removing Employment Barriers for Former Inmates**

I have documented a severe erosion of the earnings and employment of less skilled men in the U.S. and more modest developments for less skilled women. While the sources of these trends are certainly complex, there are direct policy levers under the control of federal and state government that could be effectively employed to reverse them. For example, raising the minimum wage would most directly increase the earnings of the lowest paid workers. While economists debate the likely employment effects of the minimum wage, there is solid research suggesting that modest increases have very little effect on employment while increasing the total amount of income earned by the least skilled (Card and Krueger 1994).<sup>8</sup> Moreover, the earnings of the least skilled are low primarily because of their low skills. Improving our primary, secondary, and post secondary educational systems as well as augmenting the resources devoted to workforce development would clearly benefit our lowest earners (the topic of discussion in the chapter in this volume by Lerman).

In this section, I offer and analyze two proposals for improving the take home earnings of the least skilled workers and for boosting the employment rates of those who should be working yet are participating in the formal labor force at historically low levels. Specifically, I discuss several current proposals for expanding the Earned Income Tax Credit to single childless workers and offer a hybrid proposal that combines what I see as the best elements of each. Second, I discuss several steps that federal, state, and local policy makers could take to improve

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<sup>8</sup> Research on the employment effects of the minimum wage suggests that small increases result in negligible levels of job destruction, though large increases do indeed reduce employment. The impact on total earnings accruing to minimum wage workers depends on how sensitive the demand for labor is to changes in wages. Most research suggests that demand for low skilled workers is relatively inelastic, and thus an increase in the minimum wage lead to a total increase in the aggregate wage bill accruing to low-wage workers.

the chances of former inmates and convicted felons and aid the reentry of recently released inmates into conventional non-institutionalized society.

### *Expanding the EITC*

First introduced in the 1970s, the EITC has become one of the most important anti-poverty policies in the U.S. At a current cost of approximately \$40 billion, the EITC distributes income to low-earning workers primarily in families with children, although there is a modest benefit for childless workers between 25 and 65 years of age. EITC benefits are calculated as a fraction of annual earnings up to a maximum and are phased out at a gradual rate for income earned beyond a further threshold. For example, for a married couple with two children in 2007, the EITC provides an additional \$0.40 for each dollar earned up to \$11,790 providing a maximum annual benefit of \$4,716. The benefit level is held constant until family earnings reach \$17,390 and then is reduced by \$0.21 for each dollar earned above this threshold until the benefit is completely phased out (occurring at \$39,783). Since benefits are conditional on having positive earnings, the EITC provides a strong incentive to participate in the labor force, although the program does provide an incentive for many workers who are already working to work fewer hours per year.<sup>9</sup>

The expansions of the EITC during the 1990s had very large impacts on the employment and after tax incomes of those adults most effected (Meyer and Rosenbaum 2001, Meyer and Holtz-Eakin 2001). However, these expansions had very little impact on the earnings of single non-custodial parents or childless single adults with very low earnings, as nearly all of the extra

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<sup>9</sup> In particular, for households with incomes in the region of benefits schedule between the maximum benefit threshold and the phase-out threshold, the EITC increases income without altering the marginal return to an additional hour of work. Simple economic theory predicts that such an increase in income would induce most people to work fewer hours. Workers whose income places them in the phase out region of the benefits schedule have particularly strong incentives to work fewer hours, as the phase out rate reduces the hourly wage by 21% while the benefit provides a positive increase in income. Existing research suggests that the negative incentive effects are particularly strong for secondary earnings in two-parent families (Eissa and Hoynes 2004).

resources devoted to the program went to households with children. In light of this fact, there are several recent proposals to expand the EITC for childless adults and non-custodial parents (Danziger and Gottschalk 2005, Edelman, Holzer and Offner 2006, Berlin 2007, Center for American Progress 2007).

The attractiveness of such proposals lies in their direct effect on the earnings of the least skilled and on their simplicity. Increasing earnings inequality and declining wages driven by a host of factors have adversely impacted the material well being and employment rates of the least skilled workers. Thus, making work pay through a wage subsidy will directly counter these trends regardless of their source, improve the material well being of the poor, while providing a strong incentive to engage in the legitimate labor market, and perhaps a disincentive to engage in criminal activity. To be sure, the existing proposals vary in cost, the degree to which the benefits are targeted towards the lowest earners, and the degree to which these expansions impact incentives along other dimensions such as marriage. Moreover, along these three dimensions any one proposal does not dominate.

Here, I analyze several variants of two recent proposals to expand the EITC and fashion a simple hybrid of the two proposals that addresses the marriage penalty while maintaining the well-targeted nature of the current EITC. The two existing plans that I analyze are

- **The Edelman, Holzer and Offner (EHO) Proposal:** In their book, *Reconnecting Disadvantaged Young Men* (2006), Peter Edelman, Harry Holzer, and Paul Offner offer a plan for a targeted expansion of the EITC toward single childless workers and non-custodial parents. The plan calls for a 20 percent wage subsidy for the first \$7,500 in earnings with a maximum subsidy of \$1,500. Beyond earnings of \$10,000, the subsidy is taxed away at the rate of \$0.15 per dollar until it is completely phased out at \$20,000 in annual earnings. The proposal also calls for disregarding one half of the earnings of the lower earning spouse in two earner families for the purposes of calculating EITC benefits. In the analysis below, I assume that all workers 18 to 65 who meet the income

criteria are eligible for the childless credit. Note this proposal is quite similar to that recently offered by the Center for American Progress Task Force on Poverty.<sup>10</sup>

- **The Berlin Proposal:** In a recent working paper, the president of MDRC, Gordon Berlin (2007), proposes a targeted expansion of the EITC singles benefit along with a change in the manner in which family income is tabulated for the purposes of the credit. Regarding the childless credit, Berlin proposes an expansion for all adults 21 to 54 years of age who work full time at a rate of 25 cents per dollar earned through \$7,800 of earnings, with a phase out beginning for earnings beyond \$14,400 at a rate of \$0.16 per additional dollar earned (with a total phase out income level of \$26,587). Berlin also proposes that EITC benefits be calculated based on individual income rather than family income. Thus, in a two earner household with two children, the higher earning worker would claim the children for the purposes of the EITC and the benefit attributable to this worker's earnings would be calculated accordingly. The lower earning worker would qualify for the childless credit.

To highlight the relative characteristics of these two proposals, I simulate the costs, impacts on the income distribution, and impacts on average earnings of these two plans (and, by extension, the likely impacts on employment). For simplicity, I modify the existing proposals somewhat to highlight the tradeoffs in the two approaches. Specifically, I apply the EHO childless credit phase-in and phase-out rates as well as the income thresholds to the Berlin plan. In addition, I assume that all workers between 21 and 54 are eligible for benefits under the Berlin plan irrespective of full time/part time status. I also consider an enhanced EHO plan that extends the 20 percent earnings subsidy through \$10,000 in annual earnings, effectively giving a 20 percent raise to a full-time minimum wage worker. Finally, I consider a hybrid plan that combines elements of the EHO and Berlin proposals. Specifically, I combine the EHO childless credit for all workers 18 to 65, with the Berlin income calculation rules applied selectively to families with

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<sup>10</sup> In the report, *From Poverty to Prosperity*, (2007) The Center for American Progress proposes an expansion of the EITC nearly identical to that in Edelman, Holzer, and Offner with the addition that the childless credit be available to all adults yet limited to adults 18 to 24 who are not enrolled in school. The report also calls for an expansion of the phase in rate for families with three or more children from the current 40 percent (applicable to all families with two or more children) to 45 percent.

earnings equal to or less than \$30,000 per year. For qualified households with earnings above \$30,000, I apply the income determination rules in the EHO proposal.<sup>11</sup>

I use the March 2006 Current Population Survey (CPS) to simulate how each of these proposals would have impacted outcomes in tax year 2005.<sup>12</sup> Table 9 displays cost estimates of total EITC disbursements using the parameters of each of these proposals to calculate EITC benefits for eligible families and individuals. Before proceeding, a number of qualifications should be noted. First, these simulations predict a total costs for the current system of roughly \$30 billion for tax year 2005, approximately \$5 to \$6 billion below actual costs. In isolation, this fact suggests that the costs simulated in the table may be biased downward. Biasing the estimates in the other direction, I am assuming a 100 percent take up rate for all available benefits. In practice, take up of EITC is not universal, especially for the childless credit, and thus this assumption is likely to bias costs upwards. Finally, the cost estimates in Table 9 do not account for any behavioral labor supply response among potential recipients – i.e., the cost estimates simply apply the alternative benefit formulations to those who work without considering the likely impact of expanded employment. However, as I will discuss shortly, the employment effects of each of these proposals are likely to be quite modest, thus minimizing the importance of this particular behavioral effect on costs.

