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Shares of Upper Income Groups in Income and Savings

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

FOREWORD

The general design of this study was conceived and some calculations initiated in the late 1930's, in the course of work on *National Income and Its Composition, 1919-1938* (1941). But while we recognized that distinguishing the shares of upper groups would lend additional interest and value to the other analysis of our national income totals, it soon became evident that the estimates needed would be so difficult as to delay by years the report then under way. It was therefore decided to postpone the present study until after completion of *National Income and Its Composition.* Work was resumed in 1941, but the pace was slow because attention had to be concentrated on other topics. Indeed, full emphasis on this study became possible only late in 1946, and the major part of the work occupied the next four years. The report was substantially completed in 1950.

Throughout these years I had the invaluable assistance of Elizabeth Jenks and Lillian Epstein. Miss Jenks carried the burden of the work, of the several revisions of estimates and analysis, and of the innumerable details attendant upon seeing the report through its various phases. The study owes much to Miss Jenks' perseverance and patience, and to Miss Epstein whose other duties allowed of only intermittent help.

In the course of work, aid in obtaining unpublished materials was kindly and promptly given by various data collecting agencies, particularly the Bureau of Internal Revenue, the Bureau of the Census, and the Survey Research Center at the University of Michigan. I am indebted to Thomas C. Atkeson and Marius Farioletti of the Bureau of Internal Revenue; A. Ross Eckler of the Bureau of the Census; and George Katona of the Survey Research Center. O. C. Stine of the Bureau of Agricultural Economics, Selma F. Goldsmith and Charles F. Schwartz of the National Income Division of the Department of Commerce, and Duncan McC. Holthausen and Ralph A. Young of the Research Division of the Federal Reserve Board were also helpful. And I am indebted to my friends Hildegarde Kneeland and Clark Warburton for unpublished estimates and data from their files.

The report was reviewed by a committee of the National Bureau staff. It benefited from comments by Ruth P. Mack, Thor Hultgren, and espe-

cially those by Geoffrey H. Moore. A preliminary and brief version was presented for discussion at the spring 1949 meeting of the Conference on Research in Income and Wealth. I profited greatly from the various critical suggestions made at that meeting.

Martha Anderson edited the volume, and contributed much to its readability. H. Irving Forman is responsible for the charts.

My sincere thanks go to one and all.

Simon Kuznets

CONTENTS

Volume Two

TABLES

ADDENDUM TABLES

CHARTS

Introduction and Summary

1 *Aim of the Study*

A distribution of income among population groups classified by the size of the income each receives inevitably emphasizes income *differences*. The reason for studying such size distributions is the presumption that the income differences revealed will contribute toward an understanding and appraisal of economic processes.

This general statement covers a wide variety of aims that may be pursued. The immediate aim of this investigation is to measure the level of and changes in at least one segment of the size distribution of income in this country. Scarcity of data and of testable results of past work in the field limit both the possible scope and depth of description and analysis. But we view income here as one link in the circuit flow of productive resources and final products in the economy, and assume that even a partial record of differences in income will be revealing if approached as consequences of antecedent factors (production) and causes of subsequent results (expenditures and savings).

This statement of our aim suggests points that should facilitate proper understanding of much of what follows.

a) First, many terms we employ to describe differences in income and other aspects of the distribution may, because of use in studies aiming at *appraisal* rather than analysis, carry connotations foreign to their meaning here. When we say 'income inequality', we mean simply differences in income, without regard to their desirability as a system of reward or undesirability as a scheme running counter to some ideal of equality of economic opportunity. Likewise, when we say 'income equality', we are describing a situation in which each unit's income is equal to the total divided by the number of units – a situation directly opposite to that in which one unit gets all the income and the others none. By a group's 'share' we mean the percentage its income constitutes of total income received by all units, nothing more. We do not mean its net draft upon a given stock or pool, to the detriment of all other groups. For all we know, the given group may contribute more than its 'share' and can do so because of its 'share' – in other words, the latter represents in fact a net contribution.

