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ABSTRACT

This study focuses upon the process of labor market entry of male youth in the context of the dual labor market theory. Essentially, the dual market theory contends that a large body of workers is involuntarily confined to substandard jobs in a "secondary" labor market which is separated from the mainstream, or "primary" sector by impenetrable boundaries imposed by institutionalized discrimination. Briefly, the study finds a substantial amount of upward mobility from time of first job to 1968--a period ranging from 2 to 10 years. Nonetheless, entry into and confinement within the secondary sector cannot be consistently explained solely in terms of deficiencies in aggregate demand, human capital, or motivation. Moreover, the evidence also suggests the existence of discrimination against blacks in terms of earnings. (Author)

AN EMPIRICAL ANALYSIS OF THE DUAL LABOR MARKET THEORY

by

Paul James Andrisani

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FOREWORD

In early 1965 the Center for Human Resource Research, under a contract with the United States Department of Labor, began the planning of longitudinal studies of the labor market experience of four subsets of the United States population: men 45 to 59 years of age, women 30 to 44 years of age, and young men and women 14 to 24 years of age. A national probability sample of the noninstitutionalized civilian population in each category was drawn by the Bureau of the Census; six interviews with the two cohorts of youth and four with the two older groups have been conducted over a five-year period ending in 1971 for the two male groups and in 1972 and 1973, respectively, for the older and younger groups of women.

The present study is based upon data collected in the first three rounds of interviews with the younger group of men in the Autumn of 1966, 1967, and 1968, as well as on information obtained by means of a mailed survey of the secondary schools attended by members of the sample. The study focuses upon the process of labor market entry in the context of the dual labor market theory. Essentially, the dual market theory contends that a large body of workers is involuntarily confined to substandard jobs in a "secondary" labor market which is separated from the mainstream, or "primary" sector, by impenetrable boundaries imposed by institutionalized discrimination.

The theory also suggests that there are racial and class differences in occupational assignments that are independent of level of demand for labor and of the amount of human capital or degree of motivation of workers. To evaluate this theory, Dr. Andrisani attempts to ascertain the extent and determinants of mobility between the secondary and primary labor market sectors for that portion of the total sample who had completed not more than 12 years of school and were not enrolled in school from 1966 to 1968. His research also analyzes the factors associated with occupational level at the time of labor market entry and the determinants of hourly earnings several years later.

Briefly, the study finds a substantial amount of upward mobility from time of first job to 1968. Indeed, among both whites and blacks, those whose first jobs were in the secondary sector were considerably more likely to advance to primary jobs than to remain in secondary ones. Nonetheless, entry into and confinement within the secondary sector cannot be consistently explained solely in terms of deficiencies in aggregate demand or in human capital or motivation. Moreover, the evidence also suggests the existence of discrimination against blacks in terms of earnings. Dr. Andrisani concludes that although "impenetrable boundaries" between secondary and primary sectors is a gross exaggeration, it is equally at odds with the facts to believe that equal levels of human capital, motivation, and demand create equal employment opportunities for blacks and whites or for youths of different socioeconomic status.

Herbert S. Parnes
Project Director

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This thesis has benefited greatly from the advice of numerous persons, in particular, Robert C. Miljus, Herbert S. Parnes, and Gilbert Nestel. Professor Miljus, who served as chairman, has played a most significant role over the past three years in developing my ideas and interests concerning issues in manpower development and poverty. Professor Parnes' guidance has also been of inestimable value, and it likewise extends beyond the immediate focus of this study. His keen insigh s and suggestions at countless points have been invaluable, and his encouragement has been a constant source of inspiration. As Professor Nestel's research assistant and colleague, I was afforded the opportunity to learn from his quantitative expertise and to air with him many of the methodological details of this study. It has truly been my good fortune to have had the counsel of such knowledgeable and generous mentors as these.

I am also indebted to Professor Orlando C. Behling, who served on my reading committee, for his advice and suggestions on numerous drafts of this thesis. In addition, my colleagues at the Center for Human Resource Research have been especially helpful in providing valuable suggestions during the course of this study. I also acknowledge the assistance of Dortha Gilbert and Kandy Bell, who not only competently and cheerfully typed the several drafts, but performed admirably under pressing time constraints.

To my wife and family I owe a special debt of gratitude. In addition to the confidence, understanding, and patience provided by my wife, Barbra, her interest in my work has proved to be extremely helpful throughout my graduate studies. The thesis has also benefited from the editorial assistance of my sister, Maria Andrisani Kelly. Any deficiencies which remain, of course, are my own. Finally, I dedicate this thesis to my son, Nathan Joseph.

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CHAPTER I

INTRODUCTION

Background of the Dual Labor Market Theory

Historically, the concept of market dualism has evolved from analyses of underdeveloped countries, and its application to the manpower problems of the disadvantaged apparently originated with the work of Doeringer and Piore in the mid-sixties. Their research into the administrative mechanisms of hiring and promotion policies within Boston area firms, and their analysis of the frictional unemployment and underemployment in ghetto labor markets, have been credited as an influential force in focusing attention on discrimination and institutional rigidities as a principal source of labor market disadvantage.[1]

Doeringer and Piore discuss dualism in the context of "low-income employment and the disadvantaged labor force."[2] They posit that the labor market is divided into a primary and a secondary market, and that

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[1]Garth L. Mangum, "Manpower Research and Manpower Policy," A Review of Industrial Relations Research, II, ed. by B. Aaron, et al. (Madison: Industrial Relations Research Association, 1971), p. 88.

[2]Peter Doeringer and Michael Piore, Internal Labor Markets and Manpower Analysis (Lexington, Mass.: D.C. Heath and Company, 1971), pp. 163-83. Quotations from this source are reprinted by permission of the publisher.

there is little or no mobility between them:

> Jobs in the primary market possess several of the following characteristics: high wages, good working conditions, employment stability, chances of advancement, equity, and due process in the administration of work rules. Jobs in the secondary market, in contrast, tend to have low wages and fringe benefits, poor working conditions, high labor turnover, little chance of advancement, and often arbitrary and capricious supervision.[3]

Entry into the primary market is viewed as operating according to an employment queue in which acceptable workers are ranked in relation to their productivity and hired along the queue until employer needs are met. In the secondary market, however, the queueing process is much less pronounced. In this market "Many employers do not appear to draw distinctions between one secondary worker and another other than on the basis of sex or physical strength, and almost seem to be hiring from an undifferentiated labor pool."[4]

In addition to the hiring queue described above, workers rank available jobs according to their "evaluation of wages, promotion opportunities, employment security, and working conditions." Hence, employers rank workers and hire according to rank along their hiring queue, and workers rank jobs and apply for them according to rank along their job vacancy queue. In the market mechanism which matches employer and worker preferences, a discontinuity is hypothesized such that even

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[3] Ibid., p. 165.

[4] Ibid., p. 168.

increases in the aggregate demand for labor will not move workers confined to the secondary market upward along the hiring queue and into the vacant jobs in the primary market. As Doeringer and Piore state the case:

> In the extreme version of the dual labor market theory which postulates a complete dichotomy in the labor market, primary employment will stop expanding when it has absorbed the available primary labor force, and further increases in output will be obtained by shifting demand into the secondary sector without any transfer of the secondary work force into the primary sector.[5]

The philosophy of dualism, espoused by the many manpower researchers who have accepted the conceptualization of Doeringer and Piore, takes exception to more traditional theories which recommend increases in aggregate demand and human capital as solutions to labor market disadvantage. The heart of the dualist theory maintains that institutional rigidities on the demand side pose the critical constraint to secondary-primary mobility. While not denying the necessity of high levels of aggregate demand and manpower programs for raising the stock of human capital, dualists seem to be saying that they are not sufficient.

Many dualists also raise the issue of "human capital overkill." This suggests an overemphasis on educational credentials which are most often grossly irrelevant to realistic job requirements or productivity. Furthermore, it is contended that these unrealistic

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[5] Ibid., p. 178.

standards reflect de facto discrimination in the labor market. As Harrison sees the dualist position:

> They (dualists) reject the position which attributes the cause of poverty to the alleged personal inadequacies of the poor, rather than constraints built into the structure of the economy and institutions which prevent poor people from realizing their potential. Recognizing these factors, the last thing we would recommend is continued primary emphasis on training and education, especially if that emphasis stems, as we believe it does, from a political decision to deemphasize such things as equal employment opportunity programs with strong sanctions, job restructuring, reversal of rampant "credentialism," and substantial direct redistribution of income, wealth, and political power.[6]

Doeringer and Piore recommend increasing secondary-primary mobility by opening primary jobs to secondary workers and by altering the very character of the secondary market so as to raise wage and benefit standards to the level of the primary sector. Alternative proposals for reduction of labor market disadvantage are equally complex. For instance, the National Commission on Technology, Automation, and Economic Progress recommended "government as employer of the last resort." The Commission concluded that such a drastic measure was the

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[6]Bennett Harrison, "Human Capital, Black Poverty and 'Radical' Economics," Industrial Relations, X (Fall 1971), pp. 277-78. For a further discussion on the relationship between credentials and employability, see: Christopher Jencks, et al., Inequality (New York: Basic Books, 1972), pp. 180-185; Ivar Berg, Education and Jobs: The Great Training Robbery (New York: Praeger Publishers, 1970); F. Friedlander and S. Greenberg, "The Effect of Job Attitudes, Training and Organization Climate Upon Performance of the Hard-Core Unemployed," Experimental Publication System, VIII (October 1970), MS #275-123; Marcia Freedman, The Process of Work Establishment (New York: Columbia University Press, 1969).

only hope for fulfilling the promise of the 1946 Employment Act even in periods of low unemployment.[7] Bluestone suggests an even more costly solution:

> The inadequate incomes of most of the working poor are not of their own making . . . Rather we must blame the economic system which in many instances provides less than an adequate job for those of adequate talents. In dealing with the working poor it is not enough to deal with the problems of individuals - too little schooling, not enough training, inadequate housing and filthy neighborhoods, no hope, and no potential power. We must also find solutions to an economic system which continues to propel a poverty-wage sector right into the decade of the '70's.[8]

While converts to the dualist persuasion are being made in influential positions, the foundation of the theory presently rests on the unfortified underpinnings of intuitive appeal (in light of the limited impact of manpower training programs in the inflationary period of the late '60's) and cogent exposition. Empirical evidence to examine such a model of labor market and social processes is grossly inadequate at present, yet potentially of considerable consequence for remedying the pressing manpower issues facing our society. It is in response to this need for empirical investigation of a theory which proposes new and drastic policy action, that the present research was undertaken.

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[7] Garth L. Mangum, "Government as Employer of the Last Resort," Towards Freedom From Want, ed. by Sar A. Levitan, et al. (Madison: Industrial Relations Research Association, 1968), p. 136.

[8] Barry Bluestone, "The Characteristics of Marginal Industries," Problems in Political Economy, ed. by David M. Gordon (Lexington: D.C. Heath and Co., 1971), p. 107.

Objectives of the Research

This study seeks to shed light on the dual labor market theory as it relates to the early labor market experience of male youths. Specifically, it addresses the following questions derived from the theory: (1) What is the incidence of mobility between the two labor market sectors? (2) What characteristics differentiate between young men whose first jobs after leaving school are in the secondary labor market and those whose first jobs are in the primary market? (3) What characteristics differentiate between young men who move from secondary to primary jobs and those who remain in secondary jobs? (4) Is it true that employers in the secondary sector, unlike those in the primary, fail to differentiate among workers on the basis of their relative productivities?

Source of Data

The sample selected for analysis is a subset of a national probability sample of the civilian noninstitutional population of males 14 to 24 years of age in 1966, who were interviewed in the autumn of 1966, 1967, and 1968.[9] This subset consists of respondents with the following

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[9]For a complete description of the sampling design and the entire interview schedule see: Herbert S. Parnes, Robert C. Miljus, Ruth S. Spitz, and Associates, Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth 14 to 24 Years of Age, I (Columbus: Center for Human Resource Research, The Ohio State University, February 1969); Frederick A. Zeller, John R. Shea, Andrew I. Kohen, Jack A. Meyer, Career Thresholds, II, Manpower Research Monograph no. 16 (Washington, D.C.: U.S. Government Printing Office, 1970); Andrew I. Kohen and Herbert S. Parnes, Career Thresholds, III, Manpower Research Monograph no. 16 (Washington, D.C.: U.S. Government Printing Office, 1971).

characteristics: (1) completed 12 or fewer years of schooling by 1966, (2) not enrolled in school, 1966 through 1968, (3) interviewed each year, 1966 through 1968, and (4) first job after leaving school and 1968 job were as nonagricultural wage and salary workers.[10]

Confining the sample to young men with these characteristics appears to be desirable for several reasons. Most importantly, by selecting young men less than 26 in 1968 and not enrolled in school for at least two years, a crucial period of accommodation to the labor market may be examined for heads or potential heads of households. Also, by focusing on young men, who are known to select their first jobs in a quite unsystematic manner and to be highly mobile in the process of settling into career patterns, this study constitutes a rather severe test of the dual market theory.[11] Furthermore, by limiting the universe to those youths with 12 or fewer years of schooling, the factors which are related to more favorable work experiences may be examined exclusively for those youths most prone to labor market disadvantage.

The time frame for this analysis includes the period from first job to 1968 job, a period of at least two years for each of the sample

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[10] For those youths who were unemployed at the 1968 interview date, information regarding their most recent job was utilized.

[11] Kohen and Parnes report that 55 percent of the white male youth and 68 percent of the blacks in their cohort, who were employed in 1966, 1967, and 1968, had made at least one employer shift between 1966 and 1968. Occupational movement among members of this cohort during the same period was even more extensive, as 59 percent of the whites and 69 percent of the blacks made shifts. See Kohen and Parnes, op. cit., pp. 77-95.

members. Since many youths in the sample initially entered the labor market prior to 1964, while others entered between 1964 and 1966, it is possible to see whether those youths entering during a period of falling unemployment (1964-1966) were more likely to find primary jobs than those entering a loose labor market (pre-1964).

Plan of the Study

The next chapter presents a conceptual framework within which the dual market theory and the transitional period from school to work may be analyzed. In developing this framework, the relevant literature is reviewed and major hypotheses for testing are drawn. Chapter III addresses such methodological aspects of the study as the operational definition of primary and secondary jobs, specification of the dependent and explanatory variables, specification of the models to be tested, and description of the statistical techniques employed. This is followed by the presentation of empirical results in Chapter IV. In the final chapter, the research findings are further discussed and compared with those of other studies. Additional information on the statistical work and citations of the literature are presented in the several Appendices.

CHAPTER II

CONCEPTUAL FRAMEWORK

Introduction

The transition from school to work has been considered an extremely crucial period for youth since repercussions may have a lasting impact. Mangum estimates that about one-third of the 3 million youths who enter the labor force each year encounter difficulty assimilating into the world of work, and he observes that blacks are considerably over-represented within this group.[1] In 1967, for instance, the average rate of unemployment among 16-to-19-year olds was 12.9 percent. Among nonwhites the rate was twice as high (26.5 percent), and represented a level seven times as high as the national rate of 3.8 percent.[2]

In one of the earliest studies of entry into the labor market, Davidson and Anderson characterized the transitional period as a time of "floundering" in which chance seemed to play a significant part in

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[1] Garth L. Mangum, "Second Chance in the Transition from School to Work," The Transition from School to Work, ed. by Philip Arnow, et al. (Princeton: The Industrial Relations Section, Princeton University, 1968), pp. 231-69.

[2] Philip Arnow, et al., "The Transition from School to Work," The Transition from School to Work, op. cit., p. 3.

occupational decisions, and careers were decisively affected by initial choices. Nonetheless, a systematic relationship between one's abilities and socioeconomic background, and initial occupational attainment was observed.[3] Numerous studies since have similarly described entry into the labor market.[4]

In developing a conceptual framework within which the dual market theory and the transitional period from school to work may be empirically examined, it is useful to view labor market success as the outcome of four explanatory factors: (1) family background, (2) investments in human potential, (3) worker attitudes, and (4) environmental conditions such as market demand for particular skills and services. Each of these explanatory factors represents a source of contention between dualists and more traditional theorists. To further clarify the issues concerning the role of each of these factors in a model of labor market success, the relevant literature is critically reviewed.

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[3] Percy E. Davidson and H. Dewey Anderson, Occupational Mobility in an American Community (Stanford University: Stanford University Press, 1937).

[4] For a further discussion of the process of entry into the labor force, see: Gerald G. Bachman, Swazer Green, and Ilona D. Wirtanen, Youth in Transition, Dropping Out--Problem or Symptom?, III (Ann Arbor: Institute for Social Research, The University of Michigan, 1971); Michael D. Ornstein, Entry into the American Labor Force (Baltimore: The Center for the Study of the Social Organization of Schools, The Johns Hopkins University, 1971); Jeffry Piker, Entry into the Labor Force: A Survey of Literature on the Experiences of Negro and White Youths (Ann Arbor: Institute of Labor and Industrial Relations, University of Michigan--Wayne State University, 1969); Parnes, et al., Career Thresholds, I, op. cit.; Zeller, et al., Career Thresholds, II, op. cit.; Kohen and Parnes, Career Thresholds, III, op. cit.

Relevant Literature

The human capital factor

While the proposition that labor market success is the outcome of investments in human resources may be based on theories from economics, psychology, and sociology, this study draws most heavily on the theory of human capital developed in the economics literature.[5] Basically, human capital theory suggests that marginal productivity, ceteris paribus, is a function of an individual's skills and abilities. Supposedly, these talents are developed by way of various investments in the individual, hence they comprise one's stock of human capital. It then follows from this theory that labor market disadvantage represents low productivity, that is, deficiencies of human capital. Thus, it is implicit in this framework that anything which improves the stock of human capital enhances the probability of labor market success.[6]

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[5]See, for instance: Gary S. Becker, Human Capital (New York: Columbia University Press, 1964); and Theodore W. Schultz, "Investments in Human Capital," American Economic Review, LI (1961), pp. 1-17, and The Economic Value of Education (New York: Columbia University Press, 1963).

[6]According to Thurow, much of the public policy dominating the 1960's was based on this neoclassical framework with its strong emphasis upon the supply side of the market mechanism. Thus, the originators of the antipoverty program decided that "poverty was to be eliminated by raising everyone's marginal product to the level where [they] would be able to earn an acceptable income. Education and training programs were to be the principal means for raising marginal products . . . increasing workers' human capital could eliminate poverty." See Lester Thurow, "Raising Incomes Through Manpower Training Programs," Contributions to the Analysis of Urban Problems, ed. by A. H. Pascal (Santa Monica: Rand, 1968), pp. 91-92.

Dualists, however, argue that pervasive labor market stratification exists which is impervious to investment in human capital. As they see it, stratification has evolved through a systematic and effective process of societal discrimination which is advantageous to certain interest groups in the economy. Consequently, dual market theorists have taken to task antipoverty policies advocating investments in human capital on the grounds that, in the presence of demand-side imperfections such as institutionalized racism, such investments would be insufficient and ineffective.[7] While there is hardly complete unanimity among dualists, it appears they are suggesting that human capital is of little efficacy in overcoming poverty because the value of human capital among the poor is effectively reduced by the shackles of invidious discrimination.[8] Thus, stratification is not seen to be the result of the uneven distribution of human capital across demographic groups

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[7]The major empirical criticisms of human capital theory arise from the wide dispersion of earnings within each class of education and experience. As Thurow concludes, "Thus, factors other than the distribution of human capital are of major importance in explaining the actual distribution of income." See Lester Thurow, Poverty and Discrimination (Washington: Brookings Institute, 1969), p. 97. Consequently, many have begun to further question the premise that equality of educational opportunities will lead to greater socioeconomic mobility on the part of the poor.

[8]While discrimination may also act to produce differentials in the stocks (quantities) of human capital among various race, class, or sex groups, dualists are herein suggesting that the value (price) of equivalent stocks of human capital varies according to these demographic characteristics and this is what precludes the effectiveness of a human capital approach to eliminating labor market disadvantage.

and market sectors, as human capital theory suggests, but rather the effect of large and systematic differentials in returns to equivalent levels of human capital.[9]

To empirically address the critical points of contention requires analyses of a different sort than currently exist .[10] While it is useful to examine intercolor differentials in returns to human capital, dualists contend that returns also vary systematically between the primary and secondary sectors within each color group.[11] What is required,

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[9]While economists have frequently conjectured that differential monetary returns to equivalent levels of human capital may represent differences in the noneconomic attractiveness of jobs, sociologists have contended that economic and noneconomic aspects are complementary. Furthermore, at least one study has reported that differentials in economic attractiveness "far from being offset, are often reinforced by differentials in the nonwage attractiveness of jobs." See Herbert S. Parnes, Research on Labor Mobility (New York: Social Science Research Council, 1954), p. 190. Indeed, central to the idea of a segmented labor market is a belief that the economic and noneconomic attractiveness of jobs are complementary.

[10]What the existing studies have generally utilized are cross-sectional analyses of wage determination and occupational attainment processes usually stratified only by race.

[11]While dualists contend that raising levels of human capital will not increase primary employment opportunities for blacks, lower class whites, women, etc., this does not imply that none of these persons are in primary sector jobs. Rather, "chance" or college experience may allow some to initially enter the primary market sector and remain thereafter. It is the not-so-fortunate, whose first jobs are secondary, that become confined to the secondary sector. While secondary sector employers treat all workers as though they were perfect substitutes, those minority group members lucky enough to enter the labor market in primary jobs are differentially rewarded on the basis of human capital, but returns are supposedly lower for them than for the primary sector whites.

therefore, is a separate analysis of the determinants of labor market success within clearly identifiable market sectors and color groups. In addition, for each color group it is important to estimate the effect of human capital on entry into the primary sector and secondary-to-primary mobility. Intercolor and intersector differentials in labor market success may then be partitioned for purposes of comparison into portions attributable to differences in levels of human capital, and to differential returns to human capital. While human capital theory suggests that all intercolor differentials in labor market success are explainable in terms of the nonuniform distribution of human capital, dualists contend there is no net effect of human capital in reducing poverty among blacks in particular, and among secondary workers in general.

Although the issues have never been clearly put forth for empirical analysis, what evidence that does exist is highly suggestive. In these studies, by far the most widely accepted measure of human capital is education (formal schooling). Essentially, this evidence strongly suggests that education is of less importance for blacks than whites, and some studies make even stronger inferences. Weiss, for instance, regretfully concludes that "given a labor market that distributes rewards among blacks without regard to their education the solution to the black poverty problem is outside the classroom."[12] Berg's study

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[12]Randall Weiss, "The Effects of Education on the Earnings of Blacks and Whites," Review of Economics and Statistics, LII (May 1970), pp. 150-59.

draws similar inferences in describing investments in education as "the great training robbery!"[13] Harrison reports returns to education among all blacks, residing in the ghetto or otherwise, to be extremely low or insignificant and quite often less than even the returns to whites who reside in the ghetto.[14] Also, Michelson's findings are equally suggestive in that education short of college completion is reported to be an unworthwhile investment for blacks.[15]

While these studies point to practically no effect of education in improving the labor market prospects of blacks, several others have reported that education is of importance for blacks, yet seriously constrained in effectiveness by pervasive racial discrimination. Studies by Kohen, Ornstein, Duncan, Blau and Duncan, and Schiller, for instance, have reported a significant direct effect of educational attainment on labor market success for blacks, but each has also noted substantial intercolor success differentials, unexplainable in terms of human capital

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[13]Berg's analysis generally examined for the effects of education on earnings within occupational categories. It is not surprising, therefore, that he found little difference attributable to schooling. See Berg, op. cit.