With these caveats in mind, the simulation suggest that the EHO plan would increase total EITC costs by roughly \$18 billion, the enhanced EHO plan by \$35 billion, the Berlin proposal by \$26 billion, and the hybrid proposal by \$20 billion. For the Berlin proposal, my cost estimate is close to that cited by the author in the original working paper (approximately \$29

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<sup>11</sup> An alternative form of this hybrid would be to calculate benefits based on individual income for some phase in period (say the first three years of marriage as proposed in Edelman et. al. (2006)).

<sup>12</sup> I use the March 2006 CPS to first classify all adults marital status and by whether they have dependents under 18. The four possibilities are then used to simulate tax filing units, where presumably single childless works file independent returns, single parents, file returns as a head of household, and married couple file joint returns.

billion). For the EHO proposal, my cost estimate is nearly double that cited by the authors (\$9.8 billion), although this discrepancy is nearly completely accounted for by the difference in the assumed take up rate.<sup>13</sup> Nonetheless, the costs estimates reveal a clear ordering, with the EHO proposal the least costly, the enhanced EHO proposal the most expensive, and the Berlin and hybrid proposals at intermediate cost points. As the enhanced EHO proposal would have the largest impact on the take home pay of low-income workers, and thus the largest likely effect on employment, the cost estimates reveal the fairly obvious tradeoff between impact size and cost.

Table 10 investigates where in the earnings distribution the additional dollars expended under each proposal land. To construct this table, I first simulated tax-paying units by assuming that all single childless adults as well single parents file individual returns and that all married adults file joint returns. I then stratified the distribution of wage and salary earnings across these tax filing units into 10 percent slices, or deciles, ordering them from lowest to highest. The figures in the table give the percent of the additional dollars spent under each proposal (the last row of figures in Table 9) that would accrue to each income decile.

The table reveals quite large disparities in how well targeted these proposals are towards the bottom of the earnings distribution. The additional dollars spent under the EHO and the enhanced EHO proposals are heavily concentrated in the bottom three deciles of the earnings distribution with 91 percent of the former and 89 percent of the latter accruing to tax filing units with less than \$20,000 in annual income. Some of the additional benefits do hit higher up in the income distribution, since married couples with incomes as high as \$51,000 per year would

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<sup>13</sup> Edelman et. al. (2006) assume a take up rate of the childless benefit of 0.67 and limit the credit to workers 21 to 64. Imposing these two restrictions lowers my cost estimates for this plan to \$8.6 billion, quite close to \$9.8 billion estimate offered by the authors.

qualify for benefits under the EHO proposal.<sup>14</sup> However, in proportional terms, the amount accruing to units with earnings above \$40,000 is trivial. For the Berlin proposal, only 49 percent of the additional dollars hits the bottom 30 percent of the income distribution, with a much higher proportion escaping above the median income (38 percent). These figures suggest that there are many households where a relatively high earning spouse is married to a relatively low-earning spouse whose income would qualify for the childless benefit. The hybrid proposal, on the other hand reveals that a targeted application of the income eligibility calculations under the Berlin proposal (restricted to households with incomes below \$30,000) preserves the targeting of the EHO proposal with relatively little additional benefits accruing to high income households and a relatively modest increase in total costs above the base EHO proposal.

While the EHO proposal and its variants are well targeted, the Berlin proposal wins out in terms of the implicit marriage penalty. Table 11 calculates the credit for a two earner family where each working adult earns \$10,000 per year (roughly the earnings of a full-time minimum wage worker). Hypothetical credits are tabulated when married, when unmarried, and by the number of dependent children. While the actual financial effect of marriage will differ in magnitude and, sometimes, in sign from those presented in Table 11 for households with different income mixes, two full-time low paid workers provide a good baseline for policy intended to reduce poverty and aid the lowest paid workers in the country. In general, the marriage disincentives will be higher for higher-income couples for most of the proposals analyzed here.

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<sup>14</sup> Under the EHO proposal, the highest possible phase out income would be for a married couple with two or more children. Using the 2006 EITC phased out total, total earnings must satisfy the equation  $\text{Income}_h + .5 * \text{Income}_l \leq 38,348$ , where the first term is the income of the higher earning spouse and the second term is the income of the lower earning spouse. The highest possible total income that is still eligible for some benefit is approximately \$51,000. However, the benefit accruing to such a household would be miniscule.

As can be seen, the current EITC creates modest disincentives to marry when considered in isolation. The largest penalty occurs for couples with one child (\$683). The EHO proposal as well as the enhanced EHO proposal tend to exacerbate this problem. For a couple with no children, marriage reduces total credit income by roughly \$1,950. The effect is somewhat smaller for couples with one child (-\$1,500) and two or more children (-\$964). These penalties are considerably larger for the enhanced EHO proposal.

In contrast, there is no marriage penalty under the Berlin proposal. Since benefits are calculated according to individual rather than joint income, the proposal has a neutral impact on household formation. This is clearly an attractive design feature. However, it comes at the expense of poorer targeting of the benefit dollars, as was illustrated in Table 10. The hybrid proposal also eliminates the marriage penalty for this low-income couple. However, the penalty is shifted further up the income distribution, specifically towards couples with combined incomes of \$30,000 or higher. Aggregate benefits for such higher income couples are smaller than for lower income couples, and account for a smaller percentage of annual income. Thus one might argue that in such instances, the marriage penalty associated with the EITC is likely to have less of an influence on behavior than when the credit is larger absolutely and proportionally.

In our discussion of employment and earnings trends, the role of declining wages in explaining the declining employment of low-skilled men and women was heavily emphasized. One might ask whether the proposed expansions analyzed here would appreciably alter employment by greatly increasing the returns to formal work. Among the lowest earners without children, such as those earning minimum wage, the proposed expansions would substantially raise earnings (by as much as 20 percent) effectively countering the ground lost between 1980

and the present. However, even among the least skilled, the proportion earning the minimum wage is low, and thus for many the proposed expansions will only subsidize part of annual earnings, with some low-skilled workers likely to be operating within the phase-out income range.

To assess the overall effects of these expansions on take home pay and their potential to draw certain groups into the labor market, I have tabulated average annual earnings for certain sub-groups of the population with extremely low employment rates and characterized the benefits under each of these proposals as a proportion of annual earnings. The proportional increase when combined with estimates of the supply responsiveness of these groups provide ball park estimates of the boost to employment rates one might expect from the expansions discussed here.<sup>15</sup>

Table 12 presents the proportional increases in annual income that would be generated by the proposed expansions for selective groups of low-skilled males with very low employment rates. All tabulations pertain to single, childless men with the additional characteristics indicated in the table. The first column demonstrates that the existing system has virtually no effect on earnings (less than half of a percent) and thus likely has no effect on individual decisions to work among these men. The EHO/Hybrid proposal<sup>16</sup> provides a notable increase in annual income for all groups depicted ranging from two to six percent, with the largest increase (six percent) for black high school dropouts between 18 and 25 years of age. The enhanced EHO proposal has the largest proportional effects on income, with increased among young high school dropouts as

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<sup>15</sup> This method basically ignores how the EITC impacts the returns to the marginal hour. To be sure, for many workers who receive the EITC credit the credit increases take home pay while providing an incentive to reduce hours worked. With this caveat in mind, the calculated employment effects are offered as baseline estimates for the purposes of bounding the employment effect from above. Nonetheless, the fact that most recipients receive the EITC as a once-per-year lump-sum payment may indicate that the connection between the benefits calculation parameters and the returns to additional work on the margin may be blurred for most. If this is the case, these simple calculations would provide reasonable first approximations.

<sup>16</sup> For single with no dependents under 18, the EHO proposal and the hybrid proposal are identical.

high as eight percent for all groups with the exception of white men (five percent). The Berlin proposal has the smallest effect on earnings among the new proposals, ranging from one to four percent, with most men characterized in the table experiencing increases on the order of two percent.

