CHAPTER – II

REVIEW OF RELATED LITERATURE
REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

A detailed review of literature has been made to find out the research gap and to identify the relevant issues for the study. There have been many theoretical and empirical studies assessing the role of tax policy on corporate earnings as well as on firm value. This chapter provides a sketch of literatures relevant to scope, scale and general aspects of corporate taxation and its impact on various characteristics pertaining to corporate growth.

2.2 LITERATURE REVIEW

Ayers et al.,\textsuperscript{1} using a sample of small firms at United States (i.e., <500 employees), found a negative relationship between the effective tax rate and debt. In particular, they found a negative effect on marginal tax rates by the use of outside debt (loans from non-owners), and no effect on marginal tax rates by the use of inside debt (loans from owners).

Barnea et al.,\textsuperscript{2} developed a multi-period capital structure model that includes differential costs of debt and equity financing as well as the possibility of real firm's growth. They recognized that a firm's optimal multi-period debt policy sets interest relative to taxable income on a period-by-period basis. In their model, a growing, risk-less firm can shield all of its income from corporate taxation and achieve an interior optimal capital structure.
Barclay et al.,\textsuperscript{3} found that leverage and debt maturity are negatively related to growth opportunities. They have confirmed that there has been negative relationship between growth opportunities and leverage, However there is no evidence that debt maturity is negatively related to growth opportunities. They further found that short-term debt attenuates the negative effect of growth opportunities on leverage.

According to Chirinko et al.,\textsuperscript{4} a percentage-point in the effective tax rate on capital would cause capital investment to fall by at least half a percentage point and, for some industries, by as much as 1.7 percentage points.

Desai et al.,\textsuperscript{5} emphasized the link between firms’ governance arrangements and their response to taxes. They viewed that corporate tax avoidance not only entails distinct costs, but these costs may actually outweigh the benefits to shareholders, given the opportunities for diversification.

Desai and Dharmapala\textsuperscript{6} discussed examples of the interaction between tax shelters and various forms of managerial opportunism, illustrating that straightforward diversion and subtle forms of earnings manipulation can be facilitated when managers undertake tax avoidance activity.

De Angelo and Masulis\textsuperscript{7} were one of the first to point to the importance of non-debt tax substitutes, primarily depreciation and tax credits, for capital structure relevance. There is evidence, primarily in the accounting literature that U.S. corporations have been taking a host of other (newer) non-debt tax shields. This study examines a proxy for these tax shields – the difference between tax expense and taxes actually paid – and relates this to Graham’s kink variable to see
if this measure can explain the under-leverage result. In other words, the tax benefits of debt may be of secondary importance, but tax benefits in general may still be of primary importance.

An analysis by De Mooij et al., has shown that cross-border capital flows are highly sensitive to tax rates – an increase of one percentage point in the corporate income tax rate causes the foreign direct investment stock to fall by more than three points.

Diamond, D.W. found that the tax advantage of debt over equity is due to the deductibility of interest payments from corporate income tax. Dividends and retained earnings are not deductible. If the firm's investors are not subject to different personal taxes for debt and equity, the corporate tax savings is the only tax effect of capital structure and growth.

Disney argued that, given the complexity of the tax system and the various channels through which it affects the economy, it is difficult to disentangle the effect of taxes from other factors.

Enger et al., while analyzing business environment and overall economic growth in OECD (Organization for Economic Co-operation and Development) countries, identified that taxation is a powerful government policy tool which affects the business environment and overall economic growth. One of the key challenges for government is to design an efficient, fair and simple tax system that is conducive for industrial growth. Taxes are raised to finance public goods and services that are needed to support economic development and provide economic opportunities to everyone. However, the burden of taxes can adversely affect economic growth by discouraging new investment, work effort, acquisition of skills and entrepreneurial incentives.
Geremia while examining the effect of corporate income taxation on firm investment over time in the presence of imperfect capital markets found that when capital markets are imperfect, the optimizing firm goes through different phases of growth. Given the starting stock of capital, the firm initially enters a phase of intensive growth during which it finances new investment both by retaining earnings and by issuing new debt. While accumulating, it moves to a consolidation phase during which it fully finances investment by debt. Along this path, the firm approaches a steady state stock of capital. So, corporate taxation of profits does not necessarily reduce firm's investment, and its effect varies over time. An increase in the corporate profit tax rate initially reduces investment, but the effect is reversed over time as the firm adjusts its financing policy. Indeed, the overall effect depends on the temporal horizon.

Givoly et al., after examining capital structure responses to changes in corporate tax exposure, provide evidence supporting the trade-off theory which argues that firms balance the corporate tax benefit of debt against these various costs. The theory yields an intuitively pleasing interior optimum for firms. This theory says that firms with different amounts of alternative tax shields will have different marginal tax benefits of debt, thus implying different levels of optimal debt ratios.

A number of studies have also investigated the impact of corporate taxation on the incorporation choice and the choice of corporate firm. Economic activity which is not incorporated is taxed at individual income tax rates. Incorporated firms may organize in a variety of forms as some avoid the corporate entity-level
tax whereas others must pay corporate tax on corporate earnings. If incorporated entities cannot escape the corporate tax, then as the corporate tax rate rises relative to the individual tax rate it may cause economic activity to be shifted from the corporate to the non-corporate sector.

Goolsbee\textsuperscript{14} found much larger responses of organizational form to tax rates using cross-sectional data. That is, he found out that an increase in the corporate tax rate by 10 percentage points reduces the corporate share of firms in a state by 0.25, and his results suggests that organizational form is in fact a more important adjustment margin than the firm’s operations.

Gordon and Lee\textsuperscript{15} have found out that taxes have a large effect on the use of debt for the smallest and the largest firms. At the same time, for intermediate-sized firms, they estimated a much lower effect of tax on use of debt.

Graham\textsuperscript{16} introduces the estimated marginal tax rate (MTR) in addition to non-debt tax shields into his debt regressions. This effective tax rate measures the present value of current and expected future taxes paid on an additional unit of income earned today. Expected future taxes are computed by assuming that managers forecast future taxable income using a random walk model with drift, and by accounting for the present features of the tax legislation. Despite the considerable appeal of this particular indicator, it may present a number of limitations.

Graham\textsuperscript{17} further reviewed his earlier study and concluded that, in general, taxes do affect corporate financial decisions, but the magnitude of the effect is mostly “not large”. Many more studies have investigated taxation as just one element in a general model of corporate financial decisions.
Graham also postulated that the most adequate measure of the tax advantage of debt should be a forward-looking indicator that takes account of the present status and future profitability of the company, the presence of other tax deductions or credits that might reduce the advantage of interest deduction, and the details of tax legislation on the carry-back and forward of losses. Ideally, one should take into account all interactions at the company level by using a unique measure, rather than separate variables while carrying out analysis in this regard.

Gravelle, J.G., in his report focused on estimating the effects of effective tax rate (or tax burden) on earnings and compared the resulting tax rates across asset types, organizational form and source of finance. He found that effective tax rates can differ substantially from average tax rates in the economy because the timing of tax deductions has a different (and in the long run, more powerful) effect on tax burdens on new investment. He further found that it was possible for effective tax rates on new investments to be negative, while average tax rates are positive on it.

Gruber, J. estimated the impact of the corporate tax rate on the level of corporate taxable income (profit before tax). An obvious difficulty with such an exercise is that the tax rate itself is determined by the level of taxable income. Thus, a regression of taxable income on tax rates will suffer from potential reverse causality. To address this problem, he modeled the effective tax rates faced by firms in one period, and the effective tax rate that would be faced by firms with that same income in the next period. The difference between these two is exogenous to the firm’s behavior. This forms a natural instrument for a regression of the change in taxable income as a function of the change in effective tax rates.
Helene\textsuperscript{21}, in a working paper for International Monetary Fund (IMF), has made an attempt to assess the effects of India's tax system on growth. He established stylized facts about the tax system as follows: (i) a high dependence on indirect taxes, (ii) low average effective tax rates and tax productivity, and (iii) high marginal tax rates and tax-induced distortions on investment and financing decisions. He found that tax reforms would tend to improve tax productivity and lower the marginal tax burden and tax-induced distortions. At the same time, he identified as firms that rely on internal sources of funds face problems of borrowing would continue to face high marginal tax rates.

Harhoff et al.,\textsuperscript{22} showed that, variables different from size and age may significantly affect the rate of growth. In particular the authors have found out that limited liability firms experience significantly more rapid growth than unlimited liability firms. The likely explanations for this result are that higher personal wealth at risk in unlimited liability firms reduces incentives to invest in risky opportunities which may foster firm growth. Needless to say, this result has much wider normative implications than that on the age and size growth relationship. So, use of size variable in growth model is acceptable.

Iwamoto\textsuperscript{23} extended the work looking at tax rates and q-values (a proxy for firm value or firm growth) by developing a model that showed tax rates have an effect on q-values. This study extended the research regarding tax rates and q-values by empirically testing how a corporation's effective tax rate affects its q-value.
Jalilvand et al.,\textsuperscript{24} suggested that, in a tax based theory, the incentive to use debt financing increases with a firm's marginal tax rate due to the tax deductibility of interest expenses.

Jen et al.,\textsuperscript{25} studied the effects of corporate taxes on productivity and investment among a sample of firms across OECD (Organization for Economic Co-operation and Development) economies over the period 1996-2004 and found that corporate taxes have a negative effect on productivity at the firm level. The effect is negative across firms of different size and age classes except for the small and young, which may be attributable to the relatively low profitability of small and young firms. The negative effect of corporate taxes is particularly pronounced for firms that are catching up with the technological frontier. He further stated that, in the investment analysis, corporate taxes reduce investment through an increase in the user cost of capital, which may partly explain the negative productivity effects of corporate taxes if new capital goods embody technological change.

King and Fullerton\textsuperscript{26} presented an international comparison of tax policies in four countries, Sweden, the United Kingdom, the United States, and West Germany for 1980 by using the marginal effective tax rate. The marginal effective tax rate by King and Fullerton has been popularly applied by several countries.

MacKie-Mason\textsuperscript{27} contended that the estimation of the substitution effect between interest deductions and non-debt tax shields requires either particular measures to be taken (for example, loss carry-forwards only) or that non-debt tax shields interact with a variable which identifies those companies near to tax exhaustion, especially when they consist of investment tax credits or depreciation.
allowances. They also found that firms with high marginal tax rates are more likely to issue debt than firms with low marginal tax rates. But this does not necessarily imply that debt increases firm value (corporate growth).

In Miller’s word, where there is no relation between debt and firm value, firms issue debt only when they expect to use the interest deduction to offset taxes. So, corporate tax is seen to have direct relationship with debt. Miller further found out that equity financing can be a competitive alternative to debt financing if one takes into account the tax status of corporate investors. He further pointed out that the dividends paid to stockholders and the interest earned by the debt holders is taxed at a higher rate. Then, the corporation’s tax incentive is the difference between the sum of the corporate tax rate plus the dividend rate, and the individual tax rate of the bondholders.

Modigliani and Miller were the first to introduce the idea that corporate taxation affects the capital structure of firms. They showed that if the only imperfection of the capital markets is corporate taxation, the deductibility of interest generates a debt tax shield that increases the value of corporations. When comparing debt and equity financing, they further explained that borrowing is beneficial to corporations because the cost of debt, interest paid, is tax-deductible.

According to Myers, profitability, asset structure (as a proxy for collateral), size and age were identified as likely determinants of capital structure as well as growth. Therefore, the above variables are considered as control variables while ascertaining the unique impact of corporate taxation on corporate growth.
Noord et al.,\textsuperscript{31} stated that taxes can create inefficiencies in the economy by distorting business investment decisions. As long as markets work well, then in the interest of economic efficiency, tax systems should be as neutral as possible, i.e. minimize discrimination in favour of or against particular economic choices. As a general principle, this means building tax systems around broad income and expenditure bases and minimizing differences in tax rates.

A large literature in finance empirically examines the relations between growth opportunities and leverage and maturity decisions. Rajan and Zingales\textsuperscript{32} found that leverage is negatively related to growth opportunities, while Barclay and Smith\textsuperscript{33} found that debt maturity is negatively related to growth opportunities. Hence, use of leverage variables in the model for determinants of corporate growth is recognized.

Rao\textsuperscript{34} stated that one of the most important reasons for recent tax reforms in many developing and transitional economies has been to evolve a tax system to meet the requirements of international competition. The transition from a predominantly centrally planned development strategy to market based resource allocation has changed the perspective of the role of the state in development. The transition from a public sector based, heavy industry dominated, import substituting industrialization strategy to one of allocating resources according to market signals has necessitated systemic changes in the tax system. In an export-led open economy, the tax system should not only raise the necessary revenues to provide the social and physical infrastructure but also minimize distortions. Thus, the tax system has to adjust to the requirements of a market economy to ensure international competitiveness.
According to Rao et al., corporate taxes raise the required rate of return on investment and thereby depress investment. In addition, corporate taxes tend to favor debt over equity financing or retained earnings, potentially leading to an inefficient allocation of resources, higher insolvency risks, and discrimination against smaller companies that face more difficulties borrowing. Corporate taxes are also non-neutral given the widespread use of rebates, exemptions, and special regimes for specific sectors or regions. This also benefits large companies which can bear a lower tax burden through tax planning and fiscal engineering.

Romer et al., have found that taxation has substantial growth effects. The reported magnitude of these effects seems too large to be explained by effects on factor accumulation alone which suggests that taxation may additionally have an impact on productivity.

Simmon stated that corporate taxation would intuitively appear to influence investment decisions (required for a business firm to grow further). He has postulated that taxation is, however, only one (and likely not the most important) of many possible factors which may influence the choice of location for overseas investment.

Sinn said that corporate taxes play a central role in the tax policy debate. Reductions in corporate taxation are used in many countries as a means of affecting the investment decisions of firms and attracting foreign investment. However, despite the apparent link between corporate taxation and capital
accumulation over time, very little of the theoretical debate has been interested in the inter-temporal effect of corporate taxes. In fact, little of the theoretical literature is based on satisfactory analysis of the factors underlying the investment and financing behaviour of firms over time.

Titman\(^{39}\) tried to encapsulate fiscal effects by including non-debt tax shields only. He found that instead of a tax substitution effect (tax shields against interest deductions), non-debt tax shields, in the form of depreciation allowances, encapsulate the presence of highly profitable investments and greater guarantees.

The purported growth in corporate tax avoidance activity has given rise to two alternative perspectives on the motivations and effects of this activity. Several studies investigate corporate tax avoidance as an extension of other tax-favored activity, such as the use of debt.

Tucker et al.\(^{40}\) have identified characteristics (such as size and profitability) that are positively associated with the use of tax shelters, and argue that tax shelters serve as a substitute for interest deductions in determining capital structure. The above identification supported the common view that corporate tax shelters are merely tax-saving devices without any other agency dimensions.

Walsh and Ryan\(^{41}\) pointed out the taxation, likely to be an important factor, is not considered by Myers as independent variable in his model determining capital structure. Therefore, the emphasis in the present study is on seeing the extent to which the relationship of corporate taxation with corporate growth varies with industry and size classes.
2.3 CONCLUSION

Various studies relating to role of tax on investment, capital structure and growth of firms have been reviewed in this chapter. There have been many theoretical and empirical studies assessing the role of tax policy in economic growth, some of which indicate a negative relationship. It is understood from the review that taxes can create inefficiencies in the economy by distorting business investment decisions thus affecting corporate growth. It is also noted that the only imperfection of the capital market is corporate taxation. It is inferred that the deductibility of interest generates a debt tax shield that increases the value of corporations. When comparing debt and equity financing, they further explain that borrowing is beneficial to corporations because the cost of debt, is tax-deductible. It is elicited that taxes have a large effect on the use of debt for the small and large firms. At the same time, for intermediate-sized firms, they estimated a much lower effect of tax on use of debt.

It is understood that while studying corporate taxation, marginal tax rate and effective tax rate should also be given importance. In addition to tax variables, firm's characteristics variables such as size, age, non-debt tax shield, should also be used in empirical analysis. However, study linking corporate taxation directly with corporate growth is found scanty. Many researchers have studied the effect of corporate taxation on firm value through its effect on capital structure. Further, the lists of factors chosen for comparison in earlier research are also limited. The present study aims to address these deficiencies by ascertaining the impact of taxation on the corporate growth in India.
REFERENCES


20. **Jonathan Gruber**, *How Elastic is the Corporate Income Tax Base?*, MIT and NBER, Joshua Rauh, University of Chicago and NBER, June 2005


37. **Simmons, Richard S.**, “Corporate Taxation and the Investment Location Decisions of Multinational Corporations”, *Hong Kong Institute of Business Studies*, Lingnam University, Tuen Mun, New Territories, Hong Kong, June 2000.


