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ABSTRACT

In the fall of 1965, the College Scholarship Service (CSS) made changes in their procedures for determining support of a student's educational expenses from family assets. The changes were undertaken in recognition of the fact that any method of determining ability to pay for college costs, in order to be logical and equitable, must relate to the total financial strength of the family. This report reviews the treatment of assets in CSS need analysis procedures and recommends changes indicated in light of current economic conditions. (JS)

CSS

Measuring the Financial Strength of Family Assets

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COLLEGE SCHOLARSHIP SERVICE

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MEASURING THE FINANCIAL STRENGTH OF FAMILY ASSETS

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The College Scholarship Service is an activity of the College Entrance Examination Board. Operational services are administered by Educational Testing Service.

Introduction

In the fall of 1965, the College Scholarship Service (CSS) implemented significant changes in the procedures for determining support of a student's educational expenses from family assets. These changes were undertaken in recognition that any method of determining ability to pay for college costs, in order to be logical and equitable, must relate in some manner to the total financial strength of the family. That is, it must not provide separate contributions, one from income and one from assets, but a single expected contribution derived from consideration of income and assets together.

In its revised procedures, the CSS has used the concept and technique of a supplementary income flow from assets to measure family financial strength. The basic rationale for such an approach is that:

> It is generally agreed that the economic position of a family, which determines its ability to contribute to the cost of educating its members, depends on its assets and its income rather than on its income alone. By the same token, a family with a small income and large assets may have the same financial strength as another family with a higher income and few or no assets. The CSS system measures the financial strength provided by various combinations of income and assets by determining the potential supplementary income flow which might be expected from a given value of assets. Since assets generally have been accumulated by deferring the purchase of goods and services from income in the past, they can be considered available to supplement income for purchase of goods in the present and in the future. The CSS system assumes that this supplement to current family income from assets is prorated over the expected lifetime of the parent. While families might not convert their assets in this manner, the technique serves to group families with approximately the same financial strength when both income

and assets are considered together.[1]

The purpose of this paper is to review the current treatment of assets in CSS need analysis procedures and to recommend such changes as seem indicated in light of current economic conditions. The basic concept of conversion of net worth into a supplemental income flow still seems the best approach. Indeed, similar techniques have been used by others in estimating potential income and the redistribution effects on income classes that would result if income and assets were considered together.[2] Some questions have been raised, however, regarding the indecision of certain types of assets.

In a thoughtful paper prepared for discussion by the CSS Committee on Needs Analysis Procedures, Dortha Morrison, Assistant Executive Director of the California State Scholarship and Loan Commission, has raised a question regarding the inclusion of home equity.[3] Her point is that families with income generally in the $8,000 to $15,000 effective income range are treated inequitably in situations in which their net worth consists essentially of equity in a home. When translated into an income supplement, this increases the parental contribution to the extent of disqualifying a student from financial eligibility or substantially reducing the amount of the award he may receive. Home equity, while clearly an asset, is often different from other assets since it does not produce income, is less liquid, and, depending upon the market,

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1 Manual for Financial Aid Officers, 1969 Edition. New York: College Scholarship Service, pp. 5-7.

2 Dorothy S. Projector and Gertrude S. Weiss, "Income-Net Worth Measures of Economic Welfare," Social Security Bulletin, November 1969, pp. 1-4; Burton A. Weisbrod and W. Lee Hansen, "An Income-Net Worth Measure of Economic Welfare," American Economic Review, 58 (December, 1968), pp. 1315-1329; a listing of more empirical studies can be found in James L. Bowman and Gertrude S. Weiss, Suggested Revisions in CSS Needs Analysis Procedures for the Treatment of Family Assets, Princeton: Educational Testing Service. December 1968.

