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RESEARCH ARTICLE

The Relationship between Family Firms and Tax Avoidance: A Quantile Regression Approach

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Abstract: The study examined whether firms that are family-owned avoided more taxation in contrast to the firms that are not owned by families. The study's sample consisted of non-financial firms listed on the Pakistan stock exchange during the period of 2011 to 2020. The quantile regression approach was used to find the results. The findings showed that firms that were owned by families engaged more in avoidance of tax activities as compared to the other firms. The problems of tax avoidance in the family businesses can be explained mainly because of the agency issues. Additionally, the study also utilized the firm-specific characteristics which were the age of the firm, liquidity, leverage and size. It was found that the firm characteristics variables exhibited a significant influence over the avoidance of tax. The study's findings have important implications for companies and policy makers in order to address the tax avoidance problem.

Keywords: Tax avoidance; family firms; firm characteristics
JEL Classification Codes: H26

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1. INTRODUCTION

As per Corporate Governance Mechanism, family-controlled businesses have distinctive organizational structures. This is mainly because of the reason that family businesses have distinct incentives than non-family businesses which affects their outcomes, i.e. performance (Bartholomeusz & Tanewski, 2006). Due to their commitment, knowledge, reliability, and sustainability, the family-owned businesses have well flourished. Especially with the advent of globalization and technological advancements, businesses have faced many challenges. This makes the family-owned business firms more likely to endure and survive due to their closely knit corporate governance structure influenced by family ties. Importantly, the family-owned businesses dominate most of the businesses in the World. However the family-run businesses are more dominant in the south Asian countries; this is approximately ninety percent (Fernando et al., 2018).

In line with agency theory, management and control mechanisms for the family-owned business firms differ due to their distinctive incentives (Schulz, et al., 2003; Aguilera & Crespi-Cladera, 2012). Fernando et al. (2018)

stated that differences in incentives of family firms can lead to agency issues in the businesses. In family-owned firms, the managers mostly act for the family members interests, while not for the other shareholders, which are the minority shareholders. Therefore, the management is not properly carried out in its letter and spirit, and due to this agency conflicts arise. Agency Problems I and II, are two general categories of conflicts. The conflict or competing interest arising among the company's ownership and its managers as explained by Jenson and Meckling (1976) is known as the agency problem I; which can be decreased by the large controlling (dominant) shareholders of family having large motives to oversee the management. Nevertheless, this can lead towards agency problem II, whereby the large family controlling shareholders can use their controlling influence for private benefits; in this case, the minority shareholders are exploited (Villalonga & Amit, 2006).

The family firms have this tendency to accumulate wealth particularly by keeping it towards its shareholders and management, who are closely knitted; therefore the tax avoidance can be much more beneficial for family firms. Therefore, the family owned firms are more likely to avoid taxation (Kovermann & Wendt, 2019). The tax avoidance tendency among the family owned firms can be explained by agency conflicts (Lopez-Gonzalez et al., 2019). Additionally, the avoidance of tax provides the opportunities for the firm's manager to extract rent; this also leads to the rise in the agency costs (Chyz & White, 2014). Family businesses are expected to be more prone to avoidance of tax as a result of the rise in agency conflicts within them.

The present study investigates the effect of family-owned businesses on avoidance of tax from the perspective of a developing nation, namely Pakistan. The mentioned sample setting is chosen mostly on the basis that the agency conflict concerning the dominant and minority shareholders is much more common in family-owned business firms (Cheng, 2014; Lee & Bose, 2021). Most businesses in Pakistan are family-owned (Sheikh et al., 2018); these family business firms also dominate the Pakistan stock market (Haque & Hussain, 2023). Furthermore, in Pakistan, the institutional and regulatory environment has remained weak (Uddin et al., 2019). Therefore, it's argued that Pakistan provides an appropriate setting to analyze the connection between the firms that are owned by families and avoidance of tax.