[14]Bennett Harrison, "Education and Underemployment in the Urban Ghetto," The American Economic Review, LXII (December 1972), pp. 796-811.

[15]Stephan Michelson, "Rational Income Decisions of Negroes and Everybody Else," Industrial and Labor Relations Review, XXIII (October 1969), pp. 15-28.

deficiencies, which are attributed to discrimination.[16] Schiller's study goes even farther to point out that class discrimination may indeed be more pervasive than racial discrimination, and that many blacks ultimately suffer the cumulative encumbrance of both. Also, Coleman, Blum, and Sorensen reported that while educational attainment is the principal determinant of the occupational status of the first job taken by male youth, the effect of education is about twice as great among whites as among blacks.[17]

Besides education, training has also been a widely employed measure of human capital.[18] Dualists similarly contend that investments

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[16]Andrew I. Kohen, "Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity, and Quality of Schooling" (Columbus: The Center for Human Resource Research, The Ohio State University, 1973), pp. 137-52; Ornstein, op. cit., pp. xi-xxiv; Otis D. Duncan,"Inheritance of Poverty or Inheritance of Race?", On Understanding Poverty, ed. by Daniel P. Moynihan (New York: Basic Books, 1969); Peter M. Blau and Otis D. Duncan, The American Occupational Structure (New York: Wiley, 1967), pp. 208-213; and Bradley R. Schiller, "Class Discrimination vs. Racial Discrimination," The Review of Economics and Statistics, LIII (August 1971), pp. 263-69. Also, using tabular rather than multivariate analysis, Parnes, et al., have shown that young men with lower levels of formal education have greater difficulty in finding jobs, and that the jobs they do find are more likely to pay less and have a lower ascribed status. However, blacks consistently fare worse than comparable whites. Parnes, et al., op. cit., pp. 81-117.

[17]James S. Coleman, Zahava D. Blum, and Aage B. Sorensen, Occupational Status Changes for Blacks and Nonblacks During the First Ten Years of Occupational Experience (Baltimore: The Center for the Study of the Social Organization of Schools, The Johns Hopkins University, Report no. 76, August 1970).

[18]See, for example: Jacob Mincer, "The Distribution of Labor Incomes: A Survey with Special Reference to the Human Capital Approach," Journal of Economic Literature, VIII (March 1970), pp. 1-26; also, Lester Thurow, Poverty and Discrimination, op. cit., and "Raising

are only warranted where returns to greater productivity are captured by workers. Supposedly, this only occurs in the primary sector since secondary jobs either require little training (even OJT), or else the weak bargaining position of secondary workers precludes their capturing the returns to increased productivity.

Remarkably, there is relatively little conclusive evidence of the effects of training on black underemployment despite the keen interest in this subject by human capital theorists. According to Thurow, the existing evidence suggests that institutional programs have "not been very successful."[19] Also, Gordon's review of the literature notes three interesting studies which report that the effect of MDTA training has been insignificant and that returns to training appear to vary according to sex and race.[20]

The attitudinal factor

Originally coined by anthropologist Oscar Lewis in 1961, the concept of a poverty culture has taken root more quickly than almost

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Incomes Through Manpower Training Programs," op. cit. Typically education is considered to represent generalized training, a highly transferable commodity of value in broadly defined labor markets. Training, while usually less general in nature than public education, ranges from institutional (transferable skills, not firm specific) to on-the-job training (firm specific).

[19] Thurow, "Raising Incomes Through Manpower Training Programs," op. cit.

[20] D. M. Gordon, Theories of Poverty and Underemployment (Lexington: D.C. Heath and Co., 1972), pp. 122-25.

any other social term of the past decade.[21] It has provided an explanation of the entrenchment of poverty despite tremendous prosperity and monumental social-welfare legislation, and has been broadly interpreted to provide a basis for several aspects of manpower policy. Essentially, Lewis' actual study pointed to numerous ways in which the poor of all industrialized countries resemble each other more than their nonpoor countrymen. Since his original work, this theme has been loosely interpreted to describe the poor as members of a defective culture which is both intellectually and morally sterile.[22] The poor are poor, it has been reasoned, because they have inherited a faulty culture embracing a value system incompatible with the American work-ethic. More specifically, it is argued that this culture places little value in work and thereby generates low levels of motivation among the poor. Poverty, therefore, is believed to reflect this lack of motivation rather than discrimination.[23]

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[21] Oscar Lewis, The Children of Sanchez (New York: Random House, 1961).

[22] For a further discussion, see: Charles A. Valentine, Culture and Poverty (Chicago: University of Chicago Press, 1968); and Daniel P. Moynihan, ed., On Understanding Poverty (New York: Basic Books, 1969). Also, see: Daniel P. Moynihan, The Negro Family: The Case for National Action (Washington, D.C.: Office of Policy Planning and Research, U.S. Department of Labor, Government Printing Office, 1965). Essentially, this report argues that three centuries of injustice have led to the deterioration of the Negro family. This deterioration, it contends, "is the fundamental source of the weakness of the Negro community at the present time, . . . unless this damage is repaired, all the effort to end discrimination and poverty and injustice will come to little."

[23] Lewis has more recently suggested that his poverty culture thesis has been misunderstood: "There is nothing in the concept that puts the

Rooted firmly in a poverty culture rationale, "training and work experience programs all assumed that the solution was to change the worker by adding to his skills and experience or changing his attitudes."[24] Indeed, in one of the largest of manpower programs, NAB-JOBS, a review of contracts indicated that while only 18 percent intended job specific (vestibule) training, a full 73 percent planned on some version of sensitivity training.[25] Another study noted that those responsible for manpower programs are convinced of a serious need to counsel, build self-esteem, and provide emotionally supportive services as prerequisites for employability. The particular dilemma again appears to characterize the disadvantaged as poor because they are "alienated, discouraged, immature, lacking self-esteem, and not conversant with accepted middle-class work values."[26] As Friedlander

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onus of poverty on the character of the poor." Nonetheless, he continues to maintain that "The subculture develops mechanisms that tend to perpetuate it, especially because of what happens to the world view, aspirations, and character of the children who grew up in it. For this reason, improved economic opportunities, though absolutely essential and of the highest priority, are not sufficient to alter basically or eliminate the subculture of poverty." See Lewis, "The Culture of Poverty," in Moynihan, On Understanding Poverty, op. cit., pp. 187-200.

[24]Mangum, "Manpower Research and Manpower Policy," op. cit., p. 101.

[25]Garth Mangum, The Emergence of Manpower Policy (New York: Holt, Rinehart, and Winston, 1969), p. 127.

[26]Edward Kalachek, The Youth Labor Market (Ann Arbor: The Institute of Labor and Industrial Relations, The University of Michigan-Wayne State University, 1969), p. 77.

and Greenberg have reported:

> Since most HCU (hard-core unemployable) programs focus upon changing the HCU to adapt to the predominant white middle-class structure, they would seem to proceed on the assumption that the culture of the HCU is defective and that the HCU is accordingly deviant.[27]

As a sharp reaction to this viewpoint, Valentine maintains that proof of the existence of a poverty culture has been established through faulty research and contradictions.[28] As a more reasonable explanation of the pathology of poverty, Valentine suggests the poor be viewed as a subculture fashioned by the designs of the dominant society. While dualists are hardly of one voice, their stance appears quite consistent with that of Valentine, namely: the attitudes of the poor are not the reason for their confinement to secondary jobs. This carries no necessary implication as to what the attitudes of secondary workers actually are. On the one hand, if there is no basic difference in motivational attitudes between secondary and primary workers, this supports the dualist position that individuals are not at fault, at least in this respect, for their employment plight. Yet on the other hand, should there be a difference in attitudes such that secondary workers report lower levels of motivation than primary workers, dualists can retort that attitudes are the result, rather than the cause, of labor market disadvantage.

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[27]Friedlander and Greenberg, op. cit.

[28]Valentine, op. cit.

The importance of attitudinal variables, then, in a model whose purpose is to shed light on the "dual market versus poverty culture" debate, depends critically on when attitudes are measured. Thus, only in instances where attitudes measured concurrently with labor market success fail to discriminate favorable and unfavorable situations, can light be shed on the paradigm competition.[29] However, irrespective of when attitudes are measured, interpretation of the effects of family background and race is much less ambiguous when motivational variables are included.[30] By controlling for motivation, a much clearer understanding of the meaning of relationships between labor market experiences and race and/or class may be derived.

With respect to the role of attitudes in a model of labor market success, the existing evidence hardly provides a consensus.[31] According

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[29]If there is really a causal link running from motivation to success as poverty culture theorists suggest, then the relationship should be observed irrespective of the time period in which motivation is measured. For example, youths in primary rather than secondary jobs or earning higher rather than lower wages in 1968, ceteris paribus, would be expected to have higher levels of motivation in 1968 if motivation prior to the success had any marginal impact on that success.

[30]Specifically, should motivation be unevenly distributed across racial, class, and sex groups, and at the same time be an important determinant of labor market success, studies failing to control for motivation would tend to overestimate discrimination. Schiller, for one, acknowledges this possibility in qualifying his conclusions that racial and class effects, ceteris paribus, reflect discrimination. See Schiller, op. cit.

[31]At least two of the more serious limitations of the existing research may help to explain this lack of consensus. First, hardly any study has employed multivariate techniques, hence relevant factors may not have been satisfactorily controlled. Second, extremely few have utilized either a national sample or a representative one of poor persons and control group.

to some, alienation and apathy are typical traits of teenage ghetto residents.[32] Furthermore, several studies have shown that self-concept of ability and actual performance are positively related,[33] and that alienation, even among the disadvantaged, is inversely related to such behavior as job performance, conscientiousness, compliance with work rules, observance of safety practices, operation and care of equipment, ability to work with others, work tolerance, manners in the shop, and abstract thinking.[34]

Conflicting results, however, are equally impressive. One literature review suggests that "with regard to family norms and forms especially, there is ample and increasing evidence that stable marriage and family life are accepted as a preferred ideal by most poor people, white and nonwhite."[35] Others have also reported that adult ghetto

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[32]See, for instance: M. Freedman, op. cit.; and The Report of the National Advisory Commission on Civil Disorders (New York: Bantam Books, 1968).

[33]W. B. Brookover, E. L. Erickson, and L. M. Joiner, Self-Concept of Ability and Actual School Achievement, III (East Lansing: Michigan State University, 1966). H. L. Sheppard and A. H. Belitsky, The Job Hunt (Baltimore: The Johns Hopkins Press, 1966). In the former instance, performance was measured in terms of academic achievement. In the latter case, the likelihood of finding a job was utilized as the criterion.

[34]M. S. Tseng, "Locus of Control as a Determinant of Job Proficiency, Employability, and Training Satisfaction of Vocational Rehabilitation Clients," Experimental Publication System, VII (August 1970), MS #249-16.

[35]Elizabeth Herzog, "Facts and Fictions about the Poor," Monthly Labor Review (February 1969), pp. 42-49. Lewis, however, has addressed this issue as follows: "People with a culture of poverty are aware of middle-class values; they talk about them and even claim some of them

residents have attitudes and behavioral patterns which are very largely middle-class with respect to work, education, and aspirations for their children.[36] Furthermore, Hulin and Blood's search of the job satisfaction literature notes clearly that deviations from middle-class attitudes toward work are not uncommon for urban workers with high earnings, good employment records, and high job satisfaction.[37] Irrespective of deviant attitudes, however, the conclusions of Friedlander and Greenberg are of particular relevance, suggesting that the hard-core unemployable's "motivation toward work, his motivation to avoid work or avoid unemployment, the importance of various job characteristics, his perception of his previous job, and the kind of self-image he prizes

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as their own, but on the whole they do not live by them. Thus, it is important to distinguish between what they say and what they do." (Lewis, "The Culture of Poverty," op. cit., p. 190). Herzog, in contrast, suggests, "This ability to believe in one set of values while practicing a different set is by no means unique to the poor . . . just as certain business men perfer certain forms of honesty, while considering them unrealistic for practice in daily life."

[36]Nathan Glazer, "Race Relations in New York City in 1969," manuscript prepared for the Institute of Public Administration (Fall 1969).

[37]Charles L. Hulin and Milton R. Blood, "Job Enlargement, Individual Differences, and Worker Responses," Readings in Organizational Behavior and Human Performance, ed. by L. L. Cummings and W. E. Scott (Harwood: Irwin and Dorsey, 1969). Also, Goodwin found a congruence of attitudes of young ghetto blacks with their white middle-class counterparts. However, the attitudes of neither group demonstrated a strong commitment to work. See Leonard Goodwin, "Work Orientation of the Underemployed Poor: Report on a Pilot Study," Journal of Human Resources, IV (Fall 1969), pp. 508-19.

from his friends--all of these seem to have little to do with his effectiveness or retention on the job."[38]

The environmental factor

Historically, by far the most important environmental variable considered to affect labor market success has been the level of demand for labor. While the originators of the antipoverty program felt strongly that labor market disadvantage could be overcome by investments in human capital and motivation, implicit in this rationale was a realization that labor markets must be kept tight. As Tobin has noted:

> By far the most powerful factor determining the economic status of Negroes is the overall state of the United States economy. A vigorously expanding economy with a steadily tight labor market will rapidly raise the position of the Negro, both absolutely and relatively. Favored by such a climate, the host of specific measures to eliminate discrimination, improve education and training, provide housing, and strengthen the family can yield substantial additional results. In a less beneficent economic climate, where jobs are short rather than men, the wars against racial inequality and poverty will be uphill battles, and some highly touted weapons may turn out to be dangerously futile.[39]

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[38] Friedlander and Greenberg, op. cit., p. 7. Gurin, however, utilizes longitudinal data to arrive at quite different conclusions. He suggests that feelings of efficacy in training predict well later job earnings success and the degree to which job earnings success affects future feelings of efficacy. See Gerald Gurin, "Psychology and Reality in the Study of the Hard-Core Unemployed," The Poor and the Hard-Core Unemployed, ed. by Wil J. Smith (Ann Arbor: Institute of Labor and Industrial Relations, The University of Michigan-Wayne State University, 1970), pp. 85-111.

[39] James Tobin, "Improving the Economic Status of the Negro," Inequality and Poverty, ed. by Edward C. Budd (New York: W. W. Norton, 1967), pp. 194-213.

To many manpower experts, unemployment has long been viewed as a structure unevenly distributed across areas and demographic groups, but "the structure was made of ice and would melt under the heat of increased demand."[40] Supported by numerous studies observing a significant relationship between the level of aggregate demand and the unemployment rate of teenagers and minority workers, policy proposals put faith in increased demand as the incentive for a deeper penetration into the hiring queue and an accelerated upgrading of marginal workers.[41] High levels of demand, it was contended, would make it highly unprofitable for employers to discriminate.

Dualists, however, think otherwise. Even in the face of high levels of aggregate demand, they hold that labor market stratification is so thoroughly entrenched and functional to powerful vested interests that it will not be easily eroded. The problem, once again, is not

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[40] Mangum, The Emergence of Manpower Policy, op. cit., pp. 43-46.

[41] For a further discussion of this evidence, see: Kalachek, op. cit., pp. 17-29. Also, see: U.S. Congress, Subcommittee on Economic Statistics of the Joint Economic Committee, Higher Unemployment Rates, 1957-60: Structural Transformation or Inadequate Demand, Joint Committee Print (Washington, D.C.: U.S. Government Printing Office, 1961); Dale Hiestand, Economic Growth and Employment Opportunities for Minorities (New York: Columbia University Press, 1964); Tobin, op. cit.; Harry J. Gilman, "Economic Discrimination and Unemployment," American Economic Review, LV (December 1965), pp. 1077-96; Lester Thurow, Poverty and Discrimination (Washington: Brookings Institute, 1969); The Report of the National Advisory Commission on Civil Disorders, op. cit., pp. 236-66; and Margaret S. Gordon, "U.S. Manpower and Employment Policy," Monthly Labor Review, LXXXVII (November 1964), pp. 1314-21.

seen to be the uneven distribution of human capital and motivation or the lack of primary jobs, but the invidious discrimination inherent in the institutions of the labor market. Even when demand is raised, instead of upgrading those confined to secondary jobs, primary sector firms are expected either to divert increased demand into the secondary sector by subcontracting or hiring temporary help, or to bid up the wages for the available primary labor force.[42] Competition within the primary sector is thought to result in inflationary pressures unabated by investments in human capital and motivation among the poor.

The evidence regarding the impact of several years of vigorous demand on labor market disadvantage provides mixed results. To dualists, the impact of the manpower policies of the '60's is seen as limited and demonstrative of the entrenchment of stratification. To Mangum, however, the results suggest a different conclusion:

> . . . the basic manpower obstacle is still the supply of jobs. Even during 1966-68 when labor markets in general were tight, there were never enough jobs in rural depressed areas or central city ghettoes within the occupational ranges attainable by the disadvantaged . . . Every manpower program faces everywhere the same problem: there are never enough available placements for the graduates.[43]

Yet Kelly, by way of an empirical analysis of the poverty problem, reported that:

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[42] Doeringer and Piore, op. cit., p. 178.

[43] Mangum, "Manpower Research and Manpower Policy," op. cit., pp. 109-10.

> Our analysis tends to cast some doubt on the wisdom of relying too heavily on aggregate demand . . . aggregate demand exerts an uneven influence over time across various demographic groups. Moreover, we have found the lowest degree of economic improvement to be concentrated among the very demographic groups which the "Last Hired, First Fired" theory predicts should show the largest relative gains in a prosperous period such as 1965-1966.[44] (Emphasis in the original.)

Although for different reasons, there has been considerable agreement that the inflationary costs associated with a level of demand high enough to move the disadvantaged into "meaningful" jobs would be intolerable. The National Commission on Technology, Automation, and Economic Progress, for instance, has recommended government as employer of the last resort.[45] Hence, within what have become the tolerable limits of inflation, variations in the level of demand do not seem potent enough to expand primary sector opportunities for all the disadvantaged. Dualists continue to maintain, however, that poverty is not only the result of a lack of meaningful jobs and a deficiency of skills, but more importantly, of low-wage and meaningless jobs in which many perfectly capable Americans earn their poverty nearly 52 weeks

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[44] Terence F. Kelly, "Factors Affecting Poverty: A Gross Flow Analysis," The President's Commission on Income Maintenance Programs: Technical Studies (Washington, D.C.: U.S. Government Printing Office, 1970), p. 27. For a further discussion of other studies estimating the relative effects of increased demand on the labor market positions of disadvantaged groups, see Kalachek, op. cit., pp. 17-29.

[45] Mangum, "Government as Employer of the Last Resort," op. cit.

each year. Even worse, the intrinsic character of these jobs and the labor market offer no hope for the development of transferable skills and subsequent upward socioeconomic mobility.

The family background factor

Throughout this literature review, it has been illustrated that dualists and more traditional theorists ascribe labor market disadvantage to widely divergent causes. The crucial issue of contention is the onus of guilt: Does it lie with the poor or with the system? Essentially, are differentials in labor market success explainable in terms of the distribution of human capital and motivation, or is labor market discrimination the principal reason for the economic plight of the poor?[46] Furthermore, does a more favorable economic environment equally improve the chances of all youths for primary jobs?

While conceptually "the system" is obviously an environmental factor, its effects are represented in this study by the relation between race and class and labor market disadvantage, controlling for the human capital, motivation, and environmental factors. In other words, "the system" means the extent of discrimination in the labor market.[47]

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[46]This is not to suggest that deficiencies of human capital and motivation result solely from the shortcomings of individuals. Rather, at least some of this may be attributable to both nonlabor market and historic discrimination.

[47]Since race and class are characteristics of the individual, and since discrimination is measured in terms of these variables, estimates of the impact of discrimination are considered to be the effects of family background on labor market disadvantage.

While the contentions and evidence regarding the impact of racial discrimination have been previously discussed throughout this chapter, differentials in success attributable to class have not. Essentially, as with race, traditional theories implict in manpower policy contend there are no differentials attributable to class--controlling for human capital, motivation, and environmental effects. As previously mentioned, however, numerous studies have observed systematic influences of family background on early labor market success.[48] Indeed, Ornstein and Schiller have reported the effects of discrimination based on class to be as severe as that based on race.[49] Duncan, however, while also observing an important impact of class among whites and blacks, estimated that the effects of race considerably outweigh the effects of class.[50]

Hypotheses to be Tested

Thus far, it has been proposed that labor market success (disadvantage) be viewed as a function of four explanatory factors: family

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[48] See footnote 4, this chapter, for these references.

[49] Ornstein, op. cit., pp. xxiii-xxiv; Schiller, op. cit.

[50] While Duncan's methodology allows for the study of the indirect as well as direct effects of class, he does not stratify by class as Schiller does. Hence, the relative importance of class is possibly understated. Duncan, "The Inheritance of Poverty or the Inheritance of Race?" op. cit. Other studies reporting a direct or indirect effect of class on labor market success include, for instance: Coleman, et al., op. cit.; Kohen, op. cit.; Bachman, et al., op. cit.; Blau and Duncan, op. cit.; and Zahava D. Blum and James S. Coleman, Longitudinal Effects of Education on the Incomes and Occupational Prestige of Blacks and Whites (Baltimore: The Center for the Study of Social Organization of Schools, The Johns Hopkins University, Report no. 70, June 1970).

background, human capital, attitudes, and the environment. As to the role of each of these factors there is a wide disparity between the position of dualists and more conventional thinkers. To address these issues of contention and accomplish the research objectives outlined earlier, three major hypotheses may be drawn:

1. The labor market is segmented into a primary and secondary sector and there is little or no mobility between them.

2. The entry into and confinement of the disadvantaged within the secondary sector do not result from deficiencies of human capital and motivation, or from an unfavorable economic environment. For blacks in particular, variations in these factors are inconsequential in comparison to labor market discrimination.

3. In the primary sector, variations in human capital and motivation are related to labor market success, although there are racial and class differentials in returns to each. In the secondary sector, however, employers fail to differentiate among workers on the basis of their relative productivities.

These hypotheses capture the essence of the dual market theory. While all blacks and lower class whites are not thought to be in secondary jobs, the marketplace is considered to distribute these groups disproportionately among secondary jobs at the very outset of their work careers without regard for abilities and potential. Once in secondary jobs, there is no escape, regardless of how much human capital or motivation is acquired or how high demand is raised. As long as an impenetrable boundary (discrimination) separates the two market sectors and an overabundance of secondary workers exists, conventional manpower policies will not affect labor market disadvantage. While traditional

programs may help middle and upper class whites or those fortunate enough to initially enter the labor market in primary jobs, those less fortunate will find the secondary sector and poverty both an inevitable and irreversible fate.

CHAPTER III

METHODOLOGICAL ISSUES

Introduction

The purpose of this chapter is to operationalize the concepts embodied in the research objectives and major hypotheses, and to specify the statistical techniques employed in this study. The first section of the chapter operationally defines primary and secondary jobs, while the second section discusses the measurement of labor market success and the four explanatory factors: family background, human capital, attitudes, and environment. The third section then turns to the statistical analysis involved in accomplishing the research objectives by specifying the particular mathematical models and techniques utilized.

