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The Utilization of Human Capital in the U.S., 1975-1992: Patterns of Work and Earnings Among Working Age Males

by

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Fundamental changes in labor market patterns among U.S. prime-age men over the past two decades have been the focus of numerous recent research studies and media accounts. Increases in wage inequality and in male joblessness are the most important of these changes; assertions of an increase in part-time and "contingent" work have also been made. In addition, there is evidence of a more general decline in the total annual hours of market work of the typical working-age male.[1]

In this paper, we focus on civilian non-student 18–64 year-old males, and present a new statistical indicator of the extent to which the human capital of this group (and subgroups within it) is underutilized. We call our indicator the **Capacity Utilization Rate** (CUR), as it measures the extent to which the use of human capital falls short of a full utilization norm.

We view the human capital embodied in an individual (or a group) to be the package of characteristics possessed by the person or group that yield value to the economy if used in productive activities. These characteristics include such things as basic ability, schooling, skills, work experience, and health status. Each individual's (estimated) wage rate is a function of his endowment of these characteristics. The wage rate is, in turn, an estimate of the market valuation of the hourly rental value of the individual's human capital endowment. This framework implies that the economic value of an individual's productive activities is reflected in the market-determined "use-value" of these characteristics. Hence, the annual value of the human capital of an individual (or group) is the

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[1]A December 1, 1994 front page New York Times story inquired, "So why are so many men—healthy men in the prime of life—working less than ever before?" ("More Men in Prime of Life Spend Less Time Working" by Sylvia Nasar). See also, Buron and Haveman (1995), Buron, Haveman, and O'Donnell (1995), Freeman (1994), Katz and Murphy (1992), Juhn (1992).

amount that could be earned were the productive characteristics of the individual fully utilized. We consider an individual's human capital to be fully utilized if he works full time-full year, that is 52 weeks per year and 40 hours per week.

We use the CUR indicator to examine trends in human capital utilization for the population of working-age males, and for various population subgroups, over the 1975–1992 period. We also examine trends in the reasons given for the failure to fully utilize human capital, and categorize them into two sets—those reasons reflecting **exogenous constraints** on work (e.g., inability to find work) and those that reflect **individual response** to labor market and other incentives (e.g., retirement before age 65).

The paper is organized as follows. In Section I, we describe the pattern of hours worked among working-age males from 1975 to 1992. This section reveals a hollowing out of the annual hours of work distribution—a smaller share of male workers are employed from 1–2080 hours per year, while increasing proportions are either not working at all or working in excess of the full activity norm. In Section II, we describe the concept and estimation of the human capital utilization indicator that we employ in this study, the CUR. The level and trend in this indicator for the population of working-age males are presented. In Section III, the patterns of human capital underutilization, as measured by CUR, are discussed for all males. The reasons for this underutilization are allocated among a comprehensive set of categories, based on the reasons given by respondents for not working, or not working full time-full year. Patterns of human capital underutilization for specific demographic groups distinguished by race, age and education are compared in Section IV. A similar comparison for particularly vulnerable populations—low education, minority youths and older workers—is presented in Section V. Section VI. concludes by emphasizing the trends in the exogenous constraint and individual response for human capital underutilization.

I. HOURS WORKED TRENDS: 1975-1992

Figure 1 shows the trend in average annual work hours for the male working-age population over the 1975-92 period, as reflected in the March Supplement to the annual Current Population Survey (CPS).[2] Separate trends are also shown for whites and nonwhites;[3] they indicate that the average nonwhite male works only about 80-85 percent of the annual hours of the average white male. For both racial groups, mean annual hours largely follow the business cycle; the severe dip in hours worked during the 1980-83 recession is of particular note. The figure also shows that the subsequent recovery failed to return mean annual work hours to its pre-1980s level for either racial group. Indeed, over the entire period, the trend of annual work hours is slightly negative for all working-age males, and for the two racial subgroups.

Table 1 gives the percentage of the sample in four annual hours-worked categories—0, 1-2079, 2080, >2080—for the paired recession years of 1975 and 1991, and the paired cyclical peak years of 1979 and 1989. For all of the years shown, at least 60 percent (and as much as 65 percent)

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[2]The standard method of calculating annual hours from the CPS is to multiply weeks worked in the last year by hours **usually** worked in a week. If reports of the latter correspond to modal hours, rather than mean hours, as seems likely, this estimate is incorrect. In this analysis, we adopt a different convention, and employ information on weeks worked part-time and hours worked last week in the estimation of annual hours. If an individual usually works full-time (i.e., at least 35 hours per week) and does not report working part-time in any week, then annual hours are estimated in the standard way as the product of weeks worked and hours usually worked per week. The same formula is used if an individual reports working part-time throughout the year.

However, individuals who usually work full-time but work part-time in some weeks (or who usually work part-time but work full-time in at least one week) are not asked for their hours during part-time (full-time) employment. To fill in this data gap for these workers, we use information on individuals who worked part-time in the last week (not year), but who usually work full-time. We regress hours worked by such individuals in the last week on race, age, education and usual hours/week and use the estimates to obtain a conditional expectation of the part-time hours/week of usually full-time workers. Annual hours are then calculated as the product of weeks worked full-time and hours usually worked per week, plus weeks worked part-time multiplied by the estimate of part-time hours. An analogous procedure is used to calculate the annual hours of individuals who usually work part-time but work full-time in at least one week.

[3]'Whites' refers to white, non-Hispanics; 'Non-whites' are all others.

of males work at least 2080 hours per year. If one accepts that working less than 2080 hours per year constitutes less than full time-full year work, the share of male workers who are less than full time-full year workers declined over the 1975 to 1992 period. The share of working-age males who work between one and 2079 hours per year decreased by about 6 percent over the paired recession years, and about 12 percent over the paired peak years. This decrease in the proportion of working males who are employed less than the 2080 hours norm runs counter to claims that part-time jobs have been replacing full-time work at a rapid pace.[4]

The most noteworthy change is the 26 percent increase in the proportion of jobless males (those with zero work hours) over the 1975 to 1991 period—an increase from 7.7 to 9.7 percent of the working age population over these paired recession years. The share of workers employed more than the full time-full year norm of 2080 hours is also of interest. For all of the years reported in the table, more than 25 percent of the male working-age population reports hours in excess of this full utilization norm. For both pairs of comparison years, the share of workers reporting hours of work in excess of 2080 hours increased about 6 percent.

Over the sets of paired years that we have examined, there has been a hollowing out of the middle of the annual hours distribution, with an increase in the mass at both extremes. These trends in hours worked suggest substantial shifts in labor supply and demand over the period. Although the pattern of changes in the mean and variance in male earnings have been extensively studied, including changes in the level and distribution of both wage rates and hours worked, the sources of the observed shifts remains little understood.[5]

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[4]The strong claims regarding the growth of part-time employment at the expense of full-time employment have also been challenged by Dupuy and Schweitzer (1995).

[5]See Bound and Johnson (1992), Burtless (1990), Haveman and Buron (1994), Karoly (1992), Levy and Murnane (1992), and Moffitt (1990).

II. THE CONCEPT AND ESTIMATION OF CUR

A. The Concept

In this section, we describe our indicator of the extent to which human capital is underutilized, CUR. We consider an individual to be using his human capital at capacity if his working time is at or exceeds a level commonly accepted to be full utilization—namely full time-full year work—and if he supplies his labor at a wage rate consistent with the productivity implied by his characteristics. We define the earnings associated with such full use of human capital as **potential earnings**, and measure this value as the product of an individual's predicted wage rate and 2080 hours (full time-full year work).[6] An individual who realizes less than potential earnings is taken to be underutilizing his human capital. The CUR measures this underutilization as the ratio of the individual's **earnings**[7] to the level of potential or full capacity earnings, that is the amount that he could earn were he to use his human capital at capacity.[8]

For any set of working age males, *I*, per capita CUR is:

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[6]Histograms with a bandwidth of 1 hour reveal a mode of 2080 hours in each of the peak and trough years examined.

[7]In measuring individual earnings, we rely on a predicted earnings value as a proxy for actual earnings, and refer to this value as "earnings" in the subsequent discussion. This value is the product of the actual number of hours that the person works in a year and his predicted wage rate. Our procedure for estimating the individual predicted wage rate, which is used for calculating both earnings and potential earnings for each individual, is described in Appendix I (also see footnote 3).

[8]In estimating CUR, annual work hours in excess of 2080 for individuals who exceed this full time-full year norm are ignored, and such workers are counted as having zero unutilized work hours and as working at capacity. Hence, CUR is appropriately viewed as an indicator of the **underutilization** of human capital. The CUR indicator suggests another indicator of underutilization, "foregone potential earnings"—the number of dollars that an individual's earnings fall short of the amount that he could earn were he to use his human capital at capacity—which we discuss in Haveman, Buron, and Bershadker (1996).

$$\frac{\sum_{i \in I} Earnings_i \; / \; N}{\sum_{i \in I} Potential\ Earnings_i \; / \; N}$$

where N is the number of individuals in I. So defined, CUR measures the extent to which human capital utilization deviates from a socially-accepted norm of full capacity utilization; in this case, 2080 hours per year.[9]

While labor market distortions may cause observed (and, hence, predicted) wages to be an imperfect measure of the productivity of an individual's work time, we accept these market values as the most appropriate weighting factor available for estimating the value of both earnings and potential earnings. We note that changes in labor market distortions over time will be reflected in the trend of aggregate measures of both earnings measures. For example, the presumed reduction in the influence of labor unions on wages (associated with the fall in union membership over the past two decades) could lead to a downward trend in both aggregate earnings and potential earnings due to a decrease in estimated wage rates. It should also be emphasized that the estimated wage rates used to weight actual and potential (2080) work hours reflect the interaction of supply and demand factors in individual markets at a point in time. Hence, individual potential earnings estimates can only be aggregated to indicate the total, or per capita, value of potential earnings under the assumption that the structure of wage rates would not change in any important way if all males were to increase their annual work time to 2080 hours, reflecting the full use of their human capital.

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[9]Given this convention, underutilization indicators could be calculated by comparing the actual hours that individuals work to the full capacity work hours norm of 2080 hours. However, because we are interested in **human capital** utilization rather than **labor hours** utilization, we account for individual productivity as measured by the predicted wage rate in measuring both the earnings and the potential earnings components of the CUR indicator.

B. The CUR of Working-Age Males

We begin our examination of the CUR with Table 2, which shows the trends in various earnings measures for the civilian nonstudent 18–64 year old male population. Over the 1975 to 1992 period, aggregate real earnings[10] for the population of working-age males in the U.S. increased from $1.26 trillion to $1.47 trillion, or 17 percent. During this same period, the total male working-age population grew from about 52 million to about 69 million, or 32 percent. Hence, per capita earnings for working-age males fell by nearly 12 percent over the period, from about $24,000 to $21,000. This trend in average male earnings is shown in the first column of Table 2, and is consistent with other estimates of sagging mean earnings.

We estimate that over the same period, aggregate potential earnings of all working age males in the U.S. rose from $1,480 billion to $1,770 billion, an increase of 19 percent. However, because of the 32 percent growth in the size of the working-age male population over this period, per capita potential earnings fell from $28,206 to $25,494, a decrease of 9.6 percent. This is shown in the second column of Table 2.

By comparing the level of per capita earnings (column 1) to per capita potential earnings (column 2), we can measure the extent to which working-age males fail to utilize their stock of human capital (column 3). Over the 1975 to 1992 period, the gap between aggregate earnings and aggregate potential earnings increased from $220 billion to $300 billion, or 36 percent. The final column of Table 2 shows the ratio of earnings to potential earnings, the capacity utilization rate (CUR); it fell from more than 85 percent to 83 percent over the period.

