## INFLATION AND PRODUCTIVITY IN TAX-BENEFIT ANALYSIS FOR SOCIAL SECURITY

## BY YUNG-PING CHEN\*

In the nature of a progress report, the purpose of this paper is to offer some preliminary answers to the following questions bearing upon the retrospective and prospective views of the relationships of social security taxes and social security benefits:

(1) Do workers gain or lose on their taxes for social security?

(2) As a means of financial protection, is private insurance superior to social security from the standpoint of monetary costs? Or could a worker obtain more benefits from a private insurance contract if he purchases it with the taxes otherwise paid into social security?

(3) How are the relationships of taxes to benefits influenced by considerations of price inflation and productivity gains, especially

with references to the future?

In section I, several existing studies of social security "gainers" and "losers" are briefly summarized, with particular emphasis on their approaches and assumptions. A worker is a gainer when he and/or his family have, or will have, received more benefits than what he has contributed. A worker becomes a loser if he and/or his family have, or will have, received less benefits than what he has contributed. In the same section, alternative estimates based on a set of assumptions consistently applied to certain hypothetical workers in different circumstances are presented. In section II, cost comparisons between private insurance and social security are made on the basis of three illustrative workers. In section III, taxes-to-benefits relationships in future years are examined under various assumed conditions regarding price inflation and productivity. Section IV contains some concluding remarks.

## I. TAX-BENEFIT RATIO ESTIMATES

The relationships of taxes to benefits under social security have been estimated by various writers. In earlier studies, these relationships were expressed in percentage terms, although the word "ratio" was

<sup>\*</sup>The author is on the faculty of the Department of Economics, University of California, Los Angeles. He is indebted to Profs. Harold Somers and Roland McKean for valuable comments on an earlier draft. Helpful actuarial opinions were received from Messrs. Leonard Berekson, Kenneth Clark, Sylvester Marusich, Robert J. Myers, and Forrest Ockels, and also from Drs. Chester Healy, Malcolm Heslip, and Irving Pfeffer. None of these persons or the organizations with which they are associated should be held responsible for the views expressed here. This paper is a summary of one phase of a research project in progress on income maintenance in old age. The project has been supported by grants from the Institute of Industrial Relations, Bureau of Business and Economic Research, Research Committee of the Academic Senate, all of UCLA. Computations were performed at the computing facility, also of UCLA. Able research assistance in the overall project has been rendered by Messrs. Kwang-wen Chu, Jose Acosta, and Robert Black.