Acknowledgments

This study is a direct descendant of my doctoral dissertation "A Study of Personal Income Distribution," Columbia University, 1957. A short version of the thesis appeared as "Investment in Human Capital and Personal Income Distribution" in the *Journal of Political Economy,* August 1958. Since that time, the economic analysis of human capital has grown into a large and vital field. The present study is in part a replication, on the much richer 1960 Census data (1/1,000 sample), of the research on the 1950 data reported in my thesis. More importantly, it represents a feedback into the field of income distribution of developments in human capital analysis which have occupied my attention since 1957. Throughout this time I was privileged to work closely with Gary S. Becker whose thinking gave form and direction to an entire field of economic analysis. I gratefully credit much of the conceptual advance of the present study over the 1957 vintage to this collaboration.

Other friends and co-workers who helped to convert the first draft into the present manuscript were Orley Ashenfelter, Yoram Ben-Porath, Barry R. Chiswick, John C. Hause, Robert T. Michael, Carl Rahm, Sherwin Rosen, Theodore Schultz, and Finis R. Welch.

I owe special thanks to my students in labor economics at Columbia University. Though a captive audience, they have been both receptive to and critical of the materials first tried on them and eventually incorporated here.

I was particularly fortunate to have the competent and devoted research assistance of Masanori Hashimoto, Sara Paroush, and Odile Cornet.

Research here reported was initially funded by the Economic Development Administration of the U.S. Department of Commerce, and later by the Office of Economic Opportunity and the National Science Foundation. This support is gratefully acknowledged. Of course, the opinions expressed here are my own, and should not be construed as representing the opinions or policy of these agencies.

The book was edited and prepared for press by Ester Moskowitz, and the charts were drawn by H. Irving Forman.

Foreword

In 1957 Jacob Mincer completed his thesis, "A Study of Personal Income Distribution," one of the pioneering works in the new and illuminating literature on investment in human capital. He directed our attention to the importance of training, both in school and on-the-job, as a major explanation of income inequality.[1] Since then Mincer has enriched our understanding of economic behavior with seminal studies of labor force participation, consumption, and opportunity costs. Unresolved problems concerning income distribution were never far from his mind, however, and in recent years he has attacked them with renewed vigor. The result is this volume, surely one of the most important ever published on this subject and the most systematic one relying on the human capital approach.

In the pages that follow Mincer demonstrates his skill as a wielder of Occam's razor. His objective is to explain a great deal with a little. The subject is earnings inequality, but the reader will look in vain for references to unions, monopsonists, minimum wage laws, discrimination, luck, and the numerous other institutional factors that are frequently introduced in such studies. Instead, Mincer fashions a simple but powerful theoretical model in which human capital is the central explanatory variable. Mincer does not deny that other factors may influence earnings. His position is, "Let's see how far the human capital model can take us." And in his hands it takes us very far indeed.

The two principal elements of human capital in the model are schooling and post-school investment. In the absence of specific measures of post-school investment, Mincer uses experience, which he estimates from age and the length of schooling. In the theoretical section Mincer shows in convincing fashion that it is years of experience rather than age that should be emphasized in attempts to

1. See Jacob Mincer, "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy,* August 1958.

explain variations in earnings. If one simply holds age fixed, estimates of the return to schooling are biased downward because at a given age those with less schooling have more experience, having left school earlier.

In highly simplified form, the story Mincer unfolds is the following: If you choose at random a group of white nonfarm men of various ages and educational attainments, the differences in their education will explain only a small part (about 7 per cent) of the difference in their earnings. This is also what other researchers have found; unfortunately some have rushed to the conclusion that the remaining difference must be the result of "luck" or "personality."[2] Mincer notes that men who have the same amount of schooling may have very different amounts of labor force experience, and that they also will probably differ in the amount of post-schooling investment that they have. Those who engage in a great deal of post-school investment (extreme examples would be medical residents or law clerks) will have their earnings depressed (below what they could have earned) during the early portion of their working life. In later years, however, their earnings will be inflated by the return on that investment.

The best time to measure the effect of schooling on the earnings of a cohort of men is about eight years after they leave school. At this point of "overtaking," there is minimum distortion from post-school investment because their return on previous investment is just about equal to the cost of current investment. Mincer finds that at this point differences in schooling explain about *one-third* of the inequality in annual earnings. When account is taken of differences in weeks worked the explanatory power goes to over 50 per cent! Mincer points out that if the quality of schooling could be controlled,[3] the explanatory power of the human capital model would be increased further.

Mincer shows empirically that schooling has more explanatory power for groups with constant years of experience than for groups of the same age, and that the explanatory power is at its peak for groups with seven to nine years of experience. This result is pre-

---

2. See Christopher Jencks et al., *Inequality* (New York: Basic Books, 1972).

3. See Lewis Solmon, "The Definition and Impact of College Quality," Working Paper 7 (New York: NBER, 1973).

dicted in the theoretical section. By contrast the "credentials" argument of the effect of schooling does not yield such a prediction.

Mincer's insistence that experience matters more than age finds strong confirmation in the data on female earnings—mentioned only briefly in this volume. The age-earnings profile for married women, whose work experience is often interrupted, is much flatter than that of never-married women, who typically have at any given age a much more continuous attachment to the labor force and longer work experience.[4]

When Mincer began his research, public interest in problems of income distribution was minimal. Economic growth was the vogue, and rapid growth was supposed to make life so much better for everyone that relative shares would be of minor consequence. Not so today. A quarter century of rapid growth (real GNP per capita in 1973 is almost double what it was in 1948) finds us more concerned than ever about poverty and inequality.

Strong policy debates rage over whether and how the distribution of income should be changed. In keeping with NBER policy, this volume takes no side in this debate, offers no policy recommendations. Instead, Mincer provides a logical, coherent, albeit incomplete explanation of why the distribution of earnings is what it is—surely an invaluable contribution for anyone who wants to decide if or how to change the distribution.

I have stressed the book's positive contributions to economic science; the inevitable qualifications and caveats that should accompany such an ambitious work are amply provided by Mincer himself. Indeed his own characterization of it as "an early and quite rudimentary effort toward a systematic analysis of personal income distribution," offers the promise that we can look forward to further instalments in this lifetime of scholarship.

VICTOR R. FUCHS
Vice President-Research; Director, Center for Economic Analysis of Human Behavior and Social Institutions

4. See Victor R. Fuchs, "Differences in Hourly Earnings Between Men and Women," *Monthly Labor Review,* May 1971; and Jacob Mincer and Solomon Polachek, "Family Investments in Human Capital: Earnings of Women," *Journal of Political Economy,* March 1974.

SCHOOLING, EXPERIENCE, AND EARNINGS