A regression of each of the four series in Table 2 on a time trend reveals average annual decreases of per capita earnings and potential earnings of $154 and $152, respectively. The average

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[10]Aggregate earnings is the sum of the individual earnings of working-age males, which we described above as the product of an individual's actual annual hours of work (see note 3) and the individual-specific predicted wage rate. Dollar comparisons are in 1993 prices throughout the paper.

annual decrease in the CUR was nearly .1 percentage point per year, equivalent to a one percentage point decrease in the CUR over a decade. These findings indicate that the decrease in per-capita earnings are the result of both a decrease in the level of potential earnings and a reduction in the proportion of potential earnings that are realized.

The trend in the CUR shown in column four is erratic, and reflects changes in the macroeconomic performance of the economy. For example, the CUR decreased from nearly 87 percent in the peak year of 1979 to less than 82 percent in the recession of 1982. To reveal the longer term trend in the CUR, we remove from the estimate of per capita potential earnings (the denominator of the CUR) the per capita potential earnings that were not realized because individuals are unable to find work, as revealed by each worker's own annual report of unemployment hours. The resulting ratio of per capita earnings to per capita potential earnings adjusted for unemployment hours reflects the trend in the CUR apart from changes in macroeconomic conditions. We call this ratio "macro-constrained CUR," and interpret it as an indicator of the shortfall from the full utilization of human capital attributable to factors other than the macroeconomic performance of the economy.

Figure 2 displays the trends in the overall CUR, and in the "macro-constrained CUR." Over the period from 1975 to 1992, this adjusted CUR indicator decreased steadily from more than 90 percent to about 88 percent. From this, we conclude that there has been a secular increase in the extent to which the male human capital stock is underutilized over the past two decades.

III. THE CAPACITY UTILIZATION RATIO: ALL MALES, 1975-1992

A. The "Prevalence" of Human Capital Underutilization

One plausible indicator of the extent of labor underutilization is the percent of all working-age males who work less than the "full activity" norm, and hence record a CUR of less than 100. This

percentage of non-fully-active males was revealed in Table 1, and we use it here as an indicator of the "prevalence" of underutilization.

In each of the recession years of 1975 and 1991, about 39 percent of working-age males failed to fully utilize their human capital by this definition (Table 1). However, comparing the late-1980s cyclical peak to the late-1970s peak suggests that the prevalence of underutilization decreased by about two percentage points over the decade.

We calculated the patterns of underutilization-prevalence for four age groups, four education groups, and two race groups, for a total of 32 race-age-education groups.[11] Across age groupings, young males (18–24 years) have the highest prevalence—about 59 percent of young whites and 66 percent of young nonwhites record working less than full time-full year, or not working at all.[12]

Males aged 55–64 years were the only age group to show an upward trend in prevalence over the period, and this older worker pattern holds for both racial groups and all education levels. Interestingly, within this older age group, the increase in underutilization prevalence is greater for the most educated groups, suggesting voluntary substitution of leisure for work time by individuals with high permanent income. By 1992, the prevalence of underutilization for the oldest group approached that for the youngest; for nonwhites about 62 percent of older workers worked less than full time-full year—and hence earned less than their potential—while the corresponding figure for whites was about 50 percent.

Across education groups, the prevalence of underutilization is the highest for high school dropouts, and has been increasing over time. The largest increase in prevalence among this low education group is recorded for white dropouts, who ended the period with 62 percent of the group

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[11]The four age groups are 18–24,25–39,40–54, and 55–64. The four education groups are < 12 years, 12 years, 13–15 years, and 16+ years. The two racial groups are whites and non-whites.

[12]A full set of estimates of underutilization prevalence is found in Buron, Haveman, and O'Donnell (1995).

either jobless or working less than full time-full year (up from 52 percent in 1975). This recent rate is nearly as high as that for nonwhite dropouts (65 percent in 1992). Of the eight race-education groups, only nonwhite college graduates recorded a decline in the prevalence of underutilization over the period.

When underutilization prevalence is disaggregated into race-age-education groups, the youngest group of high school dropouts stands out. Irrespective of race, about 73 percent of 18–24 year old dropouts either have no employment over the course of the year or work less than full time-full year. While this very high level of prevalence among youth dropouts remained constant over the period, prevalence rose rapidly for high school dropouts in all other age groups. This finding is at odds with the general perception that the young, least-educated—and, nonwhite—groups have experienced the greatest labor market **deterioration** in recent years.[13]

B. CUR Among Those Not Fully Active

Table 1 indicates that about 35–40 percent of working-age males were working less than the full time-full year norm during the 1975–1992 period. The disaggregated race-age-education patterns of working-age males with an "activity deficit" were described in Section III.A. However, these patterns of underutilization prevalence say little about the extent of underutilization among *those with an activity deficit*. This shortfall for the group of not-fully-active working age males can be summarized by the capacity utilization rate (CUR). This measure can be interpreted as the extent—or

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[13]Juhn (1992) reports that the decline in the labor market participation of black high school drop-outs over the 1967–87 period was most pronounced in the youngest group (that with the least labor market experience). A number of factors may explain why we do not find this. The principal difference between our analysis and that of Juhn (op cit) is the measure of labor utilization. She examined weeks worked as a proportion of 52, while our results are based on whether the individual works less than 2080 hours. Further, the periods of analysis differ. Another important difference lies in Juhn's examination of blacks, as opposed to non-whites. It is plausible that there has been a decline in the labor market attachment of young black high school drop-outs which is not evident when all non-whites are taken together.

"intensity"—of underutilization for those not fully active. In the following discussion, we summarize the most important CUR patterns for this group; a more complete set of estimates is found in Buron, Haveman, and O'Donnell (1995).

Among this less-than-fully-active group, there has been a clear upward trend in the extent—or intensity—of human capital underutilization. The CUR for those working-age males with an activity deficit decreased from .55 to .48 over the 1975–1992 period. This translates into an increase of unutilized work hours among this growing less-than-fully-active group from an annual average of 936 hours of inactivity to an annual average of 1082 hours.

In contrast to our measure of underutilization prevalence—which was highest among the youngest age group—the lowest CUR among those who are not fully active is recorded for the oldest age group, those aged 55–64 years. While young males are more likely to work less than 2080 hours than are males in the oldest group, the older males who are not working full-time, full-year are more likely to be completely inactive, due to factors such as health, disability, and retirement.

For those not meeting the full time-full year norm, the CUR has been falling for all age categories, and both racial groups. The decrease in the CUR among older whites has been greater than that of older nonwhites, and suggests an increased propensity for whites to retire (or to at least slow down) prior to age 65 over the past two decades relative to nonwhites. The CUR of whites in the older age category remains higher than that of nonwhites, but these differential trends indicate a narrowing of the race differential in CUR for this older, less-than-fully-employed group.

However, the opposite trend holds for the group aged 25–39 years; for these prime-age workers, the racial gap in the CUR has been increasing as the utilization rate for nonwhites who are not fully active has been falling faster than the CUR for whites. By 1992, nonwhites in this prime age category who either were jobless or working less than the full time-full year norm recorded earnings

of less than one-half of their potential earnings; the comparable percentage for whites who are not fully active is about 60 percent.

A downward trend in CUR among the less-than-fully-employed is observed for all education groups. For whites, the difference in CUR across these education groups has remained roughly constant. In contrast, CUR has decreased most rapidly for the nonwhites with the highest education levels, hence narrowing the gaps among education categories within this racial group. White high school dropouts who were not fully-active showed a more rapid decrease in their CUR over the period than did nonwhite dropouts—by the end of the period, the CUR among those not working full time-full year stood at about 35 percent for both of these low education racial groups.

C. The Reasons for Human Capital Underutilization

1. *Self-Reported Reasons for Underutilization*

Table 2 shows the gap between Earnings and Potential Earnings, which can also be thought of as the amount of potential earnings that are foregone ("foregone potential earnings"). Foregone potential earnings have ranged from about $3800 in 1978 to more than $5000 in the recession year of 1982. From respondents' answers to questions regarding why they work less than the full time-full year norm, foregone potential earnings for each year can be decomposed into the following comprehensive set of "reasons." (Appendix II describes the decomposition procedures we have used.)

- Work is not available (unemployed)
- Discouraged from seeking work
- Illness/disability
- Retirement
- Voluntary part-time work
- Housework, including child care
- Other

The level and trend of these components of foregone potential earnings are presented in Figure 3 for the 1975–92 period. The vertical sum of the component values for each year equals the per capita gap between Potential Earnings and Earnings that are realized.

With the exception of the late 1970s boom, a **lack of employment opportunities** for those seeking work is the largest component of unutilized potential earnings. On average, across the period, the unemployment reason given for the failure to fully utilize human capital accounts for around 25–35 percent of the total Earnings/Potential Earnings gap. This unemployment component peaks during the recession of the early 1980s, when it accounts for nearly $2200 per person. The value of per capita foregone potential earnings due to this job availability reason was at its lowest at the end of the expansion of the late-1980s, when it fell to less than $1000 per person. Over the period, per capita foregone potential earnings due to unemployment shows a slight downward trend of about $120 per decade.[14]

For nonworkers and those working part-year (but not part-time), we calculated a value of the earnings foregone by those who are not looking for work, and who do not give illness-retirement-housework reasons for not working. We presume that this component of foregone earnings represents the failure to utilize human capital by what have been called **"discouraged workers,"** and hence that it too reflects macroeconomic conditions. This value ranges from a low of about $100 per person (or about 2 percent of the total gap between Potential Earnings and Earnings) during the high employment period at the end of the 1970s, to a high of nearly $400 (nearly 6 percent of the total) during the early-1980s recession. While this value declined during the expansion of the 1980s, it never fell below $200 per person, and rose to more than $300 by the end of the period. Per capita foregone potential earnings due to this discouraged worker effect showed an upward trend over the period of about $140 per decade.

Illness or disabling health conditions form the second most important reason for human capital underutilization, and accounts for a per capita value of about $1000 to $1300 per year over the

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[14]The average annual change in the gap between Earnings and Potential Earnings due to unemployment (Figure 3) are calculated by a regression of the values of the relevant series on a time trend. Subsequent average annual change calculations follow the same procedure.

period. The contribution to foregone potential earnings due to this factor is clearly downward, however, at about $150 per person per decade. This downward trend in foregone earnings due to illness/disability contradicts a growing incidence of illness/disability problems among the working-age population reported in other studies.[15]

Retirement is the third most important reason for the gap between Potential Earnings and Earnings, and has ranged from $500 per capita to nearly $1000 per capita. This source of human capital underutilization is also the most rapidly growing among the set of reasons given by working age males for the failure to fully use human capital. Per capita foregone earnings due to retirement have grown about $190 per decade, or nearly $350 over the 1975–1992 period.

The remaining reasons for foregone potential earnings (**housework, voluntary part-time work, and other**) account for a relatively small share of total foregone potential earnings per person—ranging from 14–23 percent of the total over the period. Aggregate underutilization attributable to this set of reasons has fallen slowly over the period.

2. *Underutilization due to Exogenous Constraints and Individual Response*

The underutilization of human capital due to exogenous constraints placed on individuals carries quite different social and policy implications than that due to individual responses to incentives. For this reason, we have divided foregone potential earnings (Potential Earnings less Earnings) into two components—that arising from individual responses to incentives (retirement, voluntary part-time work, and housework) and that stemming from exogenous constraints on the underutilization of human capital (work not available, discouraged from seeking work, and illness).[16]

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[15]See Chirikos (1986) and Colvez and Blanchet (1981).

[16]The attribution of the gap between Potential Earnings and Earnings into "exogenous constraint" and "individual response" categories takes at face value what respondents state to be the most important reason for their not working, even though there may be other contributing reasons, or a more important reason that they have disguised. For example, an individual may choose not to work, but may report illness (included in our "individual response" category) in order to indicate a

Figure 4 shows the level of per capita foregone potential earnings due to exogenous constraint and individual response reasons for the working-age male population. An upward trend for individual response reasons is observed; the trend for exogenous constraint reasons is negative. At the beginning of the period, foregone potential earnings due to individual response reasons was 23 percent as large as exogenous constraint reasons for foregone potential earnings; by the end of the period, the individual response reasons had grown to over 37 percent of the exogenous constraint reasons. Over the 1975–1992 period, per capita foregone potential earnings attributed to individual response reasons **increased** by about $240 per decade, while the per capita unutilized human capital due to exogenous constraints fell by about $130 per decade.