How much of an increase in employment might we expect from these expansions? When combined with the labor supply elasticity estimates discussed above, the earnings increases in Table 12 are likely to have very modest effects on employment. For example, the EHO proposal is predicted to impact the employment rate of all black male dropouts by roughly one percentage point, while the larger enhanced EHO proposal might increase the employment rate of young black dropouts by as much as two percent. Given the lower responsiveness of less skilled men in the other racial/ethnic groups, the employment effects are likely to be even smaller.

As an overall assessment of the proposals, it is clear that any one does not dominate, and that each has relative advantages and disadvantages. The EHO proposal costs less and delivers more income to the lowest earning workers.<sup>17</sup> However, the expanded childless credit exacerbates the marriage penalty inherent to the current system. The Berlin proposal eliminates this penalty, but at a higher cost and a less well-targeted program. The hybrid model, I believe, combines the strengths of both proposals, yielding a well targeted expansion that reduces, or for some eliminates, the disincentive to marry. While the marriage disincentives are pushed further up the earnings distribution, one can reasonably argue that the behavioral impact of the penalty is likely to be smaller for higher income couples.

The small projected employment effects of these expansions are disappointing and suggest that substantially increasing employment through supply-side incentives would require a

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<sup>17</sup> The analysis above looks at the proportion of income accruing to the deciles of the simulated tax filing units. Analysis of the absolute dollars accruing to these deciles also reveals that larger absolute benefits for households in the bottom three deciles.

much bigger and costlier expansions than the proposals analyzed here. Nonetheless, the proposals represent considerable increases in the incomes of the workers at the very bottom of the distribution, increases that will greatly improve their material well being and provide strong incentives for a small slice of the nation's poorest adults to engage in legitimate work.

*Policies to remove barriers to employment for ex-offenders*

Spending time in prison or having a prior felony conviction in one's history is becoming an increasingly common characteristic of low-skilled workers, especially for low-skilled minority men. While the causes of this increased interaction with the criminal justice system are varied, the lion's share of this development is attributable to changes in sentencing policy that have both increased the average time that an offender spends behind bars as well as enlarged the scope of behavior punished by a spell of incarceration (Raphael and Stoll 2007). My analysis of employment trends found that only a small part of the decline in employment rates among the least skilled men can be explained by declining wages, suggesting the limits of policies designed to boost take home earnings. Fully addressing the employment crises for these men requires directly addressing the barriers to employment created by one's official criminal past.

Facilitating the successful reentry of former inmates and prior felons into non-institutionalized society is an extremely complex problem that will most likely require substantial investments in training, social services, employment services, and post-release monitoring (see the discussions in Petersilia (2003) and Travis (2007)). The sheer size of this population, with roughly 600,000 inmates released each year and nearly five percent of the adult male population having served time, is indicative of the enormity of this challenge. Nonetheless, there are simple steps that the state and federal government could take that would not

compromise public safety yet would eliminate some of the challenges that former inmates and felons face in procuring employment and avoiding extreme poverty post-release.

*To begin, the summary disqualification of former inmates and those with felony convictions from participating in federal public assistance programs and from receiving financial aid for education should be reversed.* Currently, those with prior drug felony convictions are prohibited from receiving federal financial education assistance. Moreover, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act made drug felons ineligible for food stamps and cash assistance for life. States could adopt the federal ban on food stamps and cash assistance as is, or pass legislation to modify or eliminate the ban. States are not authorized to eliminate the ban on financial aid (Legal Action Center 2004).

The only possible rationale for such collateral punishment of drug offenders is that by enhancing punishment fewer people will engage in drug crimes. However, the deterrence effects of incarceration itself are hotly debated among those who study the determinants of crime (see for example Lee and McCrary (2006) and Levitt (1998)), with much research suggesting that the likely effects are quite small. With this in mind, the deterrent effects of much more removed, and perhaps less salient, punishments such as a lifetime ban on food stamps receipt or becoming ineligible for Pell grants must certainly generate very little by way of crime reduction. Such bans, however, do make it more difficult for released offenders to avoid extreme poverty and to turn their lives around. Financial aid through the Pell grant program is one of the main sources of assistance for those attending community college, an important source of training and secondary education for less skilled adults. Food stamps very effectively provide basic assistance to meet the most fundamental needs of the poor. Banning former felons from participating in these programs is frankly counter-productive. Those states who maintain

complete or partial bans on participation in public assistance should drop them, and the federal governments should reverse the ban on the drug offenders receiving educational assistance.

*Employment bans based on former convictions and occupational licensing restrictions should be based on the content of one's criminal history record and not applied in a blanket manner. Moreover, when used, employment bans should be based on conviction rather than arrest records. Any bans on the employment of felons mandated by law should be based on the content of one's previous behavior as well as the time that has elapsed.* In their analysis of the consideration by prior criminal history records, the Legal Action Center (2004) found that in nearly all states there is no standard governing the consideration of prior criminal history records by employers and occupational licensing agencies. In many states, employers can fire anyone who is found to have a criminal history record regardless of the gravity of the offense, the time since conviction, or the relevance of the past behavior to the current to one's current job responsibility. In addition, employers are generally free to consider and discriminate based upon one's criminal history in hiring, with most states allowing employers to consider arrests not leading to conviction.

Holzer et. al. (2006) demonstrate that most employers of low skilled labor check criminal history records in some manner (either by directly asking the applicant, paying a private firm, or performing a query of the state criminal history repository), and that the proportion of employers that check has increased considerably over the decade of the 1990s. The high propensity to check, the complete discretion in considering past criminal history records, and the high proportion of men with prior convictions all indicate a need for some governing standard that addresses the interests of employers but also recognizes the employment needs of former inmates and those with prior convictions. With this in mind, states should prohibit the consideration of

prior arrests that did not result in a conviction in the hiring or firing of an employee. Moreover, publicly mandated employment bans of former felons for specific jobs as well as licensing bans should be based on the content of specific offenses or offender characteristics. In general, a more considerate and rational process for determining the suitability of former prisoners for employment in certain occupations is needed.

*We should invest more in labor market intermediaries that specialize in the reentry employment needs of recently released inmates.* When asked, many employers express an extreme reluctance to hire former inmates. However, a sizable minority indicate that they are indeed willing to hire offenders and actually do so as measured by recent hiring outcomes. Governmental as well as non-profit entities devoted to workforce development often serve an important informational role in matching clients to employers that greatly minimizes the search costs for both parties. For a specific group of clients who face substantial stigma problems in the searching for work, such job search assistance is likely to be particularly important.

Moreover, overtime such intermediaries establish long-term relationships and credibility with employers and are thus more effective in placing their clients in employment. Given the extensive increases in incarceration for relatively less serious offenses that characterize what has happened over the past decade, intermediaries should be able to identify the most job ready and offer up a steady supply of reentering former inmates who are pre-screened and likely to be solid employees, or in the least of comparable quality to an employer's average hire.

Given the scale of the flow of inmates out of prison each year (on the order of 600,000), there is a large potential role for agencies and non-profits devoted to minimizing employment search costs, pre-screening workers for employers, and aiding those who are re-entering in becoming ready for conventional employment.

*States should incentivize desistance from criminal activity by expunging certain criminal records after a fixed time period has elapsed.* In a recent analysis, Kurlycheck, Brame, and Bushway (2006) raise the important question of whether unfettered employer access to criminal history records can be justified by the legitimate concerns of employers and the public. They assess whether the rate at which young offenders desist from offending with time since the last offense merits limiting employer access to arrest and conviction information for sufficiently distant past offenses. The authors demonstrate that for a cohort of young men in Philadelphia the likelihood of a repeat offense declines precipitously with the time since the last offense. This pattern is consistent with both a causal effect of staying clean as well as a remaining population of former offenders that becomes increasingly selected with time since the last offense (to be specific, selection towards a low propensity to offend). For policy purposes, however, the exact source of this pattern is irrelevant. Based on this pattern, the authors argue that limiting employer access to criminal history records beyond a certain time period may effectively limit the collateral consequences of prison while not necessarily exposing employers and the public to sufficiently higher risk.

