OFFICERS

Frank W. Fetter, Chairman
Arthur F. Burns, President
Theodore O. Yntema, Vice-President
Donald B. Woodward, Treasurer
Geoffrey H. Moore, Director of Research
Douglas H. Eldridge, Executive Director
Hal B. Lary, Associate Director of Research
Victor R. Fuchs, Associate Director of Research

DIRECTORS AT LARGE

Joseph A. Beirne, Communications Workers of America
Wallace J. Campbell, Foundation for Cooperative Housing
Erwin D. Canham, Christian Science Monitor
Solomon Fabricant, New York University
Marion B. Folsom, Eastman Kodak Company
Crawford H. Greenewalt, E. I. du Pont de Nemours & Company
Gabriel Hauge, Manufacturers Hanover Trust Company
Walter W. Heller, University of Minnesota
Albert J. Hettinger, Jr., Lazard Frères and Company
Harry W. Laidler, League for Industrial Democracy
Geoffrey H. Moore, National Bureau of Economic Research
Charles G. Mortimer, General Foods Corporation
J. Wilson Newman, Dun & Bradstreet, Inc.
George B. Roberts, Larchmont, New York
Robert V. Roosa, Brown Brothers Harriman & Co.
Harry Scherman, Book-of-the-Month Club
Boris Shishkin, American Federation of Labor and Congress of Industrial Organizations
George Soule, South Kent, Connecticut
Gus Tyler, International Ladies' Garment Workers' Union
Joseph H. Willits, Langhorne, Pennsylvania
Donald B. Woodward, A. W. Jones and Company

DIRECTORS BY UNIVERSITY APPOINTMENT

V. W. Bladen, Toronto
Francis M. Boddy, Minnesota
Arthur F. Burns, Columbia
Lester V. Chandler, Princeton
Melvin G. de Chazeau, Cornell
Frank W. Fetter, Northwestern
R. A. Gordon, California

Willis J. Winn, Pennsylvania

DIRECTORS BY APPOINTMENT OF OTHER ORGANIZATIONS

Percival F. Brundage, American Institute of Certified Public Accountants
Nathaniel Goldfinger, American Federation of Labor and Congress of Industrial Organizations
Harold G. Halcrow, American Farm Economic Association
Walter E. Hoadley, American Finance Association

Murray Shields, American Management Association
Willard L. Thorp, American Economic Association
W. Allen Wallis, American Statistical Association
Harold F. Williamson, Economic History Association
Theodore O. Yntema, Committee for Economic Development

DIRECTORS EMERITI

Shepard Morgan, Norfolk, Connecticut
Jacob Viner, Princeton, New Jersey

RESEARCH STAFF

Moses Abramovitz
Gary S. Becker
Gerhard Bry
Arthur F. Burns
Phillip Cagan
Frank G. Dickinson
James S. Earley
Richard A. Easterlin
Solomon Fabricant
Milton Friedman
Victor R. Fuchs
H. G. Georgiades
Raymond W. Goldsmith
Jack M. Guttentag
Challis A. Hall, Jr.
Daniel M. Holland
F. Thomas Juster
C. Harry Kahn

John W. Kendrick
Irving B. Kravis
Hal B. Lary
Robert E. Lipsey
Ruth P. Mack
Jacob Mincer
Ilse Mintz
Geoffrey H. Moore
Roger F. Murray

Ralph L. Nelson
G. Warren Nutter
Richard T. Selden
Lawrence H. Seltzer
Robert P. Shay
George J. Stigler
Norman B. Ture
Victor Zarnowitz
RELATION OF THE DIRECTORS TO THE WORK AND PUBLICATIONS OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH

1. The object of the National Bureau of Economic Research is to ascertain and to present to the public important economic facts and their interpretation in a scientific and impartial manner. The Board of Directors is charged with the responsibility of ensuring that the work of the National Bureau is carried on in strict conformity with this object.

2. To this end the Board of Directors shall appoint one or more Directors of Research.

3. The Director or Directors of Research shall submit to the members of the Board, or to its Executive Committee, for their formal adoption, all specific proposals concerning researches to be instituted.

4. No report shall be published until the Director or Directors of Research shall have submitted to the Board a summary drawing attention to the character of the data and their utilization in the report, the nature and treatment of the problems involved, the main conclusions, and such other information as in their opinion would serve to determine the suitability of the report for publication in accordance with the principles of the National Bureau.

5. A copy of any manuscript proposed for publication shall also be submitted to each member of the Board. For each manuscript to be so submitted a special committee shall be appointed by the President, or at his designation by the Executive Director, consisting of three Directors selected as nearly as may be one from each general division of the Board. The names of the special manuscript committee shall be stated to each Director when the summary and report described in paragraph (4) are sent to him. It shall be the duty of each member of the committee to read the manuscript. If each member of the special committee signifies his approval within thirty days, the manuscript may be published. If each member of the special committee has not signified his approval within thirty days of the transmittal of the report and manuscript, the Director of Research shall then notify each member of the Board, requesting approval or disapproval of publication, and thirty additional days shall be granted for this purpose. The manuscript shall then not be published unless at least a majority of the entire Board and a two-thirds majority of those members of the Board who shall have voted on the proposal within the time fixed for the receipt of votes on the publication proposed shall have approved.

6. No manuscript may be published, though approved by each member of the special committee, until forty-five days have elapsed from the transmittal of the summary and report. The interval is allowed for the receipt of any memorandum of dissent or reservation, together with a brief statement of his reasons, that any member may wish to express; and such memorandum of dissent or reservation shall be published with the manuscript if he so desires. Publication does not, however, imply that each member of the Board has read the manuscript, or that either members of the Board in general, or of the special committee, have passed upon its validity in every detail.

7. A copy of this resolution shall, unless otherwise determined by the Board, be printed in each copy of every National Bureau book.

(Resolution adopted October 25, 1926, as revised February 6, 1933, and February 24, 1941)
TABLES

1. Average Hourly Earnings of Nonagricultural Employed Persons, United States, by Demographic Characteristics, 1959 3
2. Average Hourly Earnings, Nonagricultural Employed Persons, by Region, 1959 7
3. “Expected” Average Hourly Earnings, by Region, 1959 8
4. Ratio of Actual to “Expected” Hourly Earnings, by Region, 1959 9
5. Average Hourly Earnings, Nonagricultural Employed Persons, by City Size, 1959 12
6. “Expected” Average Hourly Earnings, by City Size, 1959 14
7. Distribution, by Years of Schooling, of White Males in Nonagricultural Employment Across City Size in the Non-South, 1960 15
8. Ratio of Actual to “Expected” Hourly Earnings, by City Size, 1959 16
9. Percentage Distribution of Man-Hours, by City Size and Region, 1959 18
10. Regional Indexes of Ratio of Actual to “Expected” Hourly Earnings, by City Size, 1959 19
11. Ratio of Actual to “Expected” Hourly Earnings, by Region, Adjusted for City Size, 1959 20
12. Ratio of Actual to “Expected” Hourly Earnings, by City Size, Adjusted for Region, 1959 21
13. Index of Standardized Hourly Earnings in Non-South Relative to the South, by Education, Color, and Sex, 1959 23
14. Index of Standardized Hourly Earnings in SMSA’s of 1,000,000 and More Relative to Outside SMSA’s, by Education, Color, and Sex, 1959 24
15. Index of Standardized Earnings, Non-South Relative to the South, by Color, Education, and City Size 26
16. Results of Regressing the Logarithm of Average Hourly Earnings on the Percentage in South and Other Variables Across 138 Industries 29
17. Results of Regressing the Logarithm of Average Hourly Earnings on the Percentage in Large SMSA’s and Other Variables Across 138 Industries 30
A-1. Average Hourly Earnings of Nonagricultural Employed Persons, by Color, Age, Sex, and Education, 1959 39
A-2. Number of Nonagricultural Employed Persons, by Color, Age, Sex, and Education, 1959 42
A-3. Average Annual Earnings of Nonagricultural Employed Persons, by Color, Age, Sex, and Education, 1959 44

B-1. Comparison of Means and Distribution of Hours in the 1/1,000 Sample and Current Population Survey, Nonagricultural Employed Persons, 1959 and April 1960 49
B-2. Average Weeks Worked in 1959, by Hours Worked per Week in April 1960, for Color-Sex Groups, Employed Persons, 1960 49

CHARTS

1. Average Hourly Earnings of Nonagricultural Employed Persons by City Size, by Region and Color, 1959 13
2. Average Hourly Earnings of White Males by Education and City Size: Weighted Average of South and Non-South, 1959 25
PREFACE

This paper is a by-product of the National Bureau’s study of productivity in the service industries undertaken with the financial assistance of the Ford Foundation.¹ In the course of that study, we found that since 1929 the goods industries have been substituting skilled for unskilled labor at a much more rapid rate than have the service industries. During that same period, the price of unskilled labor has risen relative to that of skilled labor; this suggests as one possible explanation a difference between the sectors in their ability to adjust labor inputs to changing wage structure. (I.e., the elasticity of substitution of skilled for unskilled labor might be smaller in the service industries.) One way of testing this hypothesis is to examine variations in the labor skill mix in the same industry in different areas of the country, and try to relate these variations to differences in the relative prices of skilled and unskilled labor in different regions. One of the initial purposes of this paper, therefore, was to develop measures of regional wage differentials at several skill levels. The finding that the differential between wage rates in the South and in the rest of the country is much greater for unskilled labor than for skilled labor provided the starting point for a study of elasticity now being conducted by Richard Auster.

In the course of answering the regional differential question, a number of other interesting findings emerged. In particular, the magnitude of the earnings differentials across city size within regions proved to be surprisingly large. For all nonagricultural employed persons, hourly earnings in Standard Metropolitan Statistical Areas of 1,000,000 and more are approximately 30 per cent higher than in rural areas and small towns. They are approximately 15 per cent higher than in SMSA’s of less than 500,000.

The paper also develops a methodology and body of data for studying wage differentials adjusted for differences in labor force composition as measured by color, age, sex, and education. These demographic characteristics are used as proxies for labor “quality,” and measures are presented of regional and city size differences in labor “quality” and of wage differentials adjusted for “quality.” Approximately one-third of the gross South-non-South wage differential is attributable to differences in labor force composition. In contrast,

¹An excerpt from this paper appeared in the Monthly Labor Review, January 1967.
the city size wage differentials are unaffected by the adjustment for labor force composition.

The methods and data developed in this paper are being used in several other parts of the National Bureau service industry project, including David Schwartzman's study of productivity in retailing, Jean Wilburn's study of productivity in personal services, Irving Leveson's study of self-employment, and my own investigation of interindustry and intersector differences in earnings.

Certain data used here were derived from punch cards furnished under a joint project sponsored by the U.S. Bureau of the Census and the Population Council, and containing selected 1960 Census information for a 0.1 per cent sample of the population of the United States. Neither the Census Bureau nor the Population Council assumes any responsibility for the validity of any of the figures or interpretations of them published herein based on this material.

The preparation of the paper was assisted immeasurably by a computer program designed by Charlotte Boschan for processing the data contained in the 1/1,000 sample of the U.S. population. A description of this program is available upon request. A grant of computer time from the International Business Machines Corporation is also gratefully acknowledged. The reading committee of the National Bureau's board of directors — Joseph A. Beirne, Melvin G. de Chazeau, and Charles G. Mortimer — made several helpful comments. I am also grateful to Gary Becker, Gerhard Bry, Solomon Fabricant, Harry Gilman, Jacob Mincer and Geoffrey Moore for many suggestions and criticisms. Irving Leveson and Harriet S. Rubin supervised the computations and made numerous other contributions. Thanks are also due to James F. McRee, Jr., for editing the MS., to H. Irving Forman for the charts, to Regina Riebstein for research assistance, and to Joyce M. Rose and Lorraine Lusardi for secretarial assistance.

H11.K2432 no. 101 331.2'973 67-16986

MATERIAL SUBMITTED BY PUBLISHER.