This caution is important because misunderstandings may arise, and perhaps the author himself has unwittingly fallen victim to some. To avoid such connotations of commonly used terms completely, we could have employed quite unfamiliar, new terms; but it did not seem wise to encumber an already difficult subject with technical abracadabra. It seemed better to use familiar terms, and insist (as is done in the older, experimental, sciences which use such common terms as 'force', 'energy', 'matter', 'heat', and 'light') on their *operational* significance in measurement as the only proper one.

b) Our estimates are for upper income groups alone because basic data that would permit us to study the complete size distribution of income for an appreciably long period are lacking. Yet it may be asked whether measures of income shares of a relatively small upper sector can contribute sufficiently to the basic aim of the inquiry to warrant the labor and effort expended.

The answer is 'yes', for two, somewhat distinct reasons. First, whatever insight and understanding we may gain concerning the factors that determine the shares of upper income groups, and of the ways in which their size relative to the shares of the rest of the population affects the disposition of income, have a carry-over value, i.e., with some qualifications they suggest the factors influencing the shares of other groups in the income distribution. From the demographic, social, and occupational characteristics of recipients in upper income groups we can infer the characteristics of recipients in lower groups; we can make similar inferences as to the association of income level with income disposition. Second, even a small upper group such as the one covered in this study is important because its savings constitute a large proportion of total savings by individuals, and its expenditures on at least some categories of consumer goods may also account for a high proportion of the total. Thus, despite its smallness, the upper sector studied here directly affects the apportionment of total income between expenditures and savings, an apportionment that has been increasingly stressed by economic analysis in recent decades.

c) The final and most important point is that our aim is not sharply focused enough to provide a set of criteria with which unequivocal choices among definitions of income scope and unit can be made. We do not know in what specific form to cast the size distribution of income so that it will reveal as completely as possible not only the factors that determine the size of income (i.e., show differences in income as a consequence of strategically important factors) but also the effects of its size (i.e., show differences in income as determinants of patterns of expenditure and saving).

To illustrate: do we know enough about how persons determine their consumption expenditures and savings to know whether to include capital gains and losses in income? And if we do not, how are we to decide what items we should include or how we should define the unit in a size distribution?

Since to study different factors or their effects both income and unit may well have to be defined differently, no single definition or variant of the size distribution may suffice. Nor, because the past has not been studied adequately, do we know which variant is best adapted to the problem at hand. As is common in empirical work, we travel in a circle not knowing precisely what measures to make or how to make them until we have already completed and studied them. We break out of the circle in the common way too: we make the best measures we can with the data, following intuition and whatever vague notions we have, and attempt to provide estimates either in several variants or in sufficient detail so that others can construct their own variants. To say that the inquiry is concerned largely with organizing data in such a way that they may be put to various uses would be easy though somewhat misleading: we do select the data and cast them in some form, depending upon how we think differences in income are most usefully measured for our purposes. But because our choice of the form is determined by broad criteria and severely limited by the basic data, this inquiry cannot go very far toward the analytical purposes that are its ultimate goal. In that sense it is an unfinished venture, and must stop far short of the final formulation which cannot be made without complete knowledge. This is one reason, among others, why at the end of this brief summary we come back to questions this study does not answer, and thus to directions of further inquiry which it suggests and for which it constitutes a preparatory step.

2 *The Basic Procedure*

The basic procedure is to compare the number and income of persons represented on federal income tax returns with the total population and its income receipts. Underlying data are available annually back to 1919, and with some limitations, back to 1913. Since, except for a few recent years, tax returns cover only a small fraction of total population – the fraction at the highest income levels – our estimates of income shares are for only a small upper sector.

From the same source material we can, with certain limitations, carry through the comparison for various types of income (employee compensation, entrepreneurial income, etc.). We have also used other data – primarily sample studies of income – to shed some light on the effect of our

definitions ('income', 'unit', and the like) on the shares of upper income groups, as well as on their demographic and social characteristics. Furthermore, we attempt to explore the implications of the findings concerning changes in the income shares of upper groups for changes in their shares in savings. But since we deal primarily with the comparison of federal tax return data with countrywide estimates of individuals' incomes, and the estimates of annual income shares of upper groups so derived, the difficulties involved in such a comparison are central to the whole inquiry.