This simple proposal carries many advantages. Clearly, being able to procure and retain gainful employment is practically a necessary condition for the successful reintegration of former inmates into non-institutionalized society. The expunging of one's past offenses following a determined period of desistance will certainly improve the labor market as well as life prospects of former offenders. Moreover, the prospect of having one's record wiped clean after a given period of desistance provides an incentive for former inmates to change their behavior.

Nonetheless, this proposal may have negative unintended consequences if employers care about prior criminal activity and engage in indirect and imperfect screening practices. In other

words, limiting an employer's ability to access criminal history records or to ask about prior criminal convictions may not preclude employers from using potential signals of prior run-ins with the law in making hiring and promotion decisions. At a minimum, employers may be able to effectively identify ex-offenders via such signals as education, where one comes from, or through unaccounted-for gaps in one's employment history. At worst, employers may systematically discriminate against workers from groups that they *perceive* to have a high propensity to offend, such as young black men (Holzer et. al. 2006). This important issue of how employers may respond to limits on access is key to designing a policy that both allows employers to take into account aspects of an individual's history that are legitimately related to assessing potential job performance, while protecting those who, through the passage of time, have demonstrated the irrelevance of their past infractions to their future performance.

There are several key choice variables that should be considered in designing an information policy that balances both the ability of employers to access relevant information about applicants and employees as well as the interests of former offenders who have managed to stay out of trouble. First and foremost among these choice variables is the length of the time limit placed on criminal history inquiries. If the limit is set too short, employers will not have confidence in formal checks and thus will employ informal screens as a supplement, undoing much of the potential benefit to ex-offenders from suppressing such information in the first place. To the extent that the limit is too long, few offenders will benefit and there will be little added incentive to stay clean with an eye on the prospect of an expunged record. Kurlycheck et. al. (2006) focus on the seven year limit set in the federal statute pertaining to the trucking industry. Clearly, more research on employer hiring practices with a focus on this specific question would greatly inform this choice.

A second choice variable concerns the starting point for the time period framing the criminal history record. The authors implicitly advocate for a start date corresponding to the date of the most recent conviction, arguing that since few employers have access to incarceration information, time since incarceration is irrelevant. However, one can imagine that, with the knowledge that records are purged after seven years, employers may still downgrade the applications from young men who they suspect have served some time. Knowing that a clean criminal history record check is consistent with either (a) never having offended, or (b) having offended and potentially served time but no contact with the criminal justice system for the past seven years provides considerably more information than the alternative ignoring incarceration.

A third important choice variable concerns whether there are some offenses that should never be purged. One might make the argument that someone who has served time for a felony sex offense should never work with children, or that workers with prior serious violent offenses should not be placed in jobs involving security. Again, a better understanding of how employers consider such mitigating factors would provide useful information for forming a viable policy prescription.

Regardless, the growing numbers of non-institutionalized felons raise important policy questions regarding reintegration and manners in which society can ease and facilitate the transition of former offenders into productive and stable lives. Stable employment is clearly key. To the extent that we can improve the prospects of former offenders without substantially harming the interests of employers, and while providing a positive incentive to desist from criminal offending, we should do so.

## **6. Conclusion**

The past three decades have not been kind to low skilled workers in the U.S. In addition to experiencing substantial real declines in hourly earnings, the employment rates of many low-skilled adults, especially low-skilled minority men, have dropped to historic lows. Concurrently, the incarceration rates of these same adults have increased tremendously, to the point where for certain sub-groups of the adult male population the likelihood of being institutionalized at any given point in time is nearly equal to the likelihood of being employed as well as the likelihood of being non-institutionalized yet idled.

These developments are clearly related. I have demonstrated the effects of declining wages on employment and incarceration rates. There is also a growing body of research suggesting a reverse causal link from prior incarceration to employment outcomes. This line of research combined with the disturbing incarceration trends that I have documented indicate that the problems faced by ex-offenders represent an increasingly important and daunting challenge to anti-poverty policy in the U.S.

I have offered and analyzed two sets of policy responses to these developments: expanding the EITC for childless adults and non-custodial parents as well as steps federal and state policy makers could take eliminate some of the official barriers to employment and impediments to reentry for former prison inmates and convicted felons. These clearly address only a small set of the problems faced by low-income adults. Yet action on these fronts would most certainly be helpful.

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## Appendix A: Estimating Labor Supply Elasticities by Race and Gender

I use data from the 1980, 1990 and 2000 Census PUMS files to estimate the labor supply elasticities for men and women overall and for men and women by race and ethnicity. I then use these estimates to assess the degree to which changes in employment between 1980 and 2000 can be attributable to changes in wages. The supply elasticity estimates come from estimating the equation

$$(1) \quad E_{exry} = \alpha_y + \beta_e + \kappa_x + \gamma \text{Ln}W_{exry} + \varepsilon_{exry}$$

Where  $E_{exry}$  is the employment rate for adults in our sample in education group  $e$  (less than high school, high school graduate, some college, college plus), in labor market experience group  $x$  (5 years or less, 6 to 10 years, 11 to 15 years, 16 to 20 years, 21 to 25 years, 26 to 30 years, 31 to 35 years, and 36 plus years), in racial group  $r$  (white, black, Asian, or Hispanic), and in year  $y$  (1980, 1990, and 2000),  $\text{Ln}W_{exry}$  is the corresponding average of log wages for members of this group,  $\varepsilon_{exry}$  is a mean-zero error term,  $\alpha_y$  represents a year specific fixed effect, and  $\beta_e$  represents a fixed effect for all adults in the education group  $e$ , and  $\kappa_x$  represents a fixed effect for experience groups. The coefficient  $\gamma$  gives the responsiveness of employment for members of the group to a change in average log wages. The labor supply elasticity is defined by the equation  $\eta = \frac{W}{E} \frac{\partial E}{\partial W} = \frac{1}{E} \frac{\partial E}{\partial \ln W}$ . Since  $\gamma$  provides an estimate of  $\frac{\partial E}{\partial \ln W}$ , calculating the elasticity requires dividing through by the employment rate. Since I'm dividing through by the average employment rate, the elasticity should be interpreted as the responsiveness of the group at the mean. The inclusion of year fixed effects as well as education and experience fixed effects means that the elasticity estimates are identified using variation in the changes in employment and earnings occurring within education and experience groups across racial/ethnic groups.

I estimate equation (1) separately for men and women to derive overall estimates of the responsiveness of male and female labor supply. I also estimate the following modified specification

$$(2) \quad E_{exry} = \alpha_y + \beta_e + \kappa_x + \delta * \text{Black}_{exry} + \lambda * \text{White}_{exry} + \eta * \text{Asian}_{exry} + \\ \gamma_0 \text{Ln}W_{exry} + \gamma_1 \text{Ln}W_{exry} * \text{Black}_{exry} + \gamma_2 \text{Ln}W_{exry} * \text{White}_{exry} + \\ \gamma_3 \text{Ln}W_{exry} * \text{Asian}_{exry} + \varepsilon_{exry}$$

where  $\text{Black}_{exry}$  is a dummy variable equal to one if the group is black and zero otherwise, and  $\text{White}_{exry}$  and  $\text{Asian}_{exry}$  are similar dummy variables indicating white and Asian demographics subgroups. This specification allows the supply responsiveness to changes in wages to vary by race and ethnicity. The base coefficient  $\gamma_0$  indicate the responsiveness of Hispanic labor supply (the group omitted by the dummy variables) to changes in wages. The coefficient on the interaction term between the black dummy and log wages,  $\gamma_1$  indicates the degree to which black labor supply responsiveness differs from Hispanic labor supply responsiveness. The overall responsiveness of black labor supply requires adding the based coefficient,  $\gamma_0$ , and the coefficient on the interaction term,  $\gamma_1$ . Similar derivations would yield the labor supply responsiveness for whites and Asians. Note, the addition of race specific dummy variables indicates that supply responsiveness is being estimated using variation in the changes in employment and earnings

occurring within education and experience groups and within racial/ethnic groups. Again, converting the responsiveness parameter into an elasticity estimate requires dividing by the race-specific mean employment rate.

Equations (1) and (2) are estimated using employment rates and earnings potential for all men and women, institutionalized as well as non-institutionalized. Thus, any impact of wage changes on institutionalization operating through withdrawal from the formal labor force will be reflected in the elasticity estimates.