Figure 5 records the CUR that would result if the only reasons for failing to fully utilize human capital were those we labeled individual responses. This value is obtained by dividing per capita earnings by the level of per capita potential earnings if there were no exogenous constraints on using human capital, as defined above.[17] From 1975 to 1992, the adjusted CUR decreased from more than 95 percent to about 93.5 percent; a reduction of about one percentage point per decade.

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more acceptable reason for not working. The reason 'other' is excluded from these estimates. Foregone potential earnings per person due to individual response reasons is expressed as a fraction of per capita foregone potential earnings, excluding per capita foregone earnings due to the 'other' category.

[17]This adjusted CUR is defined as the ratio of per capita earnings to per capita potential earnings **less** per capita foregone earnings due to exogenous constraints (earnings unrealized because work not available, discouraged from seeking work, and illness); that is,

Adjusted CUR = Earnings /(Potential Earnings - Foregone Potential Earnings due to Exogenous Constraints).

IV. CAPACITY UTILIZATION PATTERNS AMONG RACE, AGE AND EDUCATION SUBGROUPS: 1975-1992

The overall patterns of working-age male human capital underutilization described above conceal substantial differences among race-age-education subgroups. In this section, we summarize a few of the more prominent of these differences.[18] We begin with a discussion of racial differences, and then present differences between age and education subgroups. In each discussion, we present subgroup patterns in potential earnings, earnings and the CUR, and then explore differences among subgroups in CUR levels and trends, and the reasons for these patterns.

A. Racial Differences in CUR

Figure 6 shows the time trend of per capita potential earnings for whites and non-whites from 1975 to 1992. Over this period, the ratio of non-white to white potential earnings fell from 73.5 to 70.6. The earnings potential of the mean white male fell by an average of $1104 per decade; that for the mean non-white male fell by $1188. As a result, the racial gap in potential earnings increased slightly over the period.[19]

Figure 7 shows the levels and trends of CUR for all non-whites and whites.[20] The CUR of non-whites is about 10 points below that of whites. Over the entire period, the CUR of non-whites averages about 75 percent, compared to about 85 percent for whites. From 1975 to 1992, the CUR of

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[18]Tables and figures describing the detailed sub-group patterns are available from the authors upon request.

[19]Noting that the Potential Earnings is the product of the individual's wage rate and a constant (2080), the increasing ratio of white to nonwhite Potential Earnings reflects the growing overall disparity in wage rates over the 1975-92 period.

[20]Here, CUR is calculated over both individuals who work less than the full time-full year norm and those who work 2080 hours or more.

both racial groups fell; the decrease in the non-white rate (about 1.1 percentage points) was slightly greater than that for whites.

Table 3 shows 1975 levels of Earnings, Potential Earnings, and the gap between them, for both non-whites and whites. The gap between them—foregone potential earnings—is allocated between the exogenous constraint and individual response reasons for the underutilization of human capital. The table also shows the CUR and the CUR adjusted for exogenous constraints on the ability to work for both groups, as well as trends in all of these measures, expressed in "per decade change" terms over the 1975 to 1992 period. Even though potential earnings for nonwhites are below that of whites, the gap between earnings and potential earnings is greater for nonwhites. The allocation of the reasons for the Earnings/Potential Earnings gap into exogenous constraint and individual response factors suggests that the exogenous factors account for a higher proportion of the gap for nonwhites than for whites. For nonwhites, in 1975 over 80 percent of the gap is attributable to exogenous constraints; the comparable percentage for whites is about 70 percent.[21] These patterns are reflected in the CUR and Adjusted CURs for whites and nonwhites. When contrasted to the large racial gap in the overall CUR (86 percent for whites and 76 percent for non-whites in 1975), the Adjusted CUR, reflecting the extent of underutilization after accounting for exogenous constraints on work, was only slightly lower for non-whites than for whites over the entire period. The Adjusted CUR—the CUR that would reflect utilization due to individual response reasons—fell by about 1.6 percentage points for both groups over the period.

B. Age Differences in CUR

Figure 8 is the analogue of Figure 6, and shows the time trend of per capita potential earnings for the four age groups. The most interesting patterns are for the youngest (ages 18-24) and oldest

[21]Interestingly, the portion of the Earnings/Potential Earnings gap due to exogenous constraints fell more for nonwhites than for whites over the 1975-1992 period.

(ages 55-64) groups. Per decade, the earnings potential of 18-24 year olds fell by $2700, while mean potential earnings of older working-age males decreased only $960. Over the entire period, the ratio of the potential earnings of the youngest group to that of the oldest group fell from 63.6 to 51.6—a radical drop of 12 points.

The trends in CUR for the two age groups are shown in Figure 9. Human capital utilization by youths has drifted downward from the high 70 percent range to the middle 70 percent range over the period, equivalent to a fall of about 1.5 percentage points per decade over the period. A quite different picture is seen for the older group. That group's CUR has fallen from about 73 percent at the beginning of the period to about 65 percent by 1992, a per decade decline of 5 percentage points.

Table 4 presents the same information for younger and older working-age males as was shown for whites and nonwhites in Table 3. While the gap between earnings and potential earnings is high for both older and younger workers, it has moved in quite different directions over the 1975-1992 period. For youths, this gap has fallen by nearly $400 per decade, driven by a large decrease in the amount of the gap attributable to exogenous constraints, primarily macroeconomic performance. Conversely, the rise in the gap between Earnings and Potential Earnings for the older age group—in excess of $1100 per decade—is more than explained by the rapid increase in individual responses (primarily, retirement) over the period.[22] For both age groups, exogenous constraints appear to have become less binding over the 1975-1992 period.

These patterns indicate a substantial increase in underutilization among older workers due to individual responses, an increase that is less troubling than that for youth underutilization for the same reasons. Over the period, Adjusted CUR, reflecting the extent of underutilization after accounting for

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[22]Interestingly, the retirement-induced increase in unutilized human capital for this older group was offset by a substantial decrease in the amount of underutilization due to illness/disability; from an average of about $3000 per year at the beginning of the period, to about $2200 by the end of the period. Apparently, a growing fraction of older workers who report having not worked and utilized their human capital because of health problems have, in recent years, retired from the work force.

exogenous constraints on work, fell by about 1.8 percentage points for youths, and by nearly 13 percentage points for older workers. For both groups, Adjusted CUR was substantially below that of the entire male work force during this period.

C. Education Differences in CUR

In Figure 10, the pattern of potential earnings over the 1975–1992 period is shown for the four education groups. Noteworthy levels and changes are seen in the two lowest education groups—dropouts and those with a high school degree (but no college). Over the 18 year period, potential earnings for the high school or less group fell from about $25,000 to about $19,000. The average per decade decrease is $4265 for dropouts, and $3571 for high school graduates. Of the four education groups, only college graduates showed an increase in potential earnings over the period. The increasing return to years of schooling is clearly seen in the widening gap in potential earnings among these education groups.

Figure 11 shows the trends in overall CUR for these two low schooling groups. Both potential and actual earnings for these groups fell over the 1975–1992 period, but actual earnings fell at a faster rate, resulting in a dramatic decline in CUR. The CUR for high school dropouts fell from about 74 percent in 1975 to about 62 percent by the end of the period, while the CUR for the group of those with just a high school degree fell from 86 percent to 79 percent.

Table 5 presents earnings, potential earnings, and the gap between the two for the dropout and high school degree groups; patterns of underutilization for the two groups is also shown. For both groups, the gap between earnings and potential earnings is large, and this is reflected in the CUR of these groups. Both the level of and the change in this gap are dominated by exogenous constraint reasons (primarily, unemployment and illness). For both low education groups, however, the per capita gap due to individual responses increased over the period. The adjusted CUR—the rate of utilization that reflects underutilization due to individual response reasons—decreased by about 3.6

percentage points per decade for the high school dropouts, from about 93 percent to about 86 percent over the period. For the group with a high school degree, the adjusted CUR decreased from over 95 percent to about 93 percent over the period. By contrast, the adjusted CUR for the groups with some college education stood at nearly 95 percent by the end of the period.

V. CAPACITY UTILIZATION PATTERNS FOR VULNERABLE GROUPS: 1975–1992

The patterns discussed in section IV. reveal substantial variation in human capital underutilization among subgroups of the male working-age population. In general, non-white youths and older males—especially those with low schooling levels—have the greatest levels of underutilization. These same groups display the largest increases in human capital underutilization over time.

In this section, we use our CUR indicator to explore labor market patterns for the most vulnerable of these subgroups. We focus on the youngest and oldest non-white groups with the lowest schooling levels, and compare their patterns with those of the average male in their age group, and with the average working-age male, irrespective of age.

Table 6 shows these patterns for non-white youths with low schooling levels, all youths, and all males. Table 7 presents the same patterns for non-white older males who are dropouts or with only a high school degree, all older males, and all males.

A. Low Education Minority Youths

Consider, first, low education minority youths (Table 6). Although the row of the table labeled Potential Earnings reveals nothing about the utilization of human capital, it shows vividly the declining prospects of low education minority youth. Over the 18-year period, potential earnings fell by nearly 16 percent per decade for both non-white youths who dropped out of high school and those

with a terminal high school degree. This compares with a 15 percent decadal drop for all youths, and a 5 percent drop for all males.

The Earnings/Potential Earnings gap is very large for both of the groups of low education youths, and this is reflected in the very low CUR for both groups—57 and 71 percent, respectively. For both low-education groups of minority youths, the CUR fell over the 1975–1992 period. For the group of dropouts, CUR fell by over 3 percentage points for the dropouts and by 4 percentage points for the terminal high school graduates. By way of comparison, CUR fell by about 2.7 percentage points for all youths, and by 1.6 points for all males.

The primary reasons for the gap between earnings and potential earnings among low education minority youths are concentrated in the exogenous constraints that they face—unemployment, discouragement over finding work, and illness. This notwithstanding, the adjusted CUR—the indicator of labor utilization attributable to reasons classified as individual responses—was substantially lower for the low education minority youths than for either all youths or all males. Most significantly, the fall in adjusted CUR over the period was greater for minority youths than for either of the comparison groups. Indeed, the CUR attributable to individual responses decreased by nearly 4.5 percentage points over the 1975–1992 period for young minority dropouts.

B. Low Education Minority Older Males

Potential earnings decreased substantially for low education minority older workers, relative to both all older working-age men, and all males (Table 7). Over the period, potential earnings for low education older minority males fell by 9 percent (dropouts) and 6 percent (high school graduates) per decade, while the decrease was 3 percent for all older workers, and 5 percent for all males of working age.

Similarly, the Earnings/Potential Earnings gap is very high for low education minority, older males, relative to their earnings potential. At the beginning of the period, the CUR for these groups

was only about 60–65 percent compared to 73 percent and 85 percent for all older workers and all males. However, unlike low-education minority youths, the gap between earnings and potential earnings rose substantially over the 1975–1992 period for the older, low-education minority workers. This is reflected in the very large decreases in the CUR for the minority older males with low schooling. Over the 18 year period, the CUR for dropouts fell by nearly 10 percentage points (from an already low base of about 60 percent), while the CUR for terminal high school graduates decreased by 15 percentage points (from a base of about 68 percent). For all older workers, the CUR decreased by about 9 percentage points; it fell by only 1.6 percentage points for all males.

The reasons accounting for the gap between potential earnings and earnings among non-white, low-education, older males are dominated by the exogenous constraints of unemployment, retirement, and illness. For both groups (and for all older males), illness is the single largest reason for this gap; in 1975, it accounted for nearly two-thirds of the gap for the dropout group, and 40 percent for the older workers with a terminal high school degree.[23] For all of the older groups, retirement accounted for an increasingly large share of FPE over the period, while unemployment as a reason the Earnings/Potential Earnings gap declined. It is noteworthy that non-work due to the discouraged worker effect accounted for very little of FPE for the non-white, low schooling older group at the beginning of the period; however, this source of FPE grew rapidly over the period for this vulnerable population.