They arise from two somewhat distinct sources: (a) likely differences in the size of errors attaching to the two bodies of data compared; (b) explicitly recognized differences between the latter in the concepts of income and income unit.

a) Countrywide estimates of income flows to individuals are derived from censuses and other data on income payments originating in the several industries. The errors in the aggregates are thus a compound of the errors attaching to the components of which the totals are a sum, and little can be said about them in a general way. But as these estimates have been available for a number of years, have been tested by the various uses to which they have been put, and those for recent years have been compared with results derived by other methods, we venture the conclusion that the errors in the aggregates are fairly small — within a 5 percent range in recent years — and that, on the whole, these aggregates are likely to run short, largely because it is impossible to cover all casual and part-time income. However, for countrywide totals of some income types, e.g., entrepreneurial income, the relative error is probably wider.

The errors and biases in the income tax data are probably larger. Some people, of course, evade reporting completely by not filing; others understate their income, or overstate the legally allowed exemptions and deductions. And as the data are a byproduct of the administration of a highly complex and changing tax law, it is not easy to be sure what types of receipt are exempt from tax or even from reporting. Hence, in comparing them with countrywide totals, we juxtapose a set of highly complex *administrative* data, subject to a downward bias of unknown proportions, to estimates derived essentially from *census* data, and doubtless subject to less understatement.

Some of the possible biases in the tax data were minimized by: (i) using reported income, unreduced by exemptions or by deductions except in so far as the latter represent true business costs; (ii) so defining the upper group as not to exhaust the tax return population, thereby reducing errors due to nonfiling, since the latter are most prevalent at levels close to those exempt from reporting; (iii) using diverse supplementary data and several

variant estimates. Even so, errors due to understatement of the income reported on the tax returns may well have been large – larger than those in the countrywide income totals. In our opinion, however, they are not so large for the upper income groups we cover as to affect seriously the levels of and changes in their estimated shares. This opinion, supported explicitly in Chapter 11 and implicitly in many places in the report, is confirmed by the results of the recent random audit of 1948 returns. In any case, we cannot adjust for biases due to underreporting and must either use the data or forego the opportunity to learn something, though we may be seeing through a glass, darkly. Our decision to go ahead was purely a matter of judgment, informed as it may have been, and subject to check by other investigators for whose benefit the technical details that follow are provided.

b) The federal income tax data are tabulated for most years during the period by broad classes of net income, as defined in the tax law, per return (for a few recent years, the classification is by adjusted gross income). We are interested in a classification of persons by economic income per capita, i.e., income not inflated by capital gains and not reduced by capital losses or allowable deductions that represent consumer expenditures (e.g., interest on mortgages of owner-occupied houses) rather than business costs. With the available detail we can estimate the number of persons represented on tax returns and their economic income but only for the broad groups of returns shown by size of net income, tax definition, per return. Hence in trying to approximate the successive upper groups in a size distribution of population based on economic income per person, the adjustments, which *ideally* should be made for each tax return separately, are applied only to the large blocks represented by the already formed net income, tax definition, classes; the returns so adjusted are then rearrayed by economic income per capita.

Much of the calculational complexity of the study arises from this need to reshuffle the distributions to make them conform to the desired base of unit and income concept. But because we could not go behind the net income classes to the individual returns, we could not adjust them completely. Consequently, the differences in income revealed by our estimates are *less* sharp than they would be if we had worked with a size distribution of income in which each unit, properly defined, was classified by the desired concept or even if we had worked with groups classified by the desired concepts of income and receiving unit. In a classification of population by economic income per capita the use of groups formed by classifying returns by net income as defined in the tax law will necessarily blur or damp the true spread of the income size. It is as if one tried to paint a fine picture with thick brushes and large blobs of somewhat mixed colors. For

the same reason, our estimates of income shares of upper groups distinguish few subgroups: shares for many more could be calculated, but the additional detail would be largely spurious because in most years net income classes, the basic units with which we have to work, are too few, or too affected (at the very top levels) by the use of an income base other than the one desired.