Tables A.1 present the results from this analysis. For both men and women, I present estimation results for all adults in the sample and for adults with a high school degree or less. Parameter estimates for the coefficient on log wages and the interaction terms with log wages are presented in the top half of the table, while the implied elasticity estimates (the calculations represented graphically in figures 1 and 2) are presented in the bottom half. The high elasticity estimates in figures 1 and 2 use the largest race-specific estimates from the table while the lowest are based on the smallest.

## Appendix B: Assessing the contribution of declining wages to increases in incarceration rates

Let  $c$  be the likelihood that an individual chosen at random commits a crime, and  $p$  be the likelihood of being caught and convicted conditional on committing a crime. Let  $\theta$  be the rate at which inmates are released from prison. Assume that  $c$  is a function of legitimate wages – i.e.,  $c=c(w)$  – where  $c'(w) < 0$ . Raphael and Stoll (2007) demonstrate that under these assumption, the long run equilibrium incarceration rate will be equal to

$$(3) \quad Inc = \frac{c(w)p}{c(w)p + \theta},$$

In equation (3), incarceration increases in the transition probability from non-incarceration to incarceration ( $c(w)p$ ) and decreases in the transition probability out of prison ( $\theta$ ). Differentiating equation (3) with respect to wages yields the expression

$$(4) \quad \frac{\partial Inc}{\partial w} = \frac{\partial Inc}{\partial c} \cdot \frac{\partial c}{\partial w} = \frac{\theta}{(cp + \theta)^2} \cdot p \cdot \frac{\partial c}{\partial w}$$

where the dependence of  $c$  on  $w$  is suppressed for simplicity. In practice,  $cp$  is a very small number (generally below 0.003) while  $\theta$  is relatively large (around 0.5). If we set  $cp=0$ , equation (4) reduces to

$$(5) \quad \frac{\partial Inc}{\partial w} = \frac{\partial Inc}{\partial c} \cdot \frac{\partial c}{\partial w} = \frac{1}{\theta} \cdot p \cdot \frac{\partial c}{\partial w}.$$

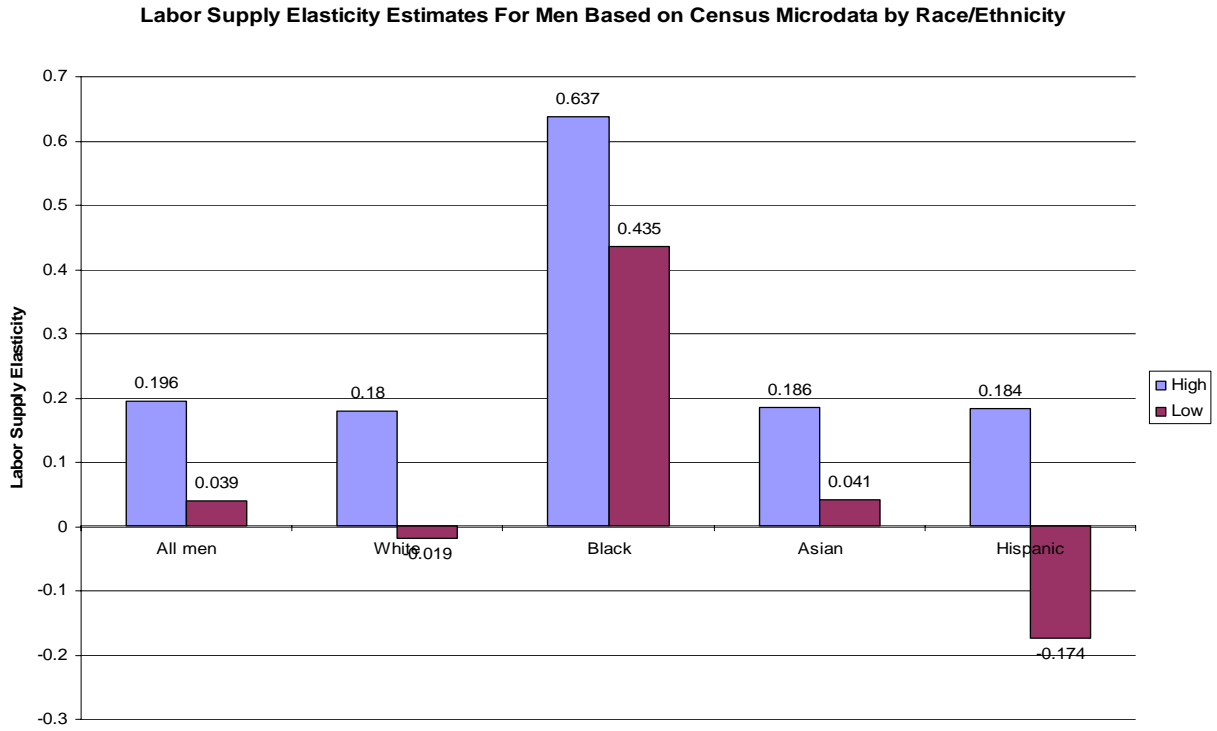
If we assume that the time served distribution is exponential, then the first term provides the expected value of time served. Thus equation (5) becomes

$$(6) \quad \frac{\Delta Incarceration}{\Delta \ln W} = E(T) \cdot p \cdot \frac{\Delta Crime}{\Delta \ln W}.$$

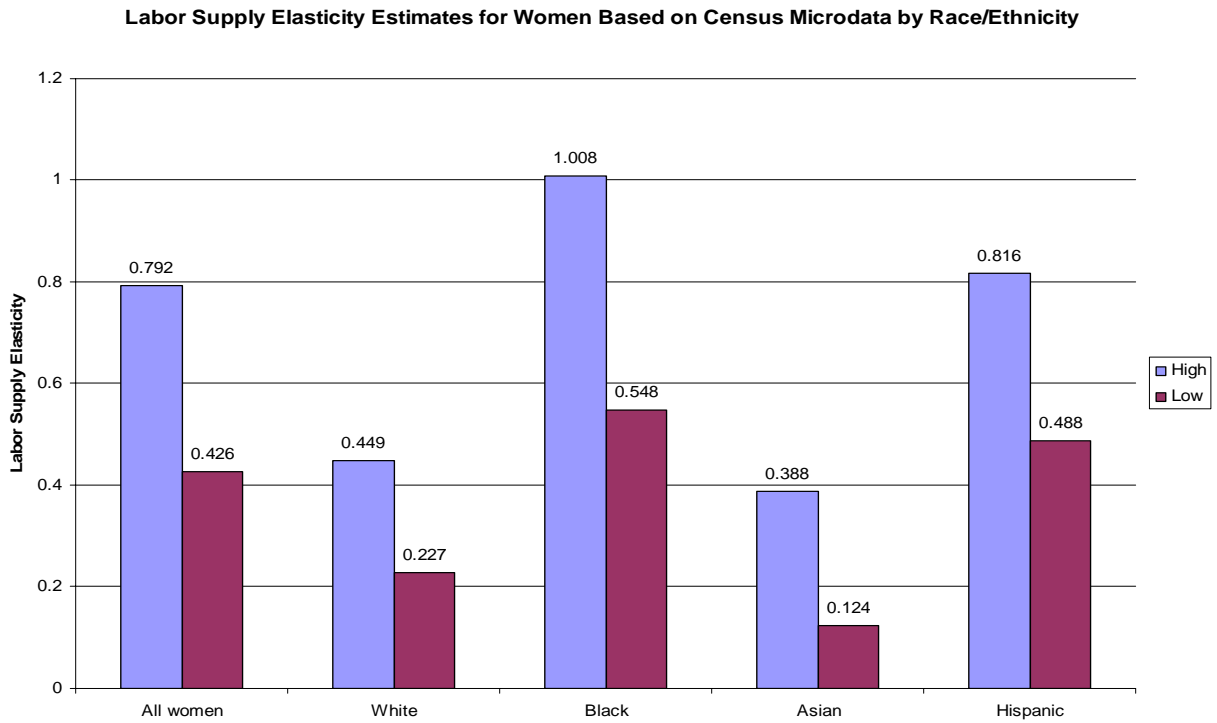
Equation (6) illustrates that the increase in incarceration caused by a decrease in wages will operate through the product of three factors. Moving from right to left on the right hand side of equation (6), a decline in wages will increase criminal activity (that is to say,  $\frac{\Delta Crime}{\Delta \ln W}$  will be negative). This in turn will increase incarceration in proportion to the probability of being apprehended and sentenced conditional on having committed a crime (the parameter,  $p$ ). Finally, the ultimate effect on the overall incarceration rate will be larger the larger the expected amount time the sentenced prisoner will serve (given by  $E(T)$  in equation (6)). Thus with estimates for each of these factors, and the wage trends presented in Table 3, one could estimate the proportion of the increase in institutionalization rates depicted in Table 5 that can be attributable to declining wages.