Importantly, concerning firm's avoidance of taxes; it has become the center of attention of policymakers (Oats & Tuck, 2019). Hanlon and Heitzman (2010) define tax avoidance as any activity that reduces a business's tax liabilities. Although the tax avoidance literature has covered many countries, however for developing countries, the area is still limited (Wang et al., 2020). Moreover, the avoidance of tax problem exists in Pakistan (Bukhari & Haq, 2020). Tax avoidance seriously impacts Pakistan's tax revenue (Marwat et al., 2023). To further analyze the area concerning avoidance of taxes from a developing country's perspective, in this study, a selection of non-financial companies listed at Pakistan Stock Exchange are sampled. The present study uses tax avoidance proxies of effective tax rates documented in earlier literature (Dyreng et al., 2008; Hanlon & Heitzman, 2010). Furthermore, family firms are those where the families are in top managerial positions, i.e. board of directors. Moreover, they also have a critical controlling level in the firms (Cubbin & Leech, 1983; Lee & Bose, 2021).

The following are some ways in which this study adds to the body of literature. Firstly, it offers an insight

regarding the agency problem type II (principal principal) arising from a conflict or competing interest among the controlling (dominant) family owners and shareholders of minority. Importantly, it examines how the family business ownership affects avoidance of tax, in a developing country's perspective, i.e. Pakistan. There is a limitation in the body of literature on family firms and avoidance of tax concerning developing countries. The prior studies concerning family firms and their effects on avoidance of tax have been done on economically advanced countries (Chen et al., 2010; Kovermann & Wendt, 2019; Lee & Bose; 2021). Pakistan has a different firm ownership structure than the other countries; its ownership structure is mostly concentrated on family ownership (Sheikh et al., 2018). Moreover in Pakistan, family-owned firms are privileged in a way to have better access to resources (Hussain & Safdar, 2018). Above all, this study adopts the quantile regression analysis approach, which has been critically recommended by the family firm's tax avoidance literature (Khelil & Khlif, 2023). Therefore, this study has its significance in examining the influence of family firms on tax avoidance. The study's key research question is whether family firms avoid more taxation than non-family firms in Pakistan?

The paper is structured and organized as follows: part 2 is the literature review, part 3 is the methodology, the part 4 describes results and analysis and part 5 Discussion and part 6 conclusion.

2. LITERATURE REVIEW

The new strands of literature view the agency theory with the context to the agency conflicts arising based upon avoidance of tax (Khan et al., 2017). Villalonga and Amit, (2006) in their study documented that in the family-owned business; type two agency conflict (principal-principal) is much more prevalent as compared to the type one agency conflict (principal-manager). Moreover, asymmetry of information is a significant area of agency theory (Eisenhardt, 1989). When dominant (family-owned) shareholders have greater access to information they can carry out activities of rent seeking, which are covered by the tax avoidance (Lee & Bose, 2021). There is an increased agency conflict in the family owned businesses between its dominant family owners and shareholders of minority (Chen et al., 2010). The avoidance of tax mainly arises in the family businesses due to the conflicts of interest between the major family owners and minority shareholder (Lopez-Gonzalez et al., 2019).

The researchers, Hanlon and Heitzman (2010) have stressed to further study tax avoidance concerning the agency problems. Importantly, there is still a research gap in the agency framework area concerning family firms and avoidance of tax. Similarly, the impact of family-owned firms on avoidance of taxes in the developing country's setting, i.e. Pakistan is also not free from limitations. Therefore, this study addresses the research gap particularly by examining how family ownership affects the avoidance of tax in the developing country, Pakistan.

2.1. Family firms and avoidance of tax

The study by Lee and Bose (2021) which was based in Taiwan came to the finding that there exists an inverse relation between family firms and the avoidance of tax. The family businesses avoided less taxation in contrast to the non-family-owned businesses. Importantly, the researchers also presented their view that family businesses avoid tax by taking into account the tradeoffs. They take into consideration the tax avoidance benefits against its costs. If the benefits outweigh the costs, the family firms are more into tax avoidance activity. Despite this, there are mixed findings to family ownership and avoidance of tax. It has also been mandated that family firms utilize more tax avoidance activities to compensate for their losses or mainly for

rent extraction purposes (Lopez-Gonzalez et al., 2019). Moreover, the greater ownership control of the family businesses also decreases the problems of moral hazards; this causes the family businesses to avoid more taxes (Jacob et al., 2021). However, the decisions of tax avoidance overall depend upon the prospective earnings of the business.