Defining Primary and Secondary Jobs

Piore and others who have discussed the confinement of the disadvantaged to employment in a secondary or peripheral sector of the labor market have characterized this sector as one of low-income employment opportunities in "low wage, and often marginal enterprises."[1] Doeringer and Piore specify jobs with one or more of the following characteristics as secondary: (a) low pay, (b) few and low fringe benefit level, (c) poor working conditions, (d) high labor turnover,

[1]Doeringer and Piore, op. cit., p. 163.

(e) little chance of advancement, (f) arbitrary and often capricious supervision.[2] They also contend that such jobs are usually found in the absence of the direct effects of strong unions, in completely unstructured jobs, and in formally structured jobs with many entry ports, short mobility clusters, and generally low paying or unpleasant work.

Averitt dichotomized the economy into "center" and "periphery" on the basis of industry and of such enterprise characteristics as size and financial position.[3] Bluestone, following Averitt in many respects, adds a third market which he calls the "irregular" sector and changes the nomenclature from "center" sector to "core."[4] On the basis of an industry's median wage rate, peripheral (secondary) industries are subsequently identified:

> . . . the firms in the core economy are noted for high productivity, high profits, intensive utilization of capital, high incidence of monopoly elements, and a high degree of unionization . . . Workers who are able to secure employment in these industries are, in most cases, assured of relatively high wages and better than average working conditions and fringe benefits . . . Concentrated in agriculture, nondurable manufacturing, retail trade, and

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[2] Ibid., p. 165.

[3] Averitt also viewed the labor market as reflecting the dichotomy with workers in the peripheral firms quite prone to "longer periods of unemployment or eventual banishment to the peripheral economy," as well as low wages, job insecurity, and lack of upward mobility. See Robert T. Averitt, The Dual Economy (New York: W. W. Norton and Company, 1968).

[4] Drawing on Ferman's "irregular labor market" in ghetto areas, he describes these irregular jobs as not coming under the purview of legitimate tax-reported employment. Gambling, prostitution, drug traffic, and unreported odd-jobs are examples of the employment opportunities in this sector. See Barry Bluestone, "The Tripartite Economy: Labor Markets and the Working Poor," op. cit.

> sub-professional services, the peripheral industries are noted for their small size, labor intensity, low productivity, intensive product market competition, lack of unionization, and consequently low wages . . . The workers who are trapped in the periphery become the working poor.[5]

While many dualists have conceptualized the differences between primary and secondary jobs, none has developed an operational definition so that specific jobs might be classified. Doeringer, et al., after an extended discussion of characteristics of jobs and/or workers that might be used to differentiate between primary and secondary labor markets, ultimately concluded that reliable measures of primary and secondary jobs are just not available and that this is an area in which research is needed.[6]

In the absence of unambiguous standards, it appears that occupation and industry are the most suitable criteria for classifying jobs as primary or secondary. Census records for the male labor force in 1960 report median earnings for 3-digit occupational and industrial codes.[7]

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[5]Barry Bluestone, "The Characteristics of Marginal Industries," Problems in Political Economy, ed. by David M. Gordon (Lexington: D. C. Heath and Co., 1971), pp. 102-07.

[6]Peter B. Doeringer, Penny H. Feldman, David M. Gordon, Michael J. Piore, and Michael Reich, Low Income Labor Markets and Urban Manpower Programs (Washington: National Technical Information Service, U.S. Department of Commerce, P.B. 192484, March 1969). In the authors' own words: "What are the characteristics of industries, occupations, degrees of capital intensity and salary levels that separate primary from secondary employment? To begin with, some reliable indices of primary and secondary jobs are needed in order to identify jobs suitable for referral." (p. 115).

[7]U.S. Bureau of the Census, U.S. Census of Population: 1960, Subject Reports, Occupational Characteristics, Final Report PC(2)-7A, U.S. Government Printing Office, Washington, D.C., 1963, Table 29, pp. 376-385; and U.S. Bureau of the Census, U.S. Census of Population:

Based on these earnings, 3-digit occupations and industries may be hierarchically ranked and cutoff points determined for defining jobs as primary or secondary--or neither. Since both occupation and industry are considered of major importance in defining primary and secondary jobs, the cutoff points have been established such that jobs are considered primary if:

1) the occupation is one with median earnings greater than or equal to the median of the entire male labor force and the industry is one with median earnings of at least $4,303;[8]

or

2) the industry is one with median earnings greater than or equal to the median of the entire male labor force and the occupation is one with median earnings of at least $4,187.[9]

Secondary jobs were then defined as all jobs in which:

1) the occupation is one with median earnings below $4,187 and the industry is one with median earnings below the median of the entire male labor force;

or

2) the industry is one with median earnings below $4,303 and the occupation is one with median earnings below the median of the entire male labor force.[10]

1960, Subject Reports, Industrial Characteristics, Final Report PC(2)-7F, U.S. Government Printing Office, Washington, D.C., 1967, Table 18, pp. 78-80.

[8]Occupations with median earnings below $4,187, and industries with median earnings below $4,303, employed one-third of the total male labor force in 1959. For this reason, these points were established as cutoffs.

[9]See footnote 8 above.

[10]It should be noted that under the classification scheme devised, there are some jobs which are considered neither primary nor secondary.

The classification thus developed was then tested to determine how consistent it appeared to be with the various criteria proposed by dualists, and with the subjective evaluations of eleven judges knowledgeable in such matters.[11] On the basis of this analysis, it was concluded that the classification scheme produces categories that are quite consistent with what most writers have conceived to be the difference between primary and secondary employment situations.[12]

The Measurement of Variables

Labor market success

Implicit in the research objectives and major hypotheses are three distinct dimensions of labor market success: (1) the likelihood of a primary first job, (2) the likelihood of secondary-to-primary mobility, and (3) wage rates. The likelihood of an individual's first job being primary rather than secondary is measured by assigning a youth a value of 1 if his first job is primary and 0 otherwise (where the sample universe is restricted to those whose first jobs are primary or secondary). Hence, the mean value of this variable is the proportion of

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[11] Further refinements of these criteria have been undertaken to handle two obvious limitations. First, the top one-fourth of all occupations (employed one-fourth of the male labor force in 1959) have been considered primary irrespective of industry. Second, to avoid the classification of apprentices as secondary workers, the construction industry has been treated as a special case. While median earnings for this industry were between $4,303 and the grand median, construction has been considered as an industry with median earnings above the grand median.

[12] For a complete description of the testing procedure and data, see Appendix A.

individuals whose first jobs are primary--i.e., the likelihood of a primary first job.[13]

In the second case, where success is defined in terms of secondary-to-primary mobility, the sample universe is restricted to those youths whose first jobs are secondary and whose 1968 jobs are either primary or secondary. By then assigning a 1 to individuals with a primary 1968 job and 0 otherwise, the mean value of this variable becomes the likelihood of secondary-to-primary mobility.[14] In the third case, where labor market success is defined in terms of wage rates, the 1968 hourly rate of pay for each respondent is utilized.[15]

The human capital factor

Unfortunately, a comprehensive accounting of exactly what investments represent human capital formation is unavailable. Thus, some may go so far as to view even differences in child rearing and parental love and affection as conscious market decisions governing investment in human capital.[16] In this study, the human capital factor embodies

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[13]The complement of this mean, by definition, is the likelihood of initial entry into the secondary sector.

[14]The complement of this mean, by definition, is the likelihood of confinement within the secondary sector.

[15]For the small proportion of the sample not employed at the time of the survey the wage refers to the last job. Although most respondents reported earnings in hourly terms, in some cases the hourly rate had to be computed from responses in terms of other time units. For the precise procedure see Parnes, et al., Career Thresholds-I, p. 95, n. 2.

[16]Indeed, as Becker has noted, ". . . in the developmental approaches to child rearing, all the earnings of a person are ultimately attributed to different kinds of investments made in him." See Gary S. Becker, Human Capital and the Personal Distribution of Income (Ann Arbor: University of Michigan Press, 1967), p. 3.

seven variables: (1) educational attainment, (2) formal training outside of regular school, (3) mental ability, (4) age, (5) status of first job, (6) health status, and (7) geographic mobility.

Educational attainment is measured in two ways--in terms of years of formal schooling completed and high school graduation status. In the former instance, the variable ranges from 0 to 12 according to the actual number of years a respondent has completed. In the latter, a youth is assigned the value of 1 if he has graduated, 0 otherwise. Such measures have numerous shortcomings, perhaps most important of which is that they say nothing of the quality of the schooling input. Should it be the case that quality of schooling exerts an independent effect on labor market success, then inequality of educational opportunities may result in findings suggestive of labor market discrimination.[17]

With respect to training, a dummy variable format is utilized whereby a youth is assigned the value of 1 if he has received any formal training, and 0 otherwise.[18] While this variable allows for an overall comparison of those trained with those receiving no training, it is limited substantially in that it says nothing of the type, source, or length of training. Nonetheless, this should not alter the expectations arising from human capital theory which suggest that those trained should fare better than those untrained, ceteris paribus.

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[17]There is considerable debate regarding an independent effect of school quality on labor market success. For a review of this literature, see Kohen, op. cit.; and Jencks, op. cit.

[18]The training variable has been measured at two points in time, 1966 and 1968. In various parts of the analysis, it becomes more appropriate to use one rather than the other.

The mental ability dimension is measured by the I.Q. scores of the male youths.[19] Conceptually, it is not to be inferred that these scores exclusively represent differentials in "native" endowment. Rather, they are thought to also measure the development of "general cognitive skills and the capacity to acquire complex, specific mental skills."[20]

The age variable is measured in terms of a respondent's actual age as an integer value. Controlling for education, age provides a measure of labor market exposure, as well as a proxy for on-the-job training. Irrespective of labor market exposure or experience, age may also reflect an improvement in human capital by way of a physiological and psychological maturation process.

The status of first job is measured in terms of the prestige score attributed to the particular occupation which a youth held when he initially entered the labor market. As an approximation of the value of initial experience, the inclusion of this variable makes it possible

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[19] These scores represent a standardized distribution (for the entire national sample) of raw scores from approximately 30 different tests. An analysis of the effect of this procedure revealed no apparent reasons why the pooled and standardized scores should not be employed. (For a complete discussion of the pooling and standardization analysis, see Kohen, op. cit., pp. 155-74). For those youths who did not attend high school, however, an I.Q. score is unavailable. In order to preserve sample cases, the mean value of those who attended but one year of high school has been assigned those respondents. This value was 87.6 in the case of whites and 77.3 for blacks. Each of the regression equations using the I.Q. measure was reestimated without imputing any I.Q. scores. The comparative results were completely compatible--i.e., involved no interpretive differences--suggesting no reason for not imputing these I.Q. scores.

[20] Kohen, op. cit., p. 16.

to examine the effect of first job on subsequent labor market success.[21] Prestige scores, or socioeconomic status of occupations, range in value from 0 to 96 on a scale (Duncan index) which assigns a 2-digit status score to every 3-digit occupation classified by the Bureau of the Census.[22]

The sixth and seventh measures of human capital, health status and geographic mobility, are operationalized by way of dummy variables. The former takes the value of 1 if the respondent's health did not limit or affect his work at a particular point in time, and 0 otherwise. Classification of a respondent into these categories was accomplished by way of a self-reporting of the limitations and their duration.[23] With respect to geographic mobility, an individual is assigned a 1 if

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[21] At least three studies have empirically observed a direct and independent effect of first job on subsequent labor market success. See, for instance: Ornstein, op. cit., pp. xx-xxii; Blau and Duncan, op. cit.; and Coleman, et al., op. cit.

[22] Over the years, this measure has become one of the most widely utilized indices of status attainment found in the sociological literature. See Otis D. Duncan, "A Socioeconomic Index for All Occupations," Occupations and Social Status, ed. by A. Reiss, Jr., et al. (New York: The Free Press, 1961), pp. 109-38.

[23] Respondents were asked about their health condition in both the 1966 and 1968 surveys. In the 1966 survey, duration of health problem was obtained for those who reported a limitation affecting work. For purposes of classifying respondents according to health at time of first job, this information on duration was utilized. Thus, only those youths whose health was reported as "limited" in 1966 for a duration equal to or exceeding the number of years since first job were considered unhealthy. Consequently, an understatement of the incidence of health limitations at first job may result since limitations that existed then may have no longer been present by 1966.

he lived in a different county (SMSA) in 1968 than 1966, and 0 otherwise.[24]

The attitudinal factor

Two widely utilized attitudinal constructs which capture the essence of the poverty culture thesis are internality and aspirations.[25] The former relates to an individual's alienation from the system--i.e., his perceptions of success as a function of factors within his personal control (internality) or of factors over which he has little or no control (externality). Specifically, feelings of powerlessness reduce motivation since "individual incentive is further dampened by the poverty culture outlook which emphasizes fate as a controller of human destiny."[26] The latter construct reflects the heights to which one aspires. Under ceteris paribus conditions, it is frequently suggested that aspirations represent motivation and incentive. As Lewis has stated: "Traits that reflect lack of participation in the institutions of the larger society or an outright rejection--in practice, if not in theory--would be the crucial traits. . . I have listed fatalism and a low level of aspiration as key traits of the subculture of poverty."[27]

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[24]Data limitations preclude a measure of geographic mobility from time of first job to any later point. Thus, the measure described above has been opted for as the best of available alternatives.

[25]See, for instance: J. W. McGuire and J. A. Pichler, Inequality: The Poor and Rich in America (Belmont, Cal.: Wadsworth, 1969), pp. 78-81. Oscar Lewis, "The Culture of Poverty," op. cit.; and Herzog, op. cit.

[26]McGuire and Pichler, op. cit., p. 81.

[27]Lewis, "The Culture of Poverty," op. cit., pp. 193-96. Also, McGuire and Pichler have put it thusly: "If life appears to be a huge lottery whose rewards are doled out on an unfathomable, random schdule,

A poverty culture, therefore, would be expected to encompass persons with low levels of aspiration and a high degree of fate control.

To measure motivation and compatibility with the work-ethic in terms of internality and aspirations, two frequently used scales are employed. Internality (degree of alienation or fate control) is measured by a respondent's actual score on a modified version of Rotter's internal-external locus of control scale,[28] and level of aspiration is measured in terms of the socioeconomic status attributed

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there is no sense in searching for a 'system' which will beat the game. It is just as well to passively hold your ticket and hope that your number will come up." (McGuire and Pichler, op. cit., p. 81.) Herzog's appraisal is similar, ". . . often attributed to the culture of poverty is lack of motivation . . . It (motivation) includes, also, aspiration and expectation, and the stronger of these is expectation. If expectation is very low, aspiration can be crippled." (Herzog, op. cit., p. 46.) Bronfenbrenner adds a different side of the issue: "To Marx, the basic sin of capitalism was psychological alienation of the worker from his work and from the rest of society. Equality was important only insofar as it might alleviate psychological alienation." (M. Bronfenbrenner, "Radical Economics in America, 1970," Journal of Economic Literature, VIII (September 1970), pp. 756-57.)

[28] The Rotter scale is a widely accepted measure of fate control and alienation. The abbreviated version utilized includes eleven items from the original Rotter scale which appeared to be more general, adult-oriented, and work-related. Since the omission of 12 items from the original test implied an approximate halving of the possible range of scores, the format of the 11 items selected was elaborated to avoid such a shrinkage. Through pretesting both the original and modified versions, a near equivalence of the two forms was revealed. This scale ranges in value from 11 to 44 in order of increasing "internality" of expectations and was administered in 1968. For a complete description of the Rotter scale instrument, the abbreviated version, and the pretest, see Gopal K. Valecha, "Construct Validation of Internal-External Locus of Control as Measured by an Abbreviated 11-Item I-E Scale" (unpublished Ph.D. dissertation: The Ohio State University, 1972).

to an occupation which the respondent reports a desire to attain by age 30.[29]

The environmental factor

It has been noted in Chapter II that the environmental factor represents the economic climate rather than "the system" or discrimination. To capture variations in the economic climate, four measures have been utilized: (1) aggregate demand for labor when entering the labor market, (2) demand for labor in one's specific locale, (3) size of the local labor market in which one resides, and (4) region of residence (South/nonSouth).

The first variable will be operationalized in terms of a dummy format. If first job occurred prior to 1964, a loose labor market, a value of 0 is assigned the respondent while a 1 is assigned if first job was between 1964 and 1966--a tightening labor market. Demand for labor in one's specific geographic area is measured in terms of the unemployment rate in a respondent's locality in 1968. The scale ranges in value from 0 to 115 reflecting decreasing levels of unemployment.[30]

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[29]Socioeconomic status of occupations is measured in terms of the Duncan index. See Duncan, "A Socioeconomic Index for All Occupations," op. cit. Aspirations were measured in 1966 and 1968, and the particular one used depends on the specifics of the situation.

[30]The unemployment rates in respondents' localities were as high as 11.5 percent for the sample in this study. These unemployment rates were multiplied by ten and flipped such that the highest rate of unemployment reflects a score of 0 while 0.0 percent unemployment is assigned a score of 115. The regression coefficient will then measure (estimate) the increased likelihood of secondary-to-primary mobility associated with a 0.1 percent decrease in unemployment for example. There is, however, an obvious limitation in using this variable. As presently coded, a respondent's locality has been defined in terms of

while the first variable represents the national picture, the fact that labor markets may generally be tight, however, says nothing about the relationship of jobs to workers in specific areas. The second measure, the tightness of the labor market in a respondent's locality, attempts to capture these differences among narrow-geographic areas. Neither of these measures, however, accounts for the fact that skills of some workers may be abundant in a generally tight labor market (irrespective of geographic size) while skills of others may be in great demand in a generally loose labor market.

Size of the local labor market is measured in terms of the actual size of the labor force in a respondent's community of residence (measured in thousands). The reasons for utilizing this variable are severalfold.[31] First, variations in this measure are expected to reflect the higher cost of living in larger communities and the greater commuting distances between residence and work--hence, differences in money incomes of labor markets. Also, variations are thought to reflect the differences in unionization, monopsony power, and concentrations of physical capital per worker which tend to work in favor of higher earnings in larger labor markets.

Primary Sampling Units (PSU) rather than SMSA's. There are a few SMSA's containing more than one PSU. For such areas the coded unemployment rate may not reflect demand conditions in the total labor market area.

[31] See, for instance: H. S. Parnes, G. Nestel, and P. Andrisani, The Pre-Retirement Years, III (Columbus: Center for Human Resource Research, The Ohio State University, 1972), pp. 65-67; Victor R. Fuchs, "Differentials in Hourly Earnings by Region and City Size, 1959," Occasional Paper 101 (New York: National Bureau of Economic Research, 1967); and John R. Shea and Richard J. Emerino, "Wage Rate Differences Among the Working Poor," Paper presented at the Annual Meetings of the American Statistical Association, Fort Collins, Colorado, 1971.

As an environmental dimension, region of residence offers several important advantages. Essentially, broad price level variations will be controlled by region of residence--measured as 0 if South, 1 otherwise. Also, this variable may capture wide differentials in industrial composition and unemployment. To the extent this is true, we would expect it to operate in the same manner for blacks as whites, controlling for levels of human capital. Thus, where significantly related to labor market success for blacks but not whites, it may tentatively suggest regional differences in opportunities for blacks.

The family background factor

The two principal measures of family background utilized in this study are race and class. The former is restricted to only whites and blacks.[32] In operationalizing class, an index of socioeconomic status is employed. To devise a scale incorporating the numerous and diverse meanings attached to this concept, is by no means an easy task. For one thing, there is no consensus as to the appropriate components of such a scale and the concept is obviously multidimensional. For the purposes of this study, an index has been used which defines socioeconomic status in terms of five subcomponents: (1) father's education, (2) mother's education, (3) education of oldest older sibling, (4) father's occupation when the respondent was age 14, and (5) the availa. llity of

[32]Since blacks comprise 92 percent of all nonwhites, there were too few nonwhite-nonblacks in the sample to permit a separate analysis for them. In order to confidently examine relationships among blacks, nonwhite-nonblacks and black youths were not combined.

magazines, newspapers, and a library card in the respondent's home at age 14.[33] Indices quite similar to this one are frequently utilized in social research.[34]

While there has been considerable debate as to whether the effect of socioeconomic status on labor market success is direct or indirect, the dual market theory quite clearly posits a direct relationship. An alternative explanation which also suggests a direct effect contends that the effect of socioeconomic status which is not imparted through educational attainment and/or attitudinal factors is transmitted by way of the "associations" and "contacts" which usually accrue to status.[35]

Besides race and socioeconomic status, two other measures of family background have been used: marital status and number of siblings.[36] The inclusion of marital status provides, controlling for motivation, a crude measure of the value employers place on marital status as a

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[33] This scale may range from 21 to 158. For a further discussion and description, see Kohen, op. cit., pp. 177-83.

[34] See, for example: Jerald G. Bachman, Youth in Transition, II: The Impact of Family Background and Intelligence on Tenth Grade Boys (Ann Arbor: University of Michigan Institute for Social Research, 1970). Also, H. Sewell, A. O. Holler, and G. W. Ohlendorf, "The Educational and Early Occupational Status Attainment Process: Replication and Revision," American Sociological Review, XXXV (December 1970), pp. 1014-27.

[35] For similar interpretations, see: W. Lee Hansen, Burton A. Weisbrod, and William J. Scanlon, Determinants of Earnings of Low Achievers: Does Schooling Really Count, Even for Them? (Madison: University of Wisconsin Institute for Research on Poverty, 1969), and Randall D. Weiss, "The Effect of Education on the Earnings of Blacks and Whites," Review of Economics and Statistics, LII (May 1970), pp. 150-59.

[36] Marital status has been measured both in 1966 and 1968. Depending on the specific analysis, the more appropriate one is utilized.

sign of motivation. This variable takes the value of 1 if married, 0 otherwise. Number of siblings is also included as a component of the family background factor since it is believed to represent a separate dimension of family background not captured by the socioeconomic status variable.[37] This variable will be measured by the actual number of brothers and sisters reported by each respondent in 1966.

Specification of the Models

In addressing the research objectives and hypotheses, the levels of movement across sector boundaries must first be examined. That is, is the hypothesis of labor market segmentation tenable in light of observed movement between secondary and primary jobs? The extent of movement across sector boundaries between the time of first job and 1968 job can be easily investigated by way of a table which records the proportion of those within a sector at the beginning of the period who are either in the same or a different sector by 1968.

Once the hypothesis of impenetrable boundaries has been examined for both color groups, the determinants of labor market success are studied by way of three equations, each addressing one of the remaining three research questions:

(1) Probability (Primary first job) = f (Family background, Human capital, Environment)

(2) Probability (Secondary-to-primary mobility) = f (Family background, Human capital, Attitudes, Environment)

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[37] While it would be desirable to include family size within the socioeconomic status index, computational difficulties made the present approach a more favorable alternative.

(3) Wage rates = f (Family background, Human capital, Attitudes, Environment)

where each equation is estimated separately for whites and blacks, and--within each color group--additional runs are made using graduation status rather than years of schooling as the measure of educational attainment. Also, in some instances, both measures of educational attainment are included in the same equation to test for a "sheepskin effect." Furthermore, in the wage rate equation separate analyses are conducted for primary and secondary workers within each color group.