I draw estimates for each of these factors from various sources. Grogger (1998) estimates that the effect of a change in the natural log of hourly earnings on the likelihood of engaging in income-generating activity is approximately -0.25. I use this number for the change in crime caused by a change in log wages. Based on an analysis of criminal offending and incarceration among respondents of the NLSY79 data set, and the increased risk of incarceration over the past 20 years, I estimate that the likelihood of being caught and incarcerated among those who are actively engaged in income generating criminal activity is 0.06 (see Raphael and Stoll (2007) for details). With regards to expected time served, the median inmate in the U.S. serves a term of slightly more than two years on a given prison spell. However, those offenders coaxed into criminal activity by declining wages are likely to commit fewer and less serious crimes relative to those already incarcerated. Thus, here I assume that such marginal offenders that wind up in prison or jail serve no more than 1.5 years on average. Multiplying these three parameters suggests that the value of the derivative in equation (3) is equal to -0.0225. Multiplying this estimate times the actual change in wages for any given sub-group provides an estimate of the predicted increase in incarceration caused by the change in the groups wages.

**Figure 1**



**Figure 2**



**Table 1**  
**Comparison of All Out-of-school Men 18 to 55 With Similar Men in the Bottom Quarter of the Earnings Potential Distribution**

	1980		2000	
	All Men	Low-Wage Men	All Men	Low-Wage Men
White	0.800	0.627	0.684	0.506
Less than high school	0.173	0.273	0.063	0.126
High School Grad.	0.324	0.220	0.239	0.214
Some College	0.171	0.074	0.199	0.111
College Grad.	0.208	0.061	0.188	0.059
Black	0.114	0.254	0.126	0.269
Less than high school	0.047	0.140	0.025	0.095
High School Grad.	0.042	0.084	0.056	0.126
Some College	0.016	0.027	0.032	0.044
College Grad.	0.008	0.008	0.014	0.009
Asian	0.015	0.016	0.038	0.032
Less than high school	0.003	0.006	0.004	0.008
High School Grad.	0.004	0.005	0.008	0.010
Some College	0.003	0.002	0.008	0.006
College Grad.	0.006	0.003	0.017	0.008
Hispanic	0.071	0.103	0.145	0.184
Less than high school	0.038	0.069	0.064	0.099
High School Grad.	0.020	0.024	0.048	0.063
Some College	0.008	0.008	0.024	0.019
College Grad.	0.005	0.003	0.011	0.006
Immigrant	0.071	0.082	0.159	0.152
Institutionalized	0.018	0.150	0.038	0.247
Disabled	0.084	0.350	0.139	0.248

Tabulated from the 1980 and 2000 Public Use Microdata Samples of the US Census of Housing and Population.

**Table 2**  
**Comparison of All Out-of-school Women 18 to 55 With Similar Women in the Bottom**  
**Quarter of the Earnings Potential Distribution**

	1980		2000	
	All Women	Low-Wage Women	All Women	Low-Wage Women
White	0.798	0.772	0.695	0.617
Less than high school	0.161	0.226	0.051	0.095
High School Grad.	0.387	0.367	0.230	0.240
Some College	0.136	0.108	0.225	0.168
College Grad.	0.114	0.072	0.193	0.118
Black	0.118	0.126	0.131	0.136
Less than high school	0.043	0.065	0.019	0.039
High School Grad.	0.048	0.047	0.053	0.064
Some College	0.017	0.011	0.041	0.027
College Grad.	0.010	0.004	0.019	0.007
Asian	0.017	0.017	0.043	0.052
Less than high school	0.004	0.005	0.006	0.010
High School Grad.	0.005	0.006	0.010	0.014
Some College	0.003	0.003	0.009	0.010
College Grad.	0.005	0.004	0.018	0.018
Hispanic	0.066	0.084	0.125	0.187
Less than high school	0.035	0.054	0.048	0.100
High School Grad.	0.021	0.022	0.041	0.058
Some College	0.007	0.005	0.025	0.022
College Grad.	0.003	0.002	0.012	0.009
Immigrant	0.075	0.088	0.148	0.219
Institutionalized	0.004	0.010	0.005	0.018
Disabled	0.069	0.131	0.112	0.143

Tabulated from the 1980 and 2000 Public Use Microdata Samples of the US Census of Housing and Population.

**Table 3**  
**Average Log Wages for Men and Women 18 to 55 Years of Age by Race/Ethnicity, Educational Attainment, and Year**

<b>Panel A: Men</b>					
	1980	1990	2000	1990 -1980	2000 – 1990
White Men					
Less than high school	2.57	2.39	2.35	-0.18	-0.04
High School Grad.	2.71	2.58	2.57	-0.13	-0.01
Some College	2.82	2.77	2.77	-0.05	0.00
College Grad.	3.07	3.12	3.17	0.05	0.05
Black					
Less than high school	2.33	2.19	2.16	-0.14	-0.03
High School Grad.	2.47	2.35	2.36	-0.12	0.01
Some College	2.62	2.58	2.60	-0.04	0.02
College Grad.	2.88	2.92	2.96	0.04	0.04
Asian					
Less than high school	2.37	2.24	2.26	-0.13	0.02
High School Grad.	2.59	2.44	2.41	-0.15	-0.03
Some College	2.69	2.68	2.68	-0.01	0.00
College Grad.	3.03	3.08	3.15	0.05	0.07
Hispanic					
Less than high school	2.35	2.19	2.18	-0.16	-0.01
High School Grad.	2.53	2.39	2.33	-0.14	-0.06
Some College	2.68	2.62	2.60	-0.06	-0.02
College Grad.	2.92	2.93	2.92	0.01	-0.01
<b>Panel B: Women</b>					
	1980	1990	2000	1990 -1980	2000 – 1990
White					
Less than high school	2.09	1.99	2.02	-0.10	0.03
High School Grad.	2.24	2.21	2.26	-0.03	0.05
Some College	2.38	2.41	2.47	0.03	0.06
College Grad.	2.68	2.79	2.87	0.11	0.08
Black					
Less than high school	2.04	1.96	2.00	-0.08	0.04
High School Grad.	2.21	2.15	2.19	-0.06	0.04
Some College	2.35	2.37	2.44	0.02	0.07
College Grad.	2.75	2.82	2.86	0.07	0.04
Asian					
Less than high school	2.13	2.07	2.10	-0.06	0.03
High School Grad.	2.29	2.25	2.26	-0.04	0.01
Some College	2.41	2.49	2.53	0.08	0.04
College Grad.	2.69	2.79	2.91	0.10	0.12
Hispanic					
Less than high school	2.04	1.95	1.96	-0.09	0.01
High School Grad.	2.21	2.16	2.16	-0.05	0.00
Some College	2.33	2.37	2.40	0.04	0.03
College Grad.	2.61	2.74	2.76	0.13	0.02

Source: Author tabulations from the 1980, 1990, and 2000 Census PUMS files.