3 Dortha L. Morrison, Treatment of Family Assets Which Are Substantially in Home Equity, Sacramento, California: California State Scholarship and Loan Commission. August, 1970.

may be more prone to depreciation of value than other assets. Finally, it was suggested that a variable home equity exemption, based on family effective income, be incorporated in CSS procedures in those cases where total assets were under $30,000.[4]

It would appear that the proposed allowance against home equity is suggested due to the effects of the current system in certain individual cases without regard to equity and economic considerations. One of the basic canons of any taxing system is that of horizontal equity -- the principle that equals should be treated equally. That is, families and individuals in similar financial circumstances should be treated similarly by public action that adds to or subtracts from their income. Two families having the same dollar income, the same dollar amount of assets, and are identical in all other respects should be expected to make the same contribution toward college costs. The addition of an allowance against home equity would give rise to unequal treatment of equals. The proposal amounts to saying that certain families with assets will be receiving financial aid -- certain families, but not others. You can qualify only if you have your assets in the form of home equity. It can reasonably be questioned whether it is very equitable to make scholarship awards to families with assets in the form of home equity and to make no scholarship award to a similar family who chose to rent and to build up his net worth in a different form. It was the violation of this principle that provided much of the criticism to the former liquid - non-liquid asset approach in CSS procedures.[5]

In terms of economic consideration, it should be noted that homeowners are given somewhat of an advantage over non-home owners in the current CSS methodology. This comes about by not including in our concept of income, the net imputed income from owner-occupied housing. Several different concepts of imputed income from owner-occupied housing have been used by economists, but the most common one is that of imputed net rental income. Net rental income is found by subtracting the necessary

[4] Ibid, pp. 1-4

[5] James L. Bowman, On the Contribution of Family Assets in Needs Analysis Procedures. Baltimore: The Johns Hopkins University. 1964.

expenses of home ownership from imputed gross rental income. Gross rental income, in turn, is defined as the rent paid for comparable housing; and necessary expenses consist of interest on mortgage debt, property taxes, depreciation, repairs and maintenance, and casualty insurance.[6] It is safe to say that the "real" income of the home owner is greater than if he were renting comparable quarters.

In light of the equity and economic consideration that would be raised if specific assets were subject to special treatment, it is suggested that the present concept of "a dollar of assets is a dollar of assets" be retained. However, some changes in the underlying variables and assumptions are required to update for changes that have occurred in the economy since 1968, and may provide some of the relief that has been sought in an indirect way.

Provision of a Retirement Allowance

The CSS system recognizes that one of the major reasons for the accumulation of assets is to provide for retirement needs in the future, since Social Security insurance provides only a portion of the income needed by a husband and wife in the years after retirement. This is accomplished by providing a retirement allowance against net worth in order to protect enough assets to supplement retirement benefits. In order to accomplish this, a logical base must be established for the determination of this allowance. Inasmuch as the established procedures for determining the expected contribution from parents' income is based, in part, on a "moderate" level of living, it is necessary that retirement income and the portion of assets required to produce it be similarly related.

At the present time, the "moderate" retirement level is based on a technique similar to that used by the Social Security Administration for estimating poverty levels for families of various sizes. This level

[6] An excellent discussion of imputed income may be found in: Benjamin Bridges, Jr., Imputed Income from Owner-Occupied Housing. Social Security Administration, Research and Statistics Note No. 3. 1967.

was established using food costs prevailing in the autumn of 1967.[7] Since the last revision to the retirement standard, the "moderate" level of income has been determined by use of the BLS intermediate standard budget. This "moderate" level is well above the poverty level, and has most recently been estimated on the basis of changes in the consumer price index presumed to occur by the fall of 1971.[8]

To be consistent, the same budget estimating procedures used in determining the current "moderate" levels of income should be used in estimating the level of retirement income required to provide a similar moderate standard. The Bureau of Labor Statistics has recently published spring 1969 cost estimates for a "moderate" budget for a retired couple.[9] Using this budget, and updating for consumer price index changes presumed to occur between now and the fall of 1971, would provide a budget estimate of $4,820 for a retired couple, age 65.