The study by Gaaya et al. (2017) based upon a developing country, Tunisia examined whether the family owned businesses avoided more taxation. The study's finding showed that Tunisian firms that were owned by families engaged more in avoidance of tax activities than the firms that were not owned by families. Moreover, the family businesses of Tunisia practice rent extraction activities through avoidance of taxation. Additionally, the shareholders who are at their minority their rights are also exploited due to this particular practice. Additionally, the study by Kovermann and Wendt (2019) in their empirical investigation drawn from the sample of firms of Germany, maintained that ownership plays a significant part in influencing avoidance of tax decision. The authors came to the finding that family businesses avoided more taxation in contrast to other businesses. The authors argued that tax avoidance brings much more benefits to the family businesses.

In the study by Flamini et al. (2021) based upon the sample of private Italian family firms, reported that that family firms with higher levels of concentrated ownership were more tax aggressive as compared to other family firms with concentrated ownership which was less. The family businesses with concentrated ownerships engage more in tax aggressiveness, since they have more interests in the financial short-term returns. This can be explained by agency perspectives. Qawqzeh (2023) in their study based upon Amman stock exchange found that family ownership in the firms increase the tax avoidance practice. In another the study by Almaharmeh et al. (2024) based upon the sample of listed firms of Jordan also found that family firms avoided more taxation. This was attributed to the regimes of weaker investor protection in the developing economies.

There exists a research gap in this area concerning developing countries, especially Pakistan. Pakistan has a large presence of family-owned business firms (Haque & Hussain 2023). Moreover, the regulatory and corporate governance framework is different in Pakistan as compared to other nations (Sheikh et al., 2017). Pakistan also has weak frameworks of corporate regulatory, which generates agency problems (Azeem et al., 2023). Additionally, Pakistan being a developing country also has poor governance which affects its taxation (Arif & Rawat, 2018). It has been well established that in Pakistan there is a problem of tax avoidance (Marwat et al., 2023). Importantly, the agency conflicts cause the rise in tax avoidance activity. However there is a limitation with respect to how the family firms affect the avoidance of taxes in Pakistan's setting. As a result this study focus into addressing the research gap in how the family firms of Pakistan avoid taxation. It is anticipated that family firms of Pakistan avoid more taxation. The following hypothesis is created in addressing the research gap in this domain:

H1: Family firms avoid more taxation than non-family owned firms.

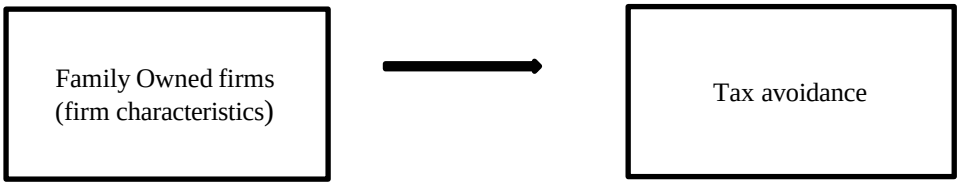

Figure.1 Conceptual framework

3. METHODS

3.1. Sample of study

This study's sample consisted of listed non-financial firms from the period of 2011 and 2020 at the Pakistan Stock Exchange (PSX). The financial firms are not included in the sample due to their unique financial structure and behavior (Sogorb-Mira, 2005). There are 295 listed non-financial firms in the final sample. The listed non-financial firm's data was extracted from Pakistan stock exchange data portal, the website of company, and from the opendoors.pk (Khan & Kamal, 2022). The study's sample period of 2011 and 2020 is taken due to the reason that it's the most reasonable year of the family firm's data availability. In agreement with the study of Lee and Bose (2021), emphasis was made concerning to the sample period according to the family firms' data availability. Moreover, the sample period of 2011 to 2020, covers the important time frame where Pakistan's necessary corporate governance mechanism regulations and codes of 2012, 2017, and the 2019 were established (Khan et al., 2022).