**Table 4**  
**Proportion Employed for Men and Women 18 to 55 Years of Age by Race/Ethnicity, Educational Attainment, and Year**

<b>Panel A: Men</b>					
	1980	1990	2000	1990 -1980	2000 – 1990
White Men					
Less than high school	0.75	0.68	0.61	-0.07	-0.07
High School Grad.	0.87	0.86	0.80	-0.01	-0.06
Some College	0.91	0.91	0.88	0.00	-0.03
College Grad.	0.95	0.95	0.94	0.00	-0.01
Black					
Less than high school	0.60	0.46	0.33	-0.14	-0.13
High School Grad.	0.73	0.66	0.57	-0.07	-0.09
Some College	0.79	0.76	0.71	-0.03	-0.05
College Grad.	0.89	0.89	0.86	0.00	-0.03
Asian					
Less than high school	0.75	0.69	0.63	-0.06	-0.06
High School Grad.	0.84	0.83	0.73	-0.01	-0.10
Some College	0.91	0.90	0.80	-0.01	-0.10
College Grad.	0.94	0.93	0.89	-0.01	-0.04
Hispanic					
Less than high school	0.77	0.73	0.64	-0.04	-0.09
High School Grad.	0.83	0.79	0.69	-0.04	-0.10
Some College	0.88	0.86	0.79	-0.02	-0.07
College Grad.	0.92	0.92	0.86	0.00	-0.06
<b>Panel B: Women</b>					
	1980	1990	2000	1990 -1980	2000 – 1990
White					
Less than high school	0.43	0.45	0.44	0.02	-0.01
High School Grad.	0.60	0.67	0.67	0.07	0.00
Some College	0.66	0.76	0.76	0.10	0.00
College Grad.	0.73	0.82	0.81	0.09	-0.01
Black					
Less than high school	0.43	0.39	0.37	-0.04	-0.02
High School Grad.	0.62	0.62	0.58	0.00	-0.04
Some College	0.73	0.76	0.74	0.03	-0.02
College Grad.	0.86	0.90	0.86	0.04	-0.04
Asian					
Less than high school	0.49	0.47	0.48	-0.02	0.01
High School Grad.	0.60	0.62	0.57	0.02	-0.05
Some College	0.68	0.73	0.66	0.05	-0.07
College Grad.	0.72	0.75	0.70	0.03	-0.05
Hispanic					
Less than high school	0.39	0.41	0.37	0.02	-0.04
High School Grad.	0.58	0.60	0.53	0.02	-0.07
Some College	0.67	0.73	0.68	0.06	-0.05
College Grad.	0.74	0.80	0.75	0.06	-0.05

Source: Author tabulations from the 1980, 1990, and 2000 Census PUMS files.

**Table 5**  
**Proportion Institutionalized for Men and Women 18 to 55 Years of Age by Race/Ethnicity,**  
**Educational Attainment, and Year**

<b>Panel A: Men</b>					
	1980	1990	2000	1990 -1980	2000 – 1990
White					
Less than high school	0.03	0.05	0.07	0.02	0.02
High School Grad.	0.01	0.02	0.03	0.01	0.01
Some College	0.01	0.01	0.02	0.00	0.01
College Grad.	0.00	0.00	0.00	0.00	0.00
Black					
Less than high school	0.08	0.15	0.27	0.07	0.12
High School Grad.	0.04	0.08	0.12	0.04	0.04
Some College	0.04	0.08	0.08	0.04	0.00
College Grad.	0.02	0.02	0.02	0.00	0.00
Asian					
Less than high school	0.01	0.02	0.03	0.01	0.01
High School Grad.	0.01	0.01	0.02	0.00	0.01
Some College	0.00	0.01	0.01	0.01	0.00
College Grad.	0.00	0.00	0.00	0.00	0.00
Hispanic					
Less than high school	0.03	0.05	0.05	0.02	0.00
High School Grad.	0.02	0.04	0.05	0.02	0.01
Some College	0.01	0.03	0.03	0.02	0.00
College Grad.	0.01	0.01	0.01	0.00	0.00
<b>Panel B: Women</b>					
	1980	1990	2000	1990 -1980	2000 – 1990
White					
Less than high school	0.01	0.01	0.02	0.00	0.01
High School Grad.	0.00	0.00	0.00	0.00	0.00
Some College	0.00	0.00	0.00	0.00	0.00
College Grad.	0.00	0.00	0.00	0.00	0.00
Black					
Less than high school	0.01	0.02	0.03	0.01	0.01
High School Grad.	0.00	0.01	0.01	0.01	0.00
Some College	0.00	0.01	0.01	0.01	0.00
College Grad.	0.00	0.00	0.00	0.00	0.00
Asian					
Less than high school	0.00	0.00	0.00	0.00	0.00
High School Grad.	0.00	0.00	0.00	0.00	0.00
Some College	0.00	0.00	0.00	0.00	0.00
College Grad.	0.00	0.00	0.00	0.00	0.00
Hispanic					
Less than high school	0.00	0.01	0.00	0.01	-0.01
High School Grad.	0.00	0.00	0.00	0.00	0.00
Some College	0.00	0.00	0.00	0.00	0.00
College Grad.	0.00	0.00	0.00	0.00	0.00

Source: Author tabulations from the 1980, 1990, and 2000 Census PUMS file

**Table 6**  
**Comparison of Actual Changes in Employment Rates to Changes Predicted By Labor Supply Elasticity Estimates**

<b>Panel A: Men</b>				
	Actual change in employment rates, 1980 to 2000	Predicted change, largest elasticity estimates	Predicted change, smallest elasticity estimates	
White				
Less than high school	-0.14	-0.03		0.00
High School Grad.	-0.07	-0.02		0.00
Some College	-0.03	-0.01		0.00
College Grad.	-0.01	0.02		0.00
Black				
Less than high school	-0.27	-0.06		-0.04
High School Grad.	-0.16	-0.05		-0.03
Some College	-0.08	-0.01		-0.01
College Grad.	-0.03	0.05		0.03
Asian				
Less than high school	-0.12	-0.02		0.00
High School Grad.	-0.11	-0.03		-0.01
Some College	-0.11	0.00		0.00
College Grad.	-0.05	0.02		0.00
Hispanic				
Less than high school	-0.13	-0.02		0.02
High School Grad.	-0.14	-0.03		0.03
Some College	-0.09	-0.01		0.01
College Grad.	-0.06	0.00		0.00
<b>Panel B: Women</b>				
	Actual change in employment rates, 1980 to 2000	Predicted change, largest elasticity estimates	Predicted change, smallest elasticity estimates	
White				
Less than high school	0.01	-0.01		-0.01
High School Grad.	0.07	0.01		0.00
Some College	0.10	0.03		0.01
College Grad.	0.08	0.06		0.03
Black				
Less than high school	-0.06	-0.02		-0.01
High School Grad.	-0.04	-0.01		-0.01
Some College	0.01	0.07		0.04
College Grad.	0.00	0.10		0.05
Asian				
Less than high school	-0.01	-0.01		0.00
High School Grad.	-0.03	-0.01		0.00
Some College	-0.02	0.03		0.01
College Grad.	-0.02	0.06		-0.01
Hispanic				
Less than high school	-0.02	-0.03		-0.02
High School Grad.	-0.05	-0.02		-0.01
Some College	0.01	0.04		0.02
College Grad.	0.01	0.09		0.05

**Table 7**  
**Comparison of Actual Changes in Institutionalization Rates for Men and Predicted Changes Based on Changes in Hourly Wages**

	Actual change in institutionalization rates, 1980 to 2000	Predicted change in institutionalization rates given wage changes	Ratio, Predicted/Actual
White			
Less than high school	0.037	0.005	0.134
High School Grad.	0.019	0.003	0.166
Some College	0.008	0.001	0.141
College Grad.	0.001	-0.002	-2.250
Black			
Less than high school	0.190	0.004	0.020
High School Grad.	0.077	0.002	0.032
Some College	0.042	0.000	-0.011
College Grad.	0.006	-0.002	-0.300
Asian			
Less than high school	0.021	0.002	0.118
High School Grad.	0.012	0.004	0.338
Some College	0.007	0.000	0.032
College Grad.	0.000	-0.003	-
Hispanic			
Less than high school	0.021	0.004	0.182
High School Grad.	0.033	0.005	0.136
Some College	0.016	0.002	0.113
College Grad.	0.004	0.000	0.000

See text for discussion of predicted changes in institutionalization rates. The predictions make use of the absolute changes in log hourly wages between 1980 and 2000 presented in Table 3.

**Table 8**  
**Quartile Values of the Total Time Served During the 1990s and the Time Between the Date of First Admission and Date of Last Release for the 1990 Prison Cohort Between 18 and 25 Years of Age**

<b>Panel A: Distribution of Total Time Served</b>			
	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
All Inmates	1.44	2.79	4.81
White	1.43	3.09	5.12
Black	1.93	3.53	5.45
Hispanic	1.29	2.23	3.97
<b>Panel B: Distribution of Time Between the Date of First Admission and the Date of Last Release</b>			
	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
All Inmates	1.86	4.99	8.71
White	2.01	6.17	9.11
Black	2.88	6.42	9.16
Hispanic	1.44	3.65	7.62

Tabulation are based on all individuals between the ages of 18 and 25 that entered the California state prison system during 1990 serving the first term of a commitment. Tabulation of the percentiles of the two time distributions are based on all terms served over the subsequent 10 years.

