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**TOWARD A MORE COMPREHENSIVE EXPLANATION
OF DECLINING BLACK MALE YOUTH EMPLOYMENT**

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Honors Research in Economics
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INTRODUCTION

By any standard, the employment position of black males has deteriorated dramatically over the last 25 years. The magnitude and duration of this decline have convinced policy makers and economists alike that serious concern is warranted. Between 1968 and 1988, for example, the employment position of black males, 16 to 19, fell nearly ten points, from just over 38 percent to 29 percent. This decline, which is similar to that in the 20 to 24 year old age group, is indicative of a crisis inside our nation's ghettos, where millions of black male youths are without work and not attending school.

This crisis is unique to the black male population. Over the last 20 years, the employment to population ratio of black females, 16 to 19, improved from 17 percent to 26 percent, while that of white males in this age group improved from 51 to 52 percent (see figures 1 and 2). Thus, studies need to address the unique characteristics of the black male youth population to determine what has caused them to lose ground **relative** to other youth groups. While much research has been done on this issue, no consensus has been reached. This study will attempt to combine several seemingly competing theories into a single, coherent, overall explanation of the relative decline in black male youth employment.

One point of current consensus is that black male youth employment is extremely sensitive to the business cycle (Freeman and Wise, 1982; Watcher and Kim, 1982). Black male youths are the first to be laid off during ebbs in the business cycle. Accordingly, their employment to population ratio should fall more than that of other youth groups during recessions. However, it is generally recognized that the business cycle can not explain the long term decline, because it is, by its very nature, a cyclical variable. Moreover, during the expansion of the late 1970's,

FIGURE 1 16-19 EMPLOYMENT/POPULATION

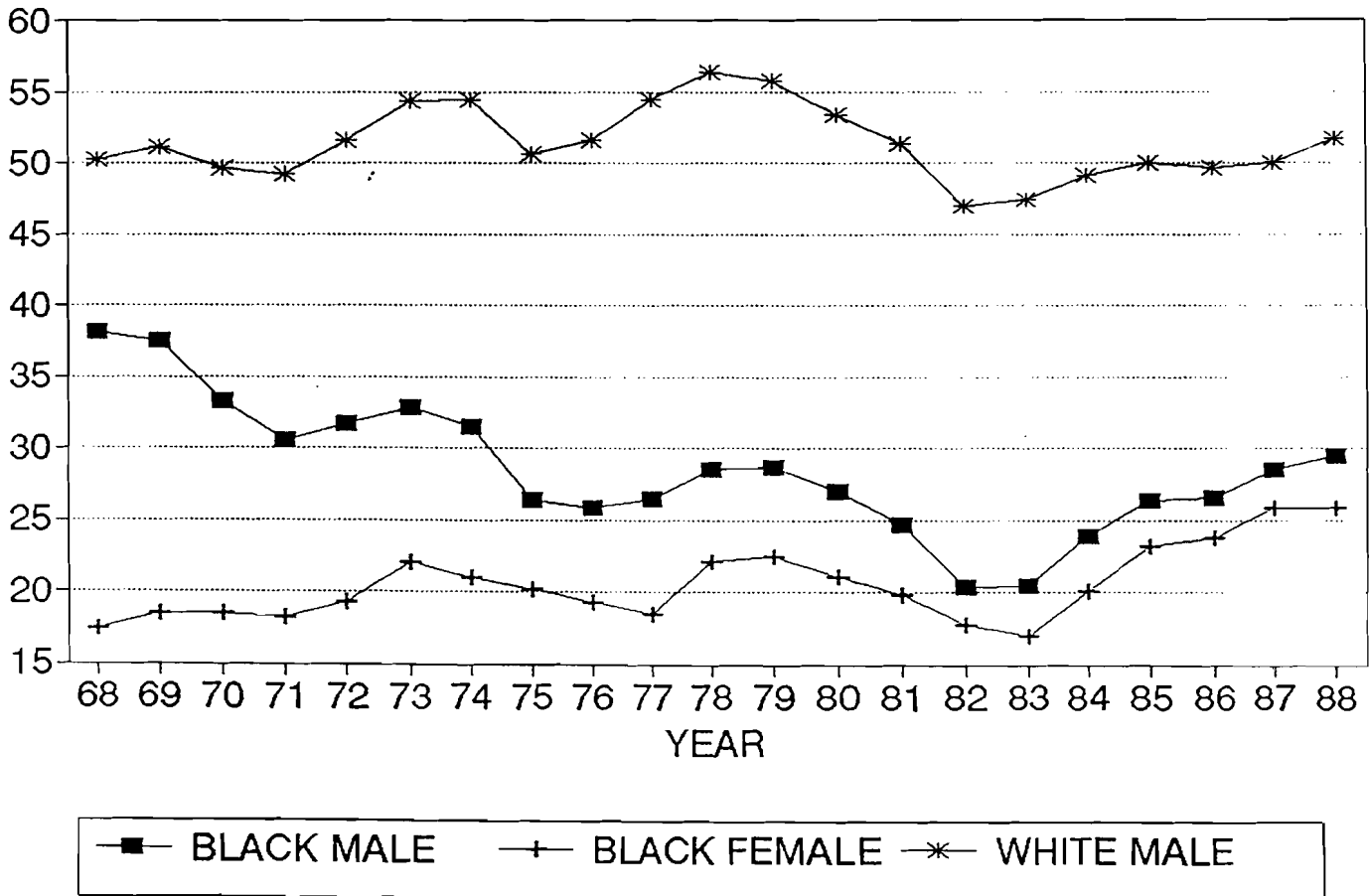
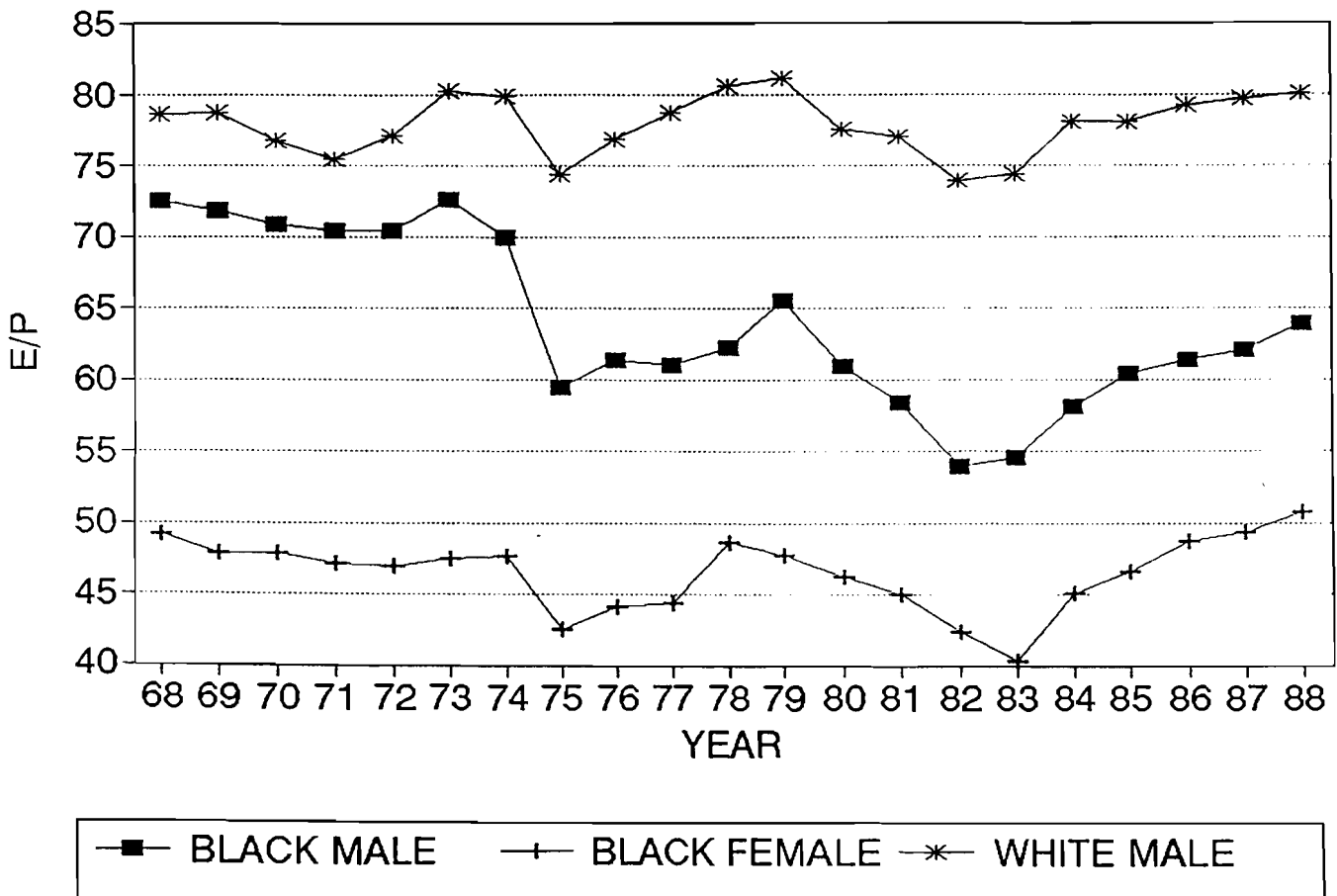


FIGURE 2
20-24 EMPLOYMENT/POPULATION



blacks continued to lose ground relative to whites, and the long expansion of the 1980's failed to erase the losses of the 1970's. Thus, while the business cycle may have some impact on employment, there are other factors at work which, for the last 20 years, have caused blacks to lose ground during downturns and fail to gain it back during upswings. It is these factors which this paper will explore.

Conditions in central cities, where the vast majority of the black youth employment declines have occurred, provide insight as to what factors may be causing the long term decline. Many blacks living in regions other than urban ghettos have improved their position markedly over the last 20 years, creating a sizable black middle class. But for those trapped in the cities, the situation has been terrifying. As the Economist describes in 1991:

Nearly half of black teenagers in the city of Chicago fail to graduate from high-school. In Washington D.C., in 1989, nearly four times as many black men were jailed in the district's prisons as graduated from its public schools; the leading cause of death among young black men is murder. In the country as a whole a staggering two-thirds of black babies are born to unmarried mothers... The images of teenagers in the central city are vivid, an unmarried mother who lives off welfare checks, a young man who drifts from girlfriend to girlfriend, selling drugs to get by (Economist, 1991).

This situation in central cities points to crime, welfare, and poor educational attainment as potential causes of the long term employment decline we have observed. This study will attempt to combine these and other currently competing explanations, such as declining manufacturing and the minimum wage, into a comprehensive explanation of falling black male youth employment. While it will incorporate many factors specific to central cities, data limitations require it to focus on aggregate trends. This

aggregate focus has advantages, however, in that it facilitates an analysis of the impact which these inner-city factors are having on the black male youth population as a whole.

REVIEW OF THE LITERATURE

Since the late 1970's a large body of economic literature has been developing around the issue of black male youth employment. Initially, the literature addressed the nature of the problem--precisely how does it manifest itself? One finding of this early literature was that the black youth crisis was truly an employment decline, rather than a fall in wages. Freeman and Holzer (1986) noted that wages of blacks, after controlling for educational attainment, have improved to virtual equality with whites. Additionally, it was noted that a significant number of those black youths without jobs become discouraged and drop out of the labor force, the "discouraged worker" effect (Freeman and Medoff, 1982). Thus the unemployment rate does not reflect the entire crisis, as it only considers those who remain in the labor force. For this reason, and because the distinction between unemployed and out of the labor force is very difficult to make for youths, employment to population ratios are generally used in discussing the youth labor market situation.

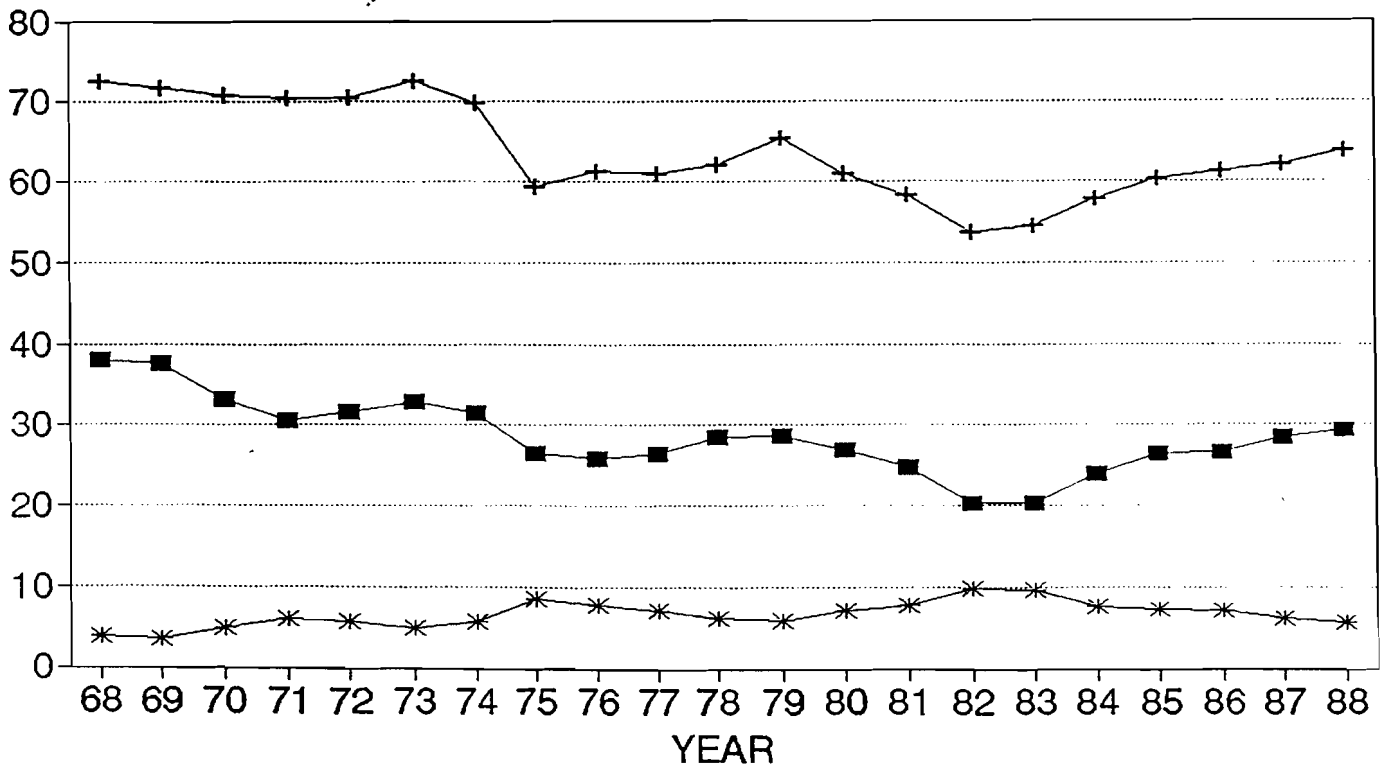
Although the literature has examined many specific causes of the youth employment problem, it has failed to develop a comprehensive explanation. In the literature, eight potential causes can be identified, although none of these have universal support. These proposed causes generally fall neatly into supply and demand categories (a division used, for example, by Freeman and Holzer, 1986), so this review will follow such a breakdown. The demand side explanations--business cycle sensitivity, minimum wage,

and spatial mismatch--will be presented, followed by the supply side theories--increased reservation wages through welfare and crime, increases in the youth cohort, falling educational attainment, and theories of the underclass.

As explained above, the business cycle argument contends that as black youths are relatively uneducated, have little work experience, and are often subject to discrimination, they are the first workers to be laid off in difficult times (Clark and Summers, 1982). While this explanation does not address the long term trends which this paper hopes to analyze, it can not be dismissed out of hand. Youth employment to population ratios have been quite sensitive to business cycle changes over the last 20 years (see figures 3, 4, and 5). Moreover, the recovery of the 1980's did end the sharp decline in black employment rates of the 1970's, even if it did not completely close the gap between blacks and whites.

An additional demand side argument, advanced particularly in the 1970's, is that high minimum wages lead to reduced black youth employment. While this has demand and supply side implications, I consider it a demand side variable because this study focuses on E/P ratios, and the increased quantity of labor supplied as a result of a high minimum wage does not affect this variable. Rather, any effect of a minimum wage on E/P would be due to the decrease in the quantity of labor demanded caused by an increase in its price (Baumol and Blinder, 1979). More specifically, if black youths have low marginal revenue products due to lack of training and experience, the minimum wage may be above the level at which employers will hire them. Empirical studies have found effects of minimum wages ranging from a one to three percent reduction in youth employment rates for a ten percent increase in the real minimum wage (Watchel, 1983). Thus, its effects warrant

FIGURE 3 BLACK MALE E/P VS. BUS. CYCLE

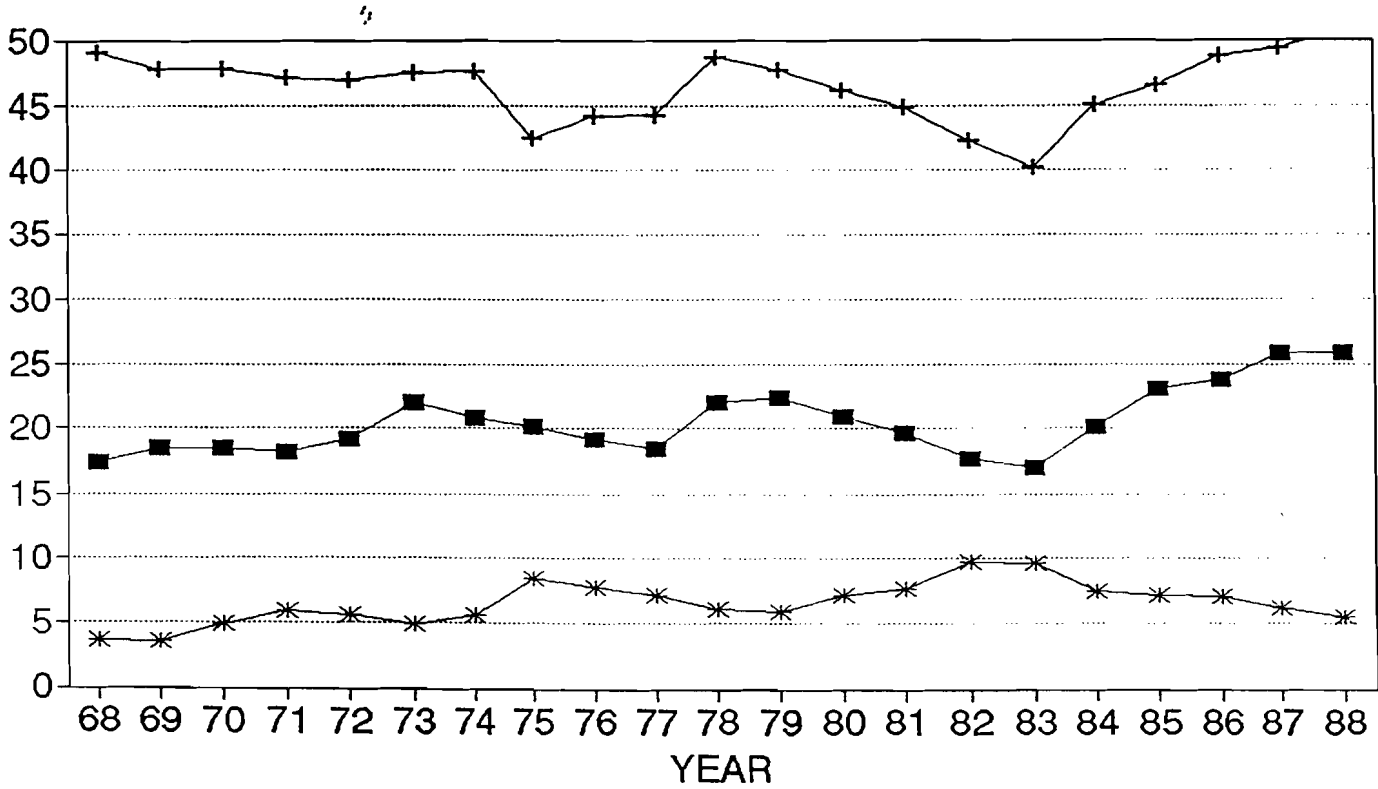


16-19 E/P

 20-24 E/P

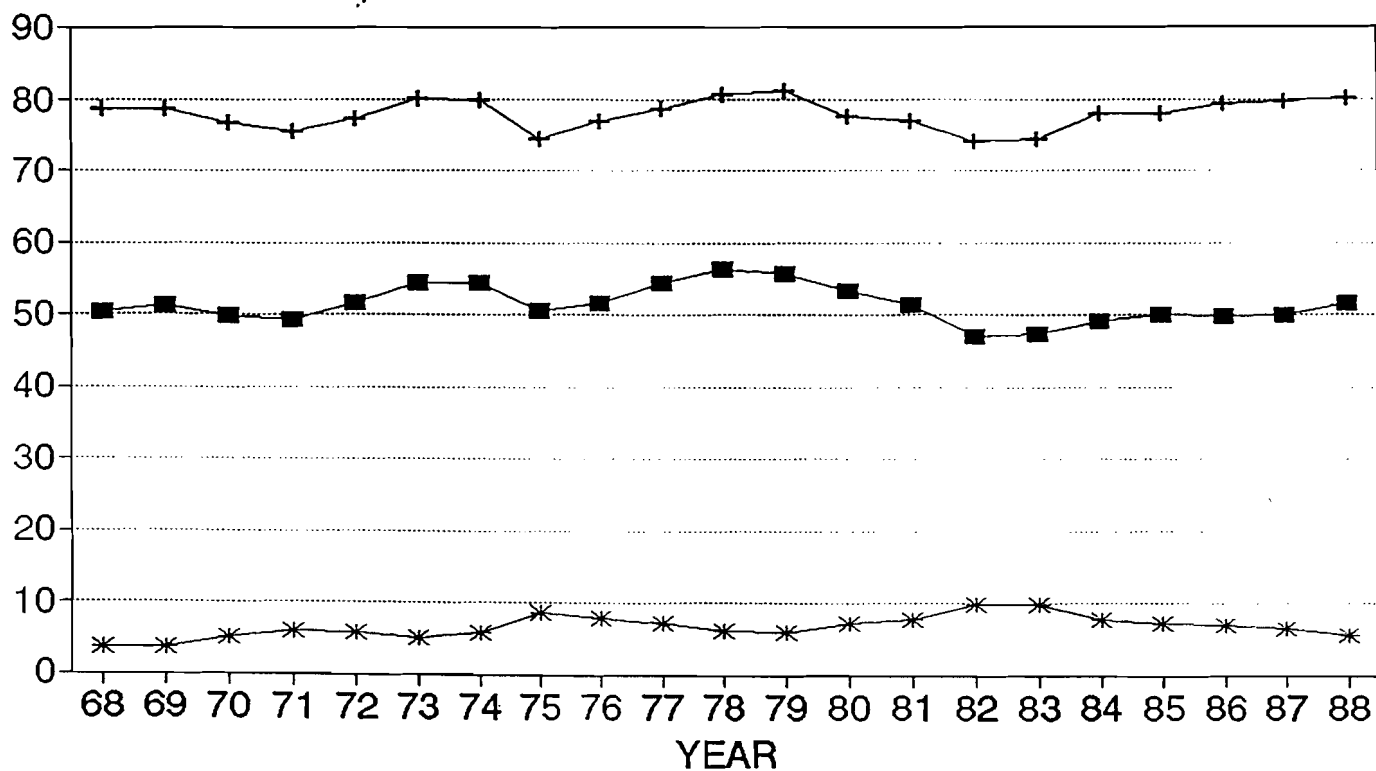
 OVERALL UNEMP.

FIGURE 4
BLACK FEMALE E/P VS BUS. CYCLE



■ 16-19 YEAR OLDS + 20-24 YEAR OLDS * OVERALL UNEMP.

FIGURE 5
 WHITE MALE E/P VS. BUS. CYCLE



■ 16-19 YEAR OLDS + 20-24 YEAR OLDS * OVERALL UNEMP.

consideration.

The third demand side argument, the spatial mismatch hypothesis, was originally developed by John Kain in 1968. He hypothesized that the movement of manufacturing jobs out of the inner-city, coupled with housing segregation which kept blacks in these areas led to declining black employment. Using data from Philadelphia, he demonstrated that, in fact, black youths were at a particular disadvantage when industries moved away from their residential areas. The full impact of this was demonstrated by John Kasarda in 1985. He discussed the rapid decline in manufacturing employment occurring in American cities, particularly those of the Northeast. Replacing these low skill manufacturing jobs in central cities are high technology information processing jobs for which black male youths are generally not qualified. Using Boston and New York as typical examples, Kasarda wrote:

By 1980, New York City and Boston each had more employees in information processing industries than in the manufacturing, construction, retail and wholesale industries combined. This represents a drastic metamorphosis since 1953 when employment in the more traditional urban industries outnumbered employment in information processing industries in each city by at least a three to one margin (Kasarda, 1985).

In 1986, David Ellwood questioned the entire spatial mismatch idea, claiming that, at least in 1970, all groups were mobile enough to find jobs for which they were qualified. However, Ihlandfelt and Sjoquist (1990) argued that Ellwood's study suffered from extreme multicollinearity due to the sample chosen. Using detailed data from Philadelphia, Los Angeles, and Chicago, they demonstrated that as the distance of a youth's residence from manufacturing jobs increases, his chances of employment decrease significantly.

This loss of demand due to declining manufacturing in cities is furthered by the general trend in the economy away from manufacturing jobs and toward the service sector (Wilson, 1987). These service jobs do not meet the needs of black male youths; they require high skill levels and generally produce more discriminatory conditions than manufacturing jobs. Hence, both the absolute decline and the relocation of manufacturing jobs provide plausible explanations for falling black male youth employment.

While virtually all studies agree that these demand side variables have some impact on black youth employment, they vary widely in their estimate of the exact extent of the effect. Most, however, conclude that demand declines can not fully explain falling employment. For example, Cain and Finnie (1990), in a study which argues for the importance of demand side factors, find that demand side factors can not fully explain the gap between black and white employment. To explain the remainder of the gap, we must turn to the supply side.

Recent literature on the labor supply decision focuses on reservation wages. A reservation wage is the minimum wage required by an individual to accept employment, or, in other words, the marginal benefit accrued by that individual from continuing in a state of non-employment. Only if the wage available from working is greater than this will an individual choose to work (Devine and Keifer, 1990). Anything which increases the benefit of not working raises the reservation wage and thus makes it less likely that an individual will accept employment. The argument that increases in the reservation wage have been responsible for declining black youth employment has been advanced most prominently by Finis Welch (1990). As Cain and Finnie explain the argument:

...the demand for black labor has generally risen during the last two decades but the reservation wage of black youth...has risen faster, leading to declines in employment. Why the reservation wage rose is not well established, but Welch suggests schooling, welfare, work in the "underground economy" (including crime), and extended family living arrangements as reasons for the leftward shift in the supply curve of black youth (Cain and Finnie, 1990).

This paper will focus on two of the most plausible causes of rising reservation wages: increasing returns to crime and the generosity of the welfare system.

As crime income becomes more available, the returns available from not working become greater. Given that an average drug dealer in an inner city may be expected to earn nearly \$24,000 per year, this is a serious concern (Rand Research Review, 1990). Becker (1975) provided the basic model for this scenario. He posited that the decision to commit crime is a rational one; if the expected benefit from crime minus the expected sanction is greater than the expected return from work, an individual will choose crime. This is just a specific example of reservation wage theory; the expected benefit from crime minus the expected sanction is the marginal benefit of not working as a result of crime. As long as this is greater than the wage from work, crime is the preferred option. Viscussi (1986) related this to today's inner-city, using data from the National Bureau of Economic Research Inner-City Youth Survey. He found that black male youths do believe the return from crime to be very high. Even more strikingly, he discovered that virtually all youths in the inner-city consider the expected sanctions from crime to be insignificant. By his analysis, 1/6 of all crime can be explained by such an economic motivation.

Welfare payments provide the other major alternative to work income. As Murray (1984) explains, a youth today has appealing

alternatives to work, while before the 1960's he did not. The tremendous expansion of the welfare system raises the benefit of remaining without employment, lessening the incentive to seek employment. Yet, as Murray realized, the exact effect of the welfare system is more complicated than this. As Fraker, Moffit and Wolff (1985) point out, the rate at which welfare benefits are taken away as other income is acquired (the benefit reduction rate) greatly affects the net wage from employment. Assuming that those on welfare have positively sloped labor supply curves, a higher benefit reduction rate and thus lower net wage reduces work effort. Fraker, Moffit and Wolff find that the effective benefit reduction rate has been trending upward for many years providing an additional explanation of lower work effort. Finally, as Lerman (1986) describes, living in a welfare family can create a "welfare mentality" which destroys the desire to gain employment. So, even children who are not yet in the labor force may be affected by the welfare system.

In addition to increasing reservation wages, falling educational attainment and the increasing size of the youth cohort have also been posited as supply-side causes of falling black male youth E/P. As Freeman and Holzer (1986) point out, most studies find higher levels of education to be positively correlated with employment. This is in keeping with the human capital theory advance by Gary Becker and others. Thus, the educational attainment theory argues that falling levels of education among certain groups of youths hurt their employment chances and lower their wages. Yet, during the years used in this study, aggregate educational attainment of blacks has been improving relative to whites. So, on an aggregate scale, educational attainment does not seem capable of explaining falling relative black male youth

employment.

Watcher and Kim (1982) are the chief proponents of the youth cohort argument. They argue that youths have lost ground due to the increasing size of the youth cohort since the number of jobs available to youths is limited. Thus, the increase in youth population can not be fully accommodated by increases in employment, and as a result, E/P falls. Yet, this argument does not answer the primary question of this paper, why black male employment is falling **relative** to other youth groups. Moreover, the youth cohort has actually been shrinking since the late 1970's, further weakening the argument.

The final supply side theory, the development of urban underclasses, is as close to a merging of the other theories as the literature currently presents. According to Kasarda (1985) and Wilson (1987), underclass development begins with a demand side shock as manufacturing firms leave the central city. This leaves black youths without the form of employment most important to them. Then, most whites and older, more prosperous blacks follow these jobs and relocate in the suburbs. This leaves black youths without role models. Without the resources to move, black youths are trapped in this environment. In response to this situation, they alter their labor supply decisions, often dropping out of the labor force and school entirely. In place of these institutions, they band together in gangs which substitute values more in line with their inner city life styles, supporting dysfunctional behavior over work and downplaying the importance of stable family structures. Crime and welfare become imbedded as the appropriate ways to support oneself. Membership in the gang becomes the dominant goal in a young person's life, as it is one he is capable

of achieving. In short, increasing opportunity cost of work, decreasing desire to seek legitimate employment, and the substitution of "underclass" values for more traditional ones causes life in urban ghettos to become a downward spiral further and further into poverty.

While all of these supply and demand arguments provide insight into the black youth employment problem, they are deficient **precisely because** they are either supply or demand arguments. The actual market functions as a system of interactions between supply and demand. Only the underclass theory attempts to describe such an interaction, and its focus is still primarily on a supply response. To explain a phenomenon as complex as declining black male employment, an analysis which combines supply and demand effects into an overall theoretical framework is required. This paper will attempt to provide such a framework.

MODEL

OVERALL THEORETICAL FRAMEWORK

Drawing from the literature just discussed, a possible chain of causation can be identified which would explain the secular decline of minority youth employment rates. First, lower employment availability and reduced wages from declining manufacturing coupled with increasing reservation wages as a result of non-work alternatives such as welfare and crime directly cause decreasing employment. This decrease affects black males most severely because they are the most heavily dependent on manufacturing jobs, because black families are more likely to be on welfare than white ones, and because black males are most heavily concentrated in inner-cities where crime is rampant. Second, as a

result of declining labor market conditions and lessened attachment to the labor force, an underclass develops. Changing attitudes and preferences associated with the emergence of an underclass also result in decreased employment. Since the underclass is an inner-city phenomenon, this also has the greatest impact on black males.

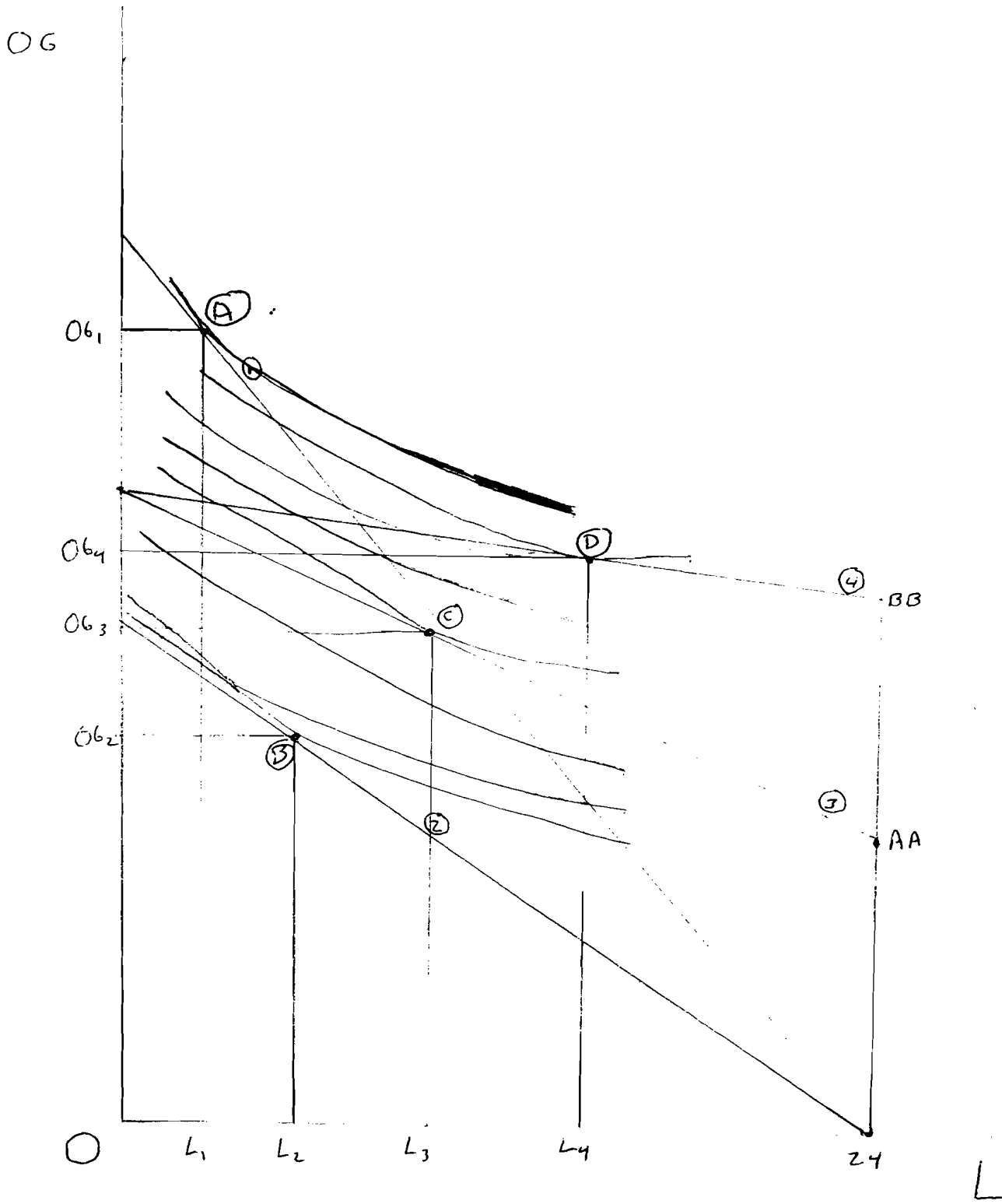
SUMMARY WITH INDIFFERENCE CURVES

This comprehensive explanation of the decline in minority youth employment which merges economic and sociological explanations can be illustrated using an indifference curve framework. Each of the initial causes of falling black male youth employment can be shown as movements in the budget constraint. The changing preference structure which comes about as a result of underclass formation can then be shown as a shift in the entire indifference map.

Consider figure 6. It shows a typical indifference curve map with leisure on the horizontal axis and other goods on the vertical axis. As an individual gives up leisure, he can work more and thus buy more other goods. The slope of the budget constraint represents the wage rate measured in other goods. Before declining labor market conditions and increased availability of non-work income set in, this male has budget constraint 1. This budget constraint can be interpreted as that faced by a black male youth in 1968, at the start of this study. For simplicity sake, assume that no non-work income was available in 1968 so that the level of OG at 24 hours of leisure is zero. Given his indifference map, the youth chooses point A, where he works $24-L_1$ hours a day. At this point, he can afford OG_1 other goods.

The first step in modeling the decline in black male

FIGURE 6



employment is to illustrate a decline in job opportunities in manufacturing. This shifts the youth's budget constraint to 2. A decline in job opportunities can be shown as a decreased wage rate if costs of securing employment, such as commuting or relocating are considered negative wages. Higher costs, then, actually cause a lower net wage. If a youth chooses to avoid these costs and stay in the central city, lower demand means wages will be lower. This decline in job opportunities leads this black male youth to choose point B on a lower indifference curve with work $24-L_2$ and other goods OG_2 .

Second, higher welfare payments and a **higher** benefit reduction rate are shown by the shift to budget constraint 3. The higher level of welfare payments means that the income available to this youth at 24 hours of leisure increases. Thus the budget constraint shifts up to **AA** at 24 hours of leisure. A higher benefit reduction rate lowers net wages and thus causes the slope of 3 to be lower than that of 2. The combined effect of the higher level of available income and lower net wages from work is to reduce work output to $24-L_3$ as the individual now chooses point C. Note that his other goods purchases increase to OG_3 due to the increased quantity of welfare available.

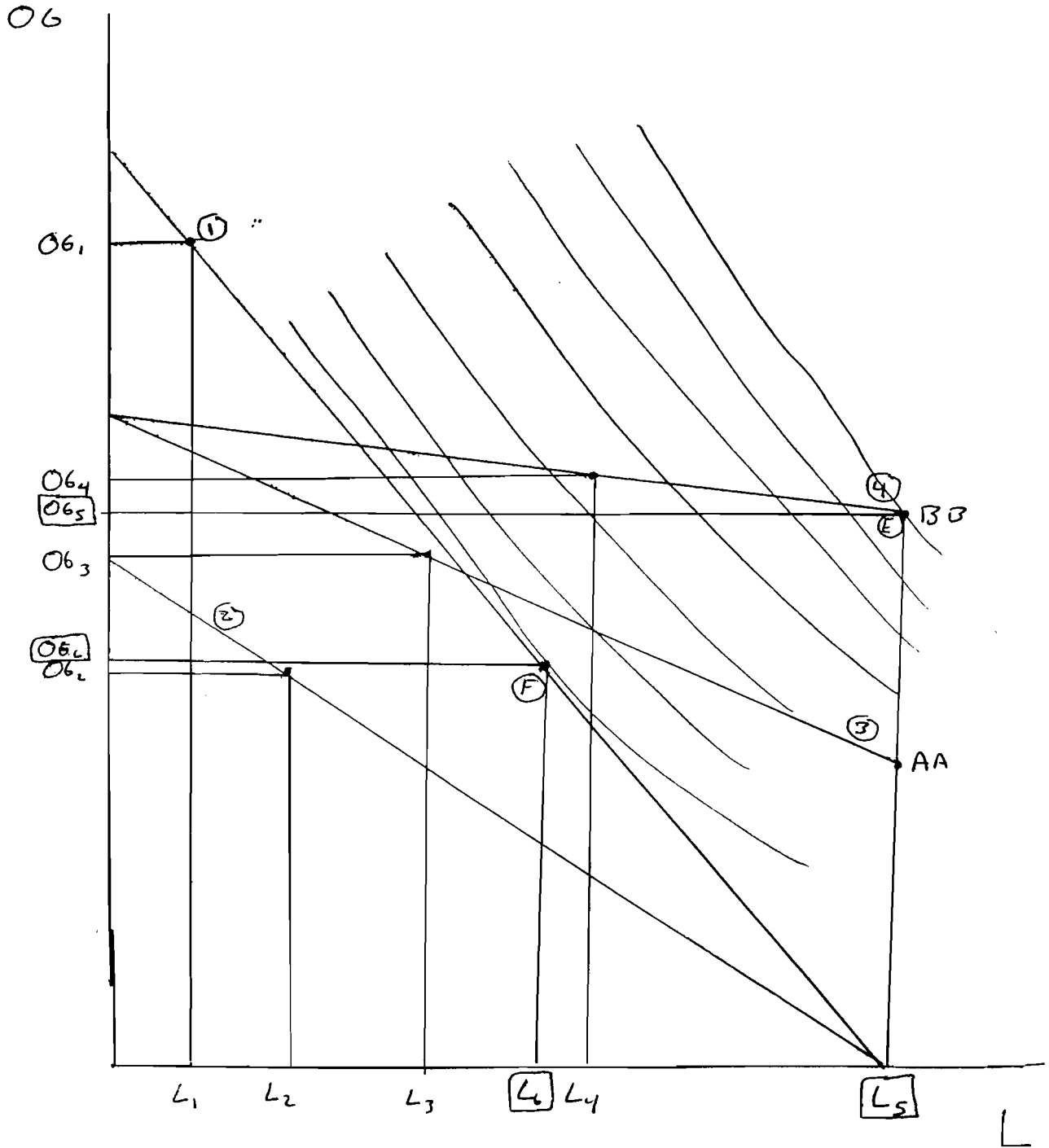
Third, the effect of higher available crime income on the budget constraint is similar to the effect of an increase in welfare. At 24 hours of leisure, the other goods available to an individual now increases to **BB**, on budget constraint 4. With more crime income available, more money can be earned with no "legitimate work." As with increasing welfare payments, this unconditionally reduces work. Higher availability of crime income also has the effect of lowering one's net wage, as for each hour worked a person gives up $1/24$ of the available time for crime, and

thus the slope of 4 is lower than that of 3. In fact, assuming there is no crime in the workplace, at 24 hours of work there is no more opportunity for crime, so budget constraint 4 is reduced to equality with 3. Overall, as a result of higher crime income and lower net wages, the individual chooses point d, with work effort reduced to $24-L_4$ and other goods purchases to OG_4 . So, work (which aggregates to the level of employment) has now been reduced by declining manufacturing employment and increased availability of non-work income.

The fourth and final stage of the indifference curve analysis of the declining employment of minority youth is illustrated in Figure 7. After some time passes, inner-city black male youths faced with poor job opportunities, no role models, and many non-labor market alternatives form together in underclasses which support non-work activities as the appropriate form of behavior. This shift in values indicates higher utility from leisure and lower utility from work. Thus at any point on any indifference curve, the marginal rate of substitution of leisure for other goods increases, which means the whole indifference map becomes steeper. Figure 7 shows this shift. Immediately following the indifference map movement, the optimal point becomes E, with a decrease in work to $24-L_5$. Because work now involves a non-pecuniary cost from lost acceptance, the individual is willing to give up other goods in order to work less. This change in attitude occurring in large groups of inner city black male youths leads to decreases in the overall employment rate of black male youths.

While each of these shifts is shown as causing this youth to work less, the truly important result is that for any black male youth each shift increases the probability of a corner solution at which the youth does not work at all. Thus, in the aggregate, each

FIGURE 7



of these shifts will increase the number of individuals who reach corner solutions, and thus decrease employment.

Note that this indifference curve analysis has interesting policy implications. Since the youth has a new indifference map after underclass formation, returning the budget constraint to 1 will not cause him to return to point A. Rather, he would now choose point F with leisure L_6 and other goods OG_6 . Thus, policy measures to increase demand will not unilaterally solve the problem.

EMPIRICAL MODEL

The model employed to study black male employment from this overall perspective will be a two-stage regression model, one stage corresponding to the effect of each variable on employment, the other representing the effect of declining manufacturing and increasing non-work income on underclass formation. The model will be used once for the 16-19 year old age group and once for the 20-24 year old group. For each age group, three sets of regressions will be run, one to explain E/P for black males, one for white males, and a final one for black females. The regressions for white males and black females will be used solely for comparison with those of black males.

In these regressions, three sets of variables will be considered. The first set includes the exogenous explanatory variables:

- a) Aggregate percentage of jobs which are in manufacturing
- b) Average public aid payment
- c) Effective benefit reduction rate on public aid payments
- d) Arrest rate for income producing crimes

The second set includes the endogenous variables representing the

underclass. For this study, this will simply be the aggregate percentage of births to unwed mothers for both blacks and whites.

Finally, the third set will include the following control variables:

- a) Overall unemployment rate as a proxy of the business cycle
- b) Real minimum wage
- c) Percentage of youths who are not in and have not completed high school

Each of these variables will be discussed in depth below.

EXOGENOUS VARIABLES

The first variable in the study is the level of manufacturing. As discussed in the literature review, there are two independent ways in which manufacturing affects employment (Wilson, 1987). First, the overall shift in the economy from manufacturing to service jobs deprives black youths of good jobs with low skill requirements and little discrimination. Second, the **movement** of the remaining manufacturing jobs from central cities to suburbs makes it more difficult for black youths to obtain them due to poor contacts and lack of resources. In either case, declining manufacturing is hypothesized to reduce demand for black youth labor, thus reducing employment and net wages.

While full analysis of this issue would require city specific data, this study is based on an aggregate data base for the years 1968-1987. Hence, only the first part, the general decline in manufacturing, can be tested. By assuming that trends in the national level are similar to trends for cities, the results can be viewed as a rough estimate of the effect which spatial mismatch can have. It will be important to interpret the results of this variable with caution, however. Because it is likely that declines

in manufacturing are greater for cities than overall, the coefficients on this manufacturing variable will probably be larger than they would if the more accurate, city-specific data were used. Nonetheless, the hypotheses for this variable are clear: declining manufacturing should decrease E/P for black males more than for other groups; it should also decrease E/P for white males; its effect on black females is ambiguous since blacks are traditionally employed in manufacturing but women traditionally work in the service sector.

The second set of variables to be explored will be welfare payments. As seen above, welfare has two distinct effects on work effort. First, higher levels of payments deter work by raising reservation wages. Second, as one earns wages, welfare payments are reduced, lowering net wages. Assuming a positively sloped labor supply curve, this lowers work effort. In either case, the effect of welfare to reduce work effort has been shown to create a "welfare mentality", reducing work effort in entire families or groups of people (Lerman, 1986).

To assess these effects, two sets of data will be used. First, the average public aid payment will be included to measure the effect of higher levels of payments. Second, the effective benefit reduction rate as measured by Fraker, Moffit and Wolff (1985) will estimate the reduction in net wages. Since they only estimate reduction rates every other year, averages will be taken for intermediate years. The hypotheses for these variables are:

- 1) Higher welfare payments decrease E/P for blacks.
- 2) The effect of higher welfare payments on whites is less negative than on blacks, since fewer white families are on welfare. In fact, it is likely that a **competition effect** exists, so that whites actually benefit from higher welfare since they face less competition from blacks.
- 3) Higher benefit reduction rates lower black E/P.

- 4) The effect of benefit reduction rates on whites is also less negative than on blacks. Again, a competition effect may exist.

The competition effect requires some discussion. To the extent that white and black youths compete in the labor market, anything which reduces the supply of black youth labor should help whites. Additionally, since the negative effect of welfare on work may affect blacks of all ages, white youths will also benefit to the extent that they compete with older blacks.

The third variable is the level of crime in society. This has two distinct effects similar to those of welfare. First, greater availability of crime raises reservation wages by increasing the returns from remaining in a state of non-work. Second, if we assume that each hour of non-work has some probability of creating crime income, the net wage of work is lowered by the extent to which it reduces expected crime income. As with welfare, each of these effects should lower work effort. Moreover, since the vast majority of all crime takes place in the central city where black youths are more heavily concentrated than other groups, the effect should be greatest on black youths (Freeman and Wise, 1982). And since most crimes are committed by males, the effect should be greatest for black **male** youths.

In fact, a competition effect may exist as with welfare, lower black male youth labor supply is likely to improve the employment position of the other youth groups. This effect on white males and black females will be important to consider since some of the black males who commit crimes may be incarcerated, which could actually improve the black male employment to population ratio by lowering civilian population. Yet, this incarceration would still hurt the **relative** position of black males, as it would help the other two groups.

The data on crime comes from FBI Uniform Crime Reports from 1968-1987. As a proxy for income available from crime, the sum of the arrest rates (number of arrests per 1000 residents) in the six major income producing crimes--burglary, robbery, theft, possession and sale of stolen property, gambling, and drug possession or sale--is used.

Several things should be noted about this variable. First, this study assumes that the probability of being arrested after committing one of these crimes has remained constant over time, a proposition supported by the FBI data. Thus variation in arrest rates must be due to changes in **actual crime** rates, not increases in enforcement. This assumption also lessens the need to consider the effect which expected sanctions have on the expected return from crime, although variations in conviction rates and expected punishments also affect expected sanctions. Second, this total crime rate is used as a measure of the overall health of the "crime market", in much the same way as employment rates are used as a measure of the health of the labor market. The implicit assumption is that the more income producing crimes being committed, the more opportunities for crime income a youth will perceive. Finally, it is assumed that each type of crime has an equivalent effect on perceptions and thus that the arrest rates can be summed to give an overall measure of the crime market. An increase of one crime in any of these income producing categories increases a youth's perception of available crime income by the same amount. While this may not always be true, it is a very useful simplifying assumption.

ENDOGENOUS VARIABLES

The only endogenous variable used in this study is a measure

of the underclass. The hypothesis behind it is that responding to declining labor market conditions, the lure of non-work alternatives, and the lack of good role models, inner-city youths form together in gangs which oppose traditional values for work and education and replace them with new ones more in line with a life of crime and welfare dependency. The chief goal of members of the gang becomes gaining acceptance from others in the group, as this is a goal they can meet by dropping out of school and the labor force, turning to crime and other "dysfunctional behavior" instead (Cohen, 1960). Thus, since these youths face a non-pecuniary cost from work in the form of lost acceptance, their employment level falls.

As Wilson (1987) points out, measuring the extent of the underclass is very difficult. The method which he suggests rests on the belief that males in gangs are no longer "worthy" marriage partners, and that stable family structure is not a value of the underclass. Hence, the pool of "marriageable males" as a proportion of population in a region provides one measure of underclass development.

To recreate this concept on an aggregate scale, this study will use the proportion of births which are to unwed mothers as an indicator of lower marriage rates and decreased family stability. The same measure will be used for both age groups and it will be distinguished only by race, not sex, since this is the only way in which the data is available. Because the unwed pregnancy rate may change for a variety of reasons, the white unwed pregnancy rate will be included in all regressions to account for general trends. The black unwed pregnancy variable, then, will pick up only those effects occurring to blacks over and above the general trend. This effect within the black community alone should give a good estimate

of underclass formation among blacks. White unwed pregnancies will still be used as a measure of underclass formation among whites for comparison sake, but, as the underclass is hypothesized to be primarily a black phenomenon, whites are unlikely to show an underclass effect. (Wilson, 1987) I hypothesize that the effect of an underclass on employment will be negative for blacks and may show a competition effect on whites, improving their employment position. Additionally, since most literature has indicated that the underclass takes most of its toll on males, I hypothesized a greater negative effect on employment for black males than black females.

Since the underclass is posited to be caused by the first three variables, the hypotheses concerning their effects on underclass formation are important. They are as follows:

- 1) Manufacturing Employment will be negatively related to underclass formation with the strongest effect on blacks.
- 2) Level of welfare payment will be positively related to underclass formation with the strongest effect on blacks.
- 3) By reducing the incentive to work, benefit reduction rates should also be positively associated with underclass formation with the strongest effect on blacks.
- 4) Higher availability of crime income will be positively related to underclass formation with the strongest effect on blacks.

CONTROL VARIABLES

The final three variables included in the study do not contribute to this story of lower employment, falling net wages, rising reservation wages, and underclass creation. Hence, they are included simply as controls. These control variables are: unemployment as a proxy of the business cycle, real minimum wage, and the percentage of the youth population which consists of high school dropouts in any given year. The business cycle needs to be controlled for in order to examine the effect of the independent

variables on long term trends. Minimum wage and educational attainment are both potentially important determinants of E/P and thus need to be controlled for, even though they are not included as a part of the explanation of the long term employment decline.

ESTIMATION OF THE MODEL

The model will function as follows. For each group, an initial regression will be run with E/P as the dependent variable and all the exogenous, endogenous, and control variables as independent. This corresponds to the effect of the three budget constraint shifts and the indifference map movement on employment. Then for each of the underclass variables, a distributed lag model will be run, using the four exogenous variables and the business cycle as independent variables. The exogenous variables will be lagged to account for the fact that it takes time for an underclass to develop. This stage represents the way in which shifts in the budget constraint cause underclass development. Since there is no theoretical basis for determining the length of the lag, various intervals will be examined. Next, multiplying the effect which each exogenous variable has on underclass development times the effect which the underclass variable has on E/P will give the lagged effect which each exogenous variable has on employment through underclass creation. For each race/gender group in each age group, the regressions will give the direct effect of each exogenous variable as well as the underclass effects. Comparing black male results with the others will indicate which variables have contributed to the relative decline of black male employment rates.

The specific equations to be used will be as follows. See figure 8 for detailed definitions of each variable.

Stage 1:

$$\text{BMEP} = A + B_1\text{MANUF} + B_2\text{RAID} + B_3\text{BRR} + B_4\text{CRIME} + B_5\text{BUNWED} + B_6\text{UN} \\ B_7\text{REALMIN} + B_8\text{EDUC}$$

$$\text{BFEP} = A + B_1\text{MANUF} + B_2\text{RAID} + B_3\text{BRR} + B_4\text{CRIME} + B_5\text{BUNWED} + B_6\text{UN} \\ B_7\text{REALMIN} + B_8\text{EDUC}$$

$$\text{WMEP} = A + B_1\text{MANUF} + B_2\text{RAID} + B_3\text{BRR} + B_4\text{CRIME} + B_5\text{WUNWED} + B_6\text{UN} \\ B_7\text{REALMIN} + B_8\text{EDUC}$$

Stage 2: (With lagged independent variables)

$$\text{BUNWED} = A + B_1\text{MANUF} + B_2\text{RAID} + B_3\text{BRR} + B_4\text{CRIME} + B_5\text{UN}$$

$$\text{WUNWED} = A + B_1\text{MANUF} + B_2\text{RAID} + B_3\text{BRR} + B_4\text{CRIME} + B_5\text{UN}$$

Each stage will be run twice, once for 16 to 19 years old and once for 20 to 24 year olds. The effect of all eight variables from stage 1, the effect of all five variables from stage 2, and the computed indirect effects will be reported.

DATA

All data used in the study come from published government documents. The data for all E/P ratios, minimum wage, and education come from the 1989 Handbook of Labor Statistics published by the U.S. Department of Labor. The crime rates come from the FBI Uniform Crime Reports from 1968-1987. Public Aid statistics come from Department of Health and Human Services publications. Manufacturing estimates are from Census business pattern reports. Finally, the percentage of births to unwed mothers is taken from Vital Statistics from the United States published by the National Center for Health Statistics.

RESULTS

In general, the empirical test of this overall model provided support for the comprehensive method employed. However, the variables real minimum wage, educational attainment, and benefit reduction rate were never significant and added very little to the

FIGURE 8

NAME	DEFINITION
BMEP	BLACK MALE YOUTH EMP./BLACK MALE YOUTH POP.
BFEP	BLACK FEMALE YOUTH EMP./BLACK FEMALE YOUTH POP.
WMEP	WHITE MALE YOUTH EMP./WHITE MALE YOUTH POP.
MANUF	AGGREGATE PERCENTAGE OF JOBS IN MANUFACTURING
RAID	AVERAGE REAL PUBLIC AID PAYMENT
BRR	BENEFIT REDUCTION RATE FOR 1 DOLLAR OF INCOME
CRIME	SUM OF CRIME RATES FOR 6 INCOME PRODUCING CRIMES
BUNWED	UNWED BIRTHS PER 1000 BIRTHS TO BLACK MOTHERS
WUNWED	UNWED BIRTHS PER 1000 BIRTHS TO WHITE MOTHERS
UN	AGGREGATE UNEMPLOYMENT RATE
MINWAGE	REAL MINIMUM WAGE
EDUC	% OF YOUTHS WHO HAVE DROPPED OUT OF HIGH SCHOOL

adjusted r^2 in any regression, and hence were removed from the model for final estimation. Reason was given in the review of literature for the insignificance of the minimum wage and educational attainment. The benefit reduction rate measure suffered from the fact that data were only available for alternate years, so that all others had to be estimated. This estimation may have reduced the accuracy of this variable. However, since there is strong theoretical reason to believe it has an impact on employment, future research should examine its effect.

The results for each stage of the model are given in tables 9 through 11. Table 9 shows the results of stage one for both age groups, table 10 shows stage two results, and table 11 gives the computed indirect results of the exogenous variables on employment through underclass formation. These indirect results are only calculated in cases where both the effect of the exogenous variable on underclass formation and the effect of underclass formation on employment are significant at the ten percent level.

STAGE 1 (16-19)

The five variables which were finally used in the estimation of stage 1 were the business cycle proxy, percent manufacturing, average real aid payment, crime rate, and the underclass proxy. As anticipated, the business cycle had a very large effect on black males, lowering their employment to population ratio by 2 points (considering E/P as a scale from 1 to 100) for every percentage point increase in the overall unemployment rate. Although it was significant at the one percent level for all groups, the business cycle effect was larger for black males than either other group, supporting the idea that they are the marginal workers of firms.

The effect of the manufacturing percentage was insignificant

STAGE 1 RESULTS
 FIGURE 9
 (T STATS IN PARENTHESES)

	BM16EP	BF16EP	WM16EP	BM20EP	BF20EP	WM20EP
MANUF	0.00234 (1.52211)	-0.00508 (3.72824)	0.00963 (6.72526)	0.00117 (.49480)	-0.00417 (2.39826)	-0.00129 (.98631)
RAID	0.00002 (.79389)	0.00003 (1.15496)	0.00007 (4.15629)	-0.00010 (3.39474)	0.00000 (.00486)	0.00002 (1.37976)
CRIME	0.00002 (.60780)	0.00007 (2.58908)	0.00007 (2.95662)	0.00002 (.48469)	0.00002 (.70501)	0.00000 (.14869)
BUNWED	-0.00023 (1.84595)	0.00005 (.49309)	0.00043 (3.61347)	0.00044 (2.23580)	0.00007 (.48924)	0.00038 (3.56921)
UN	-0.02043 (12.1985)	-0.01608 (7.59953)	-0.01685 (10.81440)	-0.02263 (8.76247)	-0.01990 (10.51912)	-0.01856 (13.06918)
ADJ R SQ	0.97057	0.846305	0.915938	0.95708	0.880325	0.89771

FIGURE 10
 STAGE 2 RESULTS
 T STATS IN PARENTHESES

	BUNWED	WUNWED
MANUF2	3.15057 (1.56830)	-2.0798 (1.42187)
RAID2	0.08688 (2.51435)	0.032715 (1.43103)
CRIME2	0.11876 (3.20130)	-0.03326 (1.21165)
UN	5.72737 (1.75187)	3.23294 (1.68082)
ADJ R SQ.	0.897224	0.840248

FIGURE 11
 INDIRECT EFFECTS

	BM16EP
RAID	-0.000017
CRIME	-0.000024

for black males in this age group, significant and negative for black females, and significantly positive for white males (unless otherwise noted significance is at the five percent level). This implies that the decline in manufacturing has no significant effect on black males, improves the position of black females, and worsens the position of white males. Thus black males are losing ground relative to black females as a result of manufacturing trends, but gaining ground relative to white males.

These results are generally consistent with theoretical predictions for black females and white males since males tend to find employment in manufacturing whereas females are generally employed in the service sector. Yet, the insignificance of the coefficient for black males is puzzling. It may be that the concentration of blacks in certain areas makes the location of manufacturing employment the crucial factor for them, while for whites aggregate trends are a more satisfactory measure. In fact, since the spatial mismatch idea indicates that manufacturing jobs are moving away from black youths and toward whites (Ihlandfelt and Sjoquist, 1990), the inclusion of this effect should show a beneficial effect on white males and a harmful one on blacks. This could decrease or even eliminate the advantage which black males were shown to have over white males in this study as a result of trends in manufacturing.

Welfare payments showed an insignificant effect on black male and black female employment, and a positive effect on white males. Thus, this variable contributes to the explanation of the decline in black male employment relative to white males, as a 100 dollar increase in the average aid payment would raise white employment to population by .7 points. As expected, welfare was unable to differentiate between the two groups of blacks. Thus the results

do support the competition effect hypothesis which indicates that welfare will lower the work output of many blacks from both sexes, thus improving the position of whites relative to all blacks. While stronger support could have been given had the coefficients for blacks been significant, it could be that 16-19 is too young for a strong welfare effect to have taken hold, meaning that the only visible effect would be on whites through decreased competition. In any case, the results indicate that higher welfare payments cause black males to lose ground relative to white males. Since real welfare payments were **decreasing** throughout the 1980's, this provides an explanation for the fact that black have stopped losing ground relative to whites.

The results for crime were very similar to those for welfare, although in this case the coefficients on both white males and black females were significant and positive. This result was robust; it remained true with a variety of measures of the overall level of crime and in regressions with a variety of other variables. As with welfare, this is the posited competition effect, black males are the only group whose employment should be affected negatively by the availability of crime income so both other groups should benefit. Again, the results could have been stronger had the coefficient for black males been significant and negative, but the incarceration effect mentioned earlier, whereby crime may actually lead to higher E/P ratios by decreasing civilian population, could explain why it wasn't. In any case, crime can explain the decline in black employment relative to both other youth groups. An increase of 100 crimes would increase white male employment to population by .7 points and black female employment by .7 points.

The strongest support for the overall model was found with the

underclass effect in this age group. The effect of black unwed pregnancies holding white unwed pregnancies constant was negative and significant, at the ten percent level, on black males. An increase of 100 unwed pregnancies would decrease black male employment to population by two points. Additionally, a competition effect was shown, as the effect of the black underclass proxy was positive and significant on white males. No independent white underclass effect was found. While the variable was insignificant for black females, these results indicate that underclass formation is decreasing black male employment absolutely and relative to both other groups.

The overall regressions were able to explain a great deal of the variation in employment. The adjusted r^2 for black males was 0.97, for black females 0.85, and for white males 0.92. Comparing the 0.97 for black males to the 0.47 which a straight trend line gives shows that these variables do have a great deal of explanatory power. And it makes sense that a model designed to explain falling black male youth employment has the highest r^2 for black males.

STAGE 1 (20-24)

For this age group, the business cycle again was the best predictor, showing t statistics over eight in all three regressions. And the largest coefficient was again on black males, indicating that they are the hardest hit by recessions and thus are the marginal workers.

In this case, manufacturing percentage was insignificant for both black and white males and significantly negative for black females. Thus, black males are losing ground to black females as a result of declining manufacturing in this group also. There is

no differential effect between males here.

Welfare was shown to have a greater effect on blacks as they become older, as the effect on black males was significant and negative as predicted. According to the results, a 100 dollar increase in average real aid payments would decrease black male E/P by one point. The effect on black females, however, was insignificant. No competition effect was shown in this case, as the effect on white males was insignificant. Overall, though, it was shown that higher welfare payments would cause black males to lose ground relative to both other groups.

The effect of crime in this age group was insignificant in all regressions. This may indicate that only for those in the younger age group does the crime market serve as a substitute for the labor market. More research is needed to verify this explanation. The underclass proxy also failed to follow the hypotheses derived from the theoretical model. It was insignificant for black females, but significant and **positive** for both white and black males. While this positive result for white males may indicate a competition effect, the positive coefficient for black males runs directly counter to the hypothesis. This may be because the underclass is only a phenomenon of the younger group. This would be a good result as far as black male are concerned, since it would indicate that being part of an underclass is not permanent. However, it also may be that births to unwed mothers happen primarily in the 16-19 group which means that the data is more sensitive to developments in this group. More study is needed to distinguish between these two explanations.

STAGE 2

This stage was used to determine the impact of the exogenous

variables on underclass formation. Various lags were attempted, but a simple two year lag showed the highest t statistics and largest effect. Current year unemployment was used as a control for the effect of the business cycle on underclass trends.

As predicted, no coefficients had a significant effect on the formation of "white underclasses", so only black results will be discussed here. The white unwed pregnancy rate was included in the black regression to account for any general trends in the determination of black unwed pregnancies, as above.

The lagged crime and welfare variables both showed significant positive effects on black underclass formation. Manufacturing was insignificant. Thus, welfare and crime not only have direct effects which hurt the relative position of black male youths, the results indicate that, over time, they also lead to the development of black underclasses, and thus indirectly hurt black males. Any effect of manufacturing, however, seems to be immediate, which is somewhat surprising given the importance placed on manufacturing in current underclass literature. Once again, this may be due to the lack of city specific manufacturing data.

INDIRECT EFFECTS

Since only black males 16-19 showed negative effects from underclass formation, indirect results are presented only for them. Indirect effects through underclass formation are hurting black males, 16-19, relative to the other groups of this age, while underclass formation has no discernible negative effect on the older youths. Multiplying the effect of welfare and crime on underclass formation times the effect of underclass formation on employment gives these indirect effects. While they are relatively small, they are still large enough to warrant attention. Average

real aid payments have changed by significantly more than 1000 dollars over the past 20 years, and a 1000 dollar increase in these payments causes a 1.7 point reduction in 16-19 year old black male employment to population through its indirect effects. Similarly, the total crime rate has gone up significantly, and a 100 point increase in the crime rate causes a .24 point decrease in black male E/P. Thus indirect effects through underclass formation can significantly hurt the position of 16-19 year old black males.

CONCLUSIONS

SUMMARY OF FINDINGS

At the outset of the paper, the stated purpose was to determine what has caused black male youths to lose employment while other youth groups have prospered. The theoretical model described an interaction of supply and demand factors--the demand for black male youth employment is decreased as a result of declining manufacturing, and their labor supply is lowered due to the appeal of non work income. These factors were posited to lead directly to lower employment and indirectly to the creation of underclasses which value dysfunctional behavior over work.

While the empirical model did not conform exactly to this theoretical construct, the results did indicate that significant insight can be gained into the causes of relative declines in black male youth employment using such an overall model. Black males, 16-19, were shown to be losing ground to black females directly as a result of declining manufacturing and higher crime rates, and indirectly through the effect of welfare and crime on underclass formation. In this age group, black males were shown to actually be gaining relative to white males as a result of aggregate declines in manufacturing. However, this result was overwhelmed by the direct and indirect effects of welfare and crime. The overall

underclass story was strongly supported, as the results showed a negative effect of underclass formation on black males only. Additionally, in both cases the significant effect of welfare may give insight not only into what has caused the long term decline in relative black male youth employment, but also into what has caused this decline to slow or stop in the 1980's while real welfare payments have been decreasing.

For the 20-24 year olds, the creation of underclasses was not supported as a cause of the relative decline of black males. Rather, the results indicated that black males are losing relative to black females as a result of declining manufacturing and increasing welfare payments, and relative to white males only as a result of welfare. Again, the reversal in welfare trends combined with the expansion of the 1980's indicates why the majority of the decline in black male youth employment had occurred before 1980.

POLICY IMPLICATIONS

Policy measures can be suggested to correct for any of the factors which are leading to declines in relative black male youth employment. However, those for welfare, crime, and manufacturing should be treated with caution since the direct effects of these variables included **positive** effects on white males and black females. However, since these positive effects are posited to be competition effects, resulting from the unfortunate reality of decreased black male labor force supply, policies will be presented to deal with these factors.

Little can be done to counteract the trend in society away from manufacturing and toward the service sector. However, since this paper and other research indicates that young males may be adversely affected by this trend, effort should be made to retrain

these youths in fields where jobs are available, or to help them relocate to areas where manufacturing jobs still exist (Kasarda, 1985). Relocation can be accomplished by actually helping these blacks to move to new areas or by making sure that public transit from cities to the new locations of manufacturing jobs is available.

Methods of counteracting the effect of higher welfare payments on employment have long concerned policy makers. This study simply adds additional evidence for their importance. While no new mechanisms can be derived from this research, I suggest that strong effort should be directed toward workfare programs in which welfare policy includes work incentives.

The question of how crime should be counteracted is also challenging. Those policies suggested to counteract demand declines should help--relocation can move blacks out of high crime areas and retraining can give them the ability to compete in the legitimate labor market. Yet, efforts will still need to be directed toward the crime market, and it is my opinion that this will require long term commitment and serious law enforcement which involves more than mass incarceration.

Although all of the policies suggested above would help, the indifference analysis prevented earlier indicates that **any** policy must be coupled with attempts to overcome the underclass. Fortunately, policies similar to those suggested above can contribute to this. Relocation efforts which would end the intense concentration of unemployed blacks in one area are essential. Also, education can provide role models and self-esteem, in addition to necessary skills. Finally, government efforts should work through supportive institutions, such as churches, which are already established in black communities to inform youths of

opportunities and encourage them to seek legitimate employment.

Suggestions for Future Research

The obvious weakness in this study is the aggregate nature of the data base. Thus future research should use less aggregate data to address those questions which were not answered by this study: the effect of spatial mismatch, the exact nature of competition effects, and the duration of underclass membership. Moreover, aggregate data could not even provide a complete test of this model which is actually a description of the behavior individual youths and specific labor markets. Rather, it could only apply the model to the explanation of aggregate trends. Thus future research should also concentrate on testing the accuracy of the model in small settings.

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