3.2. Variables

3.2.1. Dependent Variable

3.2.1.1. Tax Avoidance

In the study the avoidance of tax is the dependent variable. The effective tax rates have been used as proxy measure for avoidance of tax (Hanlon & Heitzman, 2010). The two avoidance of tax measures are used to overcome the limitations of a single tax avoidance measure; therefore, it is important to use more than one tax avoidance measure to confirm the robustness in the study (Lisowsky et al., 2013; Al-Hadi et al., 2022). These are accounting effective tax rate (ACCTETR) and long run accounting effective tax rate (LRETR). The calculation of accounting effective tax rate (ACCTETR) is done by total expenses of tax divided by the pretax earnings of the firm (Hanlon & Heitzman, 2010). Additionally, in order to overcome the possible limitations of effective tax rates which are annual based, this study in agreement with previous literature of Dyreng et al., (2008) also employs long run effective tax rates. The total sum of four years' worth expenditures of tax is divided by the complete sum of four years' worth of pretax revenue to determine the long run accounting effective tax rate (LRETR) (Taylor & Richards, 2012). Lower effective tax rates indicate greater tax avoidance (Mcguire, 2012). Moreover, the effective tax rates have been winsorized to zero and one values (Taylor & Richardson, 2012).

3.2.2. Independent Variables

3.2.2.1. Measure of family firms

The first independent variable is a dummy variable known as family firms. The family firms have the

definition as the businesses where the family members (through blood or marriages) are at most of the top management positions, i.e. board of directors. Moreover, they also have a critical controlling level in the firms (Cubbin & Leech, 1983; Villalonga & Amit, 2006; Lee & Bose, 2021). The 20% share ownership is considered to be a significant ownership that can exert an influence, (La Porta et al., 1999; Sacristan-Navarro & Gomez-Anson, 2007; Arosa et al., 2010). The mentioned criterion is used as an indication whether the firm is family owned or non-family owned. To calculate the firm's family affiliation, the dummy variable FAMFIRM is used, it is coded as 1 if the firms are owned by family and 0 if they are non-family owned (Lee & Bose, 2021).

3.2.3. Control Variables

This study also makes use of variables of control that also reflect firm characteristics (Lee & Bose, 2021). Because they have an impact on tax avoidance measures, firm characteristics like firm size, leverage, liquidity, and age are employed as variables of control in the study (Taylor & Richardson, 2012; Ginesti et al., 2020). The leverage of firm; total debt divided by total assets represents one of control variables (Doo & Yoon 2020). The liquidity which is also a control variable, it's calculated through the current ratio that is current assets divided by current liabilities (Samo & Murad, 2019). The total time frame, and the years since the company was incorporated is used to calculate the age of the firm (Taylor & Richardson, 2012; Ginesti et al 2020). The size of the firm is calculated through taking the logarithm of the total assets of the company (Taylor & Richardson, 2012).

3.3. Regression model

To examine the research hypothesis the study follows empirical testing. The Quantile regression is used to evaluate the study's hypothesis in accordance with a prior study by Armstrong et al., (2015). Moreover, the use of Quantile regression is also supported in the tax avoidance study of Chen et al. (2020); in the quantile regression, the conditional quantile of tax avoidance are focused. The FAMFIRM and the two tax avoidance measures of ACCTETR and LRETR, their relation is tested. The firm specific variables which are the firm characteristics are also controlled. Following is the model:

$$TAXAVOID_{i,t} = B0_{i,t} + B1FAMFIRM_{i,t} + B2LEV_{i,t} + B3LIQ_{i,t} + B4FSIZE_{i,t} + B5FIRMAGE_{i,t} + E_{i,t} \quad (1)$$

Where,

TAXAVOID= Tax avoidance measures; ACCTETR and LRETR
FAMFIRM=Family owned firms
LIQ= liquidity
LEV= Leverage
FSIZE = Firm Size
FIRMAGE = Firm age
E= error term

4. RESULTS & ANALYSIS

4.1. Descriptive statistics

Table 1 shows the study's descriptive statistics. Descriptive statistics provides data's statistical comprehension (Hair et al., 2020). The values of mean (median) of ACCTETR and LRETR are 0.221 (0.205)

and 0.278 (0.274) respectively. Importantly, the mean values of the effective tax rate give attributes to avoidance of tax activity (Taylor & Richardson, 2012). The mean and median effective tax rates which are lesser than the country's statutory (corporate) tax rates are indicative of the presence of corporate tax avoidance (Xu et al., 2022). The study's mean and median values are lesser than the statutory corporate tax rates of Pakistan. This lower mean and median value suggests that corporate tax avoidance activity is prevalent among Pakistan's listed non-financial firms. The independent variable the family firms has value of mean of 0.869. Moreover, the firm size has a mean value of 8.048, which is close to 9, this suggests in the sample most of firms are small and medium sized (Ginesti et al., 2020).