**Table 9**  
**Simulated Costs of Various Proposals to Expand the Earned Income Tax Credit to Single Childless Adults and to Mitigate the Inherent Marriage Penalty**

Beneficiary Category	Simulated Costs Using the 2006 Distribution of Wage and Salary Earnings (millions of 2006 dollars)				
	Existing system	EHO Proposal	Enhanced EHO Proposal	Berlin Proposal	Hybrid EHO-Berlin Proposal
Single and childless	1,269	20,062	33,878	13,840	20,062
Married, no children	516	3,166	3,737	7,172	3,788
Married with children	13,383	15,203	15,202	25,251	16,571
Single parents	<u>14,315</u>	<u>14,615</u>	<u>14,615</u>	<u>14,615</u>	<u>14,615</u>
Total	29,783	53,046	67,433	60,879	55,037
Difference relative to existing	-	18,165	35,551	25,997	20,156

Costs are simulated using data from the March 2006 Current Population Survey. See text for exact description. The EHO proposed expansion includes a 20 percent credit for single childless adults up to \$7,500 in earnings that is phased out after \$10,000 in earnings at a rate of 0.15. The EHO proposal also includes disregarding half of the earnings of the lower paid spouse in calculating the EITC benefit for married couples. The enhanced EHO proposal is similar with the exception that the 20 percent credit for a single childless adult applies to the first \$10,000 in earnings and is phased out after reaching \$12,000. The Berlin proposal applied the single childless benefit. The Berlin proposal uses the EHO single childless benefit formula applied only to single adults between 21 and 55. The proposal also uses individual income rather than combined income in calculating the EITC credit for married couples. For married couples with children, the higher earner's income is used to calculate the credit with children while the lower earner received the childless EHO credit. The Hybrid EHO-Berlin proposal is the EHO proposal with one modification: the EITC benefit for married couples with total wage and salary income less than \$30,000 is computed using the individual calculations in the Berlin proposal. The benefit for married couple with higher incomes is computed using the EHO disregard.

**Table 10**  
**Distribution of Additional Dollars Spent Above the Existing Credit by the Deciles of the Wage and Salary Earnings of Simulated Tax-Filing Units**

Deciles of the earnings distribution	Percent of additional dollars going to each earnings decile under ...			
	EHO Proposal	Enhanced EHO Proposal	Berlin Proposal	Hybrid EHO-Berlin Proposal
D1: <6,000	21%	13%	9%	19%
D2: 6,000 to 13,000	49%	41%	26%	45%
D3: 13,000 to 20,000	21%	35%	14%	20%
D4: 20,000 to 25,743	1%	6%	4%	4%
D5: 25,743 to 34,000	3%	2%	9%	7%
D6: 34,000 to 42,500	3%	2%	11%	3%
D7: 42,500 to 55,000	1%	0%	13%	1%
D8: 55,000 to 73,500	0%	0%	7%	0%
D9: 73,500 to 102,000	0%	0%	4%	0%
D10: 102,000 and up	0%	0%	3%	0%

The figures in the table give the percent of the additional dollars spent above the current system that would accrue to tax filing units of the given income class. The nature of the proposals are discussed in the notes to Table 9 and in the text.

**Table 11**  
**Calculation of the EITC Benefits for a Couple Each of Whom Earns \$10,000 per Year When Married and When Unmarried Under the Existing System and Under Each Proposed Expansion**

	Number of Children		
	None	One	More than one
<b>Existing system</b>			
Married	0	2,237	3,864
Unmarried	325	2,910	4,197
<b>Penalty</b>	<b>-325</b>	<b>-673</b>	<b>-333</b>
<b>EHO Proposal</b>			
Married	1,050	2,747	4,536
Unmarried	3,000	4,247	5,500
<b>Penalty</b>	<b>-1,950</b>	<b>-1,500</b>	<b>-964</b>
<b>Enhanced EHO</b>			
Married	1,550	2,747	4,536
Unmarried	4,000	4,747	6,000
<b>Penalty</b>	<b>-2,450</b>	<b>-2,000</b>	<b>-1,464</b>
<b>Berlin Proposal</b>			
Married	3,000	4,247	5,500
Unmarried	3,000	4,247	5,500
<b>Penalty</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Hybrid EHO-Berlin</b>			
Married	3,000	4,247	5,500
Unmarried	3,000	4,247	5,500
<b>Penalty</b>	<b>0</b>	<b>0</b>	<b>0</b>

Figures in the table represent the EITC benefit under the existing system and under each proposal that a two earner couple where each earns \$10,000 per year would receive when married and when unmarried. The nature of the proposals is discussed in the notes to Table 9 and in the text.

**Table 12**  
**EITC Credit as a Proportion of Annual Earnings for Select Groups of Single Childless**  
**Less-Educated Men Under the Existing System and Under the Various Proposed**  
**Expansions**

	Existing System	EHO and Hybrid Proposal <sup>a</sup>	Enhanced EHO Proposal	Berlin Proposal
White, less than high school				
18 to 55	0.00	0.03	0.05	0.02
18 to 25	0.00	0.05	0.08	0.02
26 to 35	0.00	0.02	0.04	0.02
Black, less than high school				
18 to 55	0.00	0.04	0.05	0.03
18 to 25	0.00	0.06	0.08	0.03
26 to 35	0.01	0.04	0.06	0.04
Asian, less than high school				
18 to 55	0.00	0.02	0.03	0.01
18 to 25	0.00	0.04	0.05	0.02
26 to 35	0.00	0.02	0.04	0.02
Hispanic, less than high school				
18 to 55	0.00	0.03	0.05	0.02
18 to 25	0.00	0.04	0.08	0.03
26 to 35	0.00	0.03	0.05	0.03

Figures provide the average credit under each system divided by the average annual wage and salary earnings for workers in the given demographic group. All calculations apply to single, childless men. The nature of each proposal is described in the notes to Table 9 and in the text.

**Appendix Table A1**  
**Estimated Effects of Log Wages on the Likelihood of Being Employed at the Time of Interview for Men and the Corresponding Implied Labor Supply Elasticities**

	Men				Women			
	All Men		Men with a high school diploma or less		All Women		Women with a high school diploma or less	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log wage	0.159 (0.039)	0.136 (0.039)	0.029 (0.079)	-0.120 (0.093)	0.279 (0.049)	0.258 (0.050)	0.449 (0.083)	0.378 (0.093)
Log wage*	-	0.019	-	0.105	-	-0.104	-	-0.110
White		(0.018)		(0.035)		(0.024)		(0.049)
Log wage*	-	0.265	-	0.364	-	0.086	-	0.157
Black		(0.023)		(0.039)		(0.028)		(0.059)
Log wage*	-	0.019	-	0.150	-	-0.179	-	-0.165
Asian		(0.032)		(0.107)		(0.040)		(0.045)
Implied Labor Supply Elasticities								
Overall	0.196	-	0.039	-	0.426	-	0.792	-
White	-	0.180	-	-0.019	-	0.227	-	0.449
Black	-	0.637	-	0.435	-	0.548	-	1.008
Asian	-	0.186	-	0.041	-	0.124	-	0.388
Hispanic	-	0.184	-	-0.170	-	0.488	-	0.816
R <sup>2</sup>	0.892	0.930	0.885	0.918	0.902	0.924	0.884	0.903
N	449	449	239	239	447	447	239	239

Standard errors are in parentheses. All models are based on regressions of the proportion employment on average log wages based on demographic cells defined by year, level of education attainment, labor market experience group, and race/ethnicity. See text for the number of categories within each dimension and the specific definitions. All regressions include dummies for year fixed effects, education group fixed effects, experience group fixed effect, and race fixed effects and are based on data from the 1980, 1990, and 2000 census. All models are weighted by the sum of the sample weights within the defined cells. Supply elasticities are calculated by dividing the point estimate for the effect of log wages on employment by the average employment rate for the group in question.