3 *Variants and Definitions*

For each net income class in the distribution of tax returns we calculate the number of persons represented including dependents, economic income as defined below, and per capita economic income. Arraying these classes from the highest per capita income down, we derive cumulative totals of population and income, then draw partition lines cutting off the top 1 percent of the population, top 3, top 5 – top in the sense that the population above each partition line receives a per capita income higher than that below. But to repeat, the array is of large groups constituted by net income, tax definition, or adjusted gross income, classes – not, unfortunately, of individual returns. The income of the top 1, 3, and 5 percent of population and, by subtraction, that of the 2nd and 3rd, and 4th and 5th percentage bands from the top, is then expressed as a percentage of individuals' total income receipts.

This general procedure varies as we modify the countrywide income total with which the income of the upper groups is compared, as we make the adjustments in passing to economic income, and as we extend the scope of income. Before describing the several variants, we comment upon the fundamental aspects of the procedure that were a matter partly of choice, partly of necessity: (a) the use of economic income as the main concept; (b) the reduction of returns to a per capita basis; (c) the use of current year income as the basis of classification.

a) Economic income as used here is the sum of employee compensation, entrepreneurial income, rent, interest, and dividends. Employee compensation, in turn, includes wages and salaries net of employee contributions to social security but inclusive of benefits from social insurance and relief payments and of other labor income. For most years, however, it is almost identical with wages and salaries. Economic income, then, comprises payments that are associated with the participation of individuals or of their property in production whose net result is measured in national income. It is not strictly current product evaluated in market prices. In a sense, all income payments are *transfers* rather than measures of productive contribution: wages paid by a business enterprise do not measure the market value of the productive contribution if the firm sustains a substantial net

profit or loss; interest may be paid even though not 'earned' in the given year. But it is fair to say that economic income thus defined is perhaps closest to the comprehensive total that is part of national income viewed as a measure of current product. As already hinted, for some specific purposes a different definition of income might be more appropriate; and some of the variants described below do employ a different definition. In any case, a statistical inquiry into a size distribution must use some one or a few concepts of income; and the choice in this case is governed largely by tie-in with the national income concept and how widely it can be used.

b) We reduce returns to a per capita basis, i.e., divide income totals for groups of tax returns by the number of persons represented instead of by the number of returns because a tax return as such is a unit of dubious significance in any size-of-income analysis. It does not represent the number of income recipients, since there may be more than one recipient per return (and the number cannot be ascertained from the available data). Besides, a recipient is a unit of limited usefulness because many persons may each receive minor amounts of property income and nothing else; and because, in any given year, some persons who customarily receive sizeable incomes may be unemployed. Excluding them from the total of recipients is hardly justified, yet it is difficult to include them since they are not directly reported. Nor does the income tax return measure, in and of itself, a family or spending unit, however defined, since a family may file more than one return, and more than one spending unit may be covered on one return. It seemed best, therefore, to reduce returns to a per capita basis; treat them as groups of persons characterized by given levels of per capita income; and compare them with the total population as the receiver of aggregate income flowing to individuals.

c) The procedure distinguishes groups that are at the upper levels of economic income per capita in the given year. Since the income reported on tax returns is for a year, not for a longer period, we must work with a distribution by income *incidence* in a given year, instead of with a distribution by income *status* for a longer period. This means that an upper income group in any given year, say, the top 1 percent, includes units (i.e., returns) that may be there in that year alone and may exclude units that are in the top 1 percent the next year. We attempt to indicate how much mobility there is, although the information is necessarily limited, and suggest that, by and large, a substantial proportion of the persons in a given upper group tend to remain in it or move to neighboring groups. But while the upper groups thus distinguished have a resident core that enjoys high income *status*, they have a migrating periphery whose relative income level

for a longer period is appreciably lower. This is an important qualification, which bars interpreting upper income groups as consisting year-in, year-out of the same single persons and families.