Table 1
Descriptive Statistics

Variables	N	Mean	Median	Std Dev	Min	Max
ACCTETR	295	0.221	0.205	0.233	0.000	1.000
LRETR	295	0.278	0.274	0.211	0.000	1.000
FAM	295	0.868	1.000	0.337	0.000	1.000
FAGE	295	38.813	35.000	16.938	1.000	73.000
LEV	295	624.630	0.563	33475.26	0.000	1809820.
LIQ	295	1.943	1.086	8.534	0.000	257.929
SIZE	295	8.048	7.944	1.4185	0.399	16.048

Source: primary data

4.2. Correlation

In Table 4.2, the Pearson correlation is shown. The Pearson correlation measures the magnitude and directions of the relationships among variables. The values of correlation coefficient fall between -1 and +1 (Cooper et al., 2015). The variable FAMFIRM has a significant negative correlation (p<0.01) with ACCTETR and LRETR. For the control variables the FIRM AGE is significant positively correlated (p<0.01) to ACCTETR and LRETR. The LEV has a significant and positive correlation (p<0.01) with ACCTETR and LRETR. Moreover, LIQ and LRETR are significantly and negatively correlated (p<0.10). The size of firm is significantly negatively correlated to ACCTETR and LRETR (p<0.01).

Additionally, statisticians claim that a correlation between the independent variables above +/- 0.60 is a sign of potential multicollinearity in data (Hair et al., 2020). The correlation among study's independent variables is not high, which indicates the absence of multicollinearity. To further test the if the data has multicollinearity, the variance inflation factor was tested. The results showed the VIF mean value of 1.02. Importantly, variables had VIF values less than five, which confirms that multicollinearity doesn't exist (Hair et al., 2006).

Table 2
Pearson Correlation

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
ACCTETR	(1)	1						
LRETR	(2)	0.496***	1					
FAM	(3)	-0.073***	-0.108***	1				
FAGE	(4)	0.058***	0.110***	-0.096***	1			
LEV	(5)	0.065***	0.063***	0.007	-0.012	1		
LIQ	(6)	0.007	-0.031*	-0.044**	-0.020	-0.004	1	
FSIZE	(7)	-0.054***	-0.063***	0.134***	-0.131***	-0.079***	0.015	1

****, **,*Indicates levels of significance at 1, 5 and 10 percentages.
Primary data

4.3. Regression Analysis

The study employs quantile regression to empirically analyze variables and whether they support or refute the hypothesis. The quantile regression has been empirically used for analyzing the distributions of avoidance of tax which have tails at their extreme levels (Armstrong et al., 2015). Amstrong et al., (2015) mandated that the quantile regression provides better and reasonable inferences as compared to the ordinary least squares (OLS). Furthermore, as documented by Hao and Naiman (2007) the ordinary least square (OLS) has a focus on conditional mean, which can bring limitations. The alternate to the conditional mean model to cover its limitations is the conditional median. The quantile regression uses the conditional median. Additionally, the quantile regression is much more robust and useful to the data that is highly skewed (Mata & Machado, 1996; Kuan et al., 2012). Therefore, this study uses the quantile regression approach.

The data observations are divided into three categories by the quantile regression. The observations are divided into the 0.25, 0.50 and 0.75 quantiles. A greater degree of avoidance of taxes is indicated by a lower value of effective tax rates (Ginesti et al., 2020). The first quantile of 0.25 contains the effective tax rates values of lowest, indicating highest level of tax avoidance activities. While the second quantile of 0.50 provides the effective tax rates value of median level. The final third quantile 0.75 provides the highest effective tax rate values, which are indicative of lowest level of tax avoidance activities (Toumi et al., 2022). In the study to analyze the impact of family firms on avoidance of tax through the quantile regression, the Equation 1 is used. The tax avoidance measures ACCTETR and LRETR were winsorized to 0 and 1 ranges to overcome outliers (Taylor & Richardson, 2012). The table 3 and 4 shows the results of the Eq. (1).

