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# A LEGAL-ECONOMIC ANALYSIS OF KEOGH RETIREMENT PLAN PARTICIPATION BY FARMERS AND OTHER SELF-EMPLOYED PERSONS+

BY DONALD R. LEVI* AND LEROY F. ROGERS**

## I. INTRODUCTION

The basic purpose of this article is to report the results of a study designed to determine and analyze the extent to which farmers participate in self-employment retirement programs authorized by the Internal Revenue Code,[1] and to compare their participation rates and levels with those existing in other industries. Only a thumbnail sketch of the legal requirements for such participation will be outlined here so that the economic implications of the various self-employment retirement plan concepts and rules may be identified and analyzed. This discussion of the economic component will be followed by identification of some of the limitations of the income tax data utilized in the study, and an analysis of the results.

## II. RULES FOR PARTICIPATING IN KEOGH[2] RETIREMENT PLANS

The basic Keogh retirement plan tax treatment available to self-employed persons is as follows. First, self-employed persons are permitted to set aside up to (1) 10 percent of their "earned income," or (2) "$2,500, whichever is the lesser"[3] into a retirement "fund." "Earned income" encompasses that portion of net profits from a

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1. The Internal Revenue Code is hereinafter referred to as the Code. All references are to the Code of 1954, as amended, unless otherwise indicated.

2. Retirement plans for the self-employed are popularly referred to as "Keogh" plans in recognition of Representative Eugene J. Keogh being the primary legislative sponsor.

3. Treas. Reg. § 1.404(e)-1(a)(2) (1963).

trade or business which constitutes a reasonable allowance for personal services actually rendered.[4]

Second, the money placed in this fund is not subject to income tax in the year earned, nor is any income generated by the fund taxable when earned. Rather such monies are not taxed to the participating individual until he receives them—usually after retirement, and in no case can the distribution begin before disability[5] or age 59½,[6] or after age 70½.[7]

Sole proprietors establishing Keogh retirement plans must also make contributions on behalf of full-time employees who have been employed for three years or more. If the business has been operating less than three years, all full-time employees must be covered who have worked for the business as long as the sole proprietor. Employees are considered to work full-time when they work more than 20 hours per week for more than five months out of the year.[8] Each employee has a nonforfeitable right to contributions made on his behalf.[9]

A Keogh plan cannot discriminate in favor of the self-employed person. This means that the percentage contribution of earned income made in behalf of the self-employed person cannot exceed the percentage contribution made on behalf of an employee on the basis of his wages earned.[10]

However, the contributions on behalf of employees required to avoid discrimination may be somewhat less than they first appear because of the possibility of "integrating" Keogh plans with social security. Such integration is available for self-employed plans covering owner-employees if the contributions made on behalf of the owner-employees do not exceed one-third of all contributions.[11] In that case, social security taxes made on behalf of employees by employers may be subtracted from the employee contribution required to avoid discrimination, and the Federal Insurance Contributions Act[12] self-employment tax is likewise subtracted from the owner-employee's contribution.[13]

There are actually four different types of "funds" into which Keogh contributions may be paid (either individually or in com-

4. Treas. Reg. § 1.401-10(c)(3) (1963).
5. *See* Treas. Reg. § 1.401-12(m)(1) (1968); *see* § 1.72-17(f) (1971) for the definition of "disabled".
6. Treas. Reg. § 1.401-12(m)(1) (1968); *see also* Rev. Rul. 65-21, 1965-1 CUM. BULL. 174.
7. Treas. Reg. § 1.401-11(e)(2) (1968). This limitation does not apply to United States Retirement Bonds.
8. Treas. Reg. § 1.401-12(e) (1968).
9. Treas. Reg. § 1.401-12(g) (1968).
10. Treas. Reg. § 1.401-12(f) (1968).
11. Treas. Reg. § 1.401-12(h) (1968).
12. Hereinafter referred to as the FICA.
13. Treas. Reg. § 1.401-12(h) (1968).

bination). They are: (1) a trust, with a bank as trustee; (2) a custodial account, with a bank as custodian; (3) U. S. Retirement Plan Bonds; and (4) insurance contracts. In addition, other methods of funding may be approved by the Internal Revenue Service.[14] If a self-employed individual utilizes more than one of these alternatives, his total contribution to all funding media still cannot exceed the 10 percent or $2,500 maximum limitation.

The trust can use the Keogh contributions and make essentially any kind of investment it chooses, including such investments as stocks and bonds, mutual funds, real estate, etc. Moreover, it is possible for the self-employed individual to retain control over the investment of trust funds.[15]

Custodial accounts can only be invested in mutual funds or insurance contracts, while the latter may involve both fixed and variable annuity contracts. United States Retirement Plan Bonds currently bear interest at the rate of five percent compounded semi-annually, but only earned 4.15 percent compounded semi-annually in 1968.[16]

### A. HISTORICAL PERSPECTIVE

Income earning resources (capital) of individuals may be divided into two distinct categories—human and nonhuman capital.[17] The magnitude and proportion of each capital category held by a given person, *ceteris paribus*, potentially has a profound influence on both his ability to retire at a specified age and his standard of living after retirement.

Those who hold primarily human capital (i.e., employees) have relatively fewer income-earning resources on which to rely during retirement. Indeed, in the absence of private or public planning (e.g., private savings and retirement programs, social security) such individuals may be unable to retire because income is insufficient to sustain the necessities of life. The plight of these individuals has been recognized for some time, as illustrated by the special tax treatment given employee retirement plans in and since the Code of 1939.

Self-employed persons whose income is derived primarily from personal services (e.g., architects, accountants) constitute another group of individuals arguably in a similar position to employees. The composition of their capital also is mostly human in nature, so in theory they potentially face essentially the same income problems

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14. Hereinafter referred to as the Service.
15. Treas. Reg. § 1.401-12(c)(3) (1968).
16. The year for which the Service provided the income tax data utilized in the study.
17. As used herein, the term "nonhuman capital" includes land and all physical resources employed in production processes or enterprises.

with increasing age.[18] In recognition of their allegedly analogous position, somewhat similar retirement plan treatment for self-employed persons was added to the Code by 1962 legislation.[19] In popular usage, these self-employed retirement plans are now referred to as "Keogh plans."

Finally, 1966[20] and 1968[21] amendments made Keogh more attractive to potential participants and extended similar treatment to self-employed individuals for whom (nonhuman) capital is a material income-producing factor (e.g., farmers). This together with potential social security benefits, has substantially broadened retirement alternatives for persons in this category. Since, by definition, they have a higher proportion of nonhuman to human capital than employees and other self-employed persons (i.e., nonhuman capital is a material income-producing factor for this class of the self-employed), they also have one additional retirement alternative—that of living on their assets. Even so, the equity argument of equal treatment was substantially responsible for extending identical Keogh coverage to this class of taxpayers.

Prior to 1967, Keogh was comparatively unattractive to those self-employed individuals for whom capital was a material income-producing factor, primarily because they could treat only 30 percent of their net profit as earned income. Therefore, in order to establish an attractive retirement plan, many individuals simply incorporated their businesses and had the corporation set up a retirement plan which covered them in their status as a corporate employee. Thus, in effect, the previously cited 1966 legislation[22] authorized essentially identical retirement plan coverage for both corporations and sole proprietors.

With the advent of state legislation (roughly a decade ago) authorizing professional (personal service) corporations, many self-employed people whose income came primarily from personal services (e.g., doctors, lawyers) were also incorporating and setting up corporate employee retirement plans. To them this was a more attractive alternative than Keogh, simply because one could deduct only one-half of his contributions to a Keogh plan prior to this same 1966 legislation.[23] Thus, in a very real sense the net effect of the 1966 and 1968 amendments[24] was to neutralize the form of business organization with respect to retirement plans.

18. Although perhaps to a lesser degree.
19. Self-Employed Individuals Tax Retirement Act of 1962, Pub.L. No. 87-792, 76 Stat. 809.
20. Foreign Investors Tax Act of 1966, Pub.L. No. 89-809, tit. II, § 204, 80 Stat. 1577.
21. Act of Oct. 21, 1968, Pub.L. No. 90-607, 82 Stat. 1189.
22. Foreign Investors Tax Act of 1966, Pub.L. No. 89-809, tit. II, § 204, 80 Stat. 1577.
23. *Id.*
24. Act of Oct. 21, 1968, Pub.L. No. 90-607, 82 Stat. 1189; Foreign Investors Tax Act of 1966, Pub.L. No. 89-809, tit. II, § 204, 80 Stat. 1577.

## III. GENERAL ECONOMIC CONCEPTS UNDERLYING SELF-EMPLOYED RETIREMENT PROGRAMS

The tax savings occurring under Keogh plan participation essentially constitute a subsidy being paid to participants for purchasing units of retirement income. The basic idea behind any subsidy is that the payment thereof will cause people or firms to change their production or consumption patterns to more closely conform to the perceived social optima. The subsidy payment (in this case to consumers) changes the effective price of the goods in question (i.e., units of retirement income). In a theoretical sense, the subsidy is being paid to correct a market imperfection (e.g., perhaps caused by imperfect information about retirement alternatives) by increasing purchases of units of retirement income.

To the extent that Keogh participation merely postpones payment of taxes until income is actually received (usually after retirement), it can be viewed as an interest-free loan from the government in the amount of the deferred taxes. This portion of the Keogh subsidy is best characterized as a credit subsidy, with the benefit realized being that of simple deferral.

However, because other income will likely be lower and exemptions and deductions higher when Keogh funds are distributed, the total taxes paid may be less than with nonparticipation. To this extent, participation in Keogh is equivalent to a tax subsidy. In total then, the subsidy enjoyed by participation is conceptually the sum of two distinctly different types of subsidies.

### A. GAINERS AND LOSERS UNDER KEOGH

There are gainers and losers with almost any governmental policy or program. The obvious losers as a result of Keogh are those taxpayers whose relative share of the total tax burden is increased. The obvious gainers are the self-employed individuals who participate (presumably none lose by participation; otherwise, assuming perfect knowledge, they would not participate).

However, depending on the price effects, or incidence, there may be others who share substantially in the benefit from the subsidy. Here the *impact* of a subsidy should be distinguished from its *incidence*. The impact refers to whom the subsidy is paid, which in this case are the self-employed purchasing units of retirement income. The incidence, on the other hand, refers to the ultimate division of the subsidy.

Congress is certain of the incidence at the time it authorizes the subsidy. But on occasion it may badly misjudge the ultimate division of the subsidy and unintended results may occur. Ignoring the secondary beneficiaries of the increased spending resulting from

Keogh over time (i.e., the "multiplier" effect), the initial distribution of the Keogh subsidy can be theoretically determined by the following ratio:

$$\frac{\text{Elasticity of supply}^{25}}{\text{Elasticity of demand}} = \frac{\text{Buyer benefit}}{\text{Seller benefit}}$$

where the buyers are the self-employed purchasing units of retirement income and the sellers of same are the life insurance companies, mutual fund companies, Treasury Department, and purveyors of other investment alternatives permitted under the law. These sellers clearly gain from Keogh, as do the secondary beneficiaries with whom the sellers are able to do business because of their Keogh sales.

A redistribution of income often results from governmental programs, and such is likely the case with Keogh. This redistribution may favor specific income levels, occupations, or geographical regions. One of the objectives of this study was to identify how this redistribution has occurred by identifying participants by income level, industry and family size.

### B. JUSTIFICATION OF KEOGH

A major justification of Keogh is that it corrected "indefensible discrimination against self-employed persons."[26] Though not within the purview of the current research, if the self-employed have a higher level of nonhuman capital available for use during retirement than do employees, whether the alleged discrimination is indeed "indefensible" appears subject to serious question.

Viewed from the traditional employer-tax deductibility standpoint, it is clear that retirement plan contributions made on behalf of employees, whether Keogh or employee plans, would be deductible in the absence of retirement plan provisions on the theory they are an "ordinary and necessary" business expense.[27] The same is not true, however, for Keogh contributions made on behalf of self-employed persons. Thus, from the standpoint of what traditionally has been considered to be a properly deductible expense, only the contributions for the self-employed appear susceptible of being classified as concessionary in nature.

A second justification sometimes advanced in favor of retirement plans in general is based in equity and states simply that the fairest tax system is one which spreads taxable income evenly

25. The elasticities of supply and demand are used by economists to measure the responsiveness of the changes in quantities placed on and purchased from the market when given changes in price occur. The data required to compute them was not available in this study.

26. R. L. GOODE, THE INDIVIDUAL INCOME TAX 116 (1964).

27. Goetz, *The Myth of Special Tax Concessions for Qualified Pension Plans*, 51 IOWA L. REV. 561 (1966).

throughout a taxpayer's lifetime.[28] This argument is analogous to the one supportive of the Code income averaging provisions,[29] recognizing that under the progressive system those with large variations in income generally pay larger total taxes over time than those with constant (but equal average) income.

The soundness of the income-spreading principle is recognized in many countries both for private contributory retirement plans[30] and for national compulsory old-age pension plans.[31]

There appears to be at least one, perhaps substantial, counterargument to the above noted support of the income-spreading principle. Simply stated, given that spreading income more or less equally over one's lifetime will minimize his total tax bill as compared to one with more extreme variations in income, taxation under income-spreading does not necessarily correspond with ability to pay. Rather, if total income taxed in low income years is below the level of disposable income required to cover necessities, participation in Keogh may cause substantial hardships to some individuals. This very situation could well exist after retirement.

### C. SOME IMPLICATIONS OF THE CONGRESSIONAL DECISION TO AUTHORIZE KEOGH PLANS

One could construct a logical economic argument[32] that the Congressional implementation of Keogh plans for the self-employed could be interpreted as implying the following.

First, the selection for subsidization of this group of people occurred only after identifying and evaluating the benefits and costs associated with subsidization of other groups. The welfare implications of various legislative alternatives should be recognized, since different people and groups may be gainers or losers under each alternative course of action.

Second, once the decision was made to subsidize self-employed persons' participation in retirement plans, the efficiency of the alternative subsidy delivery mechanisms should be examined. Again, it should also be recognized that different persons and groups may be gainers or losers when different delivery mechanisms are employed.

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28. Peterson, *Federal Taxation in Relation to Lifetime Income Spreading and the Complementary Roles of the Public and Private Retirement Programs,* TAX FOUNDATION'S 18TH NATIONAL CONFERENCE, pt. II (1967).

29. INT. REV. CODE of 1954 §§ 1301-1305.

30. Including Canada, Belgium, France, Germany, Netherlands, and the United Kingdom. *See* note 28 *supra,* at 14.

31. Including Austria. Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Japan, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland, and the United Kingdom. Hasenberg, *Income Tax Treatment of Old Age Pensions Here and Abroad,* 29-8 SOCIAL SECURITY BULL. 10 (1966).

32. Perhaps it might be more proper to class this as an "idealistic argument".

Additionally, the government is faced with the problem of determining the optimal level of the subsidy. In the unconstrained case, basic economic theory tells us this should be at the level where marginal benefits equal marginal costs (providing marginal costs are increasing). However, in practice this may present a problem which may have to be solved somewhat arbitrarily, simply because an individual's decision to participate logically will be based on his *own* marginal benefits and costs rather than those of the government.

At the government level, three potential categories of Keogh associated costs can be identified. One is the *budgetary* cost. It is related to the decrease in current taxes resulting from participation in Keogh (this includes tax decreases associated with current deductions for participation plus the taxes avoided on nontaxable income generated by Keogh "funds").[33] Here the cost to the government is the cost of borrowing such decrease in tax revenues, or the bond rate multiplied by the decrease in tax revenue.[34]

A second governmental cost is the *administrative* cost of delivering the subsidy. Here the basic consideration is the cost of additional Internal Revenue Service personnel requirements for administering Keogh.

Finally, participation in Keogh isolates monies in the retirement fund which are not available for use by the business firm, and the unavailability of this money (together with the inability to borrow) may prevent the firm from attaining additional economies of size and higher taxable incomes in future years. To the extent Keogh participation does cause inefficient resource utilization and lower taxable income, the government may incur an additional cost in the form of decreased tax revenues in future years. Consumers likewise may suffer here, if the higher costs associated with inefficient resource utilization under Keogh participation are passed on to them in the form of higher product and consumer goods prices.

In theory, of course, it is clear that an individual participant could reach a higher level of satisfaction with a cash grant than with the subsidy paid for participation in Keogh.[35] However, *community* satisfaction may be higher with Keogh than with the cash grant, at least to the extent we are willing to assume that Congressional action and our political system accurately reflect community desires.

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33. Since Keogh participants are purchasing units of retirement income and the purchase thereof constitutes income to the sellers of same, and since such sellers may spend a portion thereof buying goods and services from secondary beneficiaries, it is questionable whether a net budgetary cost actually results from Keogh.

34. Note that this cost need not equal the benefit to participants, the credit subsidy portion of which is based on the individual's cost of borrowing.

35. Simply stated, this is because the individual is free to buy whatever goods he chooses with a cash grant, but in order to get the Keogh subsidy he must purchase a particular good (unit of retirement income) which may have less personal utility to him than some other goods.

### D. THE INDIVIDUAL DECISION TO PARTICIPATE

As previously alluded to, the self-employed individual's decision regarding Keogh participation should be made only after determining that total benefits of participation are greater than or equal to total cost thereof. Ideally, the level at which he participates should be determined by equating marginal benefits and marginal costs.[36]

The major benefits to the individual Keogh participant include:

1. Deferral of tax liability until future years. As previously noted, this essentially constitutes an interest-free loan to the self-employed participant, a measure of the benefit of which is the interest rate at which the participant can borrow.
2. Complete or partial avoidance of tax liability. This may result because of additional deductions and/or exemptions available after age 65, and because the absence of other income makes Keogh distributions subject to lower marginal rates of taxation.
3. Another benefit, although not readily susceptible to quantification, is the personal satisfaction an individual may enjoy because he believes he has adequate income (in combination with other sources) for retirement security.

Some costs which the self-employed individual may incur by reason of Keogh participation include:

1. Inefficient resource utilization with the firm, to the extent that participation takes away funds from the firm necessary for the achievement of additional economies of size.[37]
2. Participation may deny the opportunity to make additional, and in some cases more lucrative, extra-firm investments.
3. Participation may so diminish disposable income so as to require either a decrease in, or borrowing for, current consumption.

### E. SOME SPECIFIC KEOGH CONCEPTS AND RULES

#### 1. *Coverage of Employees*[38]

As previously noted, a Keogh plan must include employer con-

36. In practice, this basic theoretical principle may be difficult to apply because some costs and benefits are hard to identify and quantify.

37. Note however that participation essentially constitutes forced capital accumulation. To the extent that such capital accumulation is required for investment, to the extent that investment is required for economic growth, and to the extent that economic growth is desired, participation may have important macro implications.

38. While the study being reported was designed to examine and compare Keogh plans covering employees with plans not covering employees, the results thereof were not available when this manuscript was being prepared. Thus, the theoretical expectations are discussed here, and those readers interested in the actual results of this portion of the study may direct their inquiries to the authors.

tributions on behalf of all employees who have been employed three years or more or, if less than three years, have been employed as long as the self-employed persons covered by the plan. Since the law prohibits lowering an employee's salary near or after the time he becomes eligible for coverage, the initial effect of including employees in the plan will be to increase production costs of the business firm. Presumably, to the extent that employee wages may be increased less than proportionately to gains achieved by other laborers outside the firm, over time it may be possible for this cost to be passed on to the employee.[39]

Thus, to the extent that Keogh does increase production costs, the firm may be placed in a disadvantageous position with respect to competition with other firms, depending on the competitive nature of the industry and the price elasticity of demand for its output. If it is a monopolist or oligopolist, it may, of course, be able to pass on to its customers a portion of these increased production costs. If a perfect competitor, in theory this increased production cost could be sufficient to force exit from the industry. The price elasticity of demand, of course, is important because it measures responsiveness of quantities taken as price changes. If the demand is elastic and prices increase as hypothesized, total revenue will decrease and the profit position of the firm will worsen.

With respect to the changing labor environment being faced by agricultural firms, Keogh also may be viewed as an additional employee benefit brought about by modern society, and moreover simply as another cost of doing business. From a theoretical standpoint, since Keogh causes an increase in the cost of (covered) labor, the firm would be expected to decrease the quantity of labor hired.

2. *Vesting of Retirement Plan Benefits in Employees*

The law provides that all contributions made on behalf of employees are vested in them. That is, if they leave their current employment, they are still entitled to the retirement benefits enuring because of contributions made on their behalf. Therefore, as compared to the alternative of nonvested rights, the effect of Keogh is to increase the mobility of labor, thereby permitting it to flow more freely to its highest and best use.

From the standpoint of the firm (self-employed individual), no doubt a preference would exist, if allowed by law, to cover only the highly-skilled employees, using a nonvested plan. This would give

39. This may not be universally true. Some employees may insist on a certain minimum take-home pay, regardless of the size of the Keogh contribution being made on their behalf, because they have a strong need or preference for current consumption. To the extent this preference predominates in the labor market, it may be possible to pass only a portion of the cost of employee coverage to the employees themselves.

such employees an incentive to stay with the firm, and would help assure that the firm did not incur the costs of training employees who would then accept employment elsewhere.

However, Keogh prevents such preferential treatment of highly skilled employees, and specifically requires that all employee Keogh rights be vested. Thus, the firm must look elsewhere for incentives to assist in the retention of employees.

### F. INTEGRATION OF KEOGH WITH SOCIAL SECURITY

As noted earlier, Keogh plans may be integrated with social security if the annual contributions made on behalf of the self-employed do not exceed one-third of all contributions (i.e., those made for self-employed persons plus those made for employees). In that case, while the discrimination rules prohibit making a smaller percentage contribution for employees than for the self-employed (technically called) "owner-employees," employer social security payments on behalf of employees may be considered a part of such percentage contribution (self-employed contributions must also be adjusted for FICA).

As a practical matter, the one-third of total contributions maximum limitation tends to bias Keogh participation toward opposite ends of the continuum. At one end is the firm which has no covered employees; at the other end is the firm (or industry) which is relatively labor intensive and for which the potential of integration with social security lowers (or in some cases completely avoids) the costs of employee coverage. The firms whose cost structures are increased most by the requirement of employee coverage are those which have covered employees, but whose labor force is too small to permit integration with social security.

Figure 1 illustrates the relationship between (1) the costs of covering the minimum number of employees required to permit integration, and (2) the level of earned income of the self-employed person for the years 1968, 1973, and 1987.[40] The point at which the curves intersect the horizontal axis indicate the level of earned income required to achieve a zero net cost for covering employees under integrated plans.

The actual Keogh contribution made on behalf of a self-employed person under an integrated plan will be less than $2,500 because of the FICA adjustment as shown in Table 1. This forced decrease level of Keogh participation constitutes another cost to him, the magnitude of which depends on the differential in returns between par-

40. Respectively, the year for which the income tax data used in the study were obtained, the current year, and the first year for which the highest rates now set by law will apply.

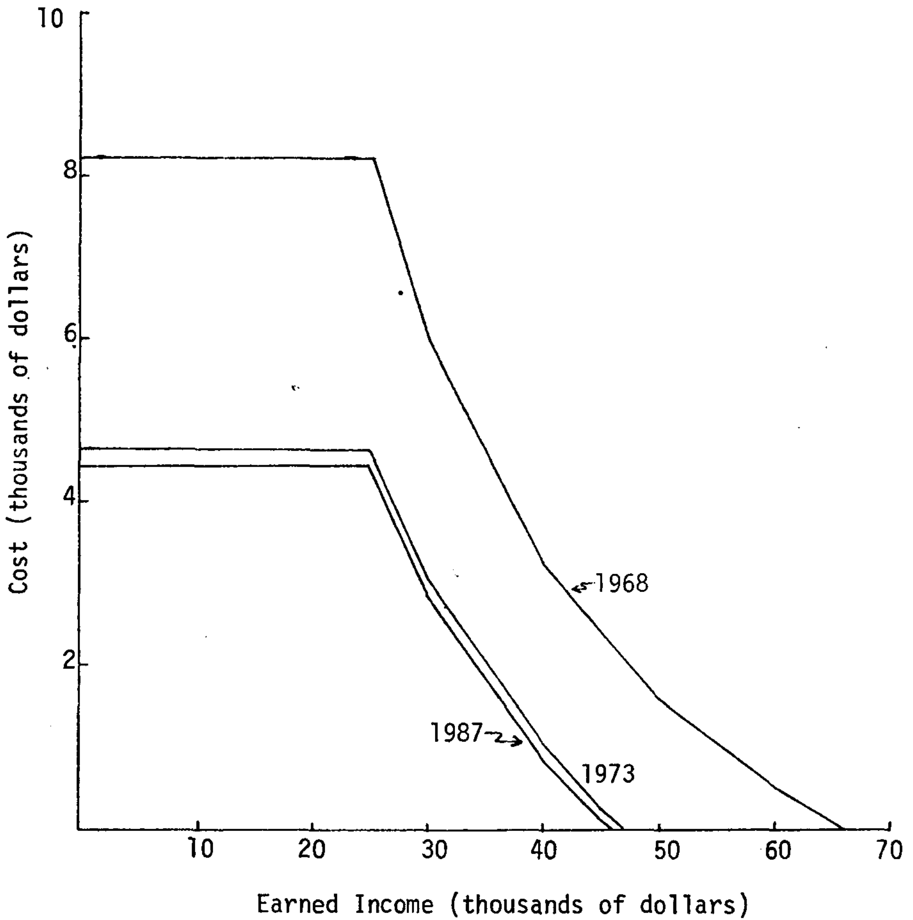


Figure 1. Employer cost of covering the minimum number of employees required for intergrating Keogh plans with social security.*

ticipation and nonparticipation. The decrease in actual participation levels over time is caused by (1) the increase in social security rates, and (2) the increase in the base income to which social security taxes apply.

## G. INVESTMENT ALTERNATIVES

As previously noted, several alternative investments may be made with Keogh contributions, including life insurance, U.S. Retirement Plan Bonds, mutual funds, and/or general investments. As

*The assumptions behind this figure are that each employee's salary equals the maximum wage to which social security taxes apply, and that the self-employed individual makes the maximum possible Keogh contribution on his own behalf ($2,500).

one would expect, those yielding the highest returns generally have a higher degree of risk associated with them.[41] Those viewing Keogh as a source of retirement security will probably prefer the lower but relatively certain returns, while those viewing it as another investment alternative may prefer to take greater risks. Since one need not retire to receive Keogh benefits (they begin at the age designated in the plan, regardless of the fact of retirement), many may use Keogh as a deferral enabling investment.

## IV. NATURE AND LIMITATIONS OF THE DATA

The Data used in the study being reported on were tabulated under special contract with the Internal Revenue Service from their records of 1968 sole proprietor income tax returns. The Service did not furnish either actual returns or totals of actual returns. Rather, in order to avoid disclosure and for practical reasons associated with data retrieval costs, the data they provided were sample estimates of population totals.

Table 1. Acutal self-employed Keogh contributions under integrated plans for selected years.

| Year | Maximum allowable Keogh contribution* | Employer social security tax† | Actual Keogh contribution |
|---|---|---|---|
| 1968 | $2,500 | $ 452 | $2,048 |
| 1973 | 2,500 | 794 | 1,706 |
| 1987 | 2,500 | 906 | 1,594 |

*Earned income is assumed $25,000.
†Rounded to the nearest dollar.

In interpreting the results of any study, it is essential to recognize any inherent limitations of the data. Thus, some salient facts about the data will be briefly outlined here.

The Service only sampled returns filed by sole proprietors. Thus, individuals operating their businesses as either partnerships or corporations were excluded from the study.

In order to facilitate comparisons of various taxpayer groups, data were obtained for each of the following industries:

1. farming;
2. other agriculture, forestry and fisheries;
3. mining;
4. general construction;
5. manufacturing;

41. Stubblefield, The Keogh Act: A Farmer's Retirement Plan, 1969 (unpublished M.S. thesis at University of Missouri).

6. transportation;
7. wholesale and retail trade;
8. finance, insurance and real estate;
9. services; and
10. all-industry totals.

To the extent possible, the Service used 1967 Office of Management and Budget standard industrial classifications as guidelines in delineating industries.[42] Where a specific tax schedule contained activities in more than one industry, the entire schedule was classified in the industry showing the largest percentage of total receipts.[43] Information about specific combinations of industries was not recorded.

The data for each industry was stratified on the basis of adjusted gross income, using five different income levels as well as one strata for nontaxable returns. Within each strata, data were obtained on certain measurable characteristics of individual taxpayers, including adjusted gross income, taxable income, total deductions, number of exemptions, and amount of self-employed retirement deduction. This information was derived for both Keogh participants and non-participants.

The majority of the data was obtained from the Service-recorded aggregated responses found on Form 2950SE, with additional information coming from Form 1040 and Schedules C and F. Here it should be noted that only "pension or annuity" type plans were covered; and Service did not record data about profit sharing plans.

## V. ANALYSIS OF RESULTS

### A. COMPARISONS OF TOTAL RETURNS FILED

In 1968, sole proprietors[44] filed 8,473,586 returns, of which 6,523,597 were taxable. From the standpoint of returns filed, farmers constituted the largest sole proprietor industry, filing 2,789,469 total and 1,886,994 taxable returns.

With respect to total taxable returns, Table 2 shows that farmers and services filed almost identical proportions, with 28.93 and 28.83 per cent, respectively. Wholesale and retail trade was the only other industry in two-digit figures, with 21.19 per cent.

As illustrated in Table 2, farming had a relatively large proportion of total sole proprietor returns at lower adjusted gross income

42. STATISTICS OF INCOME 1968—BUSINESS INCOME TAX RETURNS, DEP'T OF TREASURY, INTERNAL REVENUE SERVICE, PUB. NO. 438 (1-72), 253 (1969).
43. *Id.*
44. It is emphasized that this study only involved sole proprietors. No data was obtained on partnerships, or on either subchapter C or S corporations. This should be kept in mind when interpreting the results.

(AGI), with such proportion decreasing as income increased. This trend held true until reaching the highest AGI level examined ($50,000 and over), at which point the proportion of returns filed by farmers increased slightly to 15.48 per cent.

It is interesting to contrast the relative proportion of returns filed by the services industry with that filed by farms (see Table 2). Services progressively increased their share from 23.95 per cent of the lowest positive AGI level to 55.70 per cent where AGI was $50,000 or more. Attorneys, doctors, and other professional people are, of course, a part of the services industry.

Table 2. Percent* of total returns filed by various income levels, by industry.

| | Total taxable returns | AGI less than $10,000 | AGI $10,000-17,499 | AGI $17,500-24,999 | AGI $25,000-49,999 | AGI $50,000 or more | Non-taxable returns |
|---|---|---|---|---|---|---|---|
| Farms | 28.93 | 34.32 | 24.60 | 15.98 | 12.61 | 15.48 | 34.32 |
| Other agriculture, forestry & fisheries | 1.77 | 1.91 | 1.75 | 1.35 | 1.13 | 1.22 | 1.91 |
| Mining | .40 | .20 | .33 | .67 | 1.28 | 3.73 | .20 |
| General construction | 7.84 | 9.04 | 7.12 | 5.40 | 3.55 | 2.30 | 9.04 |
| Manufacturing | 1.90 | 1.67 | 2.18 | 2.41 | 2.30 | 2.08 | 1.67 |
| Transportation | 2.92 | 3.25 | 2.98 | 1.85 | 1.29 | .92 | 3.25 |
| Wholesale & retail trade | 21.19 | 21.16 | 23.01 | 20.88 | 17.28 | 10.39 | 21.16 |
| Finance, insurance & real estate | 6.23 | 4.50 | 7.83 | 11.73 | 9.72 | 8.18 | 4.50 |
| Services | 28.83 | 23.95 | 30.21 | 39.73 | 50.84 | 55.70 | 23.95 |

*May not total to 100 because of rounding.

Finally, farmers filed 34.32 per cent of the 1968 nontaxable sole proprietor returns. Services ranked second in this category, with 23.95 per cent.

B. COMPARISONS OF TOTAL KEOGH RETURNS FILED

Of the total returns filed by sole proprietors in 1968, 2.90 percent participated in Keogh. Relative industry Keogh participation rates for various AGI levels can be found in Table 3. It shows that the services industry is by far the biggest Keogh participant, filing 62.30 per cent of all taxable Keogh returns and 86.81 per cent of all such returns reporting AGI of $50,000 or more.

Farms, on the other hand, only filed 9.48 per cent of taxable Keogh returns, and only 3.87 per cent of those with $50,000 or more AGI. This huge differential between farms and services occurred despite the fact that their relative proportions of *total* taxable returns (Keogh and non-Keogh) were almost precisely equal (28.93 per cent for farms, 28.83 per cent for services, as set out in Table 2).

A plausible explanation for this disparagement is that people in the services industries, as compared to farmers, have more perfect knowledge about tax provisions potentially beneficial to them. This premise has particular appeal for that portion of the services industry composed of attorneys and accountants.

In addition, Table 3 clearly shows that a relatively larger proportion of total Keogh participants are composed of farmers at low rather than high AGI levels. The exact opposite pattern is observed with respect to services.

C. ADJUSTED GROSS INCOME

Table 4 compares the mean level of adjusted gross income (AGI) per taxable return[45] for Keogh participants and nonparticipants, by industry. For total taxable returns, the mean AGI level was decidedly higher for Keogh farm participants than nonparticipants ($19,540 v. $9,600) and this same pattern was observed in all other industries. This is to be expected, since those with lower incomes must of necessity use a larger proportion of their income for current family consumption.

Table 3. Per cent* of Keogh returns filed per industry by income level.

| | Total taxable returns | AGI less than $10,000 | AGI $10,000-17,499 | AGI $17,500-24,999 | AGI $25,000-49,999 | AGI $50,000 or more | Non-taxable returns |
|---|---|---|---|---|---|---|---|
| Farms | 9.48 | 20.88 | 17.48 | 7.27 | 3.69 | 3.87 | 48.29 |
| Other agriculture, forestry & fisheries | 1.81 | 3.07 | 2.12 | 3.05 | 1.03 | .66 | 0.0 |
| Mining | .22 | 0.0 | .21 | .17 | .11 | .68 | .05 |
| General Construction | 2.75 | 9.69 | 3.41 | 2.08 | .91 | .26 | 1.84 |
| Manufacturing | .98 | 1.23 | 1.98 | .68 | .76 | .32 | 2.33 |
| Transportation | .77 | 1.51 | 1.71 | 1.02 | .11 | .11 | 3.88 |
| Wholsale & retail trade | 14.69 | 20.94 | 23.59 | 18.39 | 10.36 | 3.94 | 14.93 |
| Finance, insurance, & real estate | 6.99 | 6.42 | 9.40 | 10.47 | 5.97 | 3.35 | 1.98 |
| Services | 62.30 | 36.26 | 40.10 | 56.86 | 77.07 | 86.81 | 26.75 |

*May not total to 100 because of rounding.

With respect to participants, the farm mean AGI level ranked seventh among the nine industries examined, and was some $12,000 below the mean for all industries. Farms also ranked seventh among nonparticipants, with their mean AGI of $9,600 falling roughly $1,900 below the mean for all industries.

Mining had far and above the highest mean AGI levels for both

45. Note that these are the means for *taxable* returns only; the means would be decidedly lower if *all* returns (including those which were nontaxable) were analyzed.

Table 4. Mean adjusted gross income* per return and relative rank for Keogh participants and nonparticipants, by industry, for total taxable returns.

| | Participants | Rank | Nonparticipants | Rank |
|---|---|---|---|---|
| Farms | $19,540 | 7 | $ 9,600 | 7 |
| Other agriculture, forestry & fisheries | 21,860 | 4 | 10,410 | 6 |
| Mining | 73,230 | 1 | 43,100 | 1 |
| General construction | 14,550 | 9 | 9,330 | 9 |
| Manufacturing | 20,800 | 6 | 12,830 | 4 |
| Transportation | 14,890 | 8 | 9,510 | 8 |
| Wholesale & retail trade | 21,200 | 5 | 10,830 | 5 |
| Finance, insurance & real estate | 25,560 | 3 | 14,810 | 2 |
| Services | 37,740 | 2 | 13,560 | 3 |
| All industries | 31,540 | | 11,470 | |

*Rounded to nearest ten dollars.

participants and nonparticipants ($73,230 v. $43,100), indicating that the few sole proprietors involved in mining have relatively large incomes.

Table 5 contains the AGI share ratios for Keogh participants, by industry. A share ratio just tells whether participants received more or less than their proportional share of industry AGI. A value greater than one indicates receipt of greater than a proportionate share, while the opposite holds true for a value less than one.[46]

Computed participants' share ratios were greater than one in all industries until the $25,000 AGI level was reached, where the

Table 5. Adjusted gross income industry share ratios for Keogh participants, by income level.

| | Total taxable returns | AGI less than $10,000 | AGI $10,000-17,499 | AGI $17,500-24,999 | AGI $25,000-49,999 | AGI $50,000 or more | Non-taxable returns |
|---|---|---|---|---|---|---|---|
| Farms | 2.02 | 1.19 | 1.06 | 1.00 | 1.03 | .68 | 3.29 |
| Other agriculture, forestry & fisheries | 2.03 | 1.06 | 1.23 | 1.04 | 1.02 | .70 | — |
| Mining | 1.68 | 0.0 | 1.18 | 1.16 | 1.18 | .69 | — |
| General construction | 1.55 | 1.30 | 1.01 | 1.02 | 1.03 | .97 | 2.02 |
| Manufacturing | 1.61 | 1.08 | 1.03 | 1.00 | .93 | .86 | 5.08 |
| Transportation | 1.56 | 1.07 | 1.06 | 1.00 | .96 | .69 | 4.30 |
| Wholesale & retail trade | 1.92 | 1.22 | 1.07 | 1.03 | .99 | .92 | 3.84 |
| Finance, insurance & real estate | 1.69 | 1.21 | 1.07 | 1.01 | 1.02 | .83 | 14.66 |
| Services | 2.50 | 1.21 | 1.04 | 1.03 | 1.06 | .89 | 3.27 |
| All industries | 2.62 | 1.22 | 1.06 | 1.03 | 1.06 | .81 | 3.72 |

46. For example, in an industry with ten percent of its taxpayers participating in Keogh, if such participants claim ten percent of the industry AGI, they receive exactly their proportionate share and have a share ratio of one.

share ratios of manufacturing, transportation, and wholesale and retail trade fell below one. Moreover, share ratios were less than one for *each and every industry* when the $50,000 AGI level was reached, indicating that the mean AGI level of nonparticipants was exceeding that of participants.

Since the theoretical Keogh participation advantages generally increase with increasing income,[47] the fact that participants' AGI share ratios are less than one at high income levels may have important implications. One possible explanatory hypothesis here is that this taxpayer group generally tends to expect long-run non-Keogh investment after-tax returns to exceed Keogh investment after-tax returns. This hypothesis has particular appeal where indivisibilities and institutional impediments are associated with non-Keogh investments which enjoy economies of size.[48]

### D. TAXABLE INCOME

The 1968 mean level of taxable income (TI) per sole proprietor taxable return[49] can be found in Table 6. The relative rankings for mean TI are quite similar to those for mean AGI, with farms again ranking seventh of the nine industries examined for both participants and nonparticipants. Mean farm participants' TI was $15,000, while nonparticipants' mean TI was only $6,270. These means were again below those for all industries, which were, respectively, $24,600 and $7,610.

### E. PERSONAL EXEMPTIONS

The mean number of exemptions per return was used in the study as a proxy for family size. As shown in Table 7, there would appear to be no substantial variations among industries with respect to participants filing taxable returns, or for nonparticipants filing either taxable or nontaxable returns.

However, to the extent that the number of exemptions are a valid proxy for family size, several industries were characterized by relatively larger families with respect to Keogh participants filing *nontaxable* returns. For farmers participating in Keogh, the mean number of exemptions per taxable and nontaxable returns were, respectivelly, 3.60 and 5.49. This suggests that family size may be an important variable in reducing taxable income for farmers participating in Keogh.

An interesting pattern also emerges when one compares the

47. Because the differential between marginal taxation rates before and after retirement would be anticipated to be greatest for income taxpayers.

48. In its simplest form "economies of size" just means that large firms may by their nature have cost and profit advantages over smaller firms.

49. *See* note 45 *supra.*

Table 6. Mean taxable income* per return and relative rank for Keogh participants and nonparticipants, by industry, for total taxable returns.

| | Participants | Rank | Nonparticipants | Rank |
|---|---|---|---|---|
| Farms | 15,000 | 7 | 6,270 | 7 |
| Other agriculture, forestry & fisheries | 16,550 | 4 | 6,590 | 6 |
| Mining | 56,960 | 1 | 32,500 | 1 |
| General construction | 10,290 | 9 | 5,700 | 9 |
| Manufacturing | 15,700 | 6 | 8,830 | 4 |
| Transportation | 10,710 | 8 | 5,970 | 8 |
| Wholesale & retail trade | 16,160 | 5 | 7,080 | 5 |
| Finance, insurance & real estate | 19,330 | 3 | 9,990 | 2 |
| Services | 29,800 | 2 | 9,260 | 3 |
| All industries | 24,600 | | 7,610 | |

*Rounded to nearest ten dollars.

mean number of exemptions per taxable return by income level (see Table 8). In most industries the mean number of exemptions (family size) per return increases with increasing income. This is particularly true in the services industry, where an increase in number of exemptions is observed at each successively higher income level. One can posit an interesting hypothesis for this general relationship—that, at least where taxable returns are involved, perhaps those with higher incomes believe they can support larger families and therefore have more children. The ages of taxpayers may also be

Table 7. Mean number of exemptions per return and relative rank for Keogh participants and nonparticipants, by industry, for total taxable and nontaxable returns.

| | Participants | | | | Nonparticipants | | | |
|---|---|---|---|---|---|---|---|---|
| | Taxable | Rank | Nontaxable | Rank | Taxable | Rank | Nontaxable | Rank |
| Farms | 3.60 | 7 | 5.49 | 2 | 3.28 | 9 | 3.70 | 4 |
| Other agriculture, forestry & fisheries | 3.90 | 3 | .19* | 9 | 3.45 | 4 | 3.57 | 5T |
| Mining | 3.82 | 4 | 5.00 | 3 | 3.51 | 1 | 3.57 | 5T |
| General construction | 3.80 | 5 | 2.08 | 8 | 3.50 | 2 | 3.90 | 2 |
| Manufacturing | 3.96 | 2 | 3.54 | 6 | 3.40 | 6 | 3.72 | 3 |
| Transportation | 3.45 | 9 | 4.00 | 5 | 3.44 | 5 | 3.93 | 1 |
| Wholesale & retail trade | 3.59 | 8 | 4.19 | 4 | 3.38 | 7 | 3.38 | 7T |
| Finance, insurance & real estate | 3.64 | 6 | 6.12 | 1 | 3.48 | 3 | 3.38 | 7T |
| Services | 4.05 | 1 | 3.38 | 7 | 3.34 | 8 | 3.34 | 9 |
| All industries | 3.90 | | 4.58 | | 3.36 | | 3.58 | |

*One explanation of this illogical mean exemption level is that the estimate was dealing with extremely small numbers in this industry.

important in explaining this relationship. For example, the lowest income level may well contain relatively large numbers of very old and very young families which are small in size.

Table 8. Mean number of exemptions per return for Keogh participants and nonparticipants, by industry and adjusted gross income level.

| | AGI less than $10,000 | | AGI $10,000-17,499 | | AGI $17,500-24,999 | | AGI $25,000-49,999 | | AGI $50,000 or more | |
|---|---|---|---|---|---|---|---|---|---|---|
| | P* | NP† | P* | NP† | P* | NP† | P* | NP† | P* | NP† |
| Farms | 2.91 | 3.10 | 3.57 | 3.77 | 4.28 | 3.62 | 4.15 | 3.73 | 4.65 | 3.73 |
| Other agriculture, forestry & fisheries | 1.60 | 3.21 | 4.00 | 3.88 | 4.88 | 3.78 | 4.90 | 4.40 | 5.31 | 4.10 |
| Mining | 3.13 | 2.83 | 2.00 | 3.80 | 5.00 | 3.87 | 4.15 | 3.84 | 4.08 | 3.76 |
| General construction | 3.27 | 3.22 | 4.57 | 4.11 | 3.95 | 4.17 | 4.33 | 4.05 | 4.52 | 3.93 |
| Manufacturing | 5.00 | 3.08 | 3.44 | 3.83 | 4.49 | 3.74 | 3.82 | 3.64 | 3.72 | 3.54 |
| Transportation | 2.19 | 3.26 | 4.02 | 3.75 | 4.10 | 3.95 | 2.72 | 4.05 | 3.53 | 3.68 |
| Wholesale & retail trade | 3.17 | 3.13 | 3.61 | 3.79 | 3.68 | 3.73 | 3.78 | 3.77 | 3.92 | 3.69 |
| Finance, insurance & real estate | 1.96 | 3.12 | 3.89 | 3.72 | 3.81 | 3.80 | 3.94 | 3.83 | 4.03 | 3.84 |
| Services | 2.65 | 2.89 | 3.29 | 3.70 | 3.84 | 3.87 | 4.28 | 4.15 | 4.72 | 4.15 |
| All industries | 2.82 | 3.07 | 3.54 | 3.78 | 3.88 | 3.81 | 4.20 | 3.97 | 4.65 | 3.93 |

*Participants.
†Nonparticipants.

Of the 50 paired participation-nonparticipation exemption taxable return observations shown in Table 8, only in 17 instances do the mean number of exemptions of nonparticipants exceed those of participants. Twelve of such observations fall in the two income classes (20 observations) below $17,500. One could hypothesize this illustrates that more of the large families at lower income levels need all of their income for current consumption, and therefore do not choose to participate in Keogh.

In most instances, whether looking at participants or nonparticipants, the mean number of exemptions claimed by farmers appears to approach the mean computed for all industries.

### F. AMOUNT OF SELF-EMPLOYMENT RETIREMENT DEDUCTION

The mean amount of the self-employment retirement deductions, which can also be characterized as the mean level of Keogh participation by sole proprietors, is shown in Table 9. Farming once again fell below the mean level of all participants at all income brackets and for nontaxable returns, while mining and services participated at the highest levels. This is to be expected, in light of the relative

Table 9. Mean amount of self-employment retirement deduction* per Keogh return, by industry, for various income levels.

| | Total taxable returns | AGI less than $10,000 | AGI $10,000-17,499 | AGI $17,500-24,999 | AGI $25,000-49,999 | AGI $50,000 or more | Non-taxable returns |
|---|---|---|---|---|---|---|---|
| Farms | $ 950 | $ 380 | $ 790 | $1,140 | $1,930 | $2,320 | $ 340 |
| Other agriculture, forestry & fisheries | 1,260 | 290 | 800 | 1,680 | 2,070 | 2,480 | 0 |
| Mining | 1,900 | 0 | 1,290 | 1,720 | 1,640 | 2,250 | 2,500 |
| General construction | 840 | 540 | 750 | 1,140 | 1,900 | 2,220 | 280 |
| Manufacturing | 1,320 | 620 | 1,120 | 1,380 | 1,920 | 2,150 | 500 |
| Transportation | 790 | 400 | 810 | 920 | 2,270 | 1,030 | 600 |
| Wholesale & retail trade | 1,200 | 520 | 820 | 1,350 | 1,960 | 2,310 | 1,460 |
| Finance, insurance & real estate | 1,350 | 710 | 880 | 1,430 | 1,790 | 2,160 | 1,600 |
| Services | 1,790 | 540 | 850 | 1,460 | 2,090 | 2,430 | 690 |
| All industries | 1,550 | 510 | 840 | 1,410 | 2,050 | 2,410 | 640 |

*Rounded to nearest ten dollars.

mean AGI and TI reported by these industries and discussed *supra*.[50]

With the exception of the transportation industry (at the highest AGI class)[51] all industries observed higher absolute mean participation levels with increasing income.

Table 10 contains the share ratios of the amount of self-employment deduction claimed by industry, for Keogh participants. The observations for farms and services were again contrasting in nature, with farms claiming less than their proportionate share of the Keogh

Table 10. Share ratios for self-employment retirement deduction, by industry and income level.

| | Total taxable returns | AGI less than $10,000 | AGI $10,000-17,499 | AGI $17,500-24,999 | AGI $25,000-49,999 | AGI $50,000 or more | Non-taxable returns |
|---|---|---|---|---|---|---|---|
| Farms | .62 | .75 | .94 | .81 | .94 | .96 | .53 |
| Other agriculture, forestry & fisheries | .82 | .57 | .96 | 1.19 | 1.01 | 1.03 | 0.0 |
| Mining | 1.23 | 0.0 | 1.54 | 1.22 | .80 | .93 | 3.90 |
| General construction | .55 | 1.07 | .90 | .81 | .93 | .89 | .78 |
| Manufacturing | .85 | 1.23 | 1.34 | .98 | .94 | .89 | .78 |
| Transportation | .51 | .78 | .97 | .65 | 1.11 | .43 | .94 |
| Wholesale & retail trade | .77 | 1.03 | .98 | .96 | .96 | .96 | 2.28 |
| Finance, insurance & real estate | .87 | 1.40 | 1.06 | 1.01 | .87 | .90 | 2.50 |
| Services | 1.16 | 1.07 | 1.02 | 1.04 | 1.02 | 1.01 | 1.08 |

50. Whether services, for example, participated at a greater rate than farmers cannot be determined without looking at earned income, since the maximum allowable Keogh contribution is based on same (rather than on AGI or TI). The study was structured so as to investigate earned income, but the results were not yet available when this manuscript was being written.

deduction at all income levels while services had a share ratio exceeding one at all levels. Thus, it is clear that farmers participated both at a lower rate and at a lower level than did taxpayers in the services industry.

## VI. SUMMARY AND CONCLUDING COMMENTS

Since 1963, sole proprietor taxpayers have had the opportunity to shield a portion of their income from taxation while building up a reserve for retirement. In essence, the government has offered a subsidy as an inducement for sole proprietors to create and participate in Keogh retirement plans.

This study indicates that, in 1968, less than three per cent of all taxpayers eligible to participate in Keogh were actually doing so. Another report,[52] though analyzing *only taxable returns*, indicates that while the proportion of taxpayers participating has increased over time, those participating now are probably not more than ten per cent of those eligible. Interestingly, that same report estimated that those participating in 1966, 1967, 1968 and 1970, respectively, constituted 1, 2, 4, and 8 per cent of the sole proprietor taxable returns for those years.[53]

As compared to the means of total returns for all industries, it is clear that farmers availed themselves of the Keogh subsidy at both lower participation rates and levels. Since there was little difference in family size, as indicated by the number of exemptions claimed, among farms and the means for all industries, the hypothesis that farmers needed more income for current family consumption would not appear supportable.

Other hypotheses can be posited for the relatively low participation rates and levels by farmers. One is that the capital requirements of the farm business are greater than those of some industries (e.g., services), and that farmers therefore must earmark a larger proportion of their cash flow for debt retirement. If so, this is a rational course of conduct so long as the long-run after-tax returns of the farm business equal or exceed the long-run after-tax returns of Keogh participation, considering both the credit and tax subsidy benefits of Keogh participation. In this respect, economists and other business analysts can be helpful in assisting farmers and other sole proprietors in evaluating the economic rationality of Keogh participation.

A second logically tenable hypothesis explaining why farmers

51. This observation is perhaps rationalized by the fact that only .11 of one percent of the Keogh returns filed in this income bracket were filed in the transportation industry.
52. RESEARCH AND STATISTICS NOTE: RETIREMENT DEDUCTIONS CLAIMED BY THE SELF-EMPLOYED, DEP'T OF HEALTH, EDUCATION AND WELFARE, PUB. NO. 73-11701 (Sept. 1972).
53. *Id.* at 6. This report did not look at participation rates in individual industries.

contribute to Keogh at relatively low rates and levels is simply that they do not know of its existence and availability. Logically, the services industry, with the highest participation rate, has more perfect knowledge about Keogh because attorneys and accountants are a part of its composition. The disparagement between participation rates and levels for farms and services tends to support the hypothesis about the state of Keogh knowledge among farmers. To the extent this hypotheses is true, and to the extent it is economically rational for given farmers to participate, when counseling their farm clients about financial or estate planning matters, attorneys can provide them with a valuable service simply by pointing out the availability of Keogh and helping them determine whether it would assist them in meeting long-run personal and business objectives.

Finally, while the analysis in this study was directed primarily at farmers, it is clear that many sole proprietors in the services industry believe the Keogh subsidy is beneficial in meeting their personal and investment objectives. Thus, it is submitted that the self-employed attorney-reader should evaluate Keogh in light of his own personal circumstances.