The three variants, developed by the general procedure just outlined, are now described.

i) Since the upper income groups segregated by us in the tax data represent overwhelmingly nonfarm units, they and their income can be compared not only with the number and income of the total population but also with those of the nonfarm.

For purposes of measurement upper income groups are defined as the top 5 percent of the total population (subdivided into the top 1, 2nd and 3rd, and 4th and 5th percentage bands); and top 7 percent of the nonfarm population (subdivided into the top 1, 2nd and 3rd, 4th and 5th, and 6th and 7th percentage bands). All groups below are designated 'lower income groups'.

ii) As already indicated, the available tax data can be treated, without loss of detail, so that for each net income class, the economic income and number of persons represented can be approximated. The estimates of upper group shares derived from them are designated the 'basic' variant because they are derived directly and in full detail. It is for the basic variant alone, whether for the total or for the nonfarm population, that we can estimate upper group shares not only in individuals' total income receipts but also in the countrywide totals of the five component types: employee compensation, entrepreneurial income, rent, interest, and dividends. In deriving the shares in these various types, the upper group is classified throughout by its total income, not by its receipts of the given income type.

Further adjustments, made to bring the estimates closer to a true distribution by economic income per capita, allow for the nonreporting of state and local government salaries prior to 1938, for the omission of imputed rent on owner-occupied houses and, most important, for the effects of classifying the tax data by an inappropriate income base and unit. The resulting estimates, designated the 'economic income' variant, are available for the upper groups of both total and non-farm population, but the adjustments cannot be allocated among the several income types.

Both the basic and the economic income variants employ economic income as their base concept. We can modify economic income by deducting federal income taxes paid (the major part of direct taxes paid by individuals) and by including the net balance of realized gains and losses from sales of assets. The latter is not included in the national income total, nor is it properly a part of the economic income of individuals since it does not

represent the participation of individuals or their property in production. The deduction of taxes and inclusion of gains and losses from sales of assets thus turn the concept away from economic toward disposable income. Hence the estimates so derived (for both total and nonfarm population) are called the 'disposable income' variant. The term is somewhat misleading since a true approximation to disposable income would have to take account of other direct taxes, gifts, gambling gains and losses, and the like.

With the detail available (much of which is given in Part V), it is possible to derive other variants, e.g., economic income after deducting federal income taxes but before including gains and losses from sales of assets, and disposable income adjusted roughly to include undistributed net profits or losses of corporations.

4 *Major Findings*

Of the major findings of the study, we present five here: (a) the average levels and structure of income shares of upper income groups; (b) some characteristics of the latter that may shed some light on the causes and consequences of their relative income position; (c) the recent decline in the income shares of upper income groups; (d) short term changes in these shares associated with business cycles; (e) implications of changes in upper income shares for changes in shares of upper income groups in total savings of individuals.

a) Our estimates are fairly complete for 1919-46; a few go back to 1913, and those in the basic variant extend through 1948. In trying to describe the average level and structure of upper group shares we are confronted by the fact that they have declined drastically since 1939. Hence an average for the entire period would be quite unrepresentative. We therefore confine the averages to the interwar period 1919-38, and qualify them by comparing them with the levels in recent years.

For the two interwar decades the average shares in the economic income variant (i.e., in income excluding gains and losses from sales of assets and before taxes) of upper groups of total population (in this summary, we omit shares of the nonfarm population) were: top 1 percent of population, 15 percent of income; top 5 percent of population, 30 percent of income. In the basic variant, where the true income range is somewhat understated, the average share of the top 1 percent was 13 percent of income; of the top 5 percent of population, 25 percent of income. The degree to which the recent decline modified the income structure of the country can be seen from the basic variant estimates for 1947 and 1948, the latest pair of years for which estimates can be calculated: the top 1 percent of the population

received 8½ percent of income; the top 5 percent of population, 18 percent of income.