The findings in the below table 3 show that family-owned firm (FAM) has a significantly inverse relation to the accounting effective tax rate (ACCTETR) at (p<0.05) in first quantile 0.25Q and at (p<0.01) in the second 0.50Q and third quantile 0.75Q respectively. It can be observed that the negative relations become most statistically significant under the second quantile level 0.50Q. The results support the study's Hypothesis. As for the firm characteristics which are also the variables of control the age of firm has a positive significant relationship with ACCTETR at the second quantile 0.50Q (p<0.01) respectively. Implying that as firms get old, they practice less tax avoidance activities. Similarly, the leverage of firm is positively significantly related (p<0.01) to the ACCTETR at all quantile levels. However, the relationship between leverage and ACCTETR is

strongest at the lowest quantile of 0.25Q.

The firm's liquidity is significantly and positively related (p<0.01) to ACCTETR at first quantile of 0.25Q. While the relationship is insignificant at the second quantile of 0.50Q. In contrast the relation is significantly and negatively related at the third quantile 0.75Q. Moreover, another firm characteristic variable the firm size FSIZE, is statistically significantly and negatively related to ACCTETR at second quantile 0.50Q and the third quantile 0.75Q. While its relationship with the ACCTETR is statistically insignificant at the first quantile 0.25Q.

Table 3
Results of Quantile regression

	ACCTETR		
Variable	Q 0.25	Q 0.50	Q 0.75
Intercept	0.091*	0.310***	0.388***
	(1.945)	(6.725)	(14.404)
FAM	-0.091**	-0.085***	-0.029***
	(-2.094)	(-7.057)	(-3.298)
FAGE	0.000	0.001***	0.000
	(0.046)	(3.487)	(1.317)
LEV	0.000***	0.000***	0.000***
	(24.270)	(12.855)	(14.938)
LIQ	0.000***	0.000	-0.000***
	(4.828)	(0.5771)	(-2.791)
FSIZE	0.000	-0.011**	-0.006**
	(0.013)	(-2.191)	(-2.203)
Pseudo R^2	0.005	0.020	0.006

****, **, * Indicates levels of significance at 1, 5 and 10 percentages. T-statistics are reported in parentheses.

primary data

The annual effective tax rates have their limitations with respect to their potential annual variation; therefore, the long run effective tax rates are also used (Dyreng et al., 2008; Taylor & Richardson, 2012). The table 4 shows the quantile regression results with the dependent variable of long run accounting effective tax rate (LRETR). It can be seen that the family-owned firms (FAM) have a significant negative relationship (p<0.01) with long run accounting effective tax rate (LRETR) at all three quantiles. However, the relationship is much stronger at the first 0.25Q and second quantiles 0.50Q respectively. Thus, suggesting that firms that are family owned they practice more tax avoidance. This provides support to study's hypothesis, H1. As for the firm characteristics that also serve as the variables of control, age of firm is statistically significantly and positively related (p<0.01) with the LRETR at first quantile 0.25Q, second quantile 0.50Q. Similarly, the firms age is significantly and positively related (p<0.05) to LRETR at third quantile 0.75Q. It can be observed that the relationship is significantly stronger at the first 0.25Q and second quantiles 0.50Q respectively.

In the Table 4.the leverage (LEV) is statistically and significantly positively related (p<0.01) to LRETR at all the Quantiles 0.25Q, 0.50Q and 0.75Q. However, the relationship is at its strongest in the first quantile 0.25Q. Furthermore, the firm's liquidity (LIQ) is significantly and negatively related to LRETR at second 0.50Q and third 0.75Q respectively. Moreover, the size of the firm is significantly and negatively related (p<0.05) to LRTETR at first quantile 0.25Q. Similarly, the size of firm is significantly and negatively related (p<0.01) to LRETR at the second quantile 0.50Q. While its relationship at third quantile is insignificant. Overall, the study's

results are economically significant.

