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## 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.<sup>1</sup> 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,

<sup>1</sup>An 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.

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