Tax Optimization and Firm Value in Context of Pakistan

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ABSTRACT:
The purpose of this research is to investigate the relationship between tax optimization and firm value in context of Pakistan. This study incorporates specially the factors that can be closely interrelated to effective tax rates and can influence the firm value. Debt, earnings management and audit quality is given the main interest in this study. To determine the effect, the study includes the balanced panel data with 381 non-financial firms and 2280 total number of observations. The time period of the study conducted is six years i.e. from 2009 to 2014. Panel data regression analysis is done in the e-views software to test the data. The results how that tax optimization, accruals and audit quality increase the firm value. The findings of the research help policy makers, investigators to better apprehend the role of tax optimization in managing of firms and also increase in their performance and ultimately the increased value.

Keywords: Firm value, tax optimization, listed non-financial companies of Pakistan.

1. INTRODUCTION:

Taxation of corporate profits, as an important component of fiscal policy, is a topical issue of great interest impacting both macroeconomic and microeconomic. By imposing taxes, the state seeks to collect financial resources to the budget. When referring to the economic, tax, representing a sampling of financial resources at their disposal to the state, have the effect of reducing economic and financial value achieved. At first glance, the action has the same impact on firm value manifestation, regardless of the company to which it relates. But note that not all companies understand the law in the same manner and not all take advantage of tax breaks that are ruled by law to offer.

It has been proved over the time and to the world that taxes have coerciveness in their nature according to history and that due to this coercive nature, tax liability, which an economic unit is liable to pay, is not completely beard (Commonwealth Association of Tax Administrators (CATA), 2007). Firms adopt different ways to minimize, delay, or totally escape the imbursement of tax. Both the legal and illegal ways come through the way of a firm and it is up to the firm that, which way it chooses to minimize, delay or totally avoid tax payment. The legal means refer to tax optimization or tax planning and the illegal means refer to tax evasion. Tax optimization considers the legal agenda of the organization that leads to lowest possible tax payment or liability. Tax planning is also interlinked to tax optimization. It involves the financial analysis of the organization and planning to minimize tax in most efficient and effective way. On the other hand tax evasion refers to make illegal transactions that lead to low tax liability (Lipatov, 2012).

As said by Wahab (2010) there is nothing wrong in making arrangements and planning for keeping tax rates as minimum as possible. This argument was supported by theory of tax optimization by Hoffman in 1961. Hoffman (1961) considered that to minimize the exposure of firms to tax, they should know the fundamental tax laws and apply those laws in a way that guarantees low tax for firms. He also suggested that there is no pecuniary logic in paying more than that of the law demands. Scholes &Wolfson (1992) in their study highlighted the need for corporate organizations to engage in tax optimization. Scholes &Wolfson (1992) considered a company efficacious which is properly adjusted to its tax environment.

According to the traditional thinking, Slemrod & Yitzhaki (2001) supported that argument that firms have maximum benefit from tax optimization and who perform well in their tax planning rather than those who do not actively participate in their tax planning. This shows a positive association of tax optimization to firm value. Desai & Hines (2002) work support this view, as they stated a positive relationship between tax optimization, saving and firm value. This is due to that tax symbolizes cost of doing business, and planning of minimizing tax

cost leads to greater firm value. This view presumes that tax cost and risk do not outstrip from tax optimization activities.

Tax optimization creates value of the organization which is directly interconnected to both planning and the quality of firm's management. Wahab & Holland, (2012) revealed that to increase shareholder's wealth, and maximize after tax returns, managers take into account different strategies that can help them minimize the tax burden and increase after tax returns. It was consistent with the view of Chadefaux & Rossignol (2006) that among the main factors, tax optimization increased firm value either by minimization of tax burden or through the disclosure of improved information.

In this research, the concept of value from the shareholders' viewpoint has been used. The purpose of this study is to investigate the relationship between the tax optimization and the creation of shareholder value or firm value. The previous researches on the valuation of firms did not examine clearly the empirical implications of the firm's value on tax avoidance activities. Therefore, the purpose of this study is to add to the growing literature on the implications of corporate tax optimization on the firm's value in the context of Pakistani non-financial sectors.

1.1. Research Objectives
The primary objective of this study is to investigate the relationship between firm value and tax optimization of non-financial listed companies of Pakistan. The specific objectives are as follows:
1. To investigate the level of tax optimization activities of Pakistan's non-financial listed companies.
2. To examine the relationship between firm value and the level of tax optimization activity.
3. To investigate whether there are differences in the nature of market valuation of each component.

1.2. Research Questions:
The research questions of this study are raised in order to be answerable to the above-mentioned research objectives. The following two questions are related to the relationship between firm value and tax optimization activity:
1. Does the firm value of persistent profitable companies relate to the degree of their tax optimization actions?
2. Does the firm value of non-persistent profitable companies relate to the degree of their tax optimization actions?

1.3. Significance of the Study:
Tax optimization practices are significant facets of economics and financial management. The study of tax optimization and firm value of Non-financial sectors provides insights into the feasible and desirable growth pattern. Since non-financial sectors dominate sector scene in the developing countries, their profitability understanding is very significant to the government sector. Also, entrepreneurs, policy makers and managers can take advantage from it by knowing the impact of tax optimization on firm value. Further research can be grown considering it as a piece of knowledge for an increase in literature.

2. LITERATURE REVIEW
2.1. Hypothesis of the Study:
2.1.1. Firm value:

The evaluation of the variations of tax rate depends on stabilities of the tax jurisdictions, the policy of tax and the timing of tax declaration of the firm. On the other hand, certain studies show that this is not connected with a direct link between the value of the firm and tax optimization. This absence was allotted to the effect of non-quantifiable of the tax costs. Desai & Dharmapala (2006) found that in an organization of tax optimization this variation can involves a reduction of the value of the firm. This reduction appears when managers have both the possibility of underestimating the accounting profit and the tax base. If the two forms are complementary underestimate the lack of transparency in tax optimization provides coverage to extract rents at the expense of shareholders by minimizing benefited accounting manager. In order to solve this complementary relationship

the firm is obliged to make a proficient governance mechanism. Desai & Dharmapala (2006), showed that tax optimization will evaluate negatively by the shareholders or by the weakness of governance which would accept the reduction in profit countable. When the organization of government of the firm is strong, the reduction in the accounting incomes is not possible and tax optimization also does not import any advantage of diversion.

A linear association amongst tax planning and market to book ratio has been presumed in the previous researches conducted on taxes and firm's value. Uncertainty and expected level of future tax rates are the two dimensions of tax avoidance discussed by Kutcher et al. (2012). They reasoned that for firms with effective tax avoidance pre-tax earnings considerably affected firm value. Furthermore, unpredictable compelling duty rates, got a rebate in their profit.

H1: There is a negative association between ETR and firm's value.

2.1.2. Earning management:

Depending on the manager's conduct in using accounting approaches, earning management can be efficient or opportunistic. According to many previous researches done on earnings management's opportunistic side, concluded that there might be a negative relationship between earning management and firm value because of the perception that earning management provide a way of wealth expropriation from shareholders to managers.

Many of the research works done in context of America, such as by Frank et al. (2009) suggested that there was simultaneous increase in the value of firms that were engaged in earning management practices.

According to Assidi, & Omri, (2016) for managers, accounting income can be reduced by taking benefit of tax incentives established by law. The authors in their previous research conducted in 2014 showed that within the firm, information quality can be enhanced by tax optimization. So, according to this and the traditional idea of tax optimization, with implementation of tax optimization, the value of firm should rise.

H2: The firm's value increases if there is an increase in the sum of total accruals.

2.1.3. Financial Debt:

Firm is financed by debt and equity. The main foundation of financing for the firm is financial debt. According to Modigliani & Miller (1963), due to tax benefit of debt, there is increase in firm value and the cost of using debt capital is reduced. Relative to that, financial debt, according to tax perspective, provides advantage to the firm. Without a doubt, the interest, being financially deductible, permits the taxation rates to be minimized and to increment in this manner the firm value. According to the trade-off theory, Graham (1996) showed in his study that there exists a negative correlation between tax rates and debt. Therefore we tested following hypothesis.

H3: Financial debt is negatively related to firm value.

2.1.4. Firm Investment:

Investment can be defined in more than one way. In economics, investment is defined as the purchase of physical assets such as plant, equipment or new home. In finance it refers to the purchase of monetary asset in a view that it will provide income in future or will be sold at higher price for a profit (Oloidi, 2014).

For firm value and economic growth, investment is essential foundation. While making decisions regarding investment, income taxes can play a substantial role to managers. The net present value of firm is affected by amounts; statement and even, the insecurity of the compensation of tax burdens, and, investment decision also affect this (Hanlon, 2010). According to Frank et al. (2009), investment is an important factor determining the firm's value. Therefore following hypothesis is tested.

H4: Investment is positively related to the firm's value.

3. METHODOLOGICAL

3.1. Sample:

The sample size of our research includes 381 non-financial Pakistani firms listed in Pakistan Stock Exchange (PSE). The data under study ranges from 2009-2014 as this is the latest data available. Out of 2286 observations, 2280 observations were used. Some observations were deleted due to non-availability of data. In order to find the relationship among ratios, regression and correlation are used.

3.2. Research Design:

In this study, secondary data is used that is collected from the annual reports of the companies. Numeric values needed for the study to find the performance of the firms, are given in the Balance Sheet Analysis that is published by the State Bank of Pakistan. In order to find the relationship correlation and regression are used. Regression analysis is used to regress the dependent variable i.e. firm vale against other independent variables. This research is carried out to study the relationship of variables with the firm performance and to determine the ways by which firm performance can be improved.

3.3. Model Specifications And Measurement Of Variables:

In order to test our hypothesis we will estimate the following data regression panel model.

$$ROA_{it} = \beta_0 + \beta_1 ETR_{it} + \beta_2 ACCT_{it} + \beta_3 DEBT_{it} + \beta_4 \Delta INV_{it} + \beta_5 BIG_{it} + \beta_6 SIZE + \varepsilon_{it}$$

$$TOBIN'S\ Q_{it} = \beta_0 + \beta_1 ETR_{it} + \beta_2 ACCT_{it} + \beta_3 DEBT_{it} + \beta_4 \Delta INV_{it} + \beta_5 BIG_{it} + \beta_6 SIZE + \varepsilon_{it}$$

Dependent variables of the study are measured by ROA and Tobin's Q, and effective tax rates (ETR), total accruals (ACCT), financial debt (DEBT), investments (ΔINV) are independent variables of the study. Big 4 and log of total assets are used as control variables.

4. RESULTS:

4.1.Descriptive Statistics:

Below are the results of the descriptive statistics of all the variables. ROA is the proxy used for firm performance and Tobin's q is the proxy for firm value. Effective Tax Rate (ETR) is the proxy for tax optimization, whereas total accrual (ACC) is the proxy for earnings management. The following table shows the values of mean, median, maximum, minimum, standard deviation, skewness and kurtosis. The numbers of observations are 2280. The mean of ROA is 40.57332, its median is 3.070000 where as its standard deviation is 2002.10.Skewness of ROA is 47.2105 and kurtosis is 2247.42.

Table 1: Descriptive Statistics

	ROA	Tobin's Q	ETR	ACC	DET	ΔINV	SIZE	BIG4
Mean	40.573	0.609	0.336	23.547	5.955	52.38	6.385	0.368
Median	3.070	0.386	0.174	3.577	1.545	52.84	6.423	0.000
Maximum	95274.36	737.190	232.939	22.121	2001.400	99.96	8.780	1.000
Minimum	(7621.43)	(2389.39)	1.350	1.020	0.000	0.000	1.146	0.000
Std. Dev.	2002.100	59.378	5.637	47.049	61.0494	22.69	0.896	0.482
Skewness	47.211	29.835	33.627	13.896	25.904	(0.10)	(0.99)	0.549
Kurtosis	2247.420	1191.690	1309.62	249.40	744.567	2.512	7.131	1.301

The mean value of Tobin's Q is 0.609219 whereas the median value is 0.386068. The standard deviation of Tobin's Q is 59.3783. The skewness-29.8347 is with the kurtosis value of 1191.69. The mean of ETR is 0.335748 and the median is 0.174230. The standard deviation is 5.636726. Whereas the skewness of ETR is 33.62731and the kurtosis is 1309.636. The mean value of total accruals is 23.54701 whereas the median value is

3.57690. The standard deviation value of accruals is 47.04867. The skewness is of 13.89570with the kurtosis value of 249.4067. Financial debt has a mean value of 5.954693and the median value is 1.545000. The standard deviation is 61.04943. The value of skewness is 25.90426and the kurtosis has the value of 744.5672. Change in investment have a mean value of 52.38671and the median of 52.84588. The standard deviation value is 22.69511. The skewness of investment is -0.104354and the kurtosis is2.511880. The value of mean for size is 6.385302and the median value is 6.423396. The standard deviation value is 0.895731. The skewness of size is -0.991157 with the kurtosis value of 7.131727. The last variable is Big4 having the mean value of 0.367544and the median of 0.00000 whereas the value of standard deviation is 0.482242. The value of skewness is 0.549455and kurtosis is 1.301901.

ROA has the highest mean value of40.57332and Big4 have the smallest, mean value of 0.367544. Investment has the highest median of 52.846and Big4 have the smallest median value of 0.0000. ROA has the highest standard deviation with the value of 2002.10 whereas big4 have the smallest standard deviation of0.482242. ROA has the highest skewness value of 47.2105which means that it is positively skewed whereas size has the skewness-0.9912 of depicting it to be negatively skewed. Due to the biasness in the data the distribution of the data is not normal.

Table : 2 Random Effect Model: Dep Variable: ROA

ROA	Coefficient	Std. Error	t-statistics	Probability
ETR	(1.239275)	0.530975	(2.333961)	0.0013
ACC	1.712356	.7723754	2.216991	0.0012
DEBT	0.034937	0.687302	0.050833	0.9595
ΔINV	0.612049	1.846270	0.331506	0.7403
SIZE	21.82297	6.58602	3.313518	0.7403
BIG 4	7.192714	2.74787	2.617559	0.0356

Table: 1 Panel data regression analysis with ROA

4.2.Analysis of Data:

The panel data test is used to estimate the equation. Random effect model is used in this analysis. For the indemnity of selection of test, Hausman test is conducted to choose between random and fixed effect model. According to results, we accept the random effect model results. The value of effective tax rates (ETR) is (1.239), which shows a negative relationship ROA and ETR, moreover this relationship is significant. The results are according to the hypothesis and are according to the work done by Wahab& Holland (2012). The value of accruals i.e. 1.71235 shows positive relationship between earnings management and ROA. This relation is also significant. The results are according to the hypothesis and are supported the work done by Rezaei, (2012). The coefficient of debt i.e. 0.034937 shows a positive relationship while the value of t-statistic i.e. 0.050833 with probability 0.9595 shows an insignificant relationship between debt and ROA. Investment having value of 0.612049 shows positive relationship and the value of t-stats i.e.0.331506 with probability 0.7403reveals an insignificant impact of investment on firm performance. The results reject the proposed hypothesis. The coefficient of size i.e. 21.8229 shows a positive relationship between firm performance and firm size. The t-stat is 3.313518 with probability value 0.0000, which shows that the firm size and firm performance have highly significant impact on each other. The results show that the performance is high for the firms which are greater in size. The coefficient of Big4 is also positive and significant. This indicates that performance of the firms is higher for those which are audited by big 4 companies. This is because of the proper check and balance and due to the good reviewing of the firms. The R^2 value is 0.647802 or 64% which shows that the model is good fit as the R^2 value greater than 60% is considered to be good and significant.

Table 3:Random Effect Model: Dep Variable: TOBIN'S Q

Tobin's Q	Coefficient	Std. Error	T-Statistics	Probability
ETR	(1.043257)	0.360138	(2.896825)	0.0021
ACC	4.65548	1.947543	2.39098	0.02474
DET	(0.012560)	0.020392	(0.615927)	0.6781
ΔINV	0.040367	0.054699	0.737989	0.4606
SIZE	3.046912	1.454156	2.095313	0.0434
BIG4	3.352893	1.126323	2.976848	0.0363

Table: 2 Panel data regression analysis with Tobin's Q.

In this study, we used Tobin's Q as a measure of firm value. The panel data test was used to estimate the equation. Random effect model was used in this analysis. Hausman test was conducted to choose between random and fixed effect model. According to results, we accepted the random effect model results. The value of ETR is (1.043257), which exhibits a negative relationship between effective tax rates and firm. The t-value and probability are significant relationship. The negatively significant results revealed that minimization of tax rate had direct impact on firm's value in Pakistan. The value of accruals coefficient represents a positive and significant relationship with firm value. This validates the proposed hypothesis that firm value increases in accordance with the increase in sum of total accruals. The value of debt i.e. (0.012560) exhibits the negative and insignificant relationship between debt and firm value. The value of change in investment as represented by ΔINV is 0.04367 which shows that there is positive relationship between investment and firm value. The coefficient of size i.e. 3.046912 exhibits a positive relationship between size and firm value. This relation is significant in nature. The coefficient of Big4 shows that firms audited by top four audit firms have higher value. The R^2 value is 0.627802 or 63% which shows that the model is good fit as the R^2 value greater than 60% is considered to be good and significant.

CONCLUSION AND RECCOMENDATIONS:

This research is conducted on the non-financial firms of Pakistan to find out the impact of tax optimization on firm value. This is the first study conducted on the Pakistani non-financial firms that studies the impact of effective tax rates on firm value. The core purpose of this research is to study the tax optimization-firm value relationship. This study incorporates specially the factors that can be closely interrelated to effective tax rates and can influence the firm value. Debt, earnings management and audit quality is given the main interest in this study. To determine the effect, the study includes the balanced panel data with 381 non-financial firms and 2280 total number of observations. The time period of the study conducted is six years i.e. from 2009 to 2014. Panel data regression analysis is done in the e-views software to test the data.The results show that there is negative and significant impact of tax optimization on firm value. This shows that minimization of tax rate have a direct impact on firm value and firm performance. The results also show that there is positive and significant relationship between accruals and firm value. Managers of the firms look for tools and strategies that can effectively smooth out the financials of the firm to attract new sources of investment. According to the results, there is insignificant relationship between financial debt and firm performance and firm value. In Pakistan, debt has insignificant impact on the firm performance. This can be due to the fact that in Pakistan, the non-financial firms have taken more leverage then they should. In the case of Pakistan this is not good where the firms have more liabilities then assets. Also the analysis of the data shows that non-financial firms of Pakistan have more liabilities then assets. The result for investment is insignificant in this study. This can be explained by socio-economic instability, unfavorable environment for investment and high risk. Investors did not actively participated in investing activities due to the terrorism effect in Pakistan during 2009 to 2013. Another reason for less investment can be that rather than investment, companies tend to reduce their costs that are incurred. At

that time, companies didn't have any new projects to invest in and the growth rate was quite low for firms. Also, there were not major investment announcements which can be a reason for decrease in firm value. Size of firm is positively related to the firm value showing that the larger the firm size, the greater is the firm progress resulting in higher firm value and increased firm performance. The audit quality has significant impact on firm value and firm performance. Audit quality is basic component in ensuring the significance of decision making practice. The auditor's association to Big 4 firm plays an imperative role in valorization of the firm. By keeping in mind results of the study, the firms should tend to increase their investments by making investment announcement and should inaugurate new projects for investment. This will prove to be beneficial for the firm as it will lead to the increase in firm performance and ultimately firm value. As Pakistan is a developing country so the results will be different from those obtained for developed countries. Pakistan has been facing many crises over a period of years. Also these crises have been increasing the risks faced by the trading and the industries of Pakistan.

REFRENCES:

Assidi, S., Aliani, K., and Omri, M.A., (2016), "Tax optimization and firm's value: Evidence from Tunision context", *Borsa Istanbul Review,* 1, (1-8).

Bryant-Kutcher, L. A., Guenther, D. A., & Jackson, M. (2012)."How do cross country differences in corporate tax rates affect firm value?",*The Journal of the American Taxation Association*, 34(2), 1-17

Chadefaux, M., & Rossignol, J. L. (2006). *La performance fiscale des entreprises*.

Desai and Dharmapala (2006) « Taxes, Institutions, and Foreign Diversification Opportunities», *Journal of Public Economics*, Vol. 93, pp.703–714.

Desai, M. A., & Dharmapala, D. (2007).Corporate tax avoidance and firm value.*University of Connecticut andUniversity of Michigan,* 1–27.

Desai, M. A., & Dharmapala, D. (2009).Corporate tax avoidance and firm value.*The Review of Economics andStatistics, 91*(3), 537–546.

Desai, M. A., & Hines, J. R. Jr. (2002)."Expectations and expatriations: Tracing the causes and consequences ofcorporate inversions". *National Tax Journal, 55*, 409–441.

Desai, Mihir A., and Dhammika D.,(2009), « Taxes, Institutions, and Foreign Diversification Opportunities», *Journal of Public Economics*, Vol. 93, pp.703–714.

disclosure requirements". Working paper.

Frank M; Lynch L and Reg S.,(2009), "Are financial and tax reporting aggressiveness reflective of broader corporate policies?" , *The Accounting Review,* Vol. 84, pp. 467-498.

Frank, M., Lynch, J., & Rego, S. (2009). "Tax reporting aggressiveness and its relation to aggressive financial reporting". *The Accounting Review*, 84, (467-496)

Graham, J. R. (1996). Debt and the marginal tax rate. *Journal of financial Economics*, *41*(1), 41-73.

Hanlon, M. a. (2010).A review of tax research.Journal of accounting and Economics, 127-178.

Hoffman W., (1961), "The theory of tax planning" ,*The Accounting Review*, pp. 274-281.

Lipatov, V. (2012). Corporate tax evasion: the case of specialists. Journal of Economic Behavior and organization, 185-206.

Oloidi, G. A. (2014). Company Income Tax and Investment Decisions: A Behavioural Approach. Journal of Business and Management, 11-19.

Scholes M. S; Wolfson M. A; Erickson M; Maydew E. L and Shevlin,T., (2009), "Taxes and business strategy: A planning approach",*New York: Prentice-Hall, Inc.*

Slemrod, J., & Yitzhaki, S. (2001). *Integrating expenditure and tax decisions: the marginal cost of funds and the marginal benefit of projects* (No. w8196). National Bureau of Economic Research.

Wahab, N. S. (2010). Tax planning and corporate governance: Effect onshareholders'valuation.*Unpublished PhD thesis, University of Southampton, UK*. Retrieved from http://eprints.soton.ac.uk

Wahab, N. S. A., & Holland, K. (2012). Tax planning, corporate governance and equity value. *The British Accounting Review*, *44*(2), 111-124.