Table 4
Results of Quantile regression

	LRETR		
Variable	Q 0.25	Q 0.50	Q 0.75
Intercept	0.232***	0.367***	0.373***
	(7.434)	(14.452)	(16.041)
FAM	-0.110***	-0.054***	-0.024***
	(-9.545)	(-8.240)	(-3.380)
FAGE	0.001***	0.000***	0.000**
	(6.800)	(3.558)	(2.316)
LEV	0.000***	0.000***	0.000***
	(23.445)	(17.579)	(21.480)
LIQ	-0.000	-0.000***	-0.000***
	(-1.437)	(-3.172)	(-4.708)
FSIZE	-0.007**	-0.010***	-0.002
	(-2.351)	(-3.712)	(-1.121)
Pseudo R^2	0.0385	0.022	0.008

****, **, * Indicates levels of significance at 1, 5 and 10 percentages. T-statistics are reported in parentheses.
Primary data

5. DISCUSSION

Based upon the quantile regression approach the study's hypothesis was tested. The benefits of the quantile regression are that it is much more robust and resilient to deviations from normality, presence of outliers, and skewed tails (Mata & Machado, 1996; Nanda & Panda, 2019). Additionally, a key limitation highlighted in family firm's tax avoidance literature was not usage of the econometric instrument of quantile regression (Khelil & Khlif, 2022). Therefore, the study employed quantile regression. Above all, the quantile regression results supported the study's hypothesis that firms owned by families avoided more taxes than other types of firms.

As can be seen, the quantile regression demonstrated a strong inverse relationship between family-owned businesses and avoidance of taxes measures, i.e. ACCTETR and LRETR. This is in line with the previous empirical evidence of Gaaya et al. (2017) that firms owned by families avoided more taxation than the firms not owned by families. This can be explained from an agency perspective that due to the concentrated ownership the advantages from avoidance of tax can be a lot more in the family-owned firms, therefore it's expected that they would practice more avoidance of tax (Chen et al., 2010; Kovermann & Wendt, 2019). Additionally, in the study the first quantile 0.25Q shows the lowest values of effective tax rates, which is indicative of the highest level of tax aggressiveness (Toumi et al., 2022).

It can be seen that when employing the long run effective tax rate (LRETR) as a proxy for avoidance of tax, the relationship between family-owned firms and avoidance of tax becomes much stronger in lowest quantile of 0.25Q. Thus, this shows that family-owned firms based upon their much significant relationship in the lowest quantile of 0.25Q is indicative that they practice more aggressive avoidance of tax in comparison to firms that are not family owned. This is in agreement to the study of Martinez and Ramalho, (2014) which founded that family businesses are more tax aggressive than nonfamily owned businesses. The results are also in line with the study of Almaharmeh et al. (2024) which documented that family firms have high levels of tax avoidance. The

family firms practice avoidance of tax to cover their losses. Moreover, this is facilitated in the investor protection regimes which are weak.

The firm characteristics variables firm age, leverage, liquidity and size were also found to be statistically significant in influencing tax avoidance. As for firm characteristics the firm age has a significant and positive relation to the avoidance of tax measures, i.e. ACCTETR and LRETR. This is according to the findings of Hasan et al. (2017), the older and mature firms avoid less taxation due to their reputational concerns. Moreover, firm leverage was found to have significant and positive relation to both the avoidance of tax proxies i.e. ACCTETR and LRETR. This implies that with the increase of firms leverage, this leads to less avoidance of tax. This finding is not according to that of Ginesti et al. (2020).

Moreover, the firm's liquidity was found to be significantly positively related to the ACCTETR at the first quantile 0.25Q. However, the firm's liquidity with the ACCTETR at the 0.75Q is significantly negative. Similarly, the firm's liquidity with quantile of the LRETR are significantly negative. Overall, these imply that increase in liquidity leads to increase in tax avoidance activity. This is in line with the findings of Ginesti et al. (2020), suggesting that firms having higher liquidity are more engaged in avoidance of taxes. The size of the firm was found to have a significant and negative relation to both the tax avoