Tax Treatment of Interest

Pervez Tahir*

Introduction

Income taxes treat interest either as cost or as income. It is a cost when borrowed funds are used to generate a taxable stream of income, justifying deductibility. When it is an accretion to income, interest is liable to taxation. Interest income, it may be pointed out, has been viewed as unearned income compared with earned, wage income right from the days of Adam Smith, furnishing the basis for higher taxation of the former. However, the cost and income concepts are not strictly adhered to. In the United States, the so-called tax expenditures have resulted from these departures, first, by allowing tax deductibility without interest being a cost of producing taxable income and, secondly, by exempting interest income from state-local securities despite accretion to taxable income. All these interest categories have interesting implications for efficiency, equity, investment pattern and corporate financial structure. The present paper seeks to spell out some of these in the context the United States insofar as there are lessons for the debate on riba.

Section I deals with tax expenditures such as consumer debt and state-local securities. The declining role of unearned income is the subject matter of Section II. The most important part of the paper is Section III, which analyses why the standard public finance theory makes the wrong prediction that tax structure favours debt finance vis-a-vis non-debt finance. The rudiments of an alternative theory are also presented in the same section. Section IV sums up the paper with some sundry conclusions.

I. Interest as Tax Expenditure

Tax Expenditures comprise deduction of normally non-deductible items and exclusion of includable items. Interest cost on consumer debt belongs to the former category and interest income from state-local securities to the latter.

^{*} The author is Chief Economist, Government of Pakistan, Planning Commission, Islamabad. This paper has been written in his personal capacity.

(a) Consumer Debt

Interest on mortgages and loans for consumer durables are itemised deductions for the purposes of individual income tax. Business interest is deductible against investment to avoid abuse (21, Musgrave and Musgrave, 1980, pp.357-61).

The deductibility of interest on mortgage loans for housing raises many questions. It violates the principle underlying interest deduction i.e. production of a taxable income stream. The only reason for deductibility can be to give an incentive to low-cost housing. This is a laudable objective, given the housing crunch and soaring rents in the United States. But then the incentive has to be generalised for housing expenditure, and not restricted to house owners, as most low-cost housing is in rental form. As it exists, deductibility makes house owners triple gainers: imputed rents are exempted and mortgage interest and property tax are deductible. Not only do the renters not get any compensating benefit, they also pay higher rents to the extent property tax is shifted. At one extreme, not an insignificant number of low-income renters lies outside the tax net, leaving them unaffected by any fiscal deductibility as owner-occupants. In addition, Pechman maintains that owners are better able to itemise deductions than the renters: the former are the major beneficiaries of new and old deductions, while the latter have to be content with standard deductions (23, 1977, pp. 85-6).

Such is the enormity of issues involved, perplexing the choice of criteria. Equity could be achieved between the alternatives of mortgage ownership, equity ownership and renting if imputed rental is made liable to tax or rentals are made deductible. However, the former eliminates the incentive, while the latter preserves equity and incentives. The former faces organised political opposition and the latter lacks organised political support. Small wonder, income tax snatched the position of being the worst tax from property tax after the passage of proposition 9 and 13 in California in an opinion poll (3, 1980, pp. 1-2). Even if rentals become deductible, groups below the threshold income level will still be left out. This will cast in doubt the objective of incentive provision of housing. Direct subsidy will be the next best.

What will be the effect of abolishing interest deductibility? In that case, the equity owner will be the only gainer, taking up a mortgage and paying interest out of dividend income. As White and White contend (34, 1977, p..5): "Conformity of taxable income to Simons income implies a tax law that is not neutral in its treatment of consumption and savings but

rather is biased against the latter. But to disallow the deduction of interest cost on consumer debt would not remove this unneutrality since it is inherent in the definition of income. Instead, the disallowance would introduce another unneutrality, a tax law bias favouring asset finance over debt finance."

There is nothing wrong with the "bias favouring asset finance over debt finance" if direct subsidisation is resorted to. However, to continue with the White and White argument, the discontinuation of deductibility will only be a second-best solution insofar as the law departs from Simons' definition of income by ignoring imputed rentals. It will reduce understatement by owners, leaving the inequity between clear owners and mortgage owners unimpaired. Neither the existing law, nor the modified version will be in conformity with Simons' definition, with the result that modification will reduce inequity insignificantly (33, White and White, 1965). In any case, the tenant-owner issue requires fuller consideration of accelerated depreciation of rental housing and overall response of housing market to taxes (1, Aaron, 1970).

The problem of deductibility is complicated by the difficulty of identifying the purpose of a loan. A mismatching of expenses is caused when the rich deduct interest on investment yielding no current income. Tax shelters are the inevitable result. Pechman proposes that the deduction should be limited to the amount of reported property or business income. This would reduce interest deduction by 75 per cent. The current provision is too inadequate to make good the revenue loss from interest deductions in excess of property income (23, 1977, pp. 86, 89-90, 119-22). Goode also recommends limitation of interest deduction as about 25 percent of interest deductions are claimed by wage and salary earners, and the bulk of the remainder by those with interest deductions exceeding income from sources other than salaries and wages. But he finds Pechman's matching proceeds formula less satisfactory and suggests pooling of property income and interest payments, with averaging to allow for fluctuations (12, 1976, pp. 151-3).

As political constraints make pooling hard to introduce, Dixon proposed a second-best solution of (8, 1970, p. 176) "removing the tax-payer's ability to deduct interest payments on debt which can be considered as financing the holding of assets yielding non-taxable income from the tax base." This sounds equitable in theory, but its operation in practice requires information which either does not exist or is difficult to translate into empirical meaningfulness.

In case of consumer durables, some measure of vertical equity is achieved as low-income debtors benefit. To White and White, the relatively small number of non-owners in this case rules out even a second-best modification of the law (34. 1977, p. 6).

(b) State-Local Securities

Politically, tax-exempt state-local securities have been one of the most controversial issues ever since the introduction of income tax in the United States. Basically, it is a problem of states jealously guarding their fiscal autonomy. The more the discussion of economic pros and cons, the more the hardening of political stands.

Those in favour of terminating the exemption argue that it is iniquitous, discourages risk investment, misallocates resources within the private sector and between public and private sectors and, most important, it is an inefficient subsidy as the loss of federal revenue exceeds interest cost to states. The nature of the debate can be judged by the tendency of the proponents to present a counter case rather than rebut the case against. According to them, state-local securities are not as attractive as other securities and the removal of exemption would sharply raise their cost of borrowing. This will necessitate additional state-local taxation, making the overall tax structure more regressive. In addition, the inability to incur costlier borrowing may lead to slashing crucial capital outlays (22. Ott and Meltzer, 1963.pp.9-23).

The antagonists also propound a "trickle-up" theory. Thus if bonds must be sold to tax payers with a 50 per cent marginal rate to clear the market, the tax benefit will be competed away for the group. But the benefit will "trickle-up" to those paying 70 per cent marginal rate by the excess of interest rate on tax-exempt bonds over the after-tax yield on bonds liable to tax (2, Ackennan and Ott. 1970). Bittker finds the theory paradoxical in that (5, 1980, p. 28) "vertical inequity *increases* (emphasis original) in proportion to the tax allowance's popularity with low-income tax payers For the rich, therefore, the best tax shelters are those that are patronised by the poor; on the other hand, the more exclusive the club, the less reason to join."

This paradoxical club theory is nothing more than logical hair-splitting. For, Bittker would like to wait for the behavioural consequences of the exemption to be correctly mapped before the equity (or efficiency) issues can be settled (5, 1980, p. 31). For one thing, there does not exist a single type of economic behaviour which has been correctly mapped. For another,

the facts speak for themselves: in 1979, 80 per cent of the individual returns of over 2 billion dollar revenue loss constituted AGI above 100,000 dollar and the remaining 4 billion dollar loss was due to institutional sources, also largely benefiting the same class (2, Musgrave and Musgrave, 1980, p. 348).

Later on the area of tax-exempt bonds was widened to include industrial development bonds, pollution control bonds and, in some cases, even mortgage bonds. Underlying this, of course, is the expression of fiscal self-determination by the state and local governments. As Pechman admits rather helplessly (23, 1977, p. 116): "The major problem is political. If the tax exemption is replaced by a generous subsidy, many people fear there will be an unhealthy increase in federal control over state and local fiscal affairs. Even the possibility of it is often sufficient to arouse opposition to removal of the exemption."

II. Interest as Income

The distinction between earned and unearned income is as old as economics itself. The unearned interest receipts constitute an accretion to income and its taxation is said to be new tax on new income (20, Musgrave, 1959, p. 162). While substantial disagreement has never existed among economists on treating earned income more favourably than unearned income for tax purposes, the business classes have always viewed it more than a little askance. The *Wall Street Journal* faithfully represented this sentiment when it commented on Brodhead's bill to reduce the maximum tax rate on unearned income from 70 percent to 50 percent thus (6): "We have been railing in these columns for years about the fact that taxes are higher on so-called "unearned income" than on wages and salaries, a distinction which we recently called an economic obscenity. Every time conservatives who understand the principles at stake have proposed to do something to repair the problem, the liberals rose up and accused them of giving a gift to the rich."

What are "the principles at stake"? Doubtless, interest has historically been a basic institution of capitalism. Yet the economic explanation for its existence, the allocative role, whether it is the price of money, or capital or reward for saving are issues that have been the hotbead of controversy, yielding no clear-cut answers (31; Tahir, 2000). What is relevant in the present context is the saving aspect. Compared to an expenditure tax, income tax is said to distort the saving-consumption choice. However, how interest-elastic is saving is an open-ended question.

The underlying argument of *The Wall Street Journal* editorial seems to be what can be described as "widows' capitalism". The "jest among continental Socialists concerning Baron Rothschild's sweaty sacrifices" (25, Samuelson, 1980, pp. 560-1, n.4) is now a bad joke: it is the hard-earned savings of widows, retirees and the old that is at stake. As Seltzer (26,1955, P. 1248) put it: "A once popular belief was that the bulk of interest goes to a class of wealthy investors who are enabled to live by clipping bond interest coupons and receiving interest on mortgages rather than by more direct contribution to production."

This belief, as he went on to show, was unfounded for a number of reasons. First, interest income as a proportion of personal income declined to 2.8 percent in 1953, after having risen from 4.4 per cent in 1913 to 10 per cent in 1933. Second, the decline was more pronounced in upper income brackets, with the share of the top one percent falling from 13.4 percent in 1919 to 4.6 per cent in 1948. Third, during 1940-50, an Annual Gross Income dollar of incomes above 25,000 dollars contained an average of 3 cents of taxable interest (26, Seltzer, 1955, pp.1249-58).

Now these estimates did not include tax-exempt interest which, as noted in Section I, concentrates in upper income brackets. Further, "Baron Rothschild" has been replaced, over the years, by financial corporations. Further still, those were the days of low, often declining, interest rates. Even in the days of high interest rate and inflation, interest income as a proportion of personal income again touched the 10-per cent mark in 1979 (9, 1980, p. 227, Table B-20). A most significant development, to be considered in Section III, is the increasing reliance by corporations on internally generated finance. This indicates that the cleavage between savers and investors may not, after all, exist for a large sector of the economy. It is true that the share of interest income in Annual Gross Income has come down.

The Wall Street Journal calls the distinction between earned and unearned income "obscene" not just because it distorts the price system. In the framework of supply-side economics, the provident-aged have to learn to live on interest income alone and not on Social Security: it paves the way for phasing out Social Security spending.

It may be of interest to note two extreme cases. One relates to total, as opposed to existing partial, discrimination against interest (in keeping with the Christian tenets) through confiscatory taxation. According to Conard, the consequences will be so "pervasive" that "outright socialism would be a more likely development" (7, 1963, pp. 103-4). The other

consists in extending the logic of higher taxation of interest to the taxation of capital in general. Kalecki (15, 1971, pp. 41-2) reasoned that capital taxation is far superior to income tax in terms of effects on employment and business activity. As it would undermine the very principle of private property, he doubted its practicability by quoting Joan Robinson (24, 1936, p. 693); "..... any government which had both the power and the will to remedy the major defects of the capitalist system would have the will and the power to abolish it altogether."

III. Interest as Cost

As noted in the preceding sections, the justification given for deductibility of interest as cost is that it leads to a taxable stream of income. It ensures the optimal equality of marginal rate of substitution between present and future consumption with marginal rate of transformation between present and future goods. The economic effect of this standard public finance proposition in the case of corporate income tax is discrimination in favour of debt-financed investment and against non-debt, risk investment financing (20, Musgrave, 1959, pp. 152-3, 345). In practice, however, the story is different. According to the same theorist (21, Musgrave and Musgrave, 1980, p. 418), "the share of equity finance (mainly from internal sources) has increased rather than decreased in recent decades, and there is little evidence that the differential tax treatment has been a significant factor in retarding this decrease."

The purpose here is to analyse this glaring contradiction between fact and theory. Also it will be examined how a theory with such a bad prediction continued to hold sway. More fundamentally, an alternative theory will be presented to explain the corporate preference for internally generated finance for investment.

Pechman offers a nontheory by saying that financial experts advise corporations not to prefer debt finance despite its relative attractiveness (23. 1977, p. 140). The traditional (financial manager's) view is of a U-shaped cost of capital curve, movement along which is governed by leverage, (i.e., the ability of the firm to increase its value over some range of debt-equity ratio). Thus the firms may use debt finance advantageously until the optimal debt-equity ratio is reached. Beyond the optimum, the risks of debt finance outweigh its advantages (29, Solomon, 1963, pp. 91-119). Modigliani and Miller contend that leverage is neutralised by arbitraging in a perfect market. As a result, stockholder's gain from interest-deductible debt finance turns out to be minimal. After adjustment for tax, the required rate of return for a firm is 20 per cent from equity finance, 16 percent for debt

finance and 15 per cent for internal finance. Under these assumptions, the corporate tax discrimination in favour of debt finance has no significance (18, 1958, pp. 293-6). However, Modigliani and Miller did not work out a tax-adjusted model in all its ramifications. If the assumption of perfect information is relaxed, debt finance regains its advantage over equity finance (29, Solomon, 1963, pp. 114-6).

Attempts have also been made to explain the "puzzle" of interest deductibility failing to encourage debt finance in the framework of the neoclassical theory of the firm by incorporating risk elements. The "puzzle", it is stated, arises due to the error of comparing average cost of equity with average cost of debt, the former estimated to be twice as high as the latter during the 1950s and 1960s. However, the neoclassic category of marginal costs, defined as a function of financial structure and adjusted for tax, is supposed to have resolved the "puzzle": relevant marginal cost of equity finance lies below stock yields while the marginal cost of debt finance lies above bond yields, and the optimal point is reached when marginal cost is equal to marginal return. The proposition was subjected to empirical testing to show that corporations were in fact in financial equilibrium for 5 benchmark years and that they tend to correct disequilibrium by responding to variations between marginal cost of debt or equity and the marginal rate of return (32, Tambini 1967, pp. 185-222). The model, tike all neoclassical models, is too neat to be true. The well-behaved corporations of the model are hard to find in the matter-of-fact world. Finally, it misses the observed tendency of corporations to prefer retained earnings to debt and debt to equity finance.

Stiglitz (30, 1973, pp. 1-32) argued that the effect of interest deductibility could not be analysed in isolation. A full analysis must take into account all the relevant provisions of personal as well as corporate income tax. The extent of the tax advantage depends on the relative tax saving on personal as well as corporate income tax. So viewed, the actual debt-equity ratio turns out to be the "fortuitous outcome of the profit and investment history" (p. 32). Hence Stiglitz's assertion that, for optimal investment decisions, financial structure is relevant neither in the absence of tax nor in its presence. Interest deductibility causes no misallocation and, in its overall efficiency effect, corporate income tax is no different from a lump sum tax.

Except for the traditional view which recognised the problem, models referred to so far ignore what in the real world is a critical factor in corporate financial decision-making - the fear of bankruptcy and insolvency. More than anything else, it is this fear that makes debt finance, despite tax

deducibility, more expensive than non-debt finance. Keynes understood the problem when he talked of duplication of lender's risk and borrower's risk (16, 1964, pp. 144-5). However, the seminal contribution was made by Kalecki in his enunciation of the "principle of increasing risk" (14, 1937, pp. 98-106). Relying on the Keynes-Kalecki formulation, Goode derived an important conclusion (11, 1951, p. 139): "It seems likely that the reduction in the anticipated return will be more discouraging to investment that must be externally financed to that which can be financed from internal sources. Ordinarily a higher prospective reward is necessary to induce externally financed investment."

Another problem with the standard analysis is the ambivalent attitude towards the shifting of corporate income tax. With no shifting, a rise in the tax increases the cost of equity finance but leaves the cost of debt finance unchanged. Full shifting does not matter because the effect will be neutral (28, Smith, 1952, p. 98), although Miller and Shelton maintain that debt finance will still be more attractive (17, 1955, p. 13). However, in the modern oligopolistic corporate structure, mark-up pricing is the rule rather than the exception, geared largely towards the requirements of raising finance for investment (10, Eichner, 1980). The implication in our context is that corporate income tax is treated as cost, and shifted forward as marked-up cost. The effect is no different from an excise tax (27- Shoup, 1948).

It should be evident from the foregoing that tax-shiftability places internal finance roughly at par with interest-deductible external finance. But this merely specifies the level of indifference between the two sources of finance. To explain the preference for internally generated finance, Kalecki's principle of increasing risk has to be invoked. Indeed, mark-up pricing and increasing risk furnish the basic elements of an alternative model. Mott (19, 1980) constructed a Post-Keynesian model of investment behaviour in this spirit. Although he does not specifically incorporate the influence of taxation, the conclusions of his model are unlikely to be significantly different even after tax adjustment. According to his model, marginal risk increases with increased investment in fixed capital owing to the rising danger of bankruptcy and declining liquidity. The risk is larger, the greater the reliance on debt finance as the risk of the lender and the borrower is combined, the variance of return on equity increases with rising proportion of debt on the balance sheet and the danger of bankruptcy magnifies. Hence the reluctance of the firms to borrow, despite tax deductibility. The firms are generally disinclined to issue new stock as dividends are generally higher than the interest rate. Indeed, dividends are almost treated as a fixed charge. The reluctance to borrow itself is a function of the ability to generate

internal finance. This ability is gained and sustained, given the level of the required finance for investment, by a target rate of profit. Profits are propped up by mark-ups, which include forward shifting of corporate tax as marked-up cost.

This is what explains the fact that 60-80 per cent of corporate investment is financed internally, as also the maintenance of a stable debt-equity ratio of around 30 per cent, a result which is in stark contrast with the standard conclusion of the public finance theory that the interest-deductibility of corporate income tax discriminates in favour of debt finance.

IV. Sundry Conclusions

The preceding analysis leads to a startling conclusion: interest does not matter. But it may not be so startling if we take a careful look at facts. Income taxes in a democratic society, due to heavy weight in overall tax structure and comprehensive coverage, broadly reflect society's income distribution preferences and related policy choice. Tax treatment of various categories is merely a mirror image of these preferences.

Individual income tax recognises the old adage that interest receipts are in the nature of unearned income. This is not an ideological stance, but an empirical derivation from the fact that, over the years, the classes living off interest have reduced to a small segment of the social strata. Here, it may be argued that interest-earners largely comprise those incapable of offering labour or venturing enterprise - the old, widows, handicapped and temporarily handicapped (unemployed). This is where the role of Social Security as a natural adjunct of fiscal policy comes in. Social Security, indeed, is the best means to protect these groups against the machinations of the market and inflation. Not the least important, tax discrimination against interest is a way of discouraging richer classes to thrive in the name of socially disabled. That is why the deductibility of interest on state-local securities is undesirable, its constitutionality notwithstanding. Institutionally, capitalism has come a long way from (11, Goode, 1951, p. 130). "descriptions of a rather idealized securities market in which venturesome individuals of wealth and well-advised widows combine their resources to finance new firms and to expand old businesses."

Interest is not only unearned income, it is also an undesirable burden as a cost. Individual income tax recognises the responsibility of the society to deal with this burden. It is ill-conceived to presume that interest cost has to be related to the production of a taxable stream of income and, therefore, consumer debt, particularly housing loans, should not be out of

the tax net. It is the responsibility of a democratic society to provide shelter to its people. Tax deductibility is an admission of the fact that society does not possess the resources to do that, but is willing to share some burden. What can be debated is whether a direct subsidy will be more efficient than the present implicit subsidy, and not the very basis of aid to housing. Ergo, the rectification of discrimination lies not in discontinuing the subsidy to owners, but to provide that to the tenants also. However, some method will have to be worked out to restrict it to low-income groups. This will remove, to some extent, the bias in individual income tax towards the propertied classes by allowing the latter greater opportunities to understate income.

The argument of relating interest cost to taxable income does not apply to corporate income tax either. Here, "interest paid ... is just as much a part of income as ... profits (13, Harberger, 1965. p 117). If earned corporate and dividend income is "double-taxed", the unearned interest income has a more logical basis for "double taxation". Corporate income tax must also reflect the earned-income bias of the individual income tax. As was seen in Section III, interest deductibility is irrelevant to corporate financial choice. The predictions of standard public finance theory in this regard are plain wrong. Corporate financial choice is governed by the propensity to avoid increasing risk. Goode (11, 1951, p. 140) merits an extensive quotation here: "Although some reckless management groups may be willing to gamble freely with funds of gullible creditors, usually the selfrestraint of the management and the imposed restraints of the capital market combine to make for greater caution in use of outside funds. Management groups are often reluctant to assume the fixed or semi-fixed obligations involved in issuing bonds or preferred stock and can be induced to do so only by the expectation of large returns. Management or old stock holders may hesitate to bring outsiders into the business by the issuance of additional common stock. Floating securities is expensive, especially for medium-sized corporations, and is often impossible for small corporations. Management can often use retained net earnings, and usually depreciation and depletion accruals, without actually consulting stockholders, sometimes for purposes that the stockholders would actively disapprove if they were fully informed. Usually a stronger case must be made to get outside capital than to forestall stockholder discontent over reinvestment of internal funds."

In sum, interest matters neither as a source of income nor as cost. This by no means implies that money does not matter and, therefore, monetary policy does not matter and that only fiscal policy matters.

References

- Aaron, H. "Income Taxes and Housing", *American Economic Review*, December 1970, 60 (5), pp. 789-816.
- Ackerman, S. and Ott, D. "An Analysis of the Revenue Effects of Proposed Substitutes for Tax Exemption of State and Local Bonds", *National Tax Journal*, December 1970 *23* (4), pp. 397-406.
- Advisory Commission on Intergovernmental Relations, 1980, <u>Public Attitudes on Governments and Taxes.</u> Washington, D.C.: U.S. Government Printing Office.
- Bittker, B. "Income Tax Deductions, Credits, and Subsidies for Personal Expenditures", *Journal of Law and Economics*, October 1973, *16* (2), pp. 193-214.
- "Equity, Efficiency, and Income Tax Theory" in Aaron, H.J. and Boskin, M.J. (eds.). The Economics of Taxation. 1980, Washington, D.C.: Brookings, pp. 19-31.
- "Bravo, Brodhead! "Editorial". The Wall Street Journal, March 20,1981.
- Conard, J. W. 1963, An Introduction to the Theory of Interest. Berkeley: University of California Press.
- Dixon, D.A "A Consideration of the Theory of the Deductibility of Interest Payments from the Personal Income Tax Base", *National Tax Journal*, June 1970 *23* (2) pp. 168-76.
- Economic Report of the President. Washington, D.C.: U.S. Government Printing Office, 1980.
- Eichner, A. S., 1980, <u>The Megacorp and Oligopoly.</u> Cambridge University Press
- Goode, R. 1951, The Corporation Income Tax. York: John Wiley
- _____. 1976, The Individual Income Tax. Washington, D.C.: Brooking.
- Harberger A. C., 1965, "Issues of Tax Reform for Latin America" in Joint Tax Reform. Fiscal Policy for Economic Growth in Latin America. Baltimore: The John Hopkins Press, pp 110-29.

- Kalecki, M. "The Principle of Increasing Risk," *Economica*, November 1937, 4 (12)
- _____. 1971, "A Theory of Commodity, Income and Capital Taxation" in Selected Essays on the Dynamics of the Capitalist Economy Cambridge University Press, pp. 35-42
- Keynes, J. M. 1964, <u>The General Theory of Employment, Interest and Money.</u> New York: Harcourt Brace Jovanovich,
- Miller, M.H and Shelton, J.P. "Effects of Shifts in Corporate Income Tax on Capital Structure", *National Tax Journal* September 1955, 8 (3), pp. 252-9.
- Modigliani, F. and Miller, M.H. "The Cost of Capital, Corporation Finance and the Theory of Investment," *American Economic Review*, June 1958, 48 (3), pp. 263-97.
- Mott, T. 1980, "Kalecki's Principle of Increasing Risk: The Role of Finance in the Post Keynesian Theory of Investment Fluctuations" Unpublished Ph.D. Dissertation. Stanford University.
- Musgrave, R. A. 1959, <u>The Theory of Public Finance</u> New York: Mc Graw-Hill.
- _____. and Musgrave, P. B. 1980, <u>Public Finance in Theory and Practice.'</u>
 New York: Mc Graw-Hill.
- Ott, D.J. and Meltzer, A.H. 1963, Federal Tax Treatment of State and Local Securities. Washington, D:C.: Brookings
- Pechman, J. A. 1977, Federal Tax Policy. Washington, D.C. Brookings.
- Robinson, J. Review of R. F. Harrod, "The Trade Cycle" *Economic Journal.*, December 1936, 46 (184), pp. 691-3.
- Samuelson, P. A. 1980, Economics New York: Me Graw-Hill.
- Seletzer, L.H. *Interest as a Source of Personal Income and Tax Revenue.*New York: National Bureau of Economic Research, 1955,
 Occasional Paper 51.
- Shoup, C.S. "Incidence of Corporation Income Tax, Capital Structure and Turnover Rates", *National Tax Journal*, March 1948,1 (1), pp. 12-7.

- Smith, D. T. 1952, Effects of Taxation on Corporate Financial Policies: Boston: Harvard University Press.
- Solomon, E. 1963, <u>Theory of Financial Management.</u> New York: Columbia University Press.
- Stiglitz, J.E. "Taxation, Corporate Financial Policy and the Cost of Capital". *Journal of Public Economics,* February 1973, 2 (1), pp.1-34.
- Tahir, P. "Zero Interest Rate Order (ZIRO): Pre-Keynes, Keynes and After."

 <u>In Riba: Commercial Interest and Usury.</u> Islamabad: Pakistan Institute of Quranic Shariah.
- Tambini, L. "Financial Policy and Corporate Income Tax", in Harberger, A. C. and Bailey, M. J. (eds). 1967, The Taxation of Income from Capital. Washington, D. C.: Brookings, pp. 185-222.
- White, M.I. and White, A. "Horizontal Inequality in the Federal Income Tax Treatment of Homeowners and Tenants", *National Tax Journal* September 1965, 18 (3), pp. 225-39.
- _____."Tax Deductibility of Interest on Consumer Debt." *Public Finance Quarterly,* January 1977, 5 (1), pp. 3-7.