Unlike the retired couple, estimates of the cost of an array of goods and services have not been made on a nationwide basis. Efforts to make such an estimate for a one-person family are usually based on ratios to costs for some benchmark family type. These ratios are derived in various ways, but chiefly by determining the income levels at which measures of equivalence are reached, for example, in the percent of income spent for food.

In the CSS procedures first developed in 1964, the ratio of 65 percent of the retired couple's budget was used to determine a "modest but adequate"

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7 James L. Bowman and Gertrude S. Weiss, Suggested Revisions in CSS Needs Analysis Procedures for the Treatment of Family Assets, Princeton: Educational Testing Service, December 1968.

8 James L. Bowman, Some Thoughts and Reflections Regarding Parental Ability to Pay for Higher Education, Princeton: College Scholarship Service, December 1970. For a broader discussion of the use of the BLS three budget standards in CSS procedures, see: James L. Bowman and Gertrude S. Weiss, Expected Contribution Toward Educational Costs: Suggested Revisions for 1969-70, Princeton: Educational Testing Service. September 1969.

9 Three Budgets for a Retired Couple, Spring, 1969 Cost Estimates. Bureau of Labor Statistics, 1970.

budget level for retired persons living alone. This ratio was derived from the 1959 edition of the City Worker's Family Budget and its accompanying family-size equivalency scales. Since that time, various ratios for the one-person unit have been proposed, ranging from 55 percent to 80 percent of the budget costs for an aged couple.[10] Although 55 percent is the latest estimate,[11] there seems to be general opinion that it is too low.[12] On the other hand, the highest ratios (those over 70 percent) should be applied only at the lowest income levels, for as Orshansky points out, "...when incomes are low and consumption is already close to the marginal level, it may cost only a little less for an aged person alone than it does for two."[13] In view of the controversy that seems to prevail as to what is the most appropriate ratio, we would recommend that the need for retirement income for a retired person living alone be kept at 65 percent of the need for a couple. In terms of the estimate that we would propose for a couple ($4,820), this would amount to approximately $3,130.

The average level of annual benefits from Social Security payments to retired workers and/or wives, based on data from the Social Security Administration, is approximately $2,590 for a retired couple, age 65,

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10 For discussion of the various ratios and their underlying assumptions, see Revised Equivalence Scale: For Estimating Income and Budget Costs by Family Type, BLS Bulletin 1570-2, 1968; Retired Couple's Budget for a Moderate Living Standard, Autumn 1966, op. cit.; "Estimating Equivalent Incomes on Budget Costs by Family Type," Monthly Labor Review, November 1960; Mollie Orshansky, Who Was Poor in 1966, Social Security Administration Research and Statistics Note No. 23, 1967; Howard Watts, "The Iso-Prop Index: An Approach to the Determination of Differential Poverty Income Thresholds," Journal of Human Resources, Vol. II, No. 1, 1967; Elliot Wetzler, Determination of Poverty Levels and Equivalent Welfare, Institute for Defense Analysis Research Paper P-2-77, September 1966.

11 Mollie Orshansky, "Living in Retirement: A Moderate Standard for an Elderly City Couple," Social Security Bulletin, October 1968, p. 3.

12 Ibid., p. 16

13 Ibid.

and approximately $1,240 for a widow, age 65.[14] In order to achieve the appropriate moderate level of retirement income ($4,820 for a couple; $3,130 for a single individual), it is necessary to provide supplemental income of $2,230 and $1,890, respectively, from other sources in addition to the Social Security benefits. Under current CSS procedures, a supplemental contribution of $1,450 for the retired couple and $1,320 for the individual is provided in addition to the average Social Security benefits applicable to the appropriate beneficiaries in 1968.[15]

To preserve that portion of family assets needed to provide the retirement income, the CSS makes a variable allowance against net worth. The allowance is the dollar amount required to purchase a fully paid annuity to provide the necessary supplementary income at age 65, assuming that the annuity is purchased at the present age of the primary working parent. Under the proposed revision of retirement income supplements required, the allowance would vary from $10,400 for a male, age 40, to $26,000 for the same man at age 65.

The allowances now in use, and those proposed, are illustrated in the table for selected income levels and family types.

Comparative Retirement Allowances Under Current Procedures Versus Proposed Procedures[16]

Age of Primary Wage Earner	Male Head		Mother, Sole Support	
	Current Allowance	Proposed Allowance	Current Allowance	Proposed Allowance
42	$ 7,100	$11,000	$ 7,800	$11,100
47	8,300	12,700	9,000	12,800
52	9,700	14,900	10,400	15,000
57	11,700	18,000	12,400	17,700
62	14,500	22,300	15,000	21,500
65+	17,500	26,100	17,200	24,700

[14] "Annual Statistical Supplement, 1968", Social Security Bulletin, 1970. Estimates of average benefits for the appropriate beneficiary type contained in table 65 were raised by 15 percent to reflect the increases in retirement benefits authorized by the Social Security Administration of 1969.

[15] Manual for Financial Aid Officers, op. cit.

[16] The allowances represent the net single premium required for an individual of age (x) to purchase an annuity of the appropriate amount per year beginning at age 65. The cost is based on CSO mortality tables of 1958 with commutation columns at 2½ percent plus loading charges of 6 percent.

The differences between current and recommended retirement allowances for a male, head of household, result from changes in the estimated income needed for retirement and in average retirement benefits. Because the moderate retirement income level for both a couple and a retired individual have increased more than the average Social Security benefit has increased, an annual annuity some $780 higher for the couple, and $570 for the individual, must be provided.

Effects of Changes in the Retirement Allowance

Ceteris paribus, the increases in the retirement allowances for family heads will have an effect on expected parental contribution. The change in income supplement for future consumption purposes (due to the increased retirement level for a retired couple) would range from $470 at age 40 to $640 at age 65. The concomitant change in expected parental contribution would depend upon the income level and number of children in a particular family. If we assume a three-child family with an effective income of $10,000, the decrease in the expected contribution would range from $120 at age 40 to $180 at age 65.

In terms of effects on the expected parental contribution from supplementary income flows for consumption purposes, a greater effect occurs when considering retirement plans other than Social Security in determining retirement allowances against family net worth. At the time the current methodology relating to the treatment of family assets was implemented (1965), the average benefits available from retirement plans in addition to Social Security benefits were omitted in computing the amount needed from assets to supplement retirement income. It was pointed out at that time:

> "...Private pensions and employee-benefit plans are an important omission. Those who wish to assess net worth more (rather than less) severely could accomplish this purpose by including the value of the benefits in estimates of retirement. This would be difficult to accomplish on an overall average basis, comparable to Social Security, however. Private pension plans are exceedingly

> varied as to benefits provided. The extent to which the investment of pension funds is protected and the extent to which employees can withdraw funds or keep future retirement rights if they leave the job ... The better approach at this time seems to be to think of the minimum protected retirement income as $3,000 plus expectations from private pension plans. For families participating in desirable plans, the exempted minimum thus becomes more generous. This generosity is not as inequitable as it might appear because most of the more ample pension plans require employee contributions. These deductions, unlike the Social Security tax, were not considered a cost in the budget estimates for current living.[17]

Although private pension plans were still extremely variable with respect to benefits provided and assurance that the employee would ultimately receive those benefits, there was enough evidence of their increasing contribution to retirement income to suggest that they be taken into account.[18]

Adding expectations from private pension plans had an appreciable effect on CSS expected contribution. Approximately 15 percent of the CSS population indicate another provision for retirement in addition to Social Security. Since the majority of these families have incomes of $10,000 or more, eliminating the retirement allowance had a significant effect on parental contribution.

This may be illustrated by considering the following cases which were advanced in describing the inequitable treatment of home owners:[19]

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17 Weiss, Use of Family Maintenance Cost Estimates by the College Scholarship Service, Princeton: Educational Testing Service. 1964, pp. 4-5.

18 Bowman and Weiss, Suggested Revisions in CSS Needs Analysis Procedures for the Treatment of Family Assets, op. cit., pp. 7-11.

19 Morrison, op. cit., pp. 3-4. Both cases have been derived using two-parent, two-child family with a father, age 40-44.

			Parental Contribution
Effective Income	$ 9,000		
Home Equity	$15,000		
Other Assets	0		
Effective Income	$ 9,000		$1,110
Adjusted Effective Income	$ 9,950	(1 retirement plan)	$1,400
Adjusted Effective Income	$10,800	(2 retirement plans)	$1,610
Effective Income	$12,500		
Home Equity	$20,000		
Other Assets	0		
Effective Income	$12,000		$2,040
Adjusted Effective Income	$13,670	(1 retirement plan)	$2,730
Adjusted Effective Income	$14,400	(2 retirement plans)	$3,020

It is readily apparent that when the retirement allowance is eliminated due to two retirement plans, the expected parental contribution is significantly increased. I feel that it is this factor that is giving rise to the concerns which are being expressed as inequitable treatment of home owners.

One of the reasons advanced for the elimination of a retirement allowance in those cases where a family indicated two retirement plans was that the average benefit provided by private pension plans, when combined with the average benefit under Social Security, was approximately equal to the then prevailing moderate level of retirement income. This does not appear to be true at the present time.

The latest information as to benefits provided by private pension plans is for 1968, at which time the average benefit was approximately $1,300.[20] This sum, when combined with an average Social Security payment of $2,590, is some 20 percent less than the amount required to provide a moderate retirement income level for a husband and wife under our proposed revisions. The same ratio of benefits to budget costs exists for the single individual as well. In order to achieve the appropriate moderate level of retirement income for those cases where two retirement

[20] Walter W. Kolodrubetz, "Employee-Benefit Plans in 1968," Social Security Bulletin, April, 1970.

plans are indicated, it is necessary to provide supplemental income of $930. The provision of an allowance against assets to provide this income supplement would range from $4,300 for a male, age 40, to $10,900 for the same man at age 65. For mother sole support cases, comparable allowances would range from $5,180 to $12,140. The effect of the allowance would be to reduce the income flow supplement in such cases, for the provision of a retirement allowance, in effect, exempts a portion of the assets from consideration. Since the cost of providing a moderate retirement budget is rising faster than retirement benefits from private pension and Social Security sources, the provision of such an allowance is required.

Conversion of Discretionary Net Worth to Effective Income

After provision has been made for retirement, the family's remaining assets are considered as discretionary net worth. This is analogous to discretionary income as used on the income side of CSS procedures. Thus, it represents that portion of family net worth which is not required to provide a minimum level of retirement income and can be considered available for the family to use in supplementing income in the current and future time periods. The purpose of the procedure is to take account of the contribution that discretionary net worth makes to ability to pay for goods and services out of current income. Under this approach, the discretionary net worth is converted into an annual income flow by determining the annuity it could provide when based upon the actuarial estimate of the remaining life-years of the head of the household and its expected growth because of the years of working life remaining for the household head. In other words, because wealth has been accumulated in past time periods for use at some time in the future, some portion of it could be assumed to be available for that use in each of the expected remaining future years. Moreover, the expected additional accumulation of wealth depends on the age of the household head.

In the following table, the percentage of discretionary net worth that is assumed to be converted to an annual supplementary income flow under current CSS procedures is shown by age and family status.

Conversion of Discretionary Net Worth
(Percent per year)

Age	Male, Head of Household	Mother, Sole Support
40-44	12	7
45-49	11	6
50-54	10	5
55-59	9	4
60 and above	7	3

These conversion ratios, which, for males, range from 12 percent for the 40-44 age group to 7 percent for the 60 and above, reflect estimates of average expected life-years for various age groups and of average future growth. Future growth is based upon two factors: the appreciation of existing assets through time, which is a function of the interest rate in the economy and economic conditions; and, secondly, the probability of additional savings in later time periods.

In the Federal Reserve Board's Survey of Consumers, it was found that the most important factors explaining the size of wealth are income and age. As it pointed out:

> That there is a strong positive relation between size of wealth and size of current income may be seen in Table A8. Average wealth is estimated to be about $7,600 for consumer units with incomes less than $3,000 and is larger for each successive income level, reaching well over $1,000,000 for those with incomes of $100,000 and over. The relation between wealth and age is also positive for units with head less than 65 years of age. The wealth of young units, head under 35, for example, was about $6,300, on the average, while that for units in the 55-64 age group was more than five times that amount. For

> units headed by persons 65 and over, the average wealth of about $31,000 was smaller than the average for the 55-64 age group, but was still substantially larger than the average of $21,000 for all units.[21]

There are several reasons why it is easier for young than for older families to replace assets that are used. Census data continues to demonstrate that income increases at an increasing rate for the age groups 25-34 through 45-54, and then gradually decreases at the 55-64 age group due to the influence of early retirement after age 55.[22] The amount saved also increases with age through the 45-54 decade, and then decreases with an especially large drop in the 65-and-over bracket.[23] Another factor is the number of working years remaining in which a family can replace any assets it might have used in support of education. A man of 40, for example, has, on the average, an expectation of twenty years' employment, while a man of 55 has an average of twelve.[24] As a result, a younger family is better off in terms of its total financial situation than an older family would be with the same amount of income and wealth.

It does not appear that any changes are required in the rates at which discretionary net worth is converted into supplemental income flows. While incomes continue to rise, the increase appears to be at a decreasing rate. The consumer price index shows no indication of slowing down or reversing itself so that any gains in real income are minimal. Interest rates, for the first time in several years, appear to be on the

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21 Projector and Weiss, Survey of the Financial Characteristics of Consumers, op. cit., p. 6.

22 Income in 1968 of Families and Persons in the United States, Current Population Reports, Series P60, No. 55. December 1967.

23 Judith K. Schoenberg, Gertrude S. Weiss, and Natalie C. Strader, "Size and Composition of Consumer Saving," Federal Reserve Bulletin, January 1967, pp. 32-50.

24 Stuart Garfinkle, "Table of Working Life for Men," Monthly Labor Review, July 1963.

verge of a downward trend. In short, there does not appear to be any substantial economic pressure for change in the conversion rate, either for an increase in the rate or a decrease. We would suggest that the "status quo" be maintained for at least the next year. This would provide time for the economy to give better indications of what the medium long-run trend is apt to be and also to ascertain the direction the Cartter Panel recommendations will take. These could have been implications for the type of conversion structure that should be implemented. The present structure would be inappropriate if a lifetime earnings concept were to be introduced, for its conversion ratio assumes additions to assets from future earnings. In this case, an annuity approach similar to the one suggested by Weisbrod and Hansen would be more appropriate.

Recommendations

It is recommended that the following revisions in the current CSS procedures relative to the treatment of family assets be implemented in order to provide a more responsive and equitable system in light of current conditions in the economy:

1. That the current moderate retirement levels for a retired couple and a retired single individual be changed to provide for a budget of $4,820 and $3,130, respectively, in order to maintain consistency with the moderate level used on the income side.
2. For families indicating only one retirement provision, that current retirement allowances be updated to provide an allowance sufficient to provide for the difference between the revised retirement income levels and current estimates of average Social Security benefits.
3. For families indicating two retirement provisions, that current procedures be revised to provide an allowance sufficient to allow for the difference between the revised retirement income levels and current estimates of average Social Security and private pension benefits.

4. That no changes be made in the present percentage of discretionary net worth that is assumed to be converted to supplemental income flows.
5. No changes in the conversion ratios are considered appropriate at this time.