Both during the interwar decades and in recent years, upper group shares were largest in the countrywide totals of property income, particularly dividends. Thus, for 1919-38 the top 1 percent of population received on the average 65 percent of total dividends paid to individuals; the top 5 percent, 77 percent. Their shares were lowest in countrywide employee compensation, averaging about 6½ percent for the top 1 percent and 17 percent for the top 5 percent group. For recent years the shares of the upper groups in interest and dividends, as well as in employee compensation, declined, but the contrast persisted. In general, the upper groups received an appreciably larger proportion of their income from property than did the lower groups or the population as a whole.

In interpreting these findings we must bear in mind that the top 1 and 5 percent groups reach well down the income scale. Thus the lowest units in the top 1 percent group received incomes which, on a per capita basis (economic income variant), ranged during 1919-38 from somewhat over $2,100 in 1933 to $4,200 in 1929, and rose to $5,600 in 1946, the most recent year for which the series is available. This means that a family of 3 would be included in the top 1 percent group in 1933 if it received $6,300 or more, in 1929 if it received $12,600 or more, and in 1946 if it received $16,800 or more. For the lowest units in the top 5 percent group per capita incomes ranged during 1919-38 from about $1,250 to about $2,000, rising to somewhat over $2,300 in 1946.

b) The size of the shares and even their changes depend upon the unit used in the distribution (the recipient, family, consuming unit, etc.), the scope of income distributed (the items included or excluded, e.g., income in kind, and gains and losses from sales of assets), the extent to which several types of income from various sources combine to swell the total income of a given unit, and the length of the period for which income is measured (a year, 2 years, etc.). In interpreting differences in income one must take account not only of these statistical characteristics of the size distribution but also of the demographic and social characteristics of the recipients in the upper groups, i.e., their sex, age, education, size of family, place of residence (rural, urban, cities of different size), occupation, industrial attachment, and the like.

The effects of these characteristics cannot be summarized readily nor, for lack of continuous and adequate data, can our conclusions be expressed in simple estimates that can be applied to modify differences in income as shown above. But, in general, it may be said that: (i) the use of

a single year's income tends to exaggerate perceptibly upper group shares: if upper groups were classified by their income for a longer period their shares would be perceptibly smaller; (ii) upper groups have more recipients at productive ages and with higher formal education and longer experience than lower groups; (iii) upper groups have relatively more consuming units whose place of residence entails high living costs. Hence a size-of-income distribution based on average income for several years, covering only the experienced and highly trained members of the active population, and adjusted for differences among groups in their cost of living, would yield upper group shares materially smaller than those cited above.

c) The decline in upper group shares since 1939 is especially striking in view of the rather narrow range of movement during the preceding twenty years. Thus, in the basic variant (that for which we have the most recent estimates), the share of the top 5 percent ranged during 1919-38 from 22.1 to 26.8 percent of income – only 4.7 percentage points; and no sustained movement was perceptible, the successive quinquennial averages being 23.6, 25.5, 25.7, and 23.9 percent. From 1939 to 1944 it dropped from 23.7 to 16.8 percent – almost 7 percentage points in five years; and in 1947 and 1948 its level was only slightly higher – 17.6 and 17.8 percent respectively. During the last decade, then, the share of the top 5 percent declined about a quarter. Similarly, the share of the top 1 percent, again in the basic variant, declined from about 12 percent in 1939 and 1940 to about 8½ in 1947 and 1948.

The decline in the shares in the economic income variant, and particularly in the disposable income variant, is even more striking. From 1939 to 1946, the latest year available, the share of the top 5 percent in the economic income variant declined from 28.1 to 20.2 percent; in the disposable income variant, from 27.1 to 17.9 percent, well over three-tenths. Likewise, the share of the top 1 percent in the economic income variant declined from 13.3 in 1939 to 9.7 percent in 1946, and from 12.3 to 7.8 percent in the disposable income variant. Finally, if we adjust the shares in the basic variant by subtracting federal income taxes, the drop is from 22.7 in 1939 to 15.2 percent in 1948 for the share of the top 5 percent, and from 10.9 to 6.4 percent for the share of the top 1 percent. Recent sample data do not indicate any significant rise in upper group shares from 1948 to 1950.

This recent decline in upper group shares, which for its magnitude and persistence is unmatched in the record, obviously has various causes. The most prominent are the reduction of unemployment and the marked in-

crease in total income flowing to lower income groups (particularly farmers and wage earners); shifts in the saving and investment habits of upper income groups which may have curtailed their chances of getting large receipts from successful venture capital and equity investments; lower interest rates; and steeper income taxes. But conjectures alone are possible, and the discussion in the report is limited to a statement of facts. The exploration of causes would entail close study of the complete size distribution of income and transcends the practical limits of this inquiry.

d) During business cycles in the interwar period upper group shares changed, on the whole, within fairly narrow limits. Changes in the share of the top 1 percent were irregularly related to business cycles. Changes in the shares of upper groups below the top 1 percent tended to move counter to business cycles, as did the share of the top 5 percent group as a whole. Thus, in the economic income variant, while the share of the top 5 percent averaged 30 percent of income, there was an average decline per year of 0.4 percentage points during expansions, an average rise per year of 1.5 percentage points during contractions, and an average rise per year of 1.8 percentage points in the rate of change from expansion to contraction. As these movements are of percentage shares, not of the absolute amounts of income received, the decline in upper group shares during expansions means only that while incomes of both the upper 5 percent and the lower 95 percent groups rose, as is usual in that cyclical phase, the relative rise in the former tended to be smaller than that in the latter.

The counter-cyclical movement of upper group shares is partly confirmed by the evidence for recent years. Their recent decline is associated with the war-induced expansion, and both culminate in 1944. However, their recent drop far exceeds that in earlier cyclical expansions, and their recovery is relatively much less.

e) Unless changes in the income shares of upper groups are accompanied by marked changes in the percentage of income saved by those groups or by the lower groups, a rise or decline in their income shares will be accompanied by a rise or decline in their shares in total savings. One can conjecture, for example, that the recent striking drop in the income shares of upper groups was accompanied by a marked decline in their shares in total savings of individuals. This may well have been the case. But the recent period was one of war impact and postwar recovery, when legal and other pressures produced marked fluctuations in the savings habits of individuals, i.e., in the savings-income ratios at lower, and perhaps even at upper income levels. It seems fairly clear that during the war years, when total savings and savings-income ratios were high, the share of upper in-

come groups in total savings must have declined appreciably. However, in the postwar years, when the over-all savings-income ratio dropped sharply, it is quite possible that the share of upper groups in total savings rose again, perhaps to prewar proportions. These must remain conjectures – to be corroborated or refuted by further study.

More attention is given to how savings are affected by changes in upper group shares in income during business cycles. Savings-income ratios for upper groups fluctuated during business cycles much less relatively than those for lower groups. This, together with the stability (or mild countermovement) of income shares of upper groups, leads to the inference that their savings constituted a fairly stable proportion of the total income of individuals. Consequently, the extreme variability during business cycles of the savings-income ratio for the total population must have been due largely to violent changes in the savings-income ratios for lower groups; and, another important consequence, the share of upper groups in total savings of individuals must have declined during cyclical expansions when savings were relatively large, and risen during cyclical contractions when savings were relatively small.

Shifts in the proportion of the total savings flow contributed by upper and by lower groups are important in so far as these components differ in their sensitivity to changing economic conditions, and particularly in so far as savings of upper groups seek different investment channels and employ different intermediary financial institutions from those of lower groups. Savings seeking investment must, therefore, be examined in terms of not only the proportion originating within the upper and the lower groups respectively but also of the types of investment opportunity into which, given the legal and other institutional conditions as well as the preferences of the savers, they would easily flow.

5 *Directions of Further Inquiry*

Since the data we used required numerous and necessarily imperfect adjustments, and information for testing our hypotheses and findings was scanty, and since the source material did not permit us to cover any except the upper sector of the income size distribution, future investigations should be directed toward: (a) further testing of the findings for the sector that was covered; (b) extending the analysis to cover other sectors or the entire income size distribution.

a) In comparing federal income tax return data with estimates of individuals' total income receipts, we followed in the footsteps of preceding investigators, and it is hoped that future investigators will, as information accumulates, go on from where we left off. Both sets of data are con-

tinuous. The population coverage of federal income tax returns has widened enormously in recent years, and as far as one can see, is likely to remain wide for years to come; moreover, a random audit of returns, first made for those filed for 1948, may well become standard practice. Also, the estimates of aggregate income flow to individuals will naturally improve in accuracy and detail. Hence the comparison should, as time passes, yield more reliable estimates of upper group shares and cover a much larger proportion of the total population than the 5 percent that can now be studied continuously since 1919. Continued use of the two sets of data in measuring income shares would not only subject findings for the past to more checks but also provide a basis for even better estimates and analysis for the future.

In these bodies of data, which in the future may have more detail on social characteristics of income recipients, and in the sample studies of income and its disposition, further attention is likely to be paid both to the determinants of income differences and to their consequences upon uses of income for consumer expenditures and savings. Our analysis of such linking of income shares with their antecedents and consequences is necessarily incomplete – partly because data for the earlier years are scarce, partly because there are practical limits to the time and effort that can be spent on a single inquiry. The flow of new sample survey and administrative data in recent years, the accumulation of studies, and rising interest in the problem promise considerable advance in our understanding of how differences in income are related to the characteristics of income recipients and the patterns of income disposition. One of the first tasks in this area is to account for the recent marked decline in upper group shares in income, and to evaluate the likelihood of its persistence.

Tax return data can be compared with *independently* derived estimates of individuals' aggregate incomes for each state as well as for the country as a whole. Though the results are bound to be subject to a wider margin of error than those for the country as a whole the analysis would be worth while. Similar analyses could be undertaken for other countries, thereby extending the range of our observations in space, and perhaps even over time.

b) No matter how accurately we estimate upper group shares in income and how closely we analyze their determinants and consequences, the study is incomplete unless we take account of all groups in the size distribution. Upper groups are part and parcel of society as a whole; their actions and reactions intertwine with those of other groups; and their income position can be understood only within a completely studied whole.

In fact, we operate throughout this study with general notions concerning the entire size distribution; and at many places actually use data for it, even though they are perforce discontinuous and scanty. But the main direction of further inquiry is obviously to extend the estimates and analysis to cover the entire size distribution of income.

The chief difficulty is lack of detailed data for a sufficiently long period. Even the continuous sample studies for recent years are based upon too few cases to permit close analysis; and as one goes back to earlier years, even such limited data are available for only one or two years. A really thorough analysis of the size distribution of income, on a continuous basis and for a period long enough to permit transitory elements to be differentiated from more persistent elements, may not be possible for years to come. And if the study must be limited, it should concentrate on *low* income groups because it is at the extremes that the causes and effects of income size are most conspicuous.

Such a study would be a natural supplementation of this inquiry. Much of what has been found here is directly relevant to an analysis of groups at the bottom of the income scale. Their shares may vary over time much more than those of upper groups, and during the short term of business cycles they would move with the latter and counter to upper group shares. Statistical and social characteristics seem just as relevant for interpreting the low average level of incomes at the bottom of the scale as the high level incomes at the top. Likewise, the temporal stability of savings-income ratios at upper income levels bears with it the complementary consequence of high variability at very low income levels.

In all these respects a study of shares in income and savings of groups at the bottom of the income size distribution would in a sense be a continuation of this investigation, both supplementing and testing our findings. It could not use income tax data effectively; on the other hand, sample field studies are likely to cover these groups more fully. Also, the attention of society, directed at such of these lower groups as need assistance, has yielded and will continue to yield data not forthcoming for either the middle or the upper ranges of the income size distribution.