Largely because of the increase in individual response reasons for underutilization (primarily, retirement), the adjusted CUR for low-education minority older males fell substantially over the period—by 14–16 percentage points for the two low schooling groups, as compared to decreases of 13 percentage points for all older males and 1.6 percentage points for all males. By 1992, then, the

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[23]Surprisingly, the dropout group reported that the Earnings/Potential Earnings gap due to retirement in 1975 ($770) was less than 20 percent of the gap due to illness ($4616).

adjusted CUR for the two minority groups had fallen to about 70 percent from its start-of-the-period level of over 85 percent.

VI. SUMMARY AND CONCLUSIONS

In this paper, we have defined a new indicator of the level of human capital, Potential Earnings, and a new indicator of labor underutilization, the capacity utilization ratio (CUR). Potential Earnings is the product of the individual's predicted wage and 2080 hours, interpreted as the norm of full time-full year (or capacity) work. The CUR is the ratio of the individual's earnings (hours times the predicted wage) to the individual's level of potential earnings, and is interpreted as a rate of human capital utilization. We have used these concepts to assess the levels and trends of human capital and its utilization among U.S. working -age males from 1975 to 1992. Overall, the time-related patterns in both potential earnings and the utilization of this potential indicate that underutilization of the stock of male human capital has been increasing over the period. This downward trend in human capital utilization has been concentrated among very young and old workers, those with the lowest education levels, and nonwhites.

This overall pattern raises the question of the extent to which the reduction in human capital utilization has derived from changes in the exogenous constraints that people face or in their individual responses to incentives. For the male working-age population the reasons for not using human capital were aggregated into *exogenous constraint* (unemployment, discouraged from work, illness) and *individual response* (retirement, voluntary part-time work, housework) categories. An upward trend for individual response reasons for underutilization is observed, while exogenous constraints appear to contributing relatively less to underutilization. At the beginning of the period, individual response reasons accounting for the Earnings/Potential Earnings gap (the dollar value of underutilized human capital) were about 23 percent as large as those associated with exogenous

constraints; but by the end of the period, individual response reasons were 37 percent as large as the exogenous constraint reasons. Over the 1975 to 1992 period, per capita individual response reasons for underutilized human capital increased by about $240 per decade, while per capita exogenous constraint reasons fell by about $130 per decade.

Our calculations allow an even deeper assessment of these individual response/exogenous constraint sources of human capital underutilization among various age/race/education subgroups. In Table 8, we break the gap between earnings and potential earnings (unutilized potential earnings) into the two components of individual response and exogenous constraint reasons, and show the ratio of these two values for the subgroups. We also show the decadal change in this measure for each of the subgroups. Overall, and for each of the subgroups, the individual response/exogenous constraint ratio increased rapidly over the 1975–1992 period. For all working-age males, the percent decadal change in the ratio is nearly 50 percent. For the oldest individuals, the ratio increased by twice that amount, or 95 percent, indicating the increasing importance of individual response reasons in explaining foregone potential income. Decadal increases in this ratio in excess of 60 percent are also recorded for nonwhites in general, and for non-white youth dropouts.

We conclude, then, that working-age males in the United States face significant exogenous constraints in securing earned income. In 1975, about three-fourths of the aggregate amount of underutilized human capital is attributable to such constraints; less than one-fourth is attributable to individual responses. However, since 1975, the contribution of the individual response reasons for the increasing underutilization of human capital has been increasing relative to the contribution of the exogenous constraint reasons. Indeed, the increase in underutilization due to individual response reasons has been dramatic for certain population subgroups—particularly minorities (especially those with the lowest education levels), and the oldest working-age males.

APPENDIX I

Estimation of Individual Predicted Wage Rates

Here, we describe the procedures adopted for obtaining individual predicted wage rates for each individual in each year. Since we seek a measure of marginal productivity in the labor market, we use data on only wage and salaried workers in our estimation. We eliminate the self-employed in our estimation because their earnings are some combination of returns to labor and capital that cannot be disentangled with CPS data.

In estimating an hourly wage function appropriate for predicting the wage rate for all males, we face the problem of unobserved wage rates for individuals who are not working. The potential bias induced by estimating a wage function from data on workers alone is dealt with by the standard selectivity correction (Heckman: 1976, 1979). The estimated coefficients in a probit model of employment status are used to generate predicted Inverse Mill's Ratios which are used to correct for selection bias in the wage equation estimated over workers alone.

The first stage, then, is a probit estimation in which the dependent variable is 1 if the individual worked during the year and zero if he did not. The explanatory variables are: a dummy variable for married spouse present, a dummy variable for the presence of unmarried children under age 18, the number of people in the family, non-labor income (defined as family unearned income less Social Security payments to the individual, less Public Assistance to the family, less pension payments to the individual, less child support and alimony payments to the family, less Supplemental Security Income to the family, less Worker's Compensation and unemployment insurance payments to the individual) , years of education and its square, years of experience (defined as age - education - six) and its square, the product of years of experience and years of education, a dummy variable for veteran status, a dummy variable for SMSA central city residence, a dummy variable for SMSA non-central city residence, dummy variables for northeast, south, and west, and the unemployment rate. Although self-employed workers are excluded from both stages of the estimation, the resulting coefficients are used to estimate wage rates for the whole sample, including the self-employed.

The empirical specification of the hourly wage equations was arrived at by sifting the CPS to identify those variables which are both non-endogenous determinants of market productivity and recorded in every CPS year from 1976–93. The variables included are those used as explanatory variables in the first stage probit model of employment status, with the exception of exogenous non-labor income and the state-specific unemployment rate. The state-specific unemployment rate was initially included in the wage function but was found insignificant. (All testing for appropriate empirical specification was undertaken using 1976 data.) Likelihood Ratio tests indicated that the family composition variables—marital status, number of children, any children = 1, and number of persons in family—could not be excluded from the wage functions. Their inclusion is justified by the observation that they affect investment in job specific human capital, and hence are valid proxies for productivity.

The null hypotheses of no structural differences in the determination of the employment status and wages of the two racial groups were tested by Likelihood Ratio and Chow tests; both tests indicated rejection of the hypotheses at the 1 percent level using the 1976 CPS data. (Likelihood Ratio tests were used to test for structural differences in the probit models of employment status, and Chow

tests for the wage equation. A Wald test, which allows for the possibility of differences between the variance of the disturbances of the two regression equations, was also used with no inconsistency with the Chow test results.)

On the basis of these results, separate wage functions were estimated for whites and non-whites in every year. (A dummy variable for Hispanic ethnicity was included in the both stages of the non-white estimates.) The parameter estimates for the two race-specific wage functions for each year are available from the authors, as well as the probit equations that provide the basis for the required Inverse Mills Ratios.

The race-year specific coefficient estimates are used to predict each person's hourly wages based on their values for each of the attributes in the wage function. The predicted wage rate is multiplied by 2080 hours (the norm for full-time, full-year work) to arrive at potential earnings for each person in the sample. If a person works less than 2080 hours, foregone potential earnings is calculated by multiplying 2080 hours less actual work hours by the predicted wage rate. Hence, foregone potential earnings can be thought of as weighted foregone hours (hours worked less than the norm), where the weight is based on an estimate of the value of the person's productive capabilities in the labor market. If a person works 2080 hours or more, by definition, they are working at their full potential in the labor market and hence have no foregone potential earnings.

APPENDIX II

Attribution of Foregone Work Hours to Reasons

Allocation of foregone work hours to the seven reasons that we have distinguished—no (full-time) work available, discouragement from finding work, illness/disability, retirement, voluntary part-time work, housework, other—was made as follows.

First, foregone work hours were split into hours per week and weeks deficits. These separate components were then allocated to the seven categories.

In the CPS, civilian adults who have worked between 1 and 49 weeks inclusive (1 < = CPS variable **wkslyr** < = 49) are asked how many weeks they were not working, but were looking for work (**wkslkun**). This amount multiplied by 40 hours is attributed to the "unemployment" reason for foregone hours. These workers were then asked what they were doing for most of the remaining weeks of the year. The set of potential responses was: illness/disability, taking care of home/family, retired, no work available, other. Given that these workers had already indicated how many weeks they spent looking for work, any worker responding "no work available" had these remaining hours (52 - **wkslyr** - **wkslkun**) * 40 allocated to the discouraged worker effect. Other responses had these hours allocated as indicated. If an individual worked more than 49 but less than 52 weeks, no inquiry is made as to what the person did in the remaining weeks. These foregone hours are included in the "other" category.

Civilian adults who did not work at all are also asked how many weeks they were in the labor force looking for work (**wksnw**). These hours (**wksnw** * 40) are attributed to the unemployment reason for foregone hours. These workers were then asked the reason for not working (**rnowrk**). The set of potential responses was: illness/disability, taking care of home/family, could not find work, other. Given that these workers had already indicated how many weeks they spent looking for work, any worker responding "no work available" had these remaining hours (52 - **wkslkun**) * 40 allocated to the discouraged worker effect. Other responses had these hours allocated as indicated.

Individuals who report working part-time for at least one week in the last year are asked for the main reason for doing so. Only four response categories are available: i) could only find part-time, ii) wanted part-time, iii) slack work/material shortage, iv) other. In order to allocate foregone hours arising from part-time work to our six categories, we supplemented the information on reason for working part-time last year with information available from current economic activity status, reason for working part-time in the last week (if they usually worked part-time), and reason for working part-year.

Specifically, if an individual's reason for working part-time last year was i) or iii) above, their foregone hours due to part time work were allocated to the "no (full-time) work available" category. If their response was ii), and, even if they worked part-time last week and reported usually doing so, they did not give 'illness' or 'housework' as their reason, and if their current activity was not housework, and if they did not give 'illness' or 'housework' as a reason for working part-year, then they were allocated to the "voluntary part-time" category. If their response was ii) or iv) and they reported working part-time in the last week and usually did so and gave illness (housework) as the reason for this, or if they gave illness (housework) as the reason for working part-year, then their

part-time foregone hours were allocated to "illness" ("housework"). If their response was ii) or iv) and their part-time hours had not yet been allocated, they were included in "other".

If an individual usually works less then 40 hours per week but at least 35, they are not asked why they did not work 40 hours. The part-time hours of individuals in this group were allocated to the "other" category. If an individual usually worked more than 40 hours per week, but worked less than 2080 hours over the year as a consequence working for only part of it, a negative number of foregone hours, equal to 40 less their usual hours/week multiplied by the number of weeks worked, was included in the "other" category.

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TABLE 1

Percentage of 18–64-Year-Old Males in Annual Hours of Work Categories

Year	Annual Hours			
	0	1-2079	2080	>2080
1975	7.7	31.1	34.6	26.6
1991	9.7	29.2	32.8	28.3
1991–1975	2.0	-1.9	-1.8	1.7
1979	7.4	29.7	34.2	28.7
1989	8.8	26.1	34.7	30.4
1989–1979	1.4	-3.6	0.5	1.7

Source: Authors' calculations, March 1976, 1980, 1990, 1992 CPS.

TABLE 2

Per Capita Earnings Measures, Males, 18–64 Years Old

Year	Earnings	Potential Earnings	Potential Earnings Less Earnings	Capacity Utilization Rate
1975	$24,004	$28,206	$4,201	85.1
1976	24,630	28,780	4,150	85.6
1977	24,367	28,261	3,893	86.2
1978	24,966	28,801	3,836	86.7
1979	24,849	28,634	3,785	86.8
1980	24,039	28,725	4,236	85.0
1981	22,996	27,335	4,339	84.1
1982	22,380	27,424	5,045	81.6
1983	22,303	27,295	4,992	81.7
1984	22,919	27,448	4,529	83.5
1985	23,011	27,310	4,299	84.3
1986	23,892	28,329	4,437	84.3
1987	23,793	28,101	4,308	84.7
1988	23,373	27,317	3,944	85.6
1989	23,333	27,153	3,820	85.9
1990	22,285	26,176	3,891	85.1
1991	21,450	25,613	4,163	83.8
1992	21,181	25,494	4,313	83.1
Percentage Change: 1975–1992	-11.8	-9.6	+2.7	-2.4

Source: Authors' calculations, March 1976–1993 CPS.