In the first equation, the likelihood of a primary first job, the explanatory factors are further subdivided as follows:

Family background

1) race
2) socioeconomic status

Human capital

1) educational attainment
2) mental ability

Environment

1) aggregate demand in period of entry into the labor market.

There are several reasons why these are the only explanatory variables entering the analysis. First, many of the family background, human capital, and environmental variables--as well as the attitudinal scales--were measured between 1966 and 1968 and are therefore inappropriate in examining first job determination. Also, other variables--age and status of first job--are wholly inappropriate regardless. Third, two additional variables which were available and appropriate--number

of siblings and health status at time of first job--were tried in the equation but found to add little in terms of explanatory power.[38]

The equation was also reestimated for each color group allowing for interactions between socioeconomic status and each of the remaining explanatory variables. By so doing, the effects of human capital and demand may vary according to class as well as race. A presentation and discussion of these results are provided in Appendix B.

In the second equation, the likelihood of secondary-to-primary mobility, the explanatory factors are subdivided as follows:

Family background

1) race
2) socioeconomic status
3) marital status, 1966

Human capital

1) educational attainment
2) training by 1966
3) age
4) first job's status

Attitudes

1) occupational aspirations, 1966
2) locus of control (internality), 1968

Environment

1) region of residence, 1968

A serious shortcoming of this model arises from the absence of the ability dimension. While it was possible to include this variable in examining the likelihood of a primary first job, the large number of individuals for whom an I.Q. score is either unavailable or imputed--as

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[38] The results of the runs in which these variables were included are presented in Appendix B.

well as the reduced sample for whom this particular research question applies--prohibits its inclusion in this equation.[39] To the extent that ability, educational attainment, and secondary-to-primary mobility are interrelated, the influence of the schooling variable may be overstated. Also, to the extent that ability has a significant independent effect on success through the productive value of cognitive skills, its absence from the model results in exaggerating somewhat the influence of race and class, since there is abundant evidence of differentials in I.Q. in favor of whites and higher socioeconomic levels.[40]

As in the first equation, there are several variables inappropriate for this particular analysis.[41] Also, several variables that were initially included in the analysis but found to contribute little in explanatory power--number of siblings, health status, geographic mobility, and demand in local labor market--have been omitted, but enter the equation in Appendix B. Furthermore, Appendix B presents a complete

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[39]It should be noted, however, that the evidence indicates much of the effect of I.Q. to be indirect, and where direct--to be of less importance than years of schooling. See Kohen, op. cit. Appendix D presents a tabular analysis which compares those advancing from secondary to primary jobs with those who remained in secondary jobs. Included in this analysis is the mental ability dimension.

[40]There is considerable reason to believe that these occurrences are likely to exist. For a discussion of these issues as well as some empirical evidence, see Kohen, op. cit.

[41]Specifically, demand in period of initial entry into the labor market is clearly irrelevant. Also, size of the labor force in one's local labor market, while desirable in the wage equation to represent variations in the cost of living, is not necessary when the dependent variable is the likelihood of movement from secondary to primary jobs.

analysis which controls for differential returns to class as well as race, and Appendix D presents a tabular analysis addressing the issue of secondary-to-primary mobility.[42]

In the third equation, the dependent variable is the 1968 wage rate. Four equations will be estimated, one for each color group within (a) the primary market sector and (b) the secondary market sector. The four explanatory variables may each be subdivided thusly:

Family background

1) race
2) socioeconomic status
3) marital status, 1968

Human capital

1) educational attainment
2) training by 1968
3) age
4) first job's status

Attitudes

1) occupational aspirations, 1966
2) locus of control (internality), 1968

Environment

1) region of residence, 1968
2) size of labor force in local labor market, 1968

Once again, it is unfortunate that mental ability cannot be included in the analysis, but the same considerations preventing its use in the analysis of secondary-to-primary mobility also preclude its usage in this analysis. Four other variables originally included in the

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[42] The tabular analysis presented in Appendix D compares youths confined to secondary jobs with those who moved to primary jobs and with those in primary jobs throughout the period. The groups are compared according to levels of human capital, attitudes, socioeconomic origin, and employment experience.

analysis were found to contribute little in explanatory power: (1) health status, (2) geographic mobility, (3) demand for labor in local labor market, and (4) number of siblings. The results of runs which include these variables are presented in Appendix B.

Simplified mathematical expressions illustrating the functional specifications of the three success equations may be presented as follows:

(1) P (Primary first job) $= Y_1 = A_{10} + \sum_{i=1}^{4} A_{1i}X_{1i} + E_1$

(2) P (Secondary-to-primary mobility) $= Y_2 = A_{20} + \sum_{i=1}^{9} A_{2i}X_{2i} + E_2$

(3) Wage rates $= Y_3 = A_{30} + \sum_{i=1}^{10} A_{3i}X_{3i} + E_3$

where in a particular success equation, Y represents the dependent variable, the A_0 term represents the equation constant, the A_i term the respective slopes, X_i the particular explanatory variables (see previous section), and E the stochastic error term. In each of the three equations, separate analyses are conducted for blacks and whites; and in equation (3)--within each color group, separate analyses are conducted for primary and secondary workers.

Each of the specifications is in a linear and additive form and the parameters needed to test the structural hypotheses are derived from ordinary least squares regression analysis.[43] In the first two

[43] J. Johnston, Econometric Methods (New York: McGraw-Hill, 1963).

equations, however, the dependent variable is dichotomous--in which case the more appropriate terminology for the statistical technique is "linear probability function," a special case of multiple linear discriminant analysis.[44] Where the dependent variable is dichotomous, multiple regression analysis yields coefficients which are equivalent to the discriminant function weights.[45]

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[44] While the use of dummy dependent variables violates the econometric assumption of homoscedasticity in the error term (see A. S. Goldberger, Econometric Theory (New York: Wiley and Sons, 1966), p. 235.), Ashenfelter notes that the violation of this assumption does not result in biased regression coefficients. Furthermore, Ashenfelter also suggests that in these cases standard errors of the estimates tend to be overstated. See Ashenfelter's special appendix on heteroscedasticity in W. G. Bowen and T. Aldrich Finegan, The Economics of Labor Force Participation (New Jersey: Princeton University Press, 1969), pp. 644-48.

[45] Developed by R. A. Fisher, discriminant analysis produces the optimal composite weightings of the variables so as to maximize the difference between the total mean scores for the two groups. Hence, where the dependent variable is dichotomous, discriminant analysis and regression analysis yield identical results. See: R. J. Wherry, "Multiple Bi-serial and Multiple Point Bi-serial Correlation," Psychometrika, XII, no. 3 (September 1947), pp. 189-95; J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill, 1956), pp. 432-33; J. C. Nunnally, Psychometric Theory (New York: McGraw-Hill, 1967), pp. 388-93; and Quinn McNemar, Psychological Statistics (New York: Wiley and Sons, 1969), pp. 234-35.

CHAPTER IV

EMPIRICAL RESULTS

Introduction

The dual labor market theory may be summarized in terms of three fundamental hypotheses:

(1) The labor market is segmented into a primary and secondary sector and there is little or no mobility between them.

(2) The entry into and confinement of the disadvantaged within the secondary sector do not result from deficiencies of human capital and motivation, or from an unfavorable economic environment. For blacks in particular, variations in these factors are inconsequential in comparison to labor market discrimination.

(3) In the primary sector, variations in human capital and motivation are related to labor market success, although there are racial and class differentials in returns to each. In the secondary sector, however, employers fail to differentiate among workers on the basis of their relative productivities.

This chapter addresses each of these hypotheses. The first section presents an overview of intersector mobility, describing the level of movement across labor market boundaries for the sample of male youth from the time of their first jobs until 1968. The second section examines the characteristics that differentiate young men whose first jobs are primary from those whose first jobs are secondary. The third section deals with the process of advancement from the secondary to the

primary labor market and focuses on the characteristics that differentiate young men who move from secondary to primary jobs from those who remain in the secondary labor market. This chapter then concludes with an analysis of the determination of wage rates within each sector and color group.

Intersector Mobility

Table 1 presents data showing the incidence of intersector mobility between the time of first job and 1968. Hardly suggestive of impenetrable barriers, the evidence indicates that youths were considerably more likely to cross sector boundaries than remain within the same sector. Most importantly, for blacks and whites alike, the probability of secondary-to-primary mobility is greater than the likelihood of secondary sector confinement. Nonetheless, while only 38 percent of the whites and 40 percent of the blacks either made no job change or moved within the same market sector, probabilities of these occurrences assuming independence are 32 and 31 percent respectively. Thus, chi-squared values reported in Table 1 are significant at an $\alpha < .001$, and are strongly suggestive of a relationship between sector of first job and 1968 job.

Furthermore, despite the observed level of intersector mobility, there are substantial intercolor differences in the likelihood of entry into and confinement within the secondary sector. Blacks, for example, are 14 percentage points more likely to enter the labor market in secondary jobs, 18 percentage points less likely to advance from

TABLE 1

INTERSECTOR MOBILITY FROM FIRST JOB TO 1968 JOB

	Total	Total percent	Secondary	Intermediate	Primary
	WHITES 1968				
Job I					
Total	620	100%	14.0%	19.4%	66.6%
Secondary	237	100%	19.4%	20.7%	59.9%
Intermediate	184	100%	15.2%	20.1%	64.7%
Primary	199	100%	6.5%	17.1%	76.4%
	BLACKS 1968				
Job I					
Total	250	100%	30.4%	25.2%	44.4%
Secondary	130	100%	38.5%	19.2%	42.3%
Intermediate	80	100%	23.8%	33.8%	42.5%
Primary	40	100%	17.5%	27.5%	55.0%

$X^2_{BL} = 715.00000$

$X^2_{WH} = 5146.00000$

secondary to primary jobs, and more than twice as likely to end up in secondary jobs (30 percent versus 14 percent).

While there is a systematic relationship between first job and 1968 job, and although a substantial number of youths remained in secondary jobs, the secondary labor market is hardly an economic prison from which there is no escape. Rather, the findings constitute a punishing, if not fatal, blow to an extreme version of the dual market theory. Several caveats, however, should be noted in interpreting them. First, since the sample excluded those whose first or 1968 job was in agriculture, the incidence of confinement within the secondary sector is probably understated. Also, by focusing on young men who are known to be highly mobile in settling into career patterns, a dualist rebuttal might argue that the transition from school to work is a special case of the dual market theory.[1] Furthermore, should jobs classified as intermediate more closely resemble secondary than primary jobs, the incidence of confinement would be understated. Or, should the classification of secondary jobs inadvertently incorporate a disproportionate number of primary jobs, the high level of upward mobility may reflect intrasector advancement among primary workers.

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[1]While the dual market hypothesis clearly precludes intersector mobility in the course of labor market careers, at least one discussion has suggested that white males may be able to move out of secondary jobs which they hold as teenagers. Substantial mobility might therefore be expected where the mobile youths would predominantly be white and from the middle-to-upper socioeconomic strata. See David M. Gordon, Theories of Poverty and Underemployment, op. cit., pp. 49-50.

The Likelihood of a Primary First Job

The equation specified in Chapter III to examine the likelihood of a primary first job was presented as follows:

$$P(\text{Primary first job}) = Y_1 = A_{10} + \sum_{i=1}^{4} A_{1i}X_{1i} + E_1$$

where for each color group Y represents the dependent variable, A_{10} the constant term, A_{1i} the respective slopes, E_1 the error term, and X_{1i} the four explanatory variables: (1) socioeconomic status, (2) educational attainment, (3) mental ability, and (4) aggregate demand in the period of initial labor market entry.[2]

Regression results and interpretations

Table 2 presents the regression results, and shows, as the adjusted R^2 statistics indicate, that the type of job obtained at labor market entry appears to be marked by a considerable degree of randomness.[3] Several explanatory variables are, however, systematically related to the likelihood of a primary first job. Among whites, educational attainment and the period of initial entry into the labor market affect

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[2]It should be noted that Appendix B presents results employing several additional variables (health status and number of siblings) in the model and interaction terms to control for a moderator effect by socioeconomic status. Also, Appendix C presents the intercorrelation matrices and tables of means and standard deviations of all the variables in the analysis.

[3]Assuming a proper specification of the model, it follows that the low R^2 values reflect randomness. Low levels of explanatory power are not at all uncommon with micro data, especially where the dependent variable is dichotomous.

TABLE 2

REGRESSION RESULTS - THE LIKELIHOOD OF A PRIMARY FIRST JOB

(t-ratios)

Explanatory variables	Likelihood of a primary first job[f]	
	WHITES	BLACKS
Family background.		
1) Socioeconomic status of family[b]	a	a
Human capital:		
2) Mental ability[c]	a	0.57853 (1.94110)
3) Educational attainment[d]	5.02230 (3.18616)	a
Demand:		
4) Period of initial entry into the labor market[e]	8.00040 (1.78775)	a
Constant	-27.57300 (1.43828)	-58.50100 (2.23312)
R^2 adjusted	0.04758	0.03722
F ratio	7.05783	2.44952
N	486	151

[a]Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 1, Appendix C. Also note that all coefficients have been multiplied by 100 to express as percent.

[b-f]See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

the allocation of primary jobs. Yet among the black youth, only measured mental ability differentiates those whose first jobs were primary from those starting out in secondary jobs.

While educational attainment is positively related to the likelihood of a primary first job among white youths, additional schooling appears to have no impact for blacks. It is possible, however, that completing high school may be significantly related to entry job for blacks even though variation in years of educational attainment is not. To test for the importance of graduating from high school rather than dropping out, the equation was rerun measuring educational attainment in a dummy variable format. The results of this modification are presented in Table 3.

For either color group, the conclusion regarding the importance of education does not change. Simply stated, it can be seen that among whites, graduates fare much better than dropouts, while among blacks, educational attainment appears of little consequence and black dropouts fare no worse than graduates. What does change, however, are the conclusions regarding the impact of socioeconomic status on one's opportunities for a primary job.

For whites and blacks alike, Table 3 shows that class exerts a significant direct effect on the likelihood of a primary first job. Table 2, however, suggests there is no effect. The equations underlying these findings differ only in the measurement of educational attainment. Which results are accurate, then, is the question here.

Educational attainment is statistically insignificant for black youth in both instances. Therefore, there is no reason to believe that

TABLE 3

REGRESSION RESULTS - THE LIKELIHOOD OF A PRIMARY FIRST JOB

(t-ratios)

Explanatory variables	Likelihood of a primary first job[f]			
	WHITES		BLACKS	
Family background:				
1) Socioeconomic status of family[b]	0.24948	(1.92950)	0.25657	(1.33073)
Human capital:				
2) Mental ability[c]	[a]		0.61686	(2.01722)
3) Graduation status[d]	16.13600	(3.06471)	[a]	
Demand:				
4) Period of initial entry into the labor market[e]	9.15680	(2.04733)	[a]	
Constant	12.85300	(0.63723)	-51.59000	(1.93710)
R^2 adjusted	0.04611		0.03232	
F ratio	6.86104		2.25237	
N	486		151	

[a] Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 1, Appendix C. Also note that all coefficients have been multiplied by 100 to express as percent.

[b-c] See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

[d] Educational attainment is coded as 1 if graduated from high school, 0 otherwise.

[e-f] See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

the significance of the class variable reflects simply the effect of variation in education among dropouts.[4] Among the white youth, however, since educational attainment is significant in both instances, it may be that the class variable is merely picking up the influence of variation in education among dropouts.

Including both measures of educational attainment in the equation for whites at the same time, permits tests for whether dropouts are a homogeneous group in terms of chances for primary jobs and whether a "sheepskin effect" makes completion of 12th grade more important than finishing any earlier year of schooling. The results of this inquiry are presented in Table 4. What is observed is that: (1) class does exert a significant impact on chances for a primary first job, (2) a year of schooling at any point appears to be a worthwhile investment for white youths, and (3) there does not appear to be a signfiicant sheepskin effect. While the first two conclusions are straightforward,

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[4]Since socioeconomic status and years of schooling are highly interdependent, the change in the findings with respect to socioeconomic status accompanying the measurement change in educational attainment may have resulted from the accompanying reduction in collinearity. That is, the considerable interdependence may have made a significant effect of class appear insignificant (Table 2). The zero-order correlations between the continuous measure of education and class are 0.52 for whites and 0.47 for blacks, while the correlations are reduced to 0.39 and 0.29 respectively when education is measured in a dummy variable format. For a discussion of empirical evidence concerning the interrelationship between class and educational attainment, see, for instance: Kohen, op. cit.; Schiller, op. cit.; Duncan, "Inheritance of Poverty or Inheritance of Race?" op. cit.; and Ornstein, op. cit. Also, for a discussion of the collinearity problem, see Donald E. Farrar and Robert R. Glauber, "Multicollinearity in Regression Analysis: The Problem Revisited," The Review of Economics and Statistics, XLIX (February 1967), pp. 92-107.

TABLE 4

REGRESSION RESULTS - THE LIKELIHOOD OF A PRIMARY FIRST JOB

(t-ratios)

Explanatory variables	Likelihood of a primary first job[f]	
	WHITES	
Family background:		
1) Socioeconomic status of family[b]	0.18574	(1.34340)
Human capital:		
2) Mental ability[c]	a	
3) Educational attainment[d]	3.19220	(1.29566)
4) Graduation status[g]	a	
Demand:		
5) Period of initial entry into the labor market[e]	8.46500	(1.88062)
Constant	-9.70440	(-0.36437)
R^2 adjusted	0.04745	
F ratio	5.83232	
N	486	

[a]Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 1, Appendix C. Also note that all coefficients have been multiplied by 100 to express as percent.

[b-f]See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

[g]Graduation status is measured by a dummy variable assigned a 1 if a respondent graduated from high school, and 0 otherwise.

the third conclusion is drawn from the finding that graduates do not appear to reap a significant return above and beyond that which accrues to the completion of any year of schooling. The interdependence among all of the explanatory variables, however, must temper the confidence placed in this finding.[5]

Also, all of the regressions for whites indicate that the likelihood of a primary job is significantly higher for white youths in a tight labor market (nationally) than a loose one. For black youths, however, there is no evidence that first jobs are more likely to be primary in a tight labor market.

While the regression results concerning the impact of education and demand suggest disadvantages attributable to race, the case of mental ability is different. In this case, there is an interaction with race which seems to work to the advantage of black youths. For them, differences in measured ability are significantly related to prospects for primary jobs, yet for whites there is no significant relationship.

Several very tentative possibilities may be offered in explanation. First, primary employers may simply judge whites and blacks by different yardsticks as the data ostensibly indicate. Also, it is possible that more able whites may attain the schooling levels warranted by their

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[5]The lack of a statistically significant sheepskin effect may very well be a "quirk" inherent in the methodology and sample. Indeed, the size of the graduation status coefficient, and the offsetting reduction in the coefficient of the continuous education measure, suggest that there very well may be a sheepskin effect (Appendix C, Table 1).

aptitude, while the distribution of education among blacks may be less closely linked to ability and potential.[6]

Conclusions

Taken as a whole, the regression results suggest that within each color group a youth's chances for a primary first job are directly and significantly affected by his socioeconomic origins, class, regardless of mental ability, education, or the tightness of the labor market when he enters. Furthermore, poor blacks appear to bear the double encumbrance of being both poor and black.[7] Indeed, race is significantly related to the likelihood of a primary first job; this is due largely to the fact that education and demand for labor in period of entry are insignificant for blacks, while important determinants of primary sector opportunities among the white youth. While the primary sector is neither entirely closed to blacks nor completely insensitive to their levels of human capital, race and class most definitely appear to destine many youths, especially lower class whites and blacks, for secondary jobs from the very outset of their labor market careers.

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[6]It is also possible that the greater interdependence between education and mental ability among the whites, which this implies, prevents the relation between ability and labor market success from assuming significance when education is included in the regression. Indeed, the greater interdependence among all the explanatory variables for whites might result in such a finding. The intercorrelation matrices are presented in Appendix C, Table 4, and provide some support for these speculations.

[7]For a study which reaches this identical conclusion, see Schiller, op. cit.

The Likelihood of Secondary-to-Primary Mobility

The likelihood of secondary-to-primary mobility has been previously expressed in mathematical terms as follows:

$$P(\text{Secondary-to-primary mobility}) = Y_2 = A_{20} + \sum_{i=1}^{9} A_{2i}X_{2i} + E_2$$

where for each color group Y represents the dependent variable, A_{20} the constant term, E_2 the error term, A_{2i} the respective slopes, and X_{2i} the nine explanatory variables: (1) socioeconomic status, (2) marital status, (3) educational attainment, (4) training, (5) age, (6) status of first job, (7) locus of control (internality), (8) occupational aspirations, and (9) region of residence.[8]

Regression results and interpretations

Table 5 presents the regression results. As was the case with initial entry into the labor market, there appears to be considerable randomness in the process of secondary-to-primary mobility (the adjusted R^2 is 11 percent for the whites and 8 percent for the blacks). Nonetheless, there are some variables which systematically affect one's chances of advancement from a secondary to a primary job. Among the white youths, marital status, aspirations, and internality differentiate

[8] It should also be noted that several supplements to the statistical analysis of this section are presented in Appendices. Appendix B presents an analysis employing several additional explanatory variables (number of siblings, health status, geographic mobility, and demand index in a respondent's local labor market area) and interaction terms for a class moderator effect, while Appendix C presents intercorrelation matrices and tables of means and standard deviations. Also, Appendix D presents a tabular analysis of secondary-to-primary mobility.

TABLE 5

REGRESSION RESULTS - THE LIKELIHOOD OF SECONDARY TO PRIMARY MOBILITY

(t-ratios)

Explanatory variables[a]	Likelihood of secondary to primary mobility[b]	
	WHITES	BLACKS
Family background:		
1) Socioeconomic status of family	c	c
2) Marital status, 1966	13.98100 (1.94929)	c
Human capital:		
3) Educational attainment	c	c
4) Age, 1966	c	c
5) Training, 1966	c	c
6) First job's status	c	c
Environment:		
7) Region of the country, 1968	c	23.49000 (1.92011)
Attitudes:		
8) Occupational aspirations, 1966	0.23228 (1.68334)	0.58103 (2.24505)
9) Locus of control, 1968	1.36080 (2.12680)	c
Constant	-49.12100 (1.23942)	8.42060 (0.13448)
R^2 adjusted	0.11390	0.07837
F ratio	3.12801	1.80309
N	150	86

[a-b]See Chapter III: The Measurement of Variables for a discussion of these variables and units of measurement.

[c]Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 2, Appendix C. Also note that all coefficients have been multiplied by 100 to express as percent.

"movers" from "stayers." Among the blacks, only region of residence and aspirations are signifi.antly associated with the likelihood of a secondary-to-primary shift.

Contrary to the relationships apparent in a simple cross-tabulation (Appendix D), Table 5 suggests that levels of human capital, ceteris paribus, have no marginal impact on secondary-to-primary mobility.[9] Consequently, manpower policies aimed at moving disadvantaged youths from secondary to primary jobs by investing in their human capital--i.e., raising their productivity--can draw on no support from these findings. On the other hand, the results also imply that class is not significantly related to opportunities for upward mobility, contrary to the contentions of dualists.[10]

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[9]The tabular analysis in Appendix D points to a strong and systematic effect of human capital on upward mobility. Since the framework was tabular, however, there were no controls for motivation or class. Nonetheless, as the intercorrelation matrices in Appendix C, Table 5, strongly suggest, the interdependence among explanatory variables must once again temper the degree of confidence placed in such findings. In other words, collinearity may result in significant relationships appearing to be insignificant.

[10]These findings make it difficult to argue that initial entry into the labor market is a special case of the dual market theory. In other words, intersector boundaries appear no more permeable for middle and upper class youths who inadvertently begin in secondary jobs than for anyone else. (See note 1, this chapter, and also the zero-order correlations between class and upward mobility in Table 5, Appendix C.) However, there is some evidence in Appendix B which suggests that within each color group class exerts a significant effect on upward mobility. (See Table B-2.)

Overall, the data suggest that discrimination and motivation are the most important factors in determining primary employment opportunities for those whose first jobs are secondary. Yet only part of the intercolor differential in the likelihood of advancement appears to be attributable to lower levels of aspiration among the blacks. Another part, and perhaps the larger, seems to result from differential "returns" to an internal locus of control and marital status, and from employment discrimination in the South.[11]

The problem of temporal order.--A difficulty with much of this reasoning arises from the possibility of circularity. As was pointed out in the presentation of the conceptual framework, the measures used to reflect motivation have been derived from the survey instrument administered in 1966 and 1968, while the mobility that has been measured between first job and 1968 job may have occurred prior to 1966. Thus, the direction of causation underlying an association between motivation and mobility is not unambiguous. Furthermore, the same situation exists with respect to marital status and training, since both of these reflect the condition of the respondent as of 1966.

While there is no sure way of untangling these threads, further insight into this dilemma is gained by observing the results of the equation estimated without these four explanatory variables. That is,

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[11]The finding regarding discrimination in the South is based on the interaction observed in Table 5 between race and region of residence. Since there is an interaction, this suggests that the North/South variable is reflecting more than differences in industrial structure.

it may then be seen whether their inclusion has resulted in the statistical insignificance of other predictor variables. These results, presented in Table 6, demonstrate that removal of the four variables has resulted in only one change in the significance tests of other explanatory variables: among the white youths, the age variable becomes significant.

The culture of poverty debate.--Irrespective of the direction of causation, the relation between degree of motivation and escape from the secondary sector has considerable relevance for the culture of poverty debate. Implicit in this argument is that the culture of the poor causes a value system that is incompatible with the American work-ethic. If this is true, the issue of circularity described above does not arise, since motivation is determined early in life and the direction of causation runs from motivation to success.[12]

The data show that internality among blacks is not significantly related to movement out of the secondary sector, yet internality is very significant for whites. This difference in the behavior of the variable between the whites and the blacks in itself makes the culture of poverty thesis suspect. The results presented in Appendix B, where

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[12]Should motivation be solely determined by secondary-to-primary mobility, contrary to the poverty culture thesis, we would expect the data to reflect significant relationships between motivation and mobility for both color groups. If this is the case, the poverty culture theory would receive undeserved support. Consequently, if the cards are stacked beforehand, it is in favor of the poverty culture hypothesis.

TABLE 6

REGRESSION RESULTS - THE LIKELIHOOD OF SECONDARY TO PRIMARY MOBILITY

(t-ratios)

Explanatory variables[a]	Likelihood of secondary to primary mobility[b]	
	WHITES	BLACKS
Family background:		
1) Socioeconomic status of family	d	d
2) Marital status, 1966	c	c
Human capital:		
3) Educational attainment	d	d
4) Age, 1966	3.83730 (2.59840)	d
5) Training, 1966	c	c
6) First job's status	d	d
Environment:		
7) Region of the country, 1968	d	24.73300 (2.02409)
Attitudes:		
8) Occupational aspirations, 1966	c	c
9) Locus of control, 1968	c	c
Constant	-50.41900 (1.38893)	8.95120 (0.16829)
R^2 adjusted	0.06579	0.05995
F ratio	3.09856	2.08411
N	150	86

[a-b] See Chapter III: The Measurement of Variables for a discussion of these variables and units of measurement.

[c] Variables not included in equation at this step.

[d] Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 2, Appendix C. Also note that all coefficients have been multiplied by 100 to express as percent.

interaction between social class and motivation is allowed for, inflict even greater damage to the thesis. Lower class whites and blacks receive no "returns" to motivation, while upper class whites and blacks do--moreso for the whites than the blacks.[13] In essence, the culture of poverty thesis is unsupported by this evidence. Deficiencies in motivation do not consistently explain intercolor differentials or class differentials in upward mobility.

The graduate/dropout debate.--To test whether the nonsignificant education variable may have resulted solely from the manner of coding it, both models of secondary-to-primary mobility were reestimated using a dummy variable to differentiate between high school graduates and dropouts--1, if graduated, 0 otherwise. The results are presented in Tables 7 and 8.

There is no evidence in either case that graduates are more likely to advance to primary jobs than dropouts. This is consistent with our earlier findings concerning the importance of education for initial entry of blacks into primary jobs, and provides additional support for the dualist attack against human capital theory.[14]

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[13]To the extent that propensity to marry is culturally determined, as poverty culture theorists contend, additional evidence in opposition to a poverty culture rationale is provided by the interaction between race and marital status (Table 5).

[14]However, this change in the measurement of educational attainment, together with the omission of the four questionable variables, has also resulted in the class variable becoming significant for both color groups. Once again, it is extremely difficult to interpret the meaning of this change--i.e., whether class is now mirroring the effect of other variables such as motivation and education among dropouts, or

TABLE 7

REGRESSION RESULTS - THE LIKELIHOOD OF SECONDARY TO PRIMARY MOBILITY

(t-ratios)

Explanatory variables[a]	Likelihood of secondary to primary mobility[b]	
	WHITES	BLACKS
Family background:		
1) Socioeconomic status of family	c	c
2) Marital status, 1966	14.20300 (1.97728)	c
Human capital:		
3) Graduation status[d]	c	c
4) Age, 1966	c	c
5) Training, 1966	c	c
6) First job's status	c	c
Environment:		
7) Region of the country, 1968	c	23.41200 (1.91220)
Attitudes:		
8) Occupational aspirations, 1966	0.22696 (1.63013)	0.59201 (2.18773)
9) Locus of control, 1968	1.35970 (2.12874)	c
Constant	-42.24800 (1.08262)	5.17040 (0.08170)
R^2 adjusted	0.11440	0.07859
F ratio	3.13870	1.80559
N	150	86

[a-b] See Chapter III: The Measurement of Variables for a discussion of these variables and units of measurement.

[c] Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 2, Appendix C. Also note that all coefficients are multiplied by 100 to express as percent.

[d] Graduation status is measured by a dummy variable which assigns a respondent a 1 if graduated from high school, 0 otherwise.

TABLE 8

REGRESSION RESULTS - THE LIKELIHOOD OF SECONDARY TO PRIMARY MOBILITY

(t-ratios)

Explanatory variables[a]	Likelihood of secondary to primary mobility[b]	
	WHITES	BLACKS
Family background:		
1) Socioeconomic status of family	0.30488 (1.43427)	0.41845 (1.29219)
2) Marital status, 1966	c	c
Human capital:		
3) Graduation status[e]	d	d
4) Age, 1966	3.91880 (2.67017)	d
5) Training, 1966	c	c
6) First job's status	d	d
Environment:		
7) Region of the country, 1968	d	25.02500 (2.05206)
Attitudes:		
8) Occupational aspirations, 1966	c	c
9) Locus of control, 1968	c	c
Constant	-35.68900 (1.01566)	26.53000 (0.51120)
R^2 adjusted	0.06586	0.06485
F ratio	3.10093	2.17895
N	150	86

[a-b] See Chapter III: The Measurement of Variables for a discussion of these variables and units of measurement.

[c] Variables not included in equation at this step.

[d] Coefficients are only shown where significant at an alpha $< .10$ (one-tail). For complete results, see Table 2, Appendix C. Also note that all coefficients have been multiplied by 100 to express as percent.

[e] Graduation status is measured by a dummy variable which assigns a respondent a 1 if graduated from high school, 0 otherwise.

Conclusions

On the basis of our statistical tests, among youths with no more than a high school education confinement in secondary jobs does not appear to result from insufficient schooling or training. Nor does confinement appear to result from initial occupational assignments. Rather, secondary sector confinement among the whites seems to result from either insufficient labor market exposure or low levels of motivation and being unmarried, as well as being affected to a considerable degree by chance. Among the blacks, besides luck, either racial discrimination or a combination of low levels of aspiration and discrimination determine who is confined to secondary jobs. In either instance within each color group, dropouts seem no more likely than graduates to be confined to the secondary sector. Also, intercolor differentials in secondary-to-primary mobility cannot be consistently explained by a "poverty culture" rationale.

Wage Determination in the Secondary and Primary Labor Markets

Within each color group and market sector, the model of wage determination has been specified in Chapter III as follows:

$$\text{Wage rates} = Y_3 = A_{30} + \sum_{i=1}^{10} A_{3i}X_{3i} + E_3$$

becomes significant due to a reduction of collinearity. In either circumstance it does not appear that dropouts of either color group whose first jobs are secondary would improve their prospects for primary jobs by completing high school.

where Y represents the dependent variable, A_{30} the constant term, A_{3i} the respective slopes, E_3 the error term, and X_{3i} the ten explanatory variables: (1) socioeconomic status, (2) marital status, (3) educational attainment, (4) training, (5) age, (6) status of first job, (7) locus of control, (8) aspirations, (9) region of residence, and (10) size of labor force in local labor market.[15]

Regression results and interpretations

The regression results are presented in Table 9. Overall, within each sector, employers are considerably more selective in screening whites than blacks for the better paying jobs. Also, within each color group, employers in the primary sector are somewhat more selective in screening workers than employers in the secondary sector. Indeed, among secondary sector blacks the allocation of better paying jobs appears to be systematically related only to marital status.[16] Hence, while

[15]It should also be noted that several of the Appendices contain supplemental information regarding the statistical analysis in this section. Appendix B contains runs of this equation which also employ as explanatory variables: number of siblings, health status, geographic mobility, and a demand index in the local labor market area. Also, Appendix C presents intercorrelation matrices and tables of means and standard deviations, while Appendix D presents a tabular analysis comparing youths who remain in secondary jobs with those who advance to primary jobs, and those remaining in primary jobs.

[16]Actually, region of residence is also related to wage rate for these youth. Since region is significant for each of the four groups, there is no reason to suspect that it is reflecting anything other than price level variation.

TABLE 9

REGRESSION RESULTS - DETERMINATION OF 1968 WAGE RATES

(t-ratios)

Explanatory variables[a]	1968 Hourly rate of pay[b]			
	Primary job in 1968		Secondary job in 1968	
	WHITES	BLACKS	WHITES	BLACKS
Family background:				
1) Socioeconomic status of family	c	c	c	c
2) Marital status, 1968	41.27200	c	28.18600	17.68500
	(4.37581)		(1.60408)	(1.46518)
Human capital:				
3) Educational attainment	7.27560	11.45500	9.75210	c
	(2.50302)	(2.97837)	(1.78884)	
4) Age, 1966	4.72810	c	4.62750	c
	(2.44257)		(1.40825)	
5) Training, 1968	c	c	c	c
6) First job's status	0.89758	1.19050	c	c
	(2.87571)	(1.90268)		
Environment:				
7) Region of the country, 1968	32.49800	75.36800	39.52600	30.03100
	(3.44516)	(4.59958)	(2.06173)	(1.43717)
8) Size of local labor force	0.01380	c	c	c
	(3.47081)			
Attitudes:				
9) Occupational aspirations, 1	c	c	c	c
10) Locus of control, 1968	c	c	c	c
Constant	-6.69580	83.41400	-69.36300	80.30700
	(0.12997)	(1.23468)	(-0.90041)	(1.25590)
R^2 adjusted	0.19044	0.29092	0.31737	0.01733
F ratio	10.40976	5.84123	4.85883	1.13583
N	397	119	82	77

[a-b] See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

[c] Coefficients are only shown where significant at an alpha < .10 (one-tail). For complete results, see Table 3, Appendix C. Also note that wage rates are expressed in cents per hour.

it is not entirely true that all secondary workers are hired as though they constituted a homogeneous pool of manpower, there is considerable evidence to support the contention that "all blacks look alike" to secondary sector employers.

The primary market sector.--In the primary sector, especially among whites, the evidence suggests that youths are systematically ranked such that those with higher levels of human capital stand at the front of the queue for the better paying jobs. Among the white youths, educational attainment, age, and status of first job are directly related to rates of pay. In addition, relative rankings of these youths are directly affected by marital status. Somewhat unexpectedly, it appears that motivation is unrelated to wage rates for these youths, or for any of the other groups studied.

Among blacks in primary jobs in 1968, the data do not suggest as systematic a screening process as is observed among the whites. There does appear to be a ranking mechanism, however, which allocates the better paying jobs to those with higher levels of human capital, as reflected by educational attainment and status of first job. The non-significant relationship between age and wage rate for blacks suggests an interaction between age and race. Alternatively, it may be that labor market exposure is unimportant for either color group, and that the lower turnover of the white youths (Appendix D) allows age to reflect tenure for them. Should this be the case, labor market exposure would be less important than seniority in affecting wage rates.

The secondary market sector. -In the secondary sector, white youths appear better able to move farther ahead in the queue if they are more educated, experienced, and married. In other words, these youths seem to be screened for the better paying jobs by the same criteria as their counterparts in primary jobs except that status level of first job appears less valuable in the secondary than in the primary sector.[17]

Evidence most supportive of the dualist hypothesis is found among blacks whose 1968 jobs were secondary. Were hiring standards completely unsystematic in the secondary sector, it might be expected that differences in wage rates would be unrelated to levels of human capital. Among black youths in secondary jobs in 1968, the findings are quite consistent with this reasoning, for there are no significant relationships between human capital variables and wage rate. For these youths, only being married and residing in the North are significantly related to better paying jobs. Also, as the extremely low adjusted R^2 statistic indicates, the explanatory power of these variables is quite limited.

Finally, consistent with the dualist arguments and contrary to the culture of poverty thesis, motivation appears to exert no independent influence on wage rate. Thus, these data cast additional doubt on the

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[17]While it might be thought that differences in sample size account for this finding, the 4 to 1 ratio of coefficients (Table 3, Appendix C) suggests that the interaction is a real one. Since tenure of first job is not directly controlled, this finding may result from the shorter duration of first jobs in the secondary sector which would be expected from the analysis in Appendix D.

culture of poverty thesis that labor market disadvantage results from deficiencies in motivation.

The graduate/dropout debate.--As in previous regressions, using the continuous measure of educational attainment precludes the drawing of confident inferences concerning the graduate/dropout debate. In order to address this question, a dummy variable was used to measure educational attainment (1 for high school graduates, 0 otherwise). These results are presented in Table 10.

For whites and blacks in both labor market sectors, it appears that dropping out of school has an adverse effect on wage rate. While this is hardly unexpected with respect to the white youths and primary sector blacks--since it was suggested by the significant coefficients of the continuous measures of education--the relationship observed among secondary sector blacks is certainly unexpected. Also, the rise in adjusted R^2 for these youths when the education variable is entered in this form (from 1.7 percent to 7.4 percent) attests further to the importance of high school graduation as a determinant of wage rates among young blacks.

Thus, even in the secondary labor market employers do appear to differentiate between blacks with high school degrees and those with lesser amounts of education. On the other hand, in view of the nonsignificance of the continuous measure of educational attainment for black youths, it appears that black dropouts do indeed "look alike" to secondary employers. For these youths, finishing only eleven years of schooling may have been no better than finishing just seven or eight.

TABLE 10

REGRESSION RESULTS - DETERMINATION OF 1968 WAGE RATES

(t-ratios)

Explanatory variables[a]	1968 Hourly rate of pay[b]			
	Primary job in 1968		Secondary job in 1968	
	WHITES	BLACKS	WHITES	BLACKS
Family background:				
1) Socioeconomic status of family	0.46162	c	0.65669	c
	(1.75050)		(1.40693)	
2) Marital status, 1968	41.25500	c	32.15500	20.36800
	(4.33397)		1.84973)	(1.72767)
Human capital:				
3) Graduation status[d]	12.22400	31.39700	37.81800	27.27300
	(1.31084)	(2.03851)	(1.93431)	(2.04457)
4) Age, 1966	5.14970	c	5.04290	c
	(2.65888)		(1.54416)	
5) Training, 1968	c	c	c	c
6) First job's status	0.93857	1.21320	c	c
	(2.94465)	(1.89734)		
Environment:				
7) Region of the country, 1968	34.65700	75.96100	40.09700	34.09000
	(3.67352)	(4.53689)	(2.11021)	(1.67267)
8) Size of local labor force	0.01372	c	0.01269	c
	(3.42001)		(1.58280)	
Attitudes:				
9) Occupational aspirations, 1966	c	c	c	c
10) Locus of control, 1968	c	c	c	c
Constant	36.59500	161.69000	-8.20740	115.63000
	(0.73150)	(2.30253)	(0.10510)	(1.80168)
R^2 adjusted	0.18104	0.26111	0.32219	0.07407
F ratio	9.84282	5.16983	4.94531	1.61602
N	397	119	82	77

[a-b]See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

[c]Coefficients are only shown where significant at an alpha < .10 (one-tail).. For complete results, see Table 3, Appendix C. Also note that wage rates are expressed in cents per hour.

[d]Graduation status is measured by a dummy variable which assigns a respondent a 1 if graduated from high school, 0 otherwise.

Conclusions

To examine employer practices in hiring and promoting, we have examined the process of wage determination. Some support has been found for the dualist contention of market segmentation or noncompeting groups, in that there are substantial intersector differences in the criteria used by employers to allocate the better paying jobs. Among blacks, intersector differences in hiring criteria are also considerable. Nonetheless, across color groups and market sectors, high school graduates fare considerably better than dropouts in terms of wage rate, even though blacks in secondary jobs otherwise appear to "all look alike."

The confinement of youths to secondary jobs, then, for even very short periods of time, appears to be undesirable in terms of both individual and social consequences--especially in the case of black youths. Once a youth has begun his labor market career in a secondary job, moreover, his chances for advancement to primary employment may very well depend on forces outside of his personal control. Had blacks begun their careers in primary jobs, not only would earnings have been more reflective of human capital, but chances of being in primary jobs at future points in time would be considerably enhanced. While the secondary market appears by no means to be an economic prison from which there is no escape, the process of secondary-to-primary mobility seems sufficiently haphazard to warrant a vigorous emphasis on primary first jobs. Indeed, blacks in secondary jobs in 1968 once again seem to bear a double encumbrance--that of being both black and in jobs with lesser returns to equally productive human assets.

SPECIAL APPENDIX TO CHAPTER IV

Since the completion of this thesis, we have discovered a coding error on the original data tapes in the Rotter score for locus of control. The error affects fewer than 10 percent of the total cohort of young men and results from the inadvertent assignment of a zero score to any of the eleven items not completed. Our coding instructions called for treating as "not ascertained" the total score for any respondent who failed to complete all items.

Fortunately, a full 60 percent of the total cases in error pertain to respondents who completed ten of the eleven items comprising the Rotter score. Consequently, in most cases the downward bias attributable to the imputation of zero values for incomplete items results in the lowering of scores by only 1 to 4 points. It is also fortunate that in the small subset of the total sample that has been examined in this thesis, the proportion of cases affected by the error is considerably smaller than in the total universe. As a result of both these factors, substituting the corrected data in the regressions causes virtually no change in the findings that have been reported. While the size of coefficients are occasionally changed, this is of little consequence since we have not used the coefficients as a basis for estimates. Our interest has been only in ascertaining the existence of relationships among variables, and the results of our tests of statistical significance have been virtually unaffected by the substitution of the corrected data.

The two tables which follow present a comparison of the original and the corrected results for each of the models employing the Rotter measure. In each of the tables, the comparison is presented using the continuous measure of educational attainment.

SPECIAL APPENDIX TABLE 1

COMPARISON OF ORIGINAL AND CORRECTED REGRESSION RESULTS - THE LIKELIHOOD OF SECONDARY-TO-PRIMARY MOBILITY

(t-ratios)

Explanatory variables	Likelihood of secondary-to-primary mobility[j]			
	WHITES		BLACKS	
	Original results	Corrected results	Original results	Corrected results
Family background:				
1) Socioeconomic status of family[a]	0.24263	0.20222	0.37867	0.26522
	(1.10461)	(0.89045)	(1.10089)	(0.75686)
2) Marital status, 1966[b]	13.98100	12.22900	0.23598	-1.23660
	(1.94929)[m]	(1.62828)[m]	(0.01881)	(-0.09639)
Human capital:				
3) Educational attainment[c]	0.86151	0.25580	-0.34303	2.00020
	(0.36438)	(0.10465)	(-0.10231)	(0.63239)
4) Graduation status[k]	1	1	1	1
5) Age, 1966[d]	1.79620	2.50480	-1.08110	-0.83385
	(1.11024)	(1.48583)[m]	(-0.48813)	(-0.36831)
6) Training, 1966[e]	7.84310	6.76490	3.84570	2.30370
	(0.83579)	(0.70495)	(0.16842)	(0.10096)
7) First job's status[f]	-0.36702	-0.33907	-0.62909	-0.52439
	(-1.09797)	(-1.00352)	(-0.81936)	(-0.67490)
Environment:				
8) Region of the country, 1968[g]	3.84360	4.74270	23.49000	29.30100
	(0.52359)	(0.63240)	(1.92011)[m]	(2.32055)[m]
Attitudes:				
9) Occupational aspirations, 1966[h]	0.23228	0.18827	0.58103	0.50109
	(1.68334)[m]	(1.33537)[m]	(2.24505)[m]	(1.96833)[m]
10) Locus of control, 1968[i]	1.36080	1.48560	0.83994	0.29650
	(2.12680)[m]	(2.27655)[m]	(0.69908)	(0.23307)
Constant	-49.12100	-55.49500	8.42060	3.72200
	(-1.23942)	(-1.37920)[m]	(0.13448)	(0.05861)
R^2 adjusted	0.11390	0.10344	0.07837	0.08482
F ratio	3.12801	2.82031	1.80309	1.84448
N	150	141	86	81

a-j See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

k The graduation status variable is a dummy variable for educational attainment. It is assigned the value of 1 if a respondent graduated from high school and 0 otherwise.

l Variable did not enter equation.

m Significant at an alpha < .10 (one-tail).

SPECIAL APPENDIX TABLE 2

COMPARISON OF ORIGINAL AND CORRECTED REGRESSION RESULTS - DETERMINATION OF 1968 WAGE RATE

(t-ratios)

Explanatory variables[a]	1968 Hourly rate of pay[b]							
	Primary job in 1968				Secondary job in 1968			
	WHITES		BLACKS		WHITES		BLACKS	
	Original results	Corrected results	Original results	Corrected results	Original results	Corrected results	Original results	Corrected results
Family background:								
1) Socioeconomic status of family	0.31943	0.31538	0.33766	0.20697	0.53450	0.57763	0.27563	0.01816
	(1.15134)	(1.14208)	(0.73021)	(0.43501)	(1.05992)	(1.13045)	(0.73804)	(0.04795)
2) Marital status, 1968	41.27600	37.86000	10.62900	13.33400	28.18600	38.14700	17.69500	27.48500
	(4.37581)[e]	(3.91817)[e]	(0.78196)	(0.96895)	(1.60408)[e]	(2.09592)[e]	(1.46515)[e]	(2.30202)[e]
Human capital:								
3) Educational attainment	7.27560	7.34430	11.45500	12.64400	9.75210	8.44060	0.76467	3.70520
	(2.50302)[e]	(2.45484)[e]	(2.97837)[e]	(2.82080)[e]	(1.78684)[e]	(1.55782)[e]	(0.26482)	(1.23651)
4) Graduation status[c]	d	d	d	d	d	d	d	d
5) Age, 1966	4.72810	5.11670	-0.39720	0.03376	4.62750	3.87490	1.72770	0.59359
	(2.44257)[e]	(2.57550)[e]	(-0.15724)	(0.01332)	(1.40825)[e]	(1.13056)	(0.77657)	(0.27334)
6) Training, 1968	0.22911	2.75110	-0.88069	3.22860	-44.70600	-56.74500	10.02200	9.21420
	(0.03761)	(0.32477)	(-0.06263)	(0.22362)	(-2.18436)	(-2.75642)	(0.53691)	(0.48203)
7) First job's status	0.89755	0.84349	1.19050	0.99377	0.28958	0.56554	0.00603	0.15696
	(2.87571)[e]	(2.65666)[e]	(1.90388)[e]	(1.56733)[e]	(0.35879)	(0.67930)	(0.00794)	(0.21116)
Environment:								
8) Region of the country, 1968	32.49800	33.15000	75.36300	79.97000	39.52600	34.44400	30.03100	28.28200
	(3.44516)[e]	(3.44189)[e]	(4.59955)[e]	(4.82719)[e]	(2.06173)[e]	(1.76613)[e]	(1.43717)[e]	(1.37830)[e]
9) Size of local labor force	0.01350	0.01426	-0.01038	-0.01111	0.00969	0.01031	0.00876	0.02085
	(3.47081)[e]	(3.35865)[e]	(-1.63535)	(-1.70716)	(1.23159)	(1.32950)[e]	(0.95515)	(1.47597)[e]
Attitudes:								
10) Occupational aspirations, 1966	-0.24065	-0.21917	-0.73672	-0.59389	0.22383	0.09736	-0.00692	-0.03110
	(-1.37609)	(-1.21[illegible])	(-2.40353)	(-1.79910)	(0.54670)	(0.23790)	(-0.30937)	(-0.13905)

(Table continued on next page)

SPECIAL APPENDIX TABLE 2 - CONTINUED

Explanatory variables[a]	1968 hourly rate of pay[b]							
	Primary job in 1968				Secondary job in 1968			
	WHITES		BLACKS		WHITES		BLACKS	
	Original results	Corrected results	Original results	Corrected results	Original results	Corrected results	Original results	Corrected results
Attitudes:								
11) Locus of control, 1968	0.29268	0.91429	-0.07277	-0.43163	1.11580	0.40125	0.66552	-0.64[illegible]
	(1.12398)	(1.10190)	(-0.05316)	(-0.33866)	(0.71180)	(0.25524)	(0.53235)	(-0.48[illegible]
Constant	-6.69580	-14.70600	83.41400	77.03900	-69.36500	-22.10000	80.30700	128.[illegible]
	(0.12997)	(-0.27096)	(1.23462)	(1.02263)	(-0.90041)	(-0.27701)	(1.25590)	(1.93[illegible]
R^2 adjusted	0.19044	0.18092	0.29092	0.29694	0.31737	0.33612	0.01733	0.07[illegible]
F ratio	10.40976	9.82832	5.64183	5.46418	4.85888	4.93360	1.13583	1.[illegible]
N	397	373	119	107	82	76	77	[illegible]

a-b See Chapter III: The Measurement of Variables for a description of the variables and units of measurement.
c The graduation status variable is a dummy variable for educational attainment. It is assigned the value of 1 if a respondent graduated from high school, and 0 otherwise.
d Variable did not enter equation.
e Significant at an alpha < .10 (one-tail).

CHAPTER V

SUMMARY AND CONCLUSIONS

> The principal measure of progress toward equality will be that of employment. It is the primary source of individual or group identity. In America what you do is what you are: to do nothing is to be nothing; to do little is to be little. The equations are implacable and blunt, ruthlessly public.
>
> For the Negro American it is already, and will continue to be, the Master problem. It is the measure of white bona fides. It is the measure of Negro competence, and all of the competence of American society. Most importantly, the linkage between problems of employment and the range of social pathology that afflicts the Negro community is unmistakable. Employment not only controls the present for the Negro American, but, in a most profound way, it is creating the future as well.[1]

The principal purpose of this research has been to examine the process of initial entry into the labor force in the context of the dual labor market theory. Essentially, the dual market theory contends that a large body of workers is involuntarily confined to substandard jobs in a "secondary" labor market. Also, the impenetrable boundaries separating this secondary sector from the mainstream, or "primary" sector, are thought to be imposed by systematic discrimination

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[1] The Report of the National Advisory Commission on Civil Disorders, op. cit., p. 252.

institutionalized through prejudicial personnel policies. While dualists are hardly of one voice, the critical issue they raise may be reduced to the following: Is labor market disadvantage the resultant of shortcomings inherent in the poor or in the institutions of the labor market?

The empirical results make it rather difficult to accept an extreme hypothesis of labor market segmentation. In other words, there do not appear to be impenetrable boundaries separating two broadly defined market sectors, since the secondary sector hardly appears to be an economic prison from which there is no escape. Nonetheless, the evidence strongly suggests that invidious discrimination denies numerous youths the socioeconomic fruits warranted by their human assets, and that inequality of primary sector opportunities exists even among comparably skilled white youths. While it appears that "impenetrable boundaries" between market sectors is a gross exaggeration, it is equally at odds with the facts to suggest that equivalent levels of human capital, motivation, and demand render opportunities equal.

Human Capital

For whites initially entering the work force, levels of educational attainment are systematically related to the likelihood of entering primary jobs and to hourly wage rates in both primary and secondary sectors. On the other hand, for white youths who have entered the secondary labor market, educational attainment appears to be unrelated to the probability of escape. For black youths, educational attainment is related to earnings in both the primary and secondary sectors, but

there is no evidence whatsoever that the likelihood of entrance into primary jobs--either initially or subsequent to labor market entry--is improved by additional schooling or by a diploma.

The fact that educational attainment is related to variations in earnings among both blacks and whites, but to initial occupational assignment only among whites, is analogous to findings of other studies. Kohen, for example, while reporting that within each color group educational attainment is the most important determinant of labor market success among young men, estimates that racial discrimination accounts for about 70 percent of the intercolor differential in occupational attainment, yet only 25 percent of the differential in wage rate.[2]

Other measures of human capital employed in the present study are, in general, unrelated to the likelihood of entry or movement into primary jobs for either blacks or whites.[3] However, several of the human capital

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[2]Kohen, op. cit., pp. 147-51. Also, Schiller estimates that 80 percent of the intercolor differential in occupational attainment is attributable to discrimination. The differences in estimates of discrimination between the Kohen and Schiller studies, while quite possibly attributable to differences in sample and methodology, may also be a reflection of the omission of an I.Q. variable in the Schiller model. See Schiller, op. cit. Also, it should be noted that the evidence presented in Appendix A reports a high correlation between occupational attainment and the sector of employment (secondary, intermediate, or primary).

[3]There are, however, several exceptions which suggest that entry and movement into primary jobs are not entirely unrelated to levels of human capital. Among blacks, it appears that mental ability is systematically related to the likelihood of a primary first job. Also, there is evidence in Appendix B which suggests that upper class black youths who have received some type of formal training are more likely to advance from secondary-to-primary jobs. Among whites, other than the evidence

variables are systematically related to wage rate for white youths and for those blacks fortunate enough to be in primary jobs.[4]

Motivation: The Culture of Poverty Debate

Most previous studies addressing the issues of poverty and discrimination have not incorporated measures of motivation.[5] The interactions that we have found between socioeconomic class and motivation suggest that the lower wage rates of poor blacks and whites, and their overrepresentation in secondary jobs, are not consistently explained by deficiencies of motivation. Even more damaging to the thesis of a culture of poverty, the evidence further suggests that variations in motivation among the nonpoor are related to the likelihood of their advancing from secondary to primary jobs, but that such a relationship does not prevail for the poor. Hence, lower "returns" to motivation appear to be more important than lower levels of motivation in explaining the confinement of the poor to secondary jobs.

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of simple cross-tabulations (Appendix D), the only human capital variable which appears to be of any import for upward mobility is age--labor market exposure.

[4] While black graduates earn significantly more than black dropouts in the secondary sector, the evidence suggests that short of completion of high school, human capital variables are of little importance to blacks in secondary jobs.

[5] For an exception, see: Leonard Goodwin, Do the Poor Want to Work? (Washington: Brookings Institute, 1972).

Aggregate Demand: The Effect of First Jobs

Manpower policies aimed at improving the plight of the working poor by raising the aggregate demand for labor have been continuously chided by dualists who argue that the underemployment of these groups is not principally the result of an insufficient number of jobs, but rather the result of secondary sector confinement. As one study reported: "Negro earnings are so low that, regardless of whether Negroes are employed, unemployed, or out of the labor force, their incomes fall within a narrow range at a low level."[6]

The findings of the present study suggest that the tightness of the national labor market has a considerable influence on the job assignments of white youths initially entering the labor market. Those who entered in the period 1964-1966, when unemployment was falling, were more likely than those who entered in the less favorable period prior to 1964 to find primary jobs. This relationship only holds true for whites, however.

Those youths whose chances for initial primary jobs are improved by the state of the economy reap substantial benefits from a tight labor market. Besides the greater likelihood of being in a primary job in 1968 for those whose first jobs are primary, initial occupational status is also related to earnings among all primary workers in 1968.[7]

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[6]U.S. Department of Labor, Bureau of Labor Statistics, The Negro in the United States--Their Economic and Social Situation (Washington: U.S. Government Printing Office, June 1966), Bulletin no. 1511, p. 35.

[7]This finding also provides support for the results of Blau and Duncan and Ornstein who have previously reported an effect of first job on subsequent success. See: Blau and Duncan, op. cit., and Ornstein, op. cit.

As has been observed, the high levels of secondary-to-primary mobility occurring from time of first job to 1968 make it impossible to accept an extreme version of the dual labor market theory. However, the findings of: (1) pervasive racial discrimination in opportunities for primary employment and better paying jobs, combined with, (2) the inconsistent and ineffectual impact of levels of human capital, motivation, and demand in explaining the relative deprivation of blacks, suggest that the dual market theory contributes substantially to an explanation of intercolor differentials in labor market success.[8]

Indeed, these findings strike hard at the basic American tenet that equality of educational opportunity leads to socioeconomic parity. As Jencks has argued, such reforms are not likely to make adults more equal.[9] While hourly wage differentials early in careers may be reduced by increased emphasis on schooling, the evidence suggests that differences in opportunities for the "meaningful" jobs in the economy may

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[8]It is important to reemphasize, however, that dualists are not the only ones who have noted the existence of labor market discrimination. As has been pointed out before, many who have not accepted a theory of "two sectors separated by impenetrable boundaries" have observed the importance of overcoming discrimination. Furthermore, even the conventional wisdom which dualists attack has recognized this, the Equal Employment Opportunities Commission being only one, albeit notable, example.

[9]Jencks, op. cit., p. 41.

not be reduced.[10] Consequently, it appears that elimination of underemployment in "secondary-type" jobs requires the elimination of invidious discrimination on the basis of such attributes as race and social origin, as well as concern for levels of human capital, motivation, and aggregate demand. If the goal of public policy is to seek equity in the distribution of primary jobs and labor market success, it appears insufficient to rely completely on investments in skills, incentives, and demand without investing heavily in the removal of the shackles of discrimination.

All of this is not to say that investments in human capital and stimulation of aggregate demand are unworthy policy measures. Even with the limited range of education represented in this sample, we have seen that wage rates of both blacks and whites are related to educational attainment. Furthermore, since this study has given no attention to those with college training, it would be unwarranted to draw general conclusions about the effect of schooling on labor market success. Moreover, reforms calling for equality of educational opportunities are certainly justifiable in their own right, irrespective of the unequal rewards attached to schooling in the labor market.

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[10] In other words, the differences embodied in the concepts of primary and secondary jobs--e.g., differences in stability of employment opportunities, unemployment, annual earnings, working conditions, chances of advancement, opportunities for satisfying work, equity and due process in the administration of work rules, etc.--may not be reduced by equalizing educational opportunities. It appears that considerably more is required.

Indeed, it is also possible that reforms in schooling will provide the needed spark for reform in other social and economic institutions as well.

Thus, it seems reasonable to accept Jonathan Kozol's conclusions, with which few dualists are likely to disagree, suggesting that "hard skills," quality education, and an ability to perform in an unfriendly environment are vitally "important for the children of the powerless and the poor within this cold, efficient nation; they must not be sarcastically and ignorantly scorned by rich young white boys in blue jeans and boots with good degrees from Princeton, Oberlin, and Yale."[11]

To a considerable extent, the issues in this study have been presented in terms of opposing caricatures. While all dualists have never really believed that the secondary sector is an economic prison from which there is no escape, neither have manpower policy-makers been unmindful of labor market discrimination or of other departures from perfect competition. Furthermore, dualists have never seriously argued that market forces are completely absent, nor have policy-makers strongly contended that they are perfectly functional. The former seem to have concentrated on the exceptions, while the latter have emphasized the tendencies. Thus, as Parnes has concluded a discussion of a similar nature, between neoclassicists and institutionalists in general:

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[11] Jonathan Kozol, "Free Schools Fail Because They Don't Teach," Psychology Today (April 1972), pp. 30-36.

> . . . each side needs to recognize the essential merit in the position of the other. For some purposes, it is indeed important to be able to describe and to predict general tendencies. At the same time, for many "policy purposes," it is perhaps even more important to recognize that central tendencies do not describe all of reality.[12]

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[12] Herbert S. Parnes, "Labor Force Participation and Labor Mobility," A Review of Industrial Relations Research, I, ed. by Woodrow L. Ginzburg, et al. (Madison: Industrial Relations Research Association, 1970), p. 66.

APPENDIX A

EXAMINING THE OPERATIONAL DEFINITION OF PRIMARY AND SECONDARY JOBS

APPENDIX A

EXAMINING THE OPERATIONAL DEFINITION OF PRIMARY AND SECONDARY JOBS

Since the literature has not provided an acceptable operational definition of primary and secondary jobs, it was proposed that the primary/secondary character of jobs be measured in terms of the 3-digit occupations and industries of the respondents. Census records for 1959 classify 3-digit occupations and industries by the median earnings of workers. Thus, both occupations and industries can be ranked in terms of these median earnings.[1]

To examine the extent to which these rankings proxy for such characteristics as turnover, job security, rankings in years other than 1959, industry concentration, unionization, and job status, an attempt was made to correlate the scale components with occupation/industry statistics available from published sources. The median earnings of workers in each industry were correlated with:

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[1] U.S. Bureau of the Census, U.S. Census of Population: 1960, Subject Reports, Occupational Characteristics, op. cit.; and U.S. Census of Population: 1960, Subject Reports, Industrial Characteristics, op. cit.

a) Turnover Rates by Industry in October, 1969.[2]
b) Percent Employed 50-52 Weeks by Industry in 1959.[3]
c) Average Hourly Earnings by Industry in October, 1969.[4]
d) Average Weekly Earnings by Industry in October, 1969.[5]
e) Concentration Index by Industry.[6]
f) Collective Bargaining Coverage by Industry in August, 1963.[7]

The zero-order correlation between each of these variables and median earnings of workers in an industry in 1959 were as follows:

$r_a = -0.49826$
$r_b = 0.50386$
$r_c = 0.65657$
$r_d = 0.63648$
$r_e = 0.38817$
$r_f = 0.37686$

where $r_a \ldots r_f$ represents the correlation of each variable (a) through (f) above with median earnings by industry.

Median earnings of workers by occupation were also correlated with the percent employed 50-52 weeks by occupation in 1959,[8] and the socio-economic status of occupations.[9] The correlations were found to be:

$r_g = 0.57916$
$r_h = 0.81005$

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[2]See U.S. Bureau of Labor Statistics, Employment and Earnings, XV (December 1969), pp. 124-128.

[3]U.S. Bureau of the Census, op. cit.

[4]Employment and Earnings, op. cit., pp. 101-113.

[5]Ibi

[6]Leonard W. Weiss, "Concentration and Labor Earnings," American Economic Review, LVI (March 1966), footnote 7, p. 102.

[7]Ibid.

[8]U.S. Bureau of the Census, op. cit.

[9]Duncan, "A Socioeconomic Index for All Occupations," op. cit.

where r_g represents the correlation between employment stability and median earnings by occupation and r_h represents the intercorrelation between occupational prestige and median earnings.

Each of the intercorrelation matrices generated by the analyses above was then factor analyzed to ascertain whether a common factor was represented by each of the scale components.[10] The factor analysis of the seven industry characteristics yielded the following:[11]

Variables	Factor I	Factor II
1 Median Earnings of Workers by Industry, 1959	0.7 728	0.25230
2 Turnover Rate by Industry in October, 1969	-0.7411?	0.12492
3 Percent Employed 50-52 Weeks by Industry, 1959	0.33724	0.96381
4 Average Hourly Earnings by Industry, October, 1969	0.93577	-0.23920
5 Average Weekly Earnings by Industry, October, 1969	0.92813	-0.23102
6 Concentration Index by Industry	0.51896	0.13062
7 Collective Bargaining Coverage by Industry, 1963	0.5015	-0.10072

Factor I explained 50 percent of the total variance, and Factor II accounted for an additional 16 percent. While a single common factor was not obtained, only variable (3) appears to be representing Factor II. Median earnings by industry, however, does appear to be a reasonable surrogate for Factor I which represents a combination of each variable with the possible exception of variable (3).

Since correlations between industry median earnings and industry concentration, and industry median earnings and collective bargaining coverage were smallest in magnitude, a second factor analysis of the

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[10] Since data from published sources and the Weiss Appendix were not always complete for all 3-digit industries, missing data correlations were generated to utilize the entirety of available information.

[11] In this case, and in each of the factor analyses to follow, additional factors are not shown where their individual contribution to total variance is 5 percent or less.

industry dimensions without these two variables was attempted. The results were as follows:

Variables	Factor I	Factor II
1 Median Earnings of Workers by Industry, 1959	0.78876	0.44886
2 Turnover Rate by Industry in October, 1969	-0.69765	0.10870
3 Percent Employed 50-52 Weeks by Industry, 1959	0.26172	0.66156
4 Average Hourly Earnings by Industry in October, 1969	0.96423	-0.24121
5 Average Weekly Earnings by Industry in October, 1969	0.94164	-0.23233

Factor I accounted for 60 percent of the total variance and Factor II contributed an additional 15 percent. Once again, percent employed 50-52 weeks in 1959 does not appear to be an important component of Factor I which primarily represents the remaining four variables. Since Factor II is essentially a combination of variables (1) and (3), however, it seems reasonable to conclude that median earnings is a reasonable surrogate for all four variables because of its high loadings on Factors I and II, and due to the preponderance of cumulative variance accounted for by these two factors.

The three occupational characteristics yielded the following through factor analysis:

Variables	Factor I
1 Median Earnings of Workers by Occupation, 1959	0.86506
2 Percent Employed 50-52 Weeks by Occupation, 1959	0.68791
3 Socioeconomic Status of Occupation	0.93680

Since each of the variables is highly loaded on Factor I, it may be inferred that Factor I represents each of these variables and that [illegible] component is a reasonable proxy for Factor I. The amount of variance explained by this factor was 70 percent.

After concluding that the two components of the scale were each "reasonable representatives" of several important dimensions of the degree to which a job is primary or secondary, the scale itself was then correlated with each of the two components, 1968 hourly rate of pay for male youths in the total cohort of young men, and the socioeconomic status of the occupation of each of these youth. A universe of 3,640 subjects was obtained of whom 2,653 were white and 987 were black. The results were as follows:[12]

Correlations between the scale and:[13]	WHITES	BLACKS
1 Median Earnings of Workers by Industry, 1959	0.69519	0.65206
2 Median Earnings of Workers by Occupation, 1959	0.70688	0.64479
3 1968 Hourly Rate of Pay	0.43102	0.38138
4 1968 Socioeconomic Status of Occupation	0.59463	0.49907

The high correlations between each of these four variables and the scale suggested that all five variables constituted a common factor. To examine this further, a factor analysis for whites and blacks was performed. The results are presented below:

Factor Analysis of the Scale, its Components, and Labor Market Success

Variable 1 Labor Market Sector, 1968
Variable 2 Median Earnings by Industry, 1959
Variable 3 Median Earnings by Occupation, 1959
Variable 4 Respondents' Hourly Rate of Pay, 1968
Variable 5 Respondents' Occupational Prestige, 1968

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[12]The scale was coded as follows: secondary job = 1, intermediate job = 2, primary job = 3.

[13]In order to derive these correlations, each respondent was assigned a score on the scale depending on the industry and occupation of his 1968 job. See Chapter III for a discussion of the cutoff points used to assign these scores. Also, each respondent was assigned the median earnings in 1959 for the particular industry and occupation in which he worked in 1968.

Vbl.	Whites Factor I	Vbl.	Blacks Factor I
1	0.77329	1	0.78395
2	0.87232	2	0.75223
3	0.91766	3	0.85284
4	0.49911	4	0.47347
5	0.82840	5	0.69444

Some support for this notion is obtained by the fact that total variance attributable to Factor I was 63 percent for whites and 52 percent for blacks. The scale variable (1) is highly loaded on the common factor for both color groups as are the remaining four variables, suggesting further that the scale is proxying for the primary, intermediate, and secondary nature of jobs.

The last step in the analysis of the scale consisted of a judging by eleven persons knowledgeable in the subject of labor markets. Mr. William Papier, Director of Research and Statistics, Ohio Bureau of Employment Services, and seven of his staff members selected from the Counseling and Training Sections of the OBES, rated 60 occupation/industry combinations as 1 if "secondary," 2 if "intermediate," 3 if "primary," and -1 if "uncertain." Three members of the Center for Human Resource Research staff also participated in the ratings. Each of the 60 combinations of occupation and industry was randomly selected from the universe of 3,640 youths. The correlations between the scale's estimation of these 60 jobs and the eleven judges' were:

$r_1 = 0.81180$
$r_2 = 0.50747$
$r_3 = 0.52418$
$r_4 = 0.78602$
$r_5 = 0.76380$
$r_6 = 0.61060$
$r_7 = 0.74378$
$r_8 = 0.60802$
$r_9 = 0.76380$
$r_{10} = 0.81510$
$r_{11} = 0.89471$

Again, the correlations suggested the possibility of a common factor representing the scale and the judges' subjective evaluations. A factor analysis of the intercorrelation matrix yielded the following results:

Variable	Factor I
Scale	0.86829
Judge 1	0.88616
2	0.72698
3	0.76267
4	0.85566
5	0.89735
6	0.82754
7	0.78317
8	0.64490
9	0.82732
10	0.78263
11	0.90911

The cumulative proportion of variance explained by this factor was 67 percent, and, as the high loading suggests, the scale appears to be a reasonable surrogate for it. Since each of the judges' scorings was highly loaded on factor I, it also appears that this factor represents the subjective evaluation of each of the judges.

In conclusion, the scale devised for ranking jobs as primary, secondary, or intermediate appears to be consistent with the dimensions suggested by dualists. It also appears to represent the subjective evaluation of judges as to whether a job is primary, secondary, or intermediate, and to effectively discriminate between favorable and unfavorable labor market experiences.

APPENDIX B

ADDITIONAL RESULTS

APPENDIX B

ADDITIONAL RESULTS

In addition to the regression results presented in the text, the three equations for labor market success were also estimated including several other variables.[1] Ultimately, these variables were found to contribute little in terms of explanatory power, hence they were not included in the analysis presented in the text. The four variables were: (1) number of siblings, (2) health status, (3) geographic mobility, and (4) an index of demand for the immediate geographic vicinity of a respondent's residence.

Also, interaction terms were employed to examine for differential returns to each of the explanatory factors according to class as well as race.[2] In these interaction terms, socioeconomic status takes the

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[1] See Chapter III for a further discussion of the three equations and methodology.

[2] While the inclusion of interaction terms complicates the everpresent problem of multicollinearity, small sample sizes precluded the alternative of simultaneous stratification by race and class for each of the analyses to be presented. To examine for the effect of class using a consistent approach, the interaction term technique has been adopted in each of the analyses. For a discussion of this technique, see: Damodar Gujarati, "Use of Dummy Variables in Testing for Equality Between Sets of Coefficients in Linear Regressions: A Generalization," American Statistician, XXIV (December 1970), pp. 18-21.

value of 0 if the respondent is below average on the status index and 1 otherwise.[3] It should be noted that problems of small sample sizes, the large number of explanatory variables resulting from inclusion of interaction terms, and the considerable interdependence among the explanatory variables and interaction terms, originally cast doubt on the validity of these findings. That is, significant effects of explanatory factors--e.g. human capital--may as a result, have "appeared" insignificant. The omission of the interaction terms and the four variables noted above has not resulted in different findings. That is, there is a remarkable similarity of findings between these results and those presented in the text. Only the importance of class as an explanatory factor is more clearly observed in these findings.

The model of labor market entry considers success to be a function of: (1) socioeconomic status, (2) number of siblings, (3) educational attainment, (4) mental ability, (5) health status at time of first job, and (6) aggregate demand in period of initial entry into the labor market. A simplified mathematical expression of the relationship between the independent and dependent variables for each color group is as follows:

$$Y_1 = A_0 + A_1X_1 + A_2X_2 + \ldots + A_6X_6 + A_7X_1X_2 + A_8X_1X_3 + \ldots + A_{11}X_1X_6 + E$$

---

[3]Average refers to the average level of socioeconomic status for the entire sample of each color group. These same cutoff points have also been utilized in each of the regressions to follow.

where Y represents the likelihood of a primary first job, A_0 the intercept term, E the error term, A_i the respective slopes, X_i the 6 variables, and the cross-product terms $X_1 X_2$ through $X_1 X_6$ the interaction terms.

The model of secondary to primary mobility herein considers success to be a function of: (1) socioeconomic status, (2) number of siblings, (3) marital status, (4) educational attainment, (5) age, (6) training, (7) status of first job, (8) health status, (9) geographic mobility, (10) aspirations, (11) locus of control, (12) region of residence, and (13) the demand index. A simplified mathematical model illustrating the relationship between the 13 explanatory variables and the dependent variable may be expressed as follows:

$$Y_2 = A_0 + A_1X_1 + A_2X_2 + \ldots + A_{13}X_{13} + A_{14}X_1X_2 + A_{15}X_1X_3 + \ldots + A_{25}X_1X_{13} + E$$

where for each color group, Y represents the likelihood of secondary-to-primary mobility, A_0 the intercept term, A_i the respective slopes, E the error term, X_i the 13 explanatory variables, and the cross-product terms $X_1 X_2$ through $X_1 X_{13}$ the interaction terms.

The same 13 explanatory variables are also used in the analysis of wage determination, but interaction terms are not employed. Essentially, the dualist hypothesis addressed by this analysis does not necessitate the use of interaction terms for "class." There are several reasons for this: (1) dualists contend that secondary sector employers do not differentiate among workers in allocating jobs, (2) it is extremely difficult to argue that within each hypothetically non-competing sector

employers can further segment workers int non-competing groups on the basis of both race and class, (3) there is considerably less reason to control for interactions when looking within a sector than when addressing the question of worker distribution across sectors, (4) small sample sizes resulting from four-way stratification, and (5) the inevitable collinearity. A simplified mathematical expression illustrating the relationships between each of the 13 independent variables and the dependent variable is:

$$Y_3 = A_0 + A_1X_1 + A_2X_2 + \ldots + A_{13}X_{13} + E$$

where within each sector and color group, Y is the wage rate, A_0 the intercept term, A_j the respective slopes, E the error term, and X_i the 13 explanatory variables.

TABLE B-1

REGRESSION COEFFICIENTS - THE LIKELIHOOD OF A PRIMARY FIRST JOB[e]

(t-ratios)[d]

Explanatory variables[a]	The likelihood of a primary first job[b]			
	WHITES		BLACKS	
	Low SES	High SES	Low SES	High SES
Family background:				
1) Socioeconomic status of family	0.001276 (0.6137)		-0.002705 (-0.8217)	
2) Number of siblings	0.012670 (0.8539)	-0.006790 (-0.0560)	-0.027090 (-1.4500)[c]	-0.024292 (-0.1400)
3) Health status at time of first job	-0.045100 (-0.3417)	0.111200 (1.1700)	0.276100 (0.7547)	-0.184100 (-0.8740)
Human capital:				
4) Mental ability	-0.000706 (-0.2220)	-0.000764 (-0.3120)	0.002821 (0.6808)	0.005205 (1.3450)[c]
5) Educational attainment	0.050010 (2.5190)[c]	0.047316 (1.8800)[c]	-0.002274 (-0.0975)	0.035400 (1.1710)
Level of aggregate demand:				
6) Period of initial entry into the labor market	0.097450 (1.3620)[c]	0.068270 (1.1570)	-0.026120 (-0.2439)	0.039520 (0.4230)
Constant:	-0.253700 (-0.8472)		-0.003983 (0.0100)	
R^2 adjusted	0.03907		0.05213	
F ratio	2.79272		1.74988	
N	486		151	

[a-b]See Chapter III: The Measurement of Variables for a description of the variables and units of measurement.

[c]Significant at an alpha < .10 (one-tail).

[d]Both the regression coefficients and their standard errors, for each of the variables interacting with socioeconomic status (SES), have been estimated at the two values of SES, 0 and 1. Each of the regression coefficients for variables (2) through (6)--for each of the four race/class groups--has been calculated as follows from the results of the regression analysis:

$$\text{regression coefficient}_i \text{ for a particular race/class group} = \hat{\beta}_i + \hat{\beta}_j \text{ (SES)}$$

where within each color group $\hat{\beta}_i$ is the regression coefficient of the ith explanatory variable, $\hat{\beta}_j$ is the regression coefficient of the interaction term between the ith explanatory variable and SES, and SES is 1 for upper

TABLE B-1 - Continued

class youths, 0 otherwise. The standard error of each of these regression coefficients was then calculated as follows:

$$S = \sqrt{V(\hat{\beta}_i) + V(\hat{\beta}_j) \times (SES)^2 + 2\,\mathrm{Cov}\,\hat{\beta}_i\hat{\beta}_j\,(SES)}$$

where within each color group S is the standard error of the above calculated regression coefficient of an explanatory variable for a particular SES group, $V(\hat{\beta}_i)$ is the variance of the regression coefficient of the ith explanatory variable, $V(\hat{\beta}_j)$ is the variance of the regression coefficient of the interaction term between the ith explanatory variable and SES, $\mathrm{Cov}\,\hat{\beta}_i\hat{\beta}_j$ is the covariance of the regression coefficient of the ith variable with that of the interaction term between the ith variable and SES, and SES is 1 for upper class youths, 0 otherwise. The t-ratios are then computed by dividing each of the above calculated regression coefficients--for a particular race/class group--by the above calculated standard error for that coefficient.

[e]In all previous tables used in this thesis to address the question of the likelihood of a primary first job, regression coefficients have been multiplied by 100 to reflect changes of "___ percent" in the dependent variable. In this table, the actual results are shown without the conversion.

TABLE B-2

REGRESSION COEFFICIENTS - THE LIKELIHOOD OF SECONDARY TO PRIMARY MOBILITY[e]

(t-ratios)[d]

Explanatory variables[a]	Likelihood of secondary to primary mobility[b]			
	WHITES		BLACKS	
	Low SES	High SES	Low SES	High SES
Family background:				
1) Socioeconomic status of family	0.005285 (1.5120)[c]		0.011370 (1.8840)[c]	
2) Number of siblings	0.013780 (0.6229)	-0.004830 (-0.2180)	-0.010230 (-0.3793)	-0.003674 (-0.2963)
3) Health status, 1968	0.154800 (0.9838)	-0.021600 (-0.1128)	0.189400 (0.8429)	-0.274000 (-1.0470)
4) Marital status, 1968	0.268000 (2.4990)[c]	-0.104100 (-0.9230)	-0.131000 (-0.6447)	0.171500 (1.1000)
Human capital:				
5) Educational attainment	0.009021 (0.3215)	-0.008979 (-0.1906)	0.020150 (0.4552)	-0.068170 (-1.1600)
6) Training, 1968	-0.018280 (-0.1740)	0.005500 (0.6000)	0.101100 (0.4237)	0.470700 (2.2690)[c]
7) Age, 1966	0.029790 (1.4440)[c]	0.026416 (1.1850)	-0.046040 (-1.3560)	0.012660 (0.4850)
8) Geographic mobility, 1966-68	0.141000 (0.9610)	0.220140 (1.2000)	-0.493200 (-1.5080)	0.109680 (0.4740)
9) First job's status	-0.005625 (-1.0020)	-0.003249 (-0.6940)	-0.017370 (-1.4756)	-0.005860 (-0.4660)
Attitudes:				
10) Occupational aspirations, 1966	0.000194 (0.0889)	0.004582 (2.2190)[c]	0.006802 (1.2530)	0.008246 (2.5400)[c]
11) Locus of control, 1968	0.004570 (0.5305)	0.023110 (2.2050)[c]	0.016870 (0.9941)	0.007971 (0.4280)
Environment:				
12) Demand index, 1968	0.002285 (0.6403)	0.000284 (0.8980)	-0.004009 (-0.9020)	-0.009130 (-1.7220)
13) Region of residence, 1968	0.050300 (0.4473)	0.043446 (0.3801)	0.345300 (1.4380)[c]	0.257360 (1.6600)[c]
Constant:	-1.069000 (-1.8560)[c]		0.321900 (0.3624)	
R^2 adjusted	0.11853		0.13142	
F ratio	(1.80141)		(1.51443)	
N	150		86	

[a-b]See Chapter III: The Measurement of Variables for a description of the variables and units of measurement.

[c]Significant at an alpha < .10 (one-tail).

TABLE B-2 - Continued

[d]Both the regression coefficients and their standard errors, for each of the variables interacting with socioeconomic status (SES), have been estimated at the two values of SES, 0 and 1. Each of the regression coefficients for variables (2) through (13)--for each of the four race/class groups--has been calculated as follows from the results of the regression analysis described in Chapter III:

$$\text{regression coefficient}_i \text{ for a particular race/class group} = \hat{\beta}_i + \hat{\beta}_j \text{ (SES)}$$

where within each color group $\hat{\beta}_i$ is the regression coefficient of the ith explanatory variable, $\hat{\beta}_j$ is the regression coefficient of the interaction term between the ith explanatory variable and SES, and SES is 1 for upper class youths, 0 otherwise. The standard error of each of these regression coefficients was then calculated as follows:

$$S = \sqrt{V(\hat{\beta}_i) + V(\hat{\beta}_j) \times (\text{SES})^2 + 2 \text{ Cov } \hat{\beta}_i \hat{\beta}_j \text{ (SES)}}$$

where within each color group S is the standard error of the above calculated regression coefficient of an explanatory variable for a particular SES group, $V(\hat{\beta}_i)$ is the variance of the regression coefficient of the ith explanatory variable, $V(\hat{\beta}_j)$ is the variance of the regression coefficient of the interaction term between the ith explanatory variable and SES, $\text{Cov } \hat{\beta}_i \hat{\beta}_j$ is the covariance of the regression coefficient of the ith variable with that of the interaction term between the ith variable and SES, and SES is 1 for upper class youths, 0 otherwise. The t-ratios are then computed by dividing each of the above calculated regression coefficients--for a particular race/class group--by the above calculated standard error for that coefficient.

[e]In all previous tables used in this thesis to address the question of the likelihood of secondary to primary mobility, regression coefficients have been multiplied by 100 to reflect changes of "___ percent" in the dependent variable. In this table, the actual results are shown without the conversion.

TABLE B-3

REGRESSION RESULTS - DETERMINATION OF 1968 WAGE RATES

(t-ratios)

Explanatory variables[a]	1968 hourly rate of pay[b]			
	Primary job in 1968		Secondary job in 1968	
	WHITES	BLACKS	WHITES	BLACKS
Family background:				
1) Socioeconomic status of family	0.4299 (1.5380)[c]	0.3516 (0.7347)	0.5107 (0.9440)	0.1772 (0.4186)
2) Number of siblings	1.6600 (0.8473)	-0.2761 (-0.1044)	-0.6714 (-0.1922)	-1.8820 (-0.9211)
3) Health status, 1968	31.0400 (2.0960)[c]	-7.7270 (-0.3056)	15.0500 (0.6147)	3.7840 (0.1806)
4) Marital status, 1968	35.5300 (3.6980)[c]	7.3660 (0.5077)	33.5800 (1.7920)[c]	17.6600 (1.3420)[c]
Human capital:				
5) Educational attainment	6.9850 (2.3780)[c]	11.0200 (2.7550)[c]	10.5000 (1.8350)[c]	2.1320 (0.6361)
6) Training, 1968	-0.4124 (-0.4936)	1.9670 (0.1358)	-47.9200 (-2.2600)	10.6200 (0.5438)
7) Age, 1966	4.3360 (2.1860)[c]	-0.4548 (-0.1754)	4.0190 (1.1490)	1.1610 (0.4816)
8) Geographic mobility, 1966-68	2.9150 (0.2366)	1.2230 (0.0532)	-23.8700 (-0.8290)	11.5200 (0.5539)
9) First job's status	0.9266 (2.9210)[c]	1.0350 (1.6020)[c]	0.5390 (0.6350)	-0.0324 (-0.0413)
Attitudes:				
10) Occupational aspirations, 1966	-0.1563 (-0.8797)	-0.7505 (-2.3460)	0.2668 (0.6154)	-0.0994 (-0.3154)
11) Locus of control, 1968	0.6385 (0.7878)	0.0784 (0.0551)	-0.2184 (-0.1330)	0.8289 (0.6406)
Environment:				
12) Demand index, 1968	0.0496 (0.1789)	0.2208 (0.6226)	-0.8221 (-1.5390)	-0.1371 (-0.4336)
13) Region of residence, 1968	40.7600 (4.2630)[c]	65.3800 (4.0070)[c]	44.2300 (2.2470)[c]	42.4300 (2.3960)[c]
Constant:	9.1630 (0.1533)	86.3100 (0.9498)	-76.8500 -0.7562	128.0000 (1.4770)
R^2 adjusted	0.17114	0.25571	0.30408	-0.01728
F ratio	(7.2899)	(4.1185)	(3.7225)	(0.9007)
N	397	119	82	77

[a-b]See Chapter III: The Measurement of Variables for a description of the variables and units of measurement.

[c]Significant at an alpha < .10 (one-tail).

APPENDIX C

SUPPLEMENTARY TABLES

TABLE C-1

REGRESSION RESULTS - THE LIKELIHOOD OF A PRIMARY FIRST JOB

(t-ratios)

Explanatory variables	Likelihood of a primary first job[e]				
	WHITES	BLACKS	WHITES	BLACKS	WHITES
Family background:					
1) Socioeconomic status of family[a]	0.17143 (1.24718)	0.18697 (0.90400)	0.24948 (1.92950)[h]	0.25657 (1.33073)[h]	0.18574 (1.34340)[h]
Human capital:					
2) Mental ability[b]	-0.06622 (-0.31906)	0.57853 (1.94110)[h]	-0.10603 (-0.49741)	0.61686 (2.01722)[h]	-0.11271 (-0.52898)
3) Educational attainment[c]	5.02230 (3.18615)[h]	1.65970 (0.87861)	g	g	3.19220 (1.29566)[h]
4) Graduation status[f]	g	g	16.13600 (3.06471)[h]	1.25680 (0.17045)	7.94820 (0.96654)
Demand:					
5) Period of initial entry into the labor market[d]	8.00040 (1.78775)[h]	1.23740 (0.17871)	9.15680 (2.04733)[h]	1.70410 (0.24624)	8.46500 (1.88062)[h]
Constant	-27.57300 (-1.43828)[h]	-58.50100 (-2.23312)[h]	12.85300 (0.63723)	-51.59000 (-1.93710)[h]	-9.70440 (-0.36437)
R^2 adjusted	0.04758	0.03722	0.04611	0.03232	0.04745
F ratio	7.05783	2.44952	6.86104	2.25237	5.83232
N	486	151	486	151	486

[a-e]See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

[f]The graduation status variables is a dummy variable for educational attainment. It is assigned the value of 1 if a respondent graduated from high school, and 0 otherwise.

[g]Variable did not enter equation.

[h]Significant at an alpha < .10 (one-tail).

TABLE 3-2

REGRESSION RESULTS - THE LIKELIHOOD OF SECONDARY TO PRIMARY MOBILITY

(t-ratios)

Explanatory variables	Likelihood of secondary to primary mobility[a-j]							
	WHITES	BLACKS	WHITES	BLACKS	WHITES	BLACKS	WHITES	BLACKS
Family background:								
1) Socioeconomic status of family[a]	0.24263 (1.10461)	0.37867 (1.10089)	0.27945 (1.25072)	0.38167 (1.10996)	0.24770 (1.18180)	0.37463 (1.15285)	0.30488 (1.43427)[m]	0.41845 (1.29219)[m]
2) Marital status, 1966[b]	13.98100 (1.94929)[m]	0.23558 (0.01881)	1	1	14.20300 (1.97728)[m]	0.29711 (0.02376)	1	1
Human capital:								
3) Educational attainment[c]	0.86151 (0.36438)	-0.34303 (-0.10231)	2.11310 (0.88951)	2.61500 (0.84413)	1	1	1	1
4) Graduation status[k]	1	1	1	1	3.29550 (0.46139)	-2.16360 (-0.17035)	6.32340 (0.89555)	11.73200 (1.06576)
5) Age, 1966[d]	1.79620 (1.11024)	-1.08110 (-0.48813)	3.63730 (2.59840)[m]	-0.91687 (-0.44032)	1.80300 (1.11697)	-1.08720 (-0.49210)	3.91880 (2.67017)[m]	-0.88265 (-0.42717)
6) Training, 1966[e]	7.84310 (0.83579)	3.84570 (0.16842)	1	1	7.48270 (0.79139)	4.19040 (0.18248)	1	1
7) First job's status[f]	-0.36702 (-1.09737)	-0.62909 (-0.81936)	-0.23631 (-0.70746)	-0.25637 (-0.34481)	-0.35776 (-1.07614)	-0.63587 (-0.83287)	-0.21116 (-0.63712)	-0.24614 (-0.33634)
Environment:								
8) Region of the country, 1968[g]	3.84360 (0.52359)	23.49000 (1.92011)[m]	6.56060 (0.87913)	24.73300 (2.02409)[m]	3.94180 (0.54031)	23.41200 (1.91220)[m]	6.88350 (0.92890)	25.02500 (2.05206)[m]
Attitudes:								
9) Occupational aspirations, 1966[h]	0.23228 (1.68334)[m]	0.58103 (2.24505)[m]	1	1	0.22696 (1.63013)[m]	0.59201 (2.18773)[m]	1	1
10) Locus of control, 1968[i]	1.36080 (2.12680)[m]	0.83994 (0.69908)	1	1	1.35970 (2.12874)[m]	0.87197 (0.71341)	1	1
Constant	-49.12100 (-1.23942)	8.42060 (0.13448)	-50.41900 (-1.38893)[m]	8.95120 (0.16829)	-42.24800 (-1.08262)	5.17040 (0.08170)	-35.68900 (-1.01566)	26.53000 (0.51120)
R^2 adjusted	0.11390	0.07837	0.06579	0.05995	0.11440	0.07859	0.06586	0.06485
F ratio	3.12801	1.80309	3.09856	2.08411	3.13870	1.80559	3.10093	2.17895
N	150	86	150	86	150	86	150	86

[a-j] See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

[k] The graduation status variable is a dummy variable for educational attainment. It is assigned the value of 1 if a respondent graduated from high school and 0 otherwise.

[l] Variable did not enter equation.

[m] Significant at an alpha < .10 (one-tail).

TABLE C-3

REGRESSION RESULTS - DETERMINATION OF 1968 WAGE RATE

(t-ratios)

Explanatory variables[a]	1968 Hourly rate of pay[b]							
	Primary job in 1968		Secondary job in 1968		Primary job in 1968		Secondary job in 1968	
	WHITES	BLACKS	WHITES	BLACKS	WHITES	BLACKS	WHITES	BLACKS
Family background:								
1) Socioeconomic status of family	0.31943 (1.18134)	0.33768 (0.73021)	0.53450 (1.05993)	0.27563 (0.71804)	0.46162 (1.75059)[e]	0.50080 (1.07568)	0.65669 (1.40693)[e]	0.12237 (0.35132)
2) Marital status, 1968	41.27200 (4.37581)[e]	10.62900 (0.78396)	28.15600 (1.64408)[e]	17.68500 (1.46518)[e]	41.25500 (4.33397)[e]	9.83790 (0.70704)	32.15500 (1.84973)[e]	20.36800 (1.72767)[e]
Human capital:								
3) Educational attainment	7.27560 (2.50302)[e]	11.45500 (2.97837)[e]	9.75210 (1.78884)[e]	0.79667 (0.26482)	d	d	d	d
4) Graduation status[c]	d	d	d	d	12.22400 (1.31084)[e]	31.39700 (2.03851)[e]	37.81800 (1.93431)[e]	27.27300 (2.04457)[e]
5) Age, 1966	4.72810 (2.44257)[e]	-0.38720 (-0.15724)	4.62750 (1.40825)[e]	1.72770 (0.77657)	5.14970 (2.65888)[e]	-0.60167 (-0.23780)	5.04290 (1.54416)[e]	1.22950 (0.56677)
6) Training, 1968	0.22911 (0.02781)	-0.88069 (-0.06263)	-44.70600 (-2.18436)	10.02200 (0.53891)	-0.13378 (-0.01607)	1.23830 (0.08848)	-46.51300 (-2.26669)	14.44300 (0.79487)
7) First job's status	0.89758 (2.87571)[e]	1.19050 (1.90288)[e]	0.28958 (0.35879)	0.00603 (0.00794)	0.93857 (2.94465)[e]	1.21320 (1.89734)[e]	0.43539 (0.53590)	0.09556 (0.13180)
Environment:								
8) Region of the country, 1968	32.49800 (3.44516)[e]	75.36800 (4.59958)[e]	39.52600 (2.06173)[e]	30.03100 (1.43717)[e]	34.65700 (3.67352)[e]	75.96100 (4.53689)[e]	40.09700 (2.11021)[e]	34.09000 (1.67267)[e]
9) Size of local labor force	0.01380 (3.47081)[e]	-0.01038 (-1.63535)	0.00959 (1.23159)	0.00976 (0.95818)	0.01372 (3.42001)[e]	-0.00907 (-1.40584)	0.01269 (1.58280)[e]	0.00865 (0.87321)
Attitudes:								
10) Occupational aspirations, 1966	-0.24065 (-1.37609)	-0.73272 (-2.40353)	0.22385 (0.54870)	-0.08692 (-0.30937)	-0.20666 (-1.17450)	-0.64928 (-2.08298)	0.14189 (0.34465)	-0.23097 (-0.82036)
11) Locus of control, 1968	0.89268 (1.12098)	-0.07277 (-0.05318)	1.11580 (0.71180)	0.66552 (0.53255)	0.98759 (1.23442)	0.34613 (0.25032)	1.09080 (0.69937)	0.16333 (0.13332)
Constant	-6.69580 (0.12997)	83.41400 (1.23468)	-69.36300 (-0.90041)	80.30700 (1.25590)	36.59500 (0.73150)	161.69000 (2.30253)[e]	-8.20740 (-0.10510)	115.63000 (1.80168)[e]
R^2 adjusted	0.19044	0.29092	0.31737	0.01733	0.18104	0.26111	0.32219	0.07407
F ratio	10.40976	5.84123	4.85886	1.13583	9.84232	5.16983	4.94531	1.61602
N	397	119	82	77	397	119	82	77

[a-b] See Chapter III: The Measurement of Variables for a description of the variables and units of measurement.

[c] The graduation status variable is a dummy variable for educational attainment. It is assigned the value of 1 if a respondent graduated from high school, and 0 otherwise.

[d] Variable did not enter equation.

[e] Significant at an alpha < .10 (one-tail).

TABLE C-4

ZERO-ORDER CORRELATION COEFFICIENTS AMONG VARIABLES IN MODEL OF LABOR MARKET ENTRY

(Whites Above Main Diagonal, Blacks Below)

Variables[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1) Socioeconomic status of family	---	-0.226	0.349	0.520	-0.068	0.137	0.162
2) Number of siblings	-0.296	---	-0.112	-0.216	0.075	-0.030	-0.039
3) Mental ability	0.257	-0.135	---	0.439	-0.037	0.129	0.094
4) Educational attainment	0.466	-0.253	0.300	---	0.000	0.141	0.213
5) Health status at first job	-0.012	0.149	-0.024	0.070	---	-0.091	0.022
6) Period of initial entry into the labor market	0.004	0.047	0.077	0.086	0.082	---	0.112
7) Likelihood of a primary first job	0.163	-0.220	0.212	0.171	-0.077	0.035	---

[a]See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

TABLE C-5

ZERO-ORDER CORRELATION COEFFICIENTS AMONG VARIABLES IN MODEL OF SECONDARY TO PRIMARY MOBILITY

(Whites Above Main Diagonal, Blacks Below)

Variables[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1) Socioeconomic status of family	----	-.297	.530	-.014	.042	-.034	-.072	.227	.397	.098	.292	.153	.004	.194
2) Number of siblings	-.285	----	-.205	.058	-.097	.138	-.066	-.205	-.153	-.052	-.099	-.041	-.032	-.072
3) Educational attainment	.390	-.239	----	.062	.128	-.015	-.135	.224	.327	.121	.313	.189	.058	.189
4) Training, 1966	.089	.043	.040	----	.026	-.009	.019	-.099	.080	.093	.001	-.119	-.035	.055
5) Age, 1966	-.043	-.034	.117	.060	----	.193	-.069	.041	-.022	-.065	.074	.172	.448	.220
6) Health status, 1968	.029	.063	-.009	-.043	-.126	----	.099	-.022	-.041	-.024	-.037	.262	.154	.119
7) Geographic mobility, 1966-68	.009	.161	-.017	.065	-.209	.146	----	.041	-.025	-.051	.000	.018	-.034	.098
8) First job's status	.075	.041	.251	-.030	.069	.023	.011	----	.038	-.142	.164	.220	-.013	.000
9) Region of the country, 1968	.343	-.252	.120	.046	.078	-.089	.067	.153	----	.118	.205	.117	-.004	.147
10) Demand index, 1968	.169	.047	.256	.051	.000	-.075	.103	.048	.113	----	.035	-.030	-.065	.046
11) Occupational aspirations, 1966	.165	-.097	.407	.026	.104	-.143	-.154	.264	.147	.116	----	.024	.028	.193
12) Locus of control, 1968	.104	-.015	.275	-.169	-.037	.147	-.075	.207	-.065	-.052	.111	----	.169	.225
13) Marital status, 1966	-.056	.094	.200	-.072	.378	.003	.125	.232	.047	-.031	.234	.048	----	.248
14) Likelihood of secondary to primary mobility	.253	-.139	.166	.032	-.026	-.039	-.098	.029	.279	-.128	.292	.084	.024	----

[a]See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

TABLE C-6

ZERO-ORDER CORRELATION COEFFICIENTS AMONG VARIABLES IN MODEL OF WAGE RATE DETERMINATION AMONG PRIMARY WORKERS IN 1968

(Whites Above Main Diagonal, Blacks Below)

Variables[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1) Socioeconomic status of family	----	-.281	.430	.159	-.043	-.028	.040	.241	.324	.063	.231	.148	-.007	.222
2) Number of siblings	-.258	----	-.203	-.082	-.035	.080	.048	-.114	-.088	-.043	-.133	-.042	.055	-.026
3) Educational attainment	.377	-.026	----	.090	.117	-.009	-.040	.288	.229	.069	.286	.135	-.022	.248
4) Training, 1968	.170	-.024	.145	----	.015	.054	-.016	-.049	.057	-.008	.081	.042	-.004	.029
5) Age, 1966	.118	-.039	.159	.009	----	.119	-.068	.090	-.071	-.019	.094	.122	.259	.172
6) Health status, 1968	.011	.062	-.045	-.111	-.174	----	.035	.032	-.003	-.036	-.032	.024	.137	.141
7) Geographic mobility, 1966-68	.021	.065	.058	-.055	-.131	.001	----	.034	.006	-.011	.003	.024	.010	.016
8) First job's status	.182	-.053	.183	.106	.032	.083	.013	----	-.009	.057	.221	.025	-.033	.196
9) Region of the country, 1968	.441	-.337	.195	.047	.145	.094	.143	.247	----	.233	.096	.056	-.089	.244
10) Demand index, 1968	.272	-.195	.224	.119	.013	-.181	.219	-.018	.267	----	.059	-.047	.021	.073
11) Occupational aspirations, 1966	.243	-.208	.406	.066	.105	-.124	.084	.115	.067	.176	----	.132	.062	.084
12) Locus of control, 1968	.095	-.037	.275	-.029	.133	.103	-.100	.077	.076	-.066	.125	----	.017	.094
13) Marital status, 1968	-.050	.244	.122	.084	.211	-.104	-.132	-.053	-.088	-.099	.075	.162	----	.193
14) 1968 Wage rate	.306	-.165	.310	.081	.090	.044	.044	.270	.481	.094	-.043	.106	.020	----

[a]See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

TABLE C-7

ZERO-ORDER CORRELATION COEFFICIENTS AMONG VARIABLES IN MODEL OF WAGE RATE DETERMINATION AMONG SECONDARY WORKERS IN 1968

(Whites Above Main Diagonal, Blacks Below)

Variables[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1) Socioeconomic status of family	----	-.400	.604	.186	.193	-.014	-.110	.207	.330	.026	.227	.134	.083	.383
2) Number of siblings	-.271	----	-.350	-.082	-.160	.042	-.049	-.084	-.094	.005	-.327	-.025	.022	-.193
3) Educational attainment	.447	-.092	----	.220	.229	.015	-.012	.107	.371	.007	.166	.256	.208	.444
4) Training, 1968	-.082	.092	-.038	----	.023	-.030	-.075	.003	.207	.008	.060	-.197	-.111	-.109
5) Age, 1966	-.180	-.148	.006	-.085	----	.234	.192	.082	.002	-.080	.211	.133	.325	.290
6) Health status, 1968	.044	-.034	.071	.108	-.120	----	.020	-.050	-.208	-.113	-.031	.027	.041	.064
7) Geographic mobility, 1966-68	.027	.216	-.079	.024	-.133	.108	----	-.016	-.057	-.013	.089	-.063	.216	-.020
8) First job's status	.051	-.074	.239	.029	-.058	.122	-.106	----	-.130	.228	.263	.127	.163	.104
9) Region of the country, 1968	.199	-.195	.058	-.017	-.133	-.129	-.139	.086	----	-.114	-.053	.056	.132	.361
10) Demand index, 1968	.389	-.128	.383	-.111	-.086	.026	.097	.039	.094	----	.085	-.201	.113	-.160
11) Occupational aspirations, 1966	.049	.005	.208	.128	-.008	-.081	-.024	.191	.151	.237	----	-.091	.126	.157
12) Locus of control, 1968	.082	.017	.198	-.122	.023	.144	.043	.126	-.148	.053	.043	----	.167	.211
13) Marital status, 1968	-.124	.013	-.119	-.072	.298	.033	.269	-.251	-.170	-.074	.047	-.069	----	.334
14) 1968 Wage rate	.139	-.180	.103	.019	.074	.022	.041	.003	.267	.019	.012	.038	.145	----

[a]See Chapter III: The Measurement of Variables for a description of each of the variables and units of measurement.

TABLE C-8

MEANS AND STANDARD DEVIATIONS OF VARIABLES IN THE MODEL OF LABOR MARKET ENTRY

Explanatory variables	WHITES		BLACKS	
	Mean	Standard deviation	Mean	Standard deviation
Family background:				
1) Socioeconomic status of family[a]	95.70	18.89	85.84	18.55
Human capital:				
2) Mental ability[b]	95.82	11.90	81.80	11.95
3) Educational attainment[c]	10.86	1.72	10.17	2.06
Demand:				
4) Period of initial entry into the labor market[d]	0.57	0.50	0.62	0.49
Dependent variable:[e]				
The likelihood of a primary first job	0.42	0.49	0.23	0.42

[a-e]See Chapter III: The Measurement of Variables for a description of this variable and the unit of measurement.

TABLE C-9

MEANS AND STANDARD DEVIATIONS OF VARIABLES IN THE MODEL OF SECONDARY TO PRIMARY MOBILITY

Explanatory variables[a]	WHITES		BLACKS	
	Mean	Standard deviation	Mean	Standard deviation
Family background:				
1) Socioeconomic status of family	92.91	17.88	83.87	17.80
2) Marital status, 1966	0.59	0.49	0.34	0.48
Human capital:				
3) Educational attainment	10.64	1.64	10.29	1.93
4) Age, 1966	21.11	2.20	20.78	2.58
5) Training, 1966	0.13	0.34	0.06	0.24
6) First job's status	16.81	10.00	12.08	7.41
Environment:				
7) Region of the country, 1968	0.65	0.48	0.31	0.47
Attitudes:				
8) Occupational aspirations, 1966	31.47	24.48	23.60	22.80
9) Locus of control, 1968	33.69	5.24	30.37	4.70
Dependent variable:[b]				
The likelihood of secondary to primary mobility	0.79	0.41	0.53	0.50

[a-b] See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

TABLE C-10

MEANS AND STANDARD DEVIATIONS OF VARIABLES IN THE MODEL OF WAGE DETERMINATION IN 1968, BY COLOR AND SECTOR OF EMPLOYMENT

Explanatory variables[a]	Primary job in 1968				Secondary job in 1968			
	WHITES		BLACKS		WHITES		BLACKS	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Family background:								
1) Socioeconomic status of family	95.66	17.70	84.81	16.65	87.09	20.50	74.79	16.93
2) Marital status, 1968	0.73	0.45	0.53	0.51	0.55	0.50	0.48	0.50
Human capital:								
3) Educational attainment	10.95	1.63	10.40	2.02	10.07	1.98	9.61	2.11
4) Age, 1966	21.23	2.19	20.14	2.72	20.33	2.67	20.42	2.69
5) Training, 1968	0.44	0.50	0.33	0.47	0.22	0.42	0.10	0.31
6) First job's status	21.30	13.92	15.75	10.81	16.39	10.69	12.34	7.96
Environment:								
7) Region of the country, 1968	0.67	0.47	0.45	0.50	0.59	0.50	0.14	0.35
8) Size of local labor force	573.03	1,064.00	729.21	1,207.77	452.83	1,086.93	299.87	708.14
Attitudes:								
9) Occupational aspiration, 1966	34.23	24.56	27.56	23.21	24.27	21.20	16.36	19.80
10) Locus of control, 1968	34.07	5.15	30.97	4.96	32.20	5.65	29.42	4.70
Dependent variable:[b]								
1968 hourly rate of pay	304.79	88.69	251.69	82.50	249.16	87.30	178.40	49.38

[a]See Chapter III: The Measurement of Variables for a description of these variables and units of measurement.

[b]Hourly rate of pay in 1968 is measured in cents per hour.

APPENDIX D

A COMPARISON OF "STAYERS" AND "MOVERS"

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The importance of human capital, attitudes, and family background for favorable labor market experiences is a widely debated issue. This section presents data on these characteristics for three subsets of the sample: youths who remained in secondary jobs throughout the period, those who moved from secondary to primary jobs during the period, and those who remained in primary jobs throughout the period. In addition, several aspects of the labor market experience of the three groups will be compared, namely: turnover, weeks unemployed, wage rates, and occupational status.

For whites and blacks alike, differences in educational attainment are positively related to more favorable labor market experience, as are differences in training and mental ability (Table D-1). To the extent that age and labor market exposure represent a maturation process and the attainment of marketable skills through experience, one would also expect those who moved from secondary to primary jobs to be somewhat older and have more exposure to the world of work than those remaining in secondary jobs. This expectation is borne out for whites, but differentials are virtually nonexistent for blacks.

While intercolor differentials in educational attainment are quite small within a reference group, intercolor differences in the incidence of training, I.Q., and labor market information are often substantial. Therefore, these tabular findings provide some cause for concern in that

TABLE D-1[a]

A COMPARISON OF THREE REFERENCE GROUPS ACCORDING TO LEVELS OF HUMAN CAPITAL[i]

Variable name	Race	Secondary first job and secondary 1968 job		Secondary first job and primary 1968 job		Primary first job and primary 1968 job		F-ratio
Educational attainment[b]	Whites	10.0	(46)	10.8	(142)	11.4	(152)	17.79[h]
	Blacks	9.7	(50)	10.6	(55)	11.0	(22)	4.30[h]
Incidence of training by 1968[c]	Whites	34.8	(46)	54.9	(142)	46.3	(151)	1.79
	Blacks	10.0	(50)	34.6	(55)	54.6	(22)	5.50[h]
Mental ability[d]	Whites	90.1	(42)	94.9	(115)	97.2	(128)	5.91[h]
	Blacks	79.3	(34)	80.7	(44)	87.5	(12)	2.16
Labor market exposure by 1968[e]	Whites	3.4	(45)	4.0	(142)	3.7	(151)	1.97
	Blacks	3.4	(49)	3.4	(55)	3.0	(22)	0.50
Age, 1966[f]	Whites	20.0	(46)	21.4	(142)	21.4	(152)	8.75[h]
	Blacks	20.8	(50)	20.8	(55)	20.3	(22)	0.36
Labor market information, 1966[g]	Whites	20.1	(46)	23.4	(142)	23.9	(152)	5.93[h]
	Blacks	13.7	(50)	18.1	(55)	17.0	(22)	5.22[h]

[a]Numbers in parentheses refer to group sample cases.

[b]Educational attainment is measured in terms of the actual number of years of schooling completed, and it ranges from 0 to 12.

[c]Incidence of training is measured by the percent that had participated in a formal training program as of 1968.

[d]Mental ability is measured by the IQ scores of the youths. For those youths who did not attend high school, an IQ score has been imputed. They were assigned the mean value of those who had completed 9 years of schooling and were no longer enrolled as of 1966. These values were 87.5 for the case of whites and 77.3 for blacks. In the regression analysis presented in Tables IV-2 and Table [illegible], Appendix C, the equations were reestimated without imputing any IQ scores. The comparative results were consistently compatible suggesting no reason for not imputing these IQ scores. Among the total white universe there were only 77 imputed values, and among the blacks 44.

TABLE D-1

[e]Labor market exposure is measured by the actual number of years, as of 1968, since a respondent had last left school--net of military experience during the interim.

[f]Age is measured by the actual age in years as of 1966.

[g]Labor market information is measured by a respondent's score on a test of knowledge of the world of work. Scores range from 0 to 56 on an integer scale and represent increasing levels of awareness of the earnings and job content of various occupations.

[h]Significant at the alpha $< .01$ level.

[i]For a further discussion of each of these variables, see Chapter III.

manpower services--in particular, training and dissemination of job information--had apparently not reached those in most serious need.

Occupational aspirations in 1968 and degree of internality are positively associated with favorable work experiences for both color groups (Table D-2). In addition, blacks exhibit lower levels of aspiration and internality than whites within each reference group and they fare less favorably in terms of labor market success and unemployment (Table D-3). Consequently, differentials in attitudinal measures may have been either the cause or the effect of the labor market experiences. Also, as the dual market theory clearly suggests, Table D-2 shows family socioeconomic status to be strongly related to movement from secondary to primary jobs.

As Doeringer and Piore have suggested, job instability appears to be characteristic of secondary workers (Table D-3).[1] While youths in primary jobs at both points in time experienced about one change of employer on the average, those who remained in secondary jobs averaged more than one and one-half interfirm shifts in the case of whites and two shifts among blacks. Considering the data on unemployment in conjunction with the turnover figures, it is even more evident that job instability is a salient dimension of secondary sector employment situations. Finally, within each of the three reference categories, blacks consistently fare worse than whites. Thus, it seems clear that

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[1] Doeringer and Piore, op. cit., p. 166.

TABLE D-2[a]

COMPARISON OF THREE REFERENCE GROUPS ACCORDING TO WORK RELATED ATTITUDES AND SOCIOECONOMIC STATUS[f]

Variable name	Race	Secondary first job and secondary 1968 job		Secondary first job and primary 1968 job		Primary first job and primary 1968 job		F-ratio
Occupational aspirations, 1968[b]	Whites	32.3	(46)	39.1	(142)	43.2	(152)	6.14[e]
	Blacks	28.2	(50)	34.6	(55)	36.9	(22)	1.99
Locus of control, 1968[c]	Whites	31.1	(44)	33.8	(141)	33.9	(150)	5.07[e]
	Blacks	29.6	(46)	30.8	(53)	33.1	(22)	3.91[e]
Socioeconomic status[d]	Whites	83.4	(42)	94.6	(135)	99.5	(139)	13.38[e]
	Blacks	79.1	(44)	89.2	(48)	98.8	(20)	4.65[e]

[a]Numbers in parentheses refer to group sample cases.

[b]Occupational aspirations are measured in terms of the socioeconomic status attributed to an occupation which the respondent reports a desire to attain by age 30. This information was gathered each year of the survey and in this case, the 1968 responses are used. In subsequent analyses, for reasons to be discussed, aspirations in 1966 are employed. In each of the cases, aspirations are measured in terms of the Duncan Index of occupational status.

[c]Locus of control is a theoretical construct representing the extent to which individuals view reinforcements as a function of factors within their personal control (internality) or of factors over which they have little control (externality). This variable is measured in terms of an 11 item abbreviated Rotter scale which ranges in value from 11 to 44 in order of increasing internality.

[d]Socioeconomic status is measured by an index of five equally weighted components: father's education, mother's education, education of oldest older sibling, father's occupational attainment when the respondent was age 14, and the availability of magazines, newspapers, and a library card in the respondent's home at age 14.

[e]Significant at the alpha <.05 level.

[f]For a further discussion of each of these variables, see Chapter III.

confinement to secondary jobs is not a result of immobility. On the contrary, instability and job changing which is lateral rather than upward seems to be characteristic of the secondary worker.

Differentials in measures of labor market success, that is, hourly rate of pay and occupational status, are also quite substantial among the reference groups, as are intercolor differences within the groups (Table D-3). What is most surprising, however, is that secondary whites in 1968 averaged nearly the same rate of pay as blacks who had moved from secondary to primary jobs, despite the difference in occupational status between the two groups.

Table D-3 also shows that whites and blacks who moved from secondary to primary jobs by 1968 had not attained the pay or status levels of those in primary jobs at both points in time. Since it has been noted that those in primary jobs both years have more stable employment histories than those who moved into the primary sector, it might be conjectured that lower turnover reflects higher tenure and seniority, on the average, which results in wage and status differentials through promotions. Furthermore, both dualists and human capital theorists might view these findings as reflecting returns to on-the-job training which are more likely to occur in primary than secondary jobs.[2]

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[2]Becker, Human Capital, op. cit., pp. 7-31. See also Jacob Mincer, "On-the-Job Training: Costs, Returns, and Some Implications," Journal of Political Economy, LXX (October 1962 - Part 2), pp. 50-79. Of course, these findings may also merely reflect the higher levels of human capital of those who remain in primary jobs (Table D-1).

TABLE D-3[a]

COMPARISON OF THREE REFERENCE GROUPS ACCORDING TO SEVERAL EMPLOYMENT EXPERIENCES[g]

Variable name	Race	Secondary first job and secondary 1968 job		Secondary first job and primary 1968 job		Primary first job and primary 1968 job		F-ratio
Number of interfirm shifts during 1967 and 1968[b]	Whites	1.6	(45)	1.1	(138)	0.9	(141)	3.22[f]
	Blacks	2.0	(50)	1.6	(55)	1.0	(22)	2.46
Weeks of unemployment during 1967 and 1968[c]	Whites	4.3	(46)	2.2	(142)	1.5	(152)	2.12
	Blacks	6.6	(50)	4.8	(54)	4.8	(22)	0.43
Hourly rate of pay on 1968 job[d]	Whites	$2.46	(42)	$3.01	(139)	$3.25	(148)	11.58[f]
	Blacks	$1.80	(50)	$2.51	(54)	$2.81	(22)	22.43[f]
Occupational status of 1968 job[e]	Whites	18.4	(46)	33.6	(142)	38.2	(152)	22.80[f]
	Blacks	12.5	(50)	24.4	(55)	26.7	(22)	20.65[f]

[a] Numbers in parentheses refer to group sample cases.

[b] Number of interfirm shifts is measured by the actual number of voluntary and involuntary changes of employer which occurred over the 2-year period 1967-1968.

[c] Weeks of unemployment is measured by the actual number of cumulative weeks a respondent was unemployed over the 2-year period 1967-1968.

[d] Hourly rate of pay is measured in dollars per hour earned on 1968 job.

[e] Occupational status of 1968 job is measured in terms of the socioeconomic status attributed to each occupation by the Duncan Index of occupational status. Scores may range from 0 to 96 on the Duncan scale which assigns a two-digit status score to each three-digit occupation classified by the Bureau of the Census.

[f] Significant at the alpha < .05 level.

[g] For a further discussion of each of these variables, see Chapter III.

APPENDIX E

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