Note: All dollar amounts are in 1993 dollars.

TABLE 3

Foregone Potential Earnings and its Components, Males, 18–64 Years Old by Race

	Non-Whites		Whites	
	1975 Level	Per Decade Change	1975 Level	Per Decade Change
Earnings	$16,473	-$1,058	$25,379	-$1,106
Potential Earnings	21,663	-1,188	29,400	-1,104
Gap*	5190	-129	4,021	3
Unemployment	2,163	-264	1,569	-118
Discouraged	174	243	59	102
Illness	1,838	-196	1,167	-163
Housework	74	46	55	27
Retirement	230	130	551	229
Voluntary PT	120	14	138	24
Other	592	-103	481	-98
Exogenous Constraints	4,175	-216	2,795	-180
Individual Responses	424	190	744	280
CUR	76.0	-0.6	86.3	-0.5
Adjusted CUR**	94.2	-0.9	95.4	-0.9

Source: Authors' calculations, March 1976–1993 CPS.

Notes: All dollar amounts are in 1993 dollars.

*Gap is potential earnings less earnings.

**Adjusted CUR = Earnings/(Potential Earnings - Foregone Potential Earnings due to Exogenous Constraints).

TABLE 4

Foregone Potential Earnings and its Components, by Age
(Only the youngest and oldest age groups are shown)

	Age 18–24		Age 55–64	
	1975 Level	Per Decade Change	1975 Level	Per Decade Change
Earnings	$13,438	-$2,321	$20,355	-$2,090
Potential Earnings	17,645	-2,700	27,725	-960
Gap*	4,207	-379	7,369	1,130
Unemployment	2,592	-503	1,133	-29
Discouraged	218	193	62	126
Illness	283	7	2,985	-602
Housework	27	39	71	11
Retirement	1	7	2,434	1,562
Voluntary PT	357	19	235	129
Other	729	-142	448	-67
Exogenous Constraints	3,093	-303	4,181	-506
Individual Responses	385	66	2,740	1,702
CUR	76.2	-1.5	73.4	-5.1
Adjusted CUR**	92.3	-1.0	86.5	-7.1

Source: Authors' calculations, March 1976–1993 CPS.

Notes: All dollar amounts are in 1993 dollars.

*Gap is potential earnings less earnings.

**Adjusted CUR = Earnings/(Potential Earnings - Foregone Potential Earnings due to Exogenous Constraints).

TABLE 5

Foregone Potential Earnings and its Components, by Education (only those with no college are shown)

	High School Dropouts		High School Graduates	
	1975 Level	Per Decade Change	1975 Level	Per Decade Change
Earnings	$16,379	-$4,185	$23,626	-$3,773
Potential Earnings	22,280	-4,265	27,491	-3,571
Gap*	5,901	-81	3,865	202
Unemployment	2,023	-137	1,787	-132
Discouraged	103	265	84	154
Illness	2,548	-302	905	85
Housework	73	40	46	37
Retirement	550	138	481	147
Voluntary PT	104	7	110	5
Other	500	-91	452	-94
Exogenous Constraints	4,674	-175	2,777	107
Individual Responses	727	185	636	189
CUR	73.5	-6.4	85.9	-3.2
Adjusted CUR**	93.0	-3.6	95.6	-1.4

Source: Authors' calculations, March 1976–1993 CPS.

Notes: All dollar amounts are in 1993 dollars.

*Gap is potential earnings less earnings.

**Adjusted CUR = Earnings/(Potential Earnings - Foregone Potential Earnings due to Exogenous Constraints).

TABLE 6
Foregone Potential Earnings and its Components:
Male Low Education Minority Youths, All Male Youths, and All Males 18-64 Years Old

	Non-White Dropouts, Ages 18-24		Non-White High School Degree, Ages 18-24		All Ages 18-24		All Working Age Males	
	1975 Level	Per Decade Change	1975 Level	Per Decade Change	1975 Level	Per Decade Change	1975 Level	Per Decade Change
Earnings	$8,076	-$1,500	$11,630	-$2,152	$13,438	-$2,321	$24,004	-$1,535
Potential Earnings	14,210	-2,221	16,475	-2,607	17,645	-2,700	28,206	-1,518
Gap*	6,134	-721	4,846	-455	4,207	-379	4,201	17
Unemployment	3,085	-877	3,090	-717	2,592	-503	1,661	-122
Discouraged	719	324	323	332	218	193	76	140
Illness	793	-91	365	52	283	7	1,271	-150
Housework	90	77	63	38	27	39	58	32
Retirement	0	15	0	1	1	7	502	189
Voluntary PT	212	10	316	1	357	19	135	19
Other	1,236	-179	688	-162	729	-142	499	-91
Exogenous Constraints	4,597	-643	3,778	-333	3,093	-303	3,008	-132
Individual Responses	302	102	379	40	385	66	695	240
CUR	56.8	-1.8	70.6	-2.3	76.2	-1.5	85.1	-0.9
Adjusted CUR**	84.0	-2.4	91.6	-1.1	92.3	-1.0	95.3	-0.9

Source: Authors' calculations, March 1976-1993 CPS.
Notes: All dollar amounts are in 1993 dollars.
*Gap is potential earnings less earnings.
**Adjusted CUR = Earnings/(Potential Earnings - Foregone Potential Earnings due to Exogenous Constraints).

TABLE 7
Foregone Potential Earnings and its Components:
Low Education Minority Older Males, All Older Males, and All Males 18–64 Years Old

	Non-White Dropouts, Ages 55–64		Non-White High School Degree, Ages 55–64		All Ages 55–64		All Working Age Males	
	1975 Level	Per Decade Change	1975 Level	Per Decade Change	1975 Level	Per Decade Change	1975 Level	Per Decade Change
Earnings	$10,406	-$1,744	$16,957	-$3,064	$20,355	-$2,090	$24,004	-$1,535
Potential Earnings	17,607	-1,610	24,977	-1,626	27,725	-960	28.206	-1,518
Gap*	7,201	134	8,019	1,438	7,369	1,130	4,201	17
Unemployment	1,261	-131	1,673	-143	1,133	-29	1,661	-122
Discouraged	30	228	0	248	62	126	76	140
Illness	4,616	-598	3,158	96	2,985	-602	1,271	-150
Housework	111	-4	110	43	71	11	58	32
Retirement	770	686	2,111	1,387	2,434	1,562	502	189
Voluntary PT	161	27	255	121	235	129	135	19
Other	252	-74	712	-314	448	-67	499	-91
Exogenous Constraints	5,906	-501	4,831	201	4,181	-506	3,008	-132
Individual Responses	1,042	709	2,476	1,551	2,740	1,702	695	240
CUR	59.1	-5.4	67.9	-8.3	73.4	-5.1	85.1	-0.9
Adjusted CUR**	88.9	-7.8	84.2	-8.6	86.5	-7.1	95.3	-0.9

Source: Authors' calculations, March 1976–1993 CPS.
Notes: All dollar amounts are in 1993 dollars.
*Gap is potential earnings less earnings.
**Adjusted CUR = Earnings/(Potential Earnings - Foregone Potential Earnings due to Exogenous Constraints).

TABLE 8
The Level and Decadal Changes in the Ratio of Individual Responses to Exogenous Constraint Sources of Foregone Potential Earnings

	Potential Earnings 1975 (Rate)	Ratio of Individual Response to Exogenous Constraint Reasons for Foregone Potential Earnings 1975	Percent Decadal Change in Ratio
All	$28,205	.23	46.8
All Non-Whites	21,663 (10)	.10	62.6
All Whites	29,400 (4)	.27	54.6
Ages 18–24	17,645 (11)	.12	35.7
Ages 25–39	28.484 (5)	.06	31.9
Ages 40–54	32,952 (2)	.11	25.0
Ages 55–64	27,725 (6)	.66	95.3
High School Dropouts	22,280 (9)	.16	34.1
High School Graduates	27,491 (7)	.23	25.5
Some College	30,670 (3)	.30	28.3
College Graduates	37,541 (1)	.59	40.2
Non-White Dropouts, Ages 18–24	14,210 (14)	.07	63.5
Non-White High School Graduates, Ages 18–24	16,475 (13)	.10	21.8
Non-White Dropouts, Ages 55–65	17,607 (12)	.18	98.7
Non-White High School Graduates, Ages 55–64	24,977 (8)	.51	60.6

Source: Authors' calculations, March 1976–1993 CPS.

Notes: All dollar amounts are in 1993 dollars.

Figure 1
Mean Annual Hours
Males 18-64 Years Old, 1975-1992

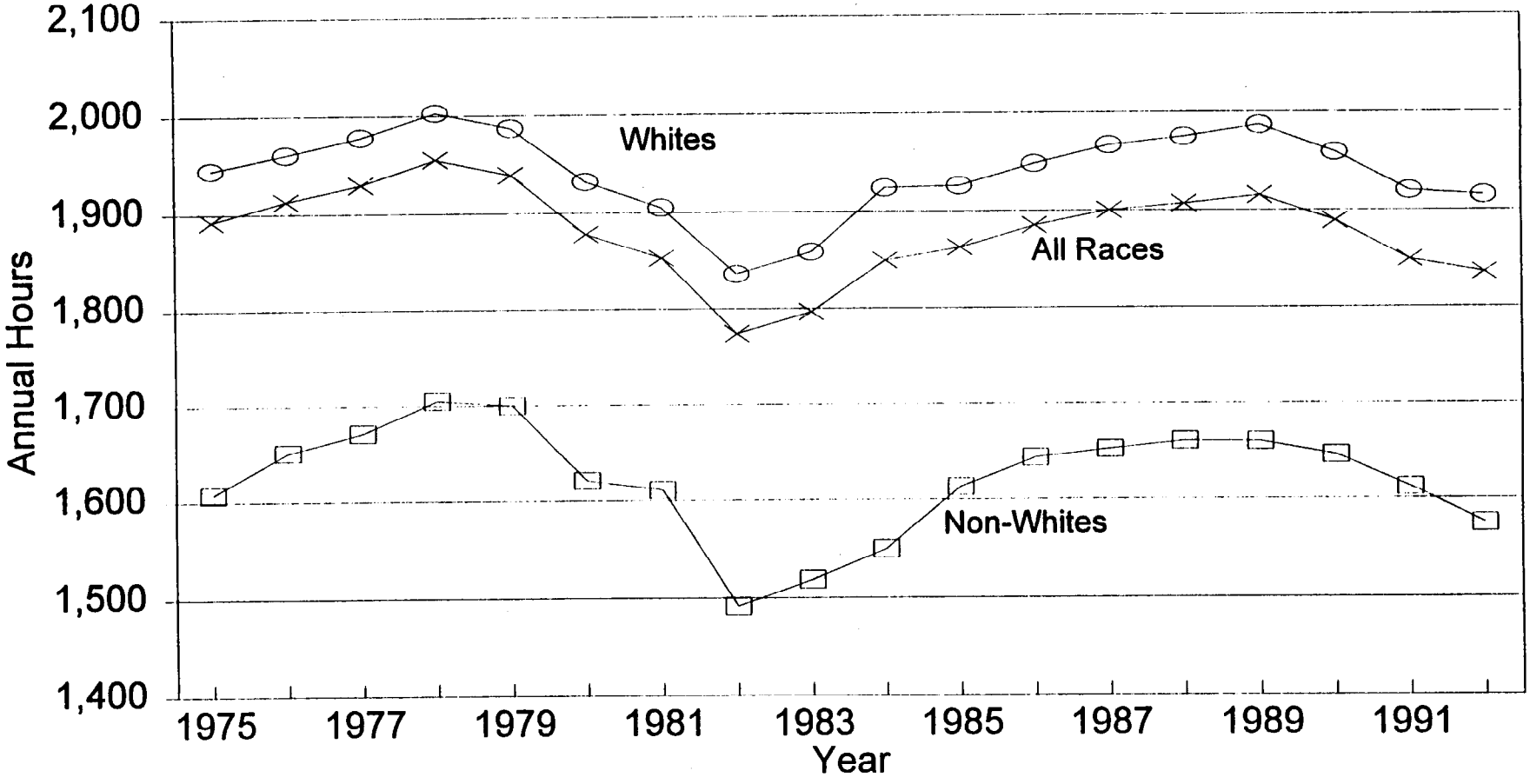


Figure 2

Capacity Utilization Rates

Males 18-64 Years Old, 1975-1992

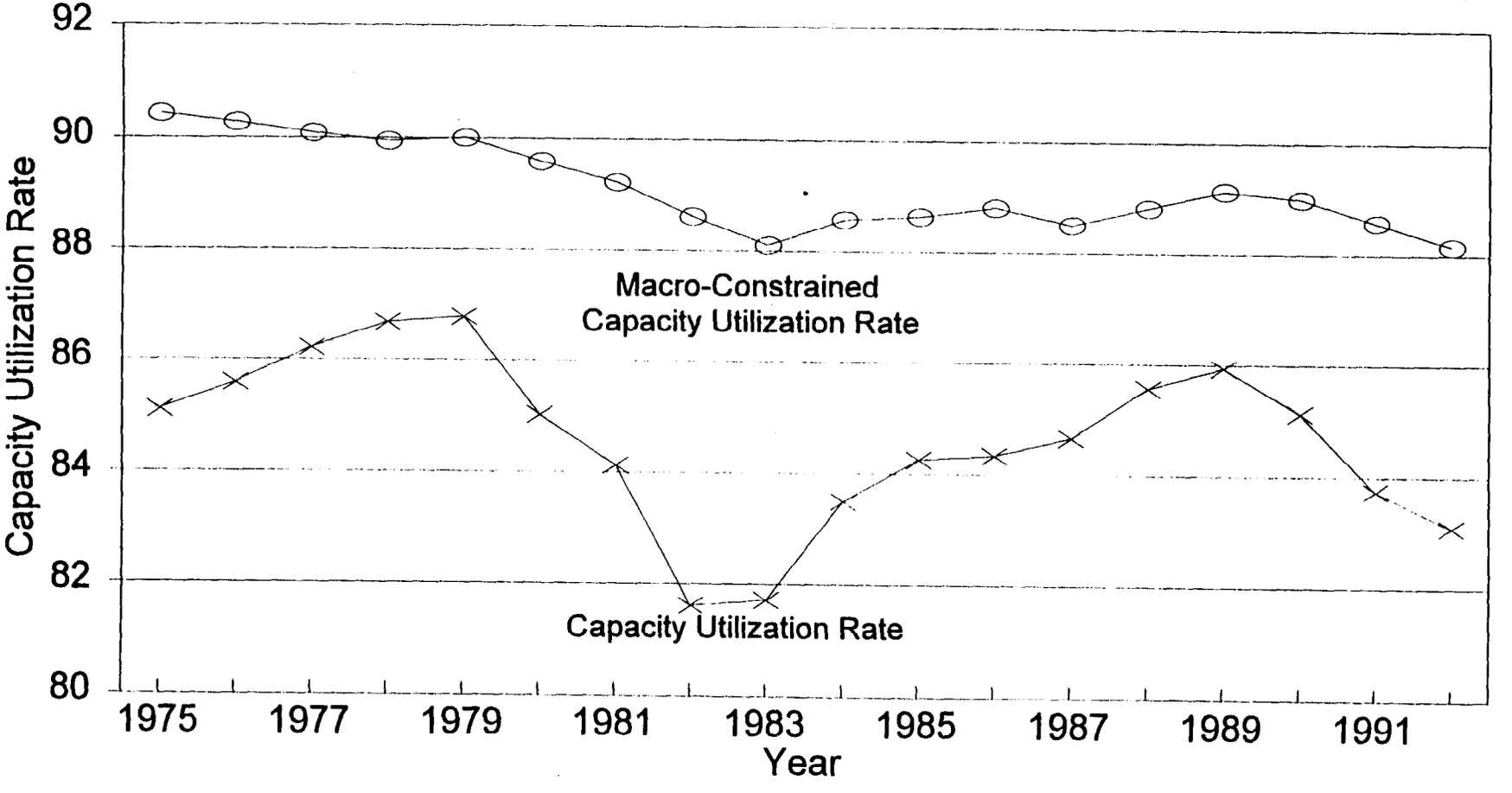
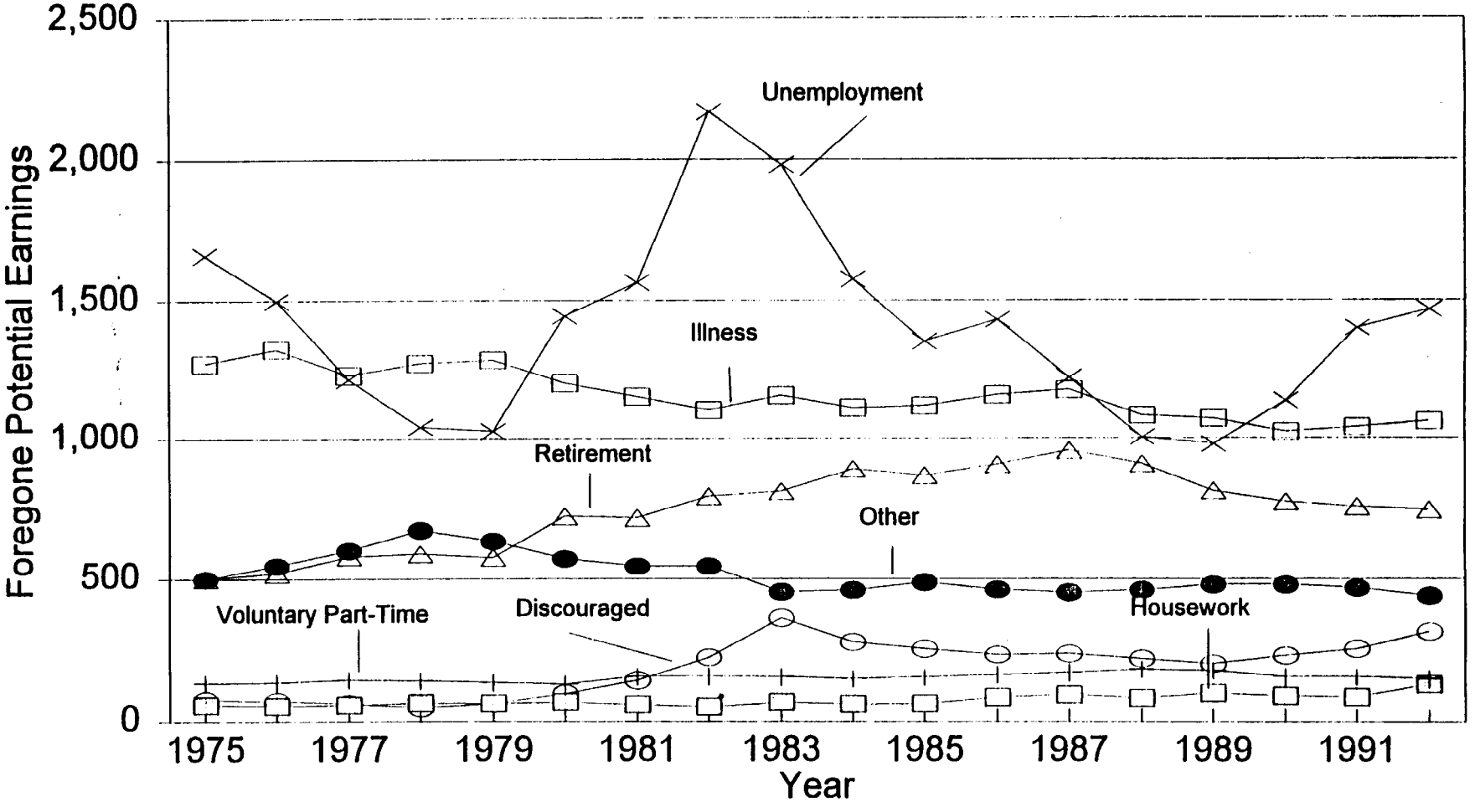


Figure 3

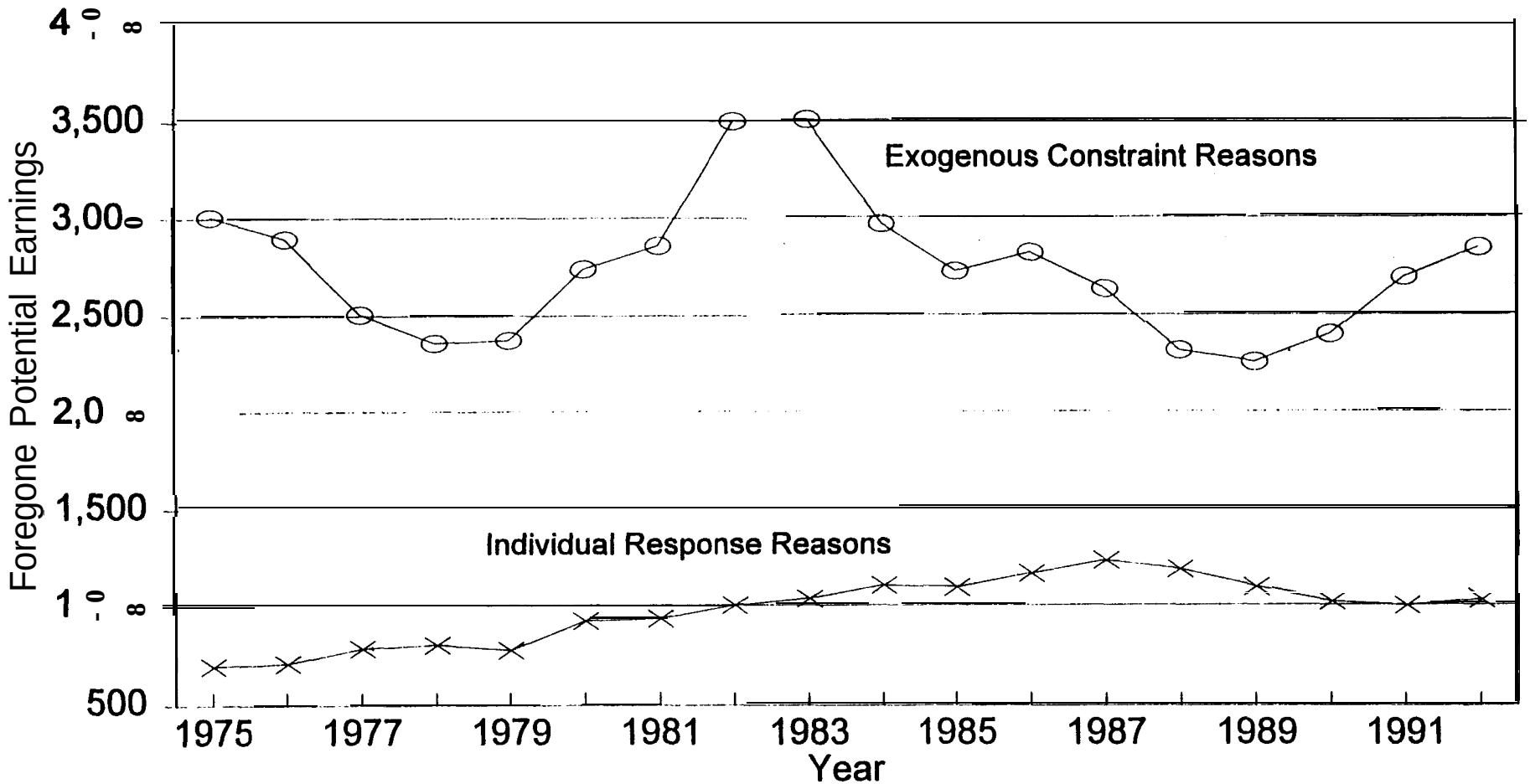
The Per Capita Gap Between Earnings and Potential Earnings
Males 18-64 Years Old, by Reason



Earnings in 1993 dollars.

Figure 4

Exogenous Constraint and Individual Response Reasons for Foregone Potential Earnings, Males 18-64 Years Old



Earnings in 1993 dollars.

Figure 5
Adjusted Capacity Utilization Rate
Males 18-64 Years Old

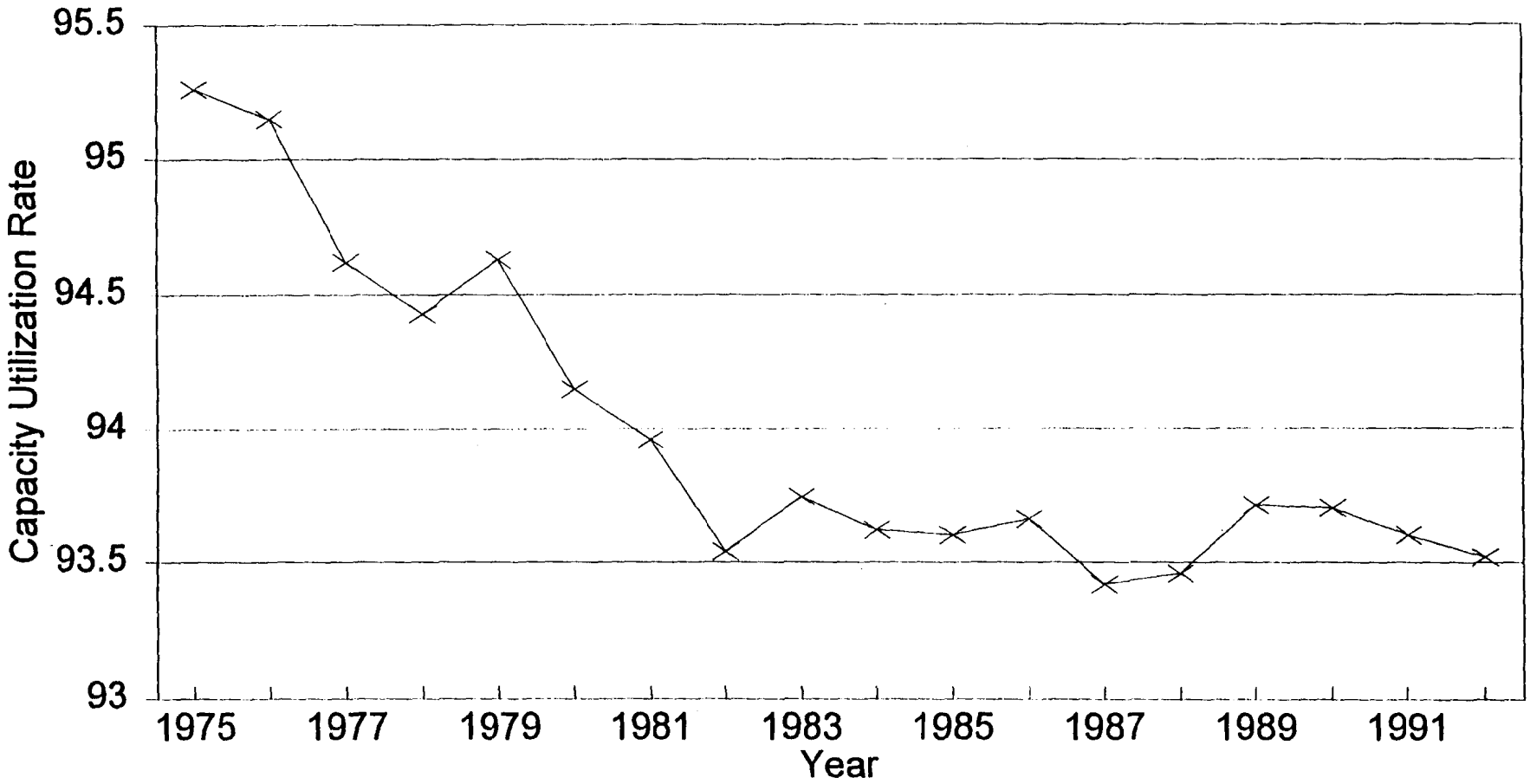


Figure 6

Per Capita Potential Earnings

Whites and Non-Whites, Males 18-64 Years Old

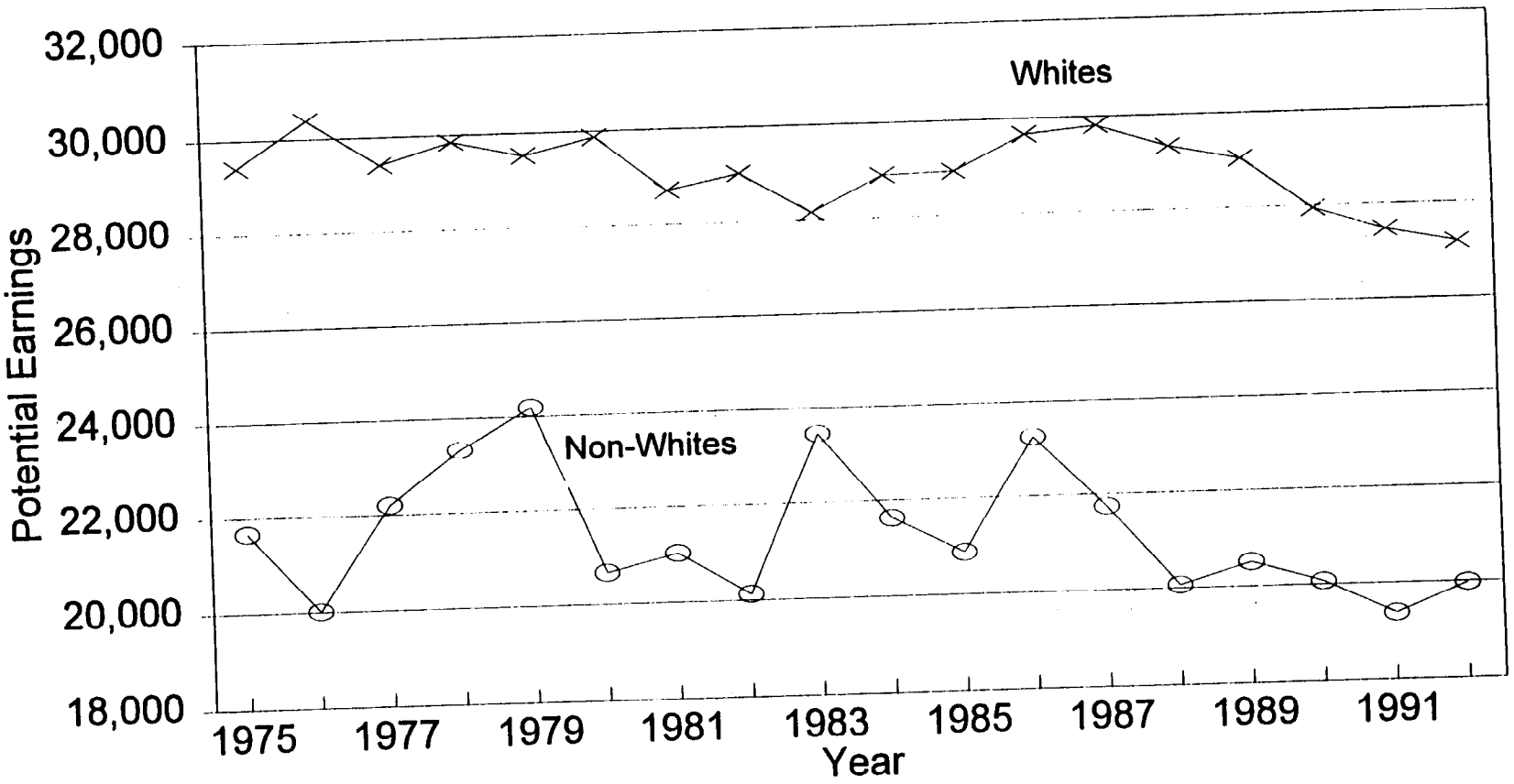


Figure 7

Capacity Utilization Rates

Whites and Non-Whites, 18-64 Years Old

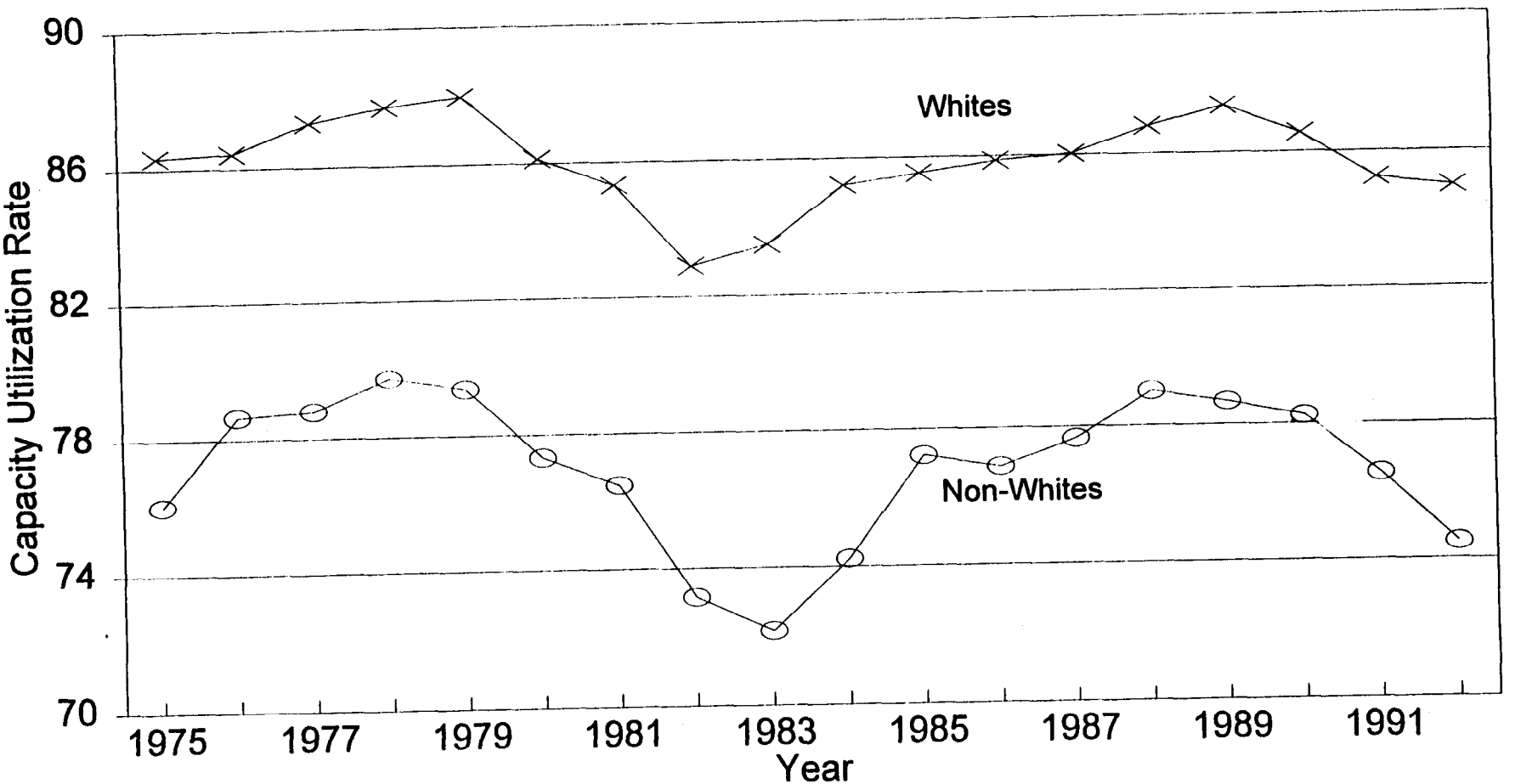
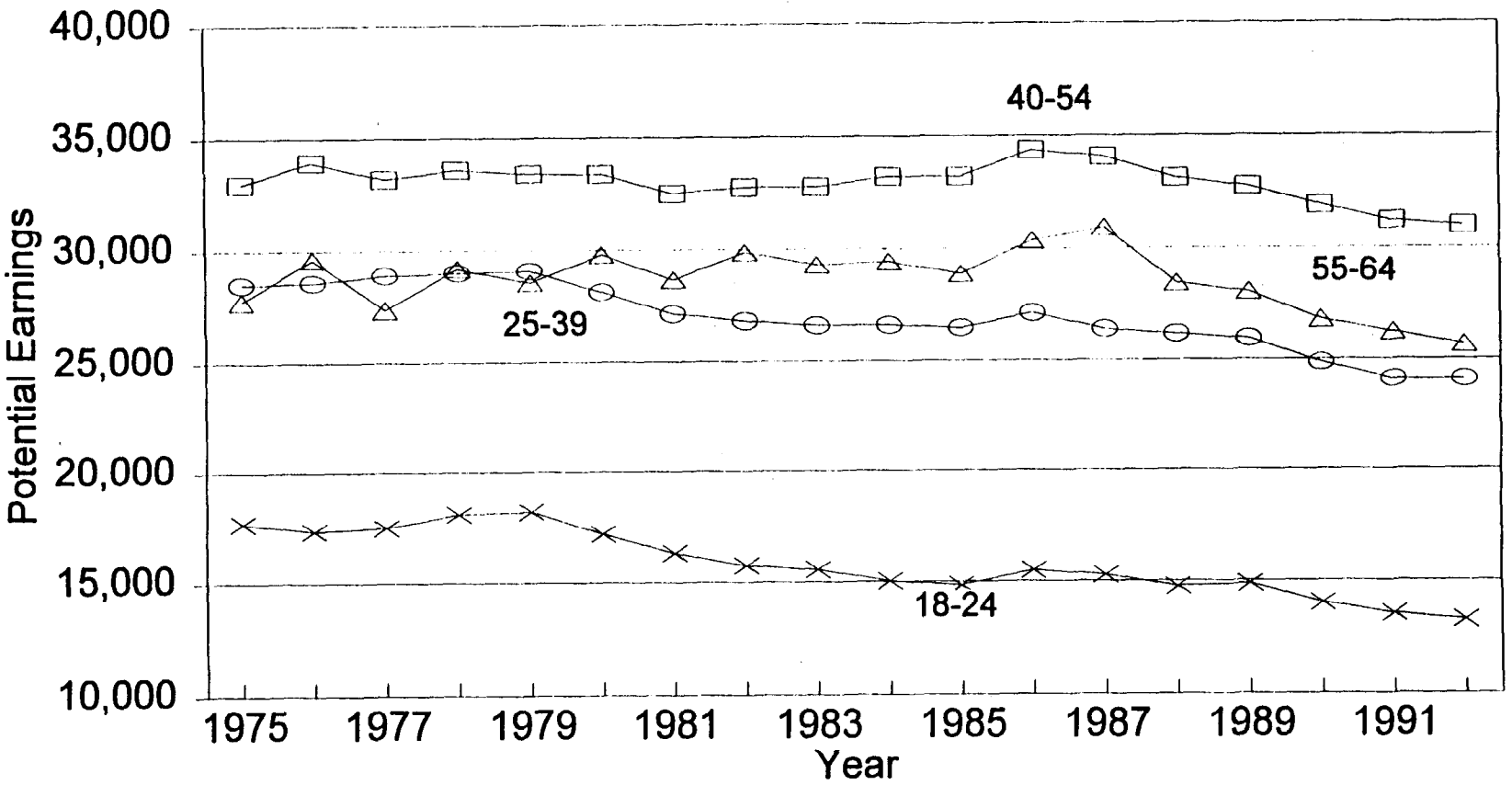


Figure 8
Per Capita Potential Earnings
Males 18-64 Years Old, by Age Group



Earnings in 1993 dollars.

Figure 9

Capacity Utilization Rates

Males 18-24 and 55-64 Years Old

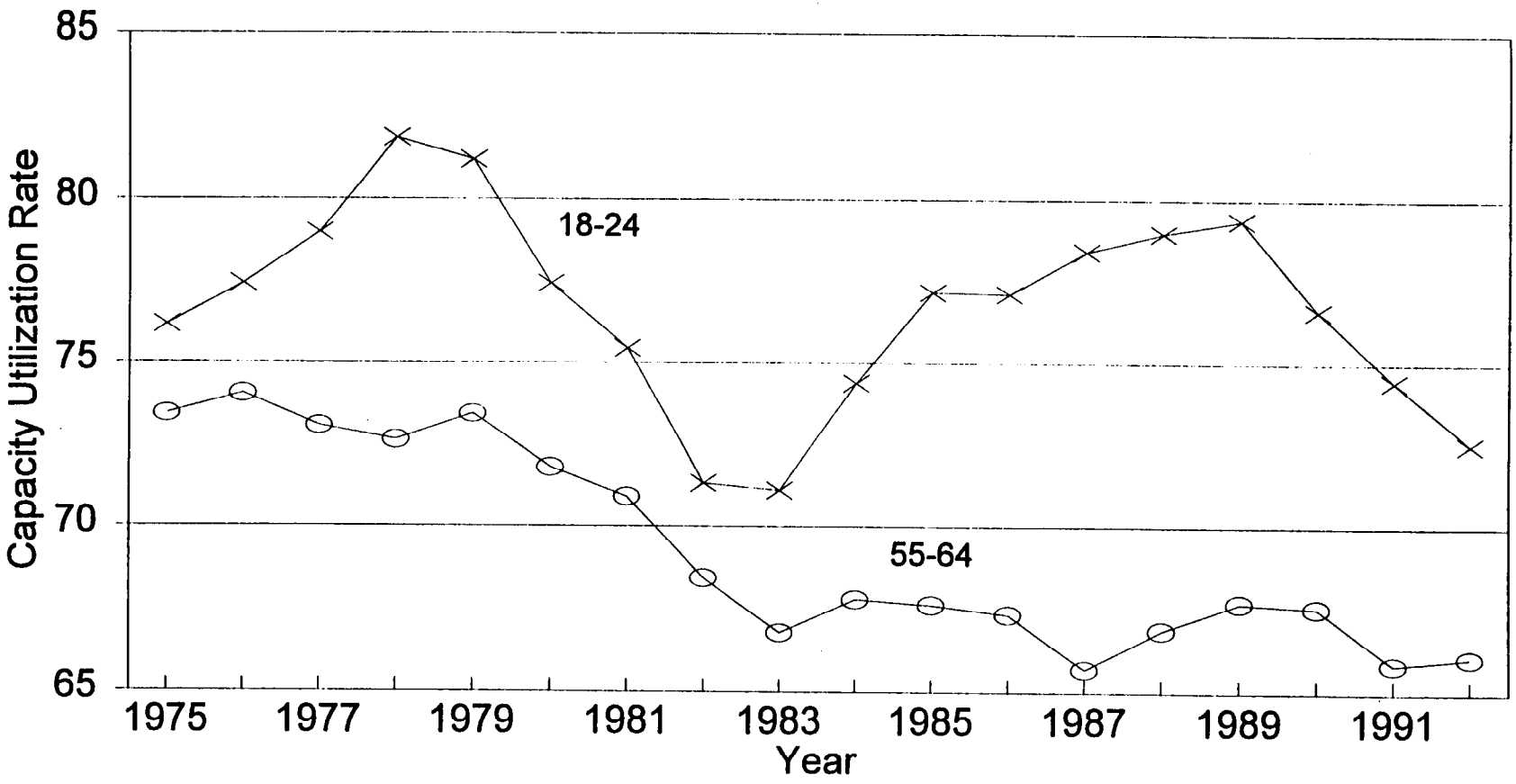
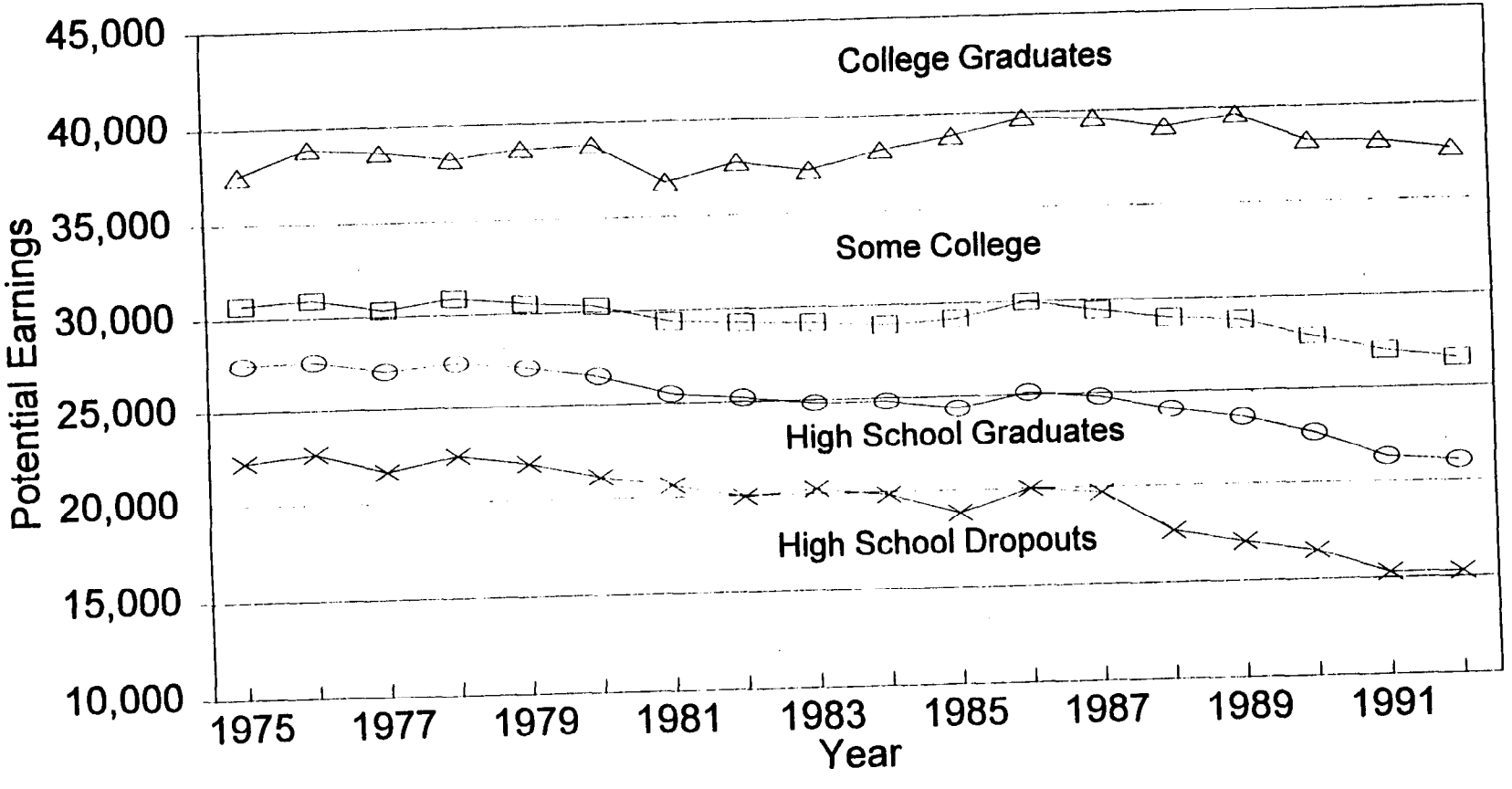


Figure 10
Per Capita Potential Earnings
Males 18-64 Years Old, by Education Group



Earnings in 1993 dollars.

Figure 11
Capacity Utilization Rates, Males 18-64 Years Old
High School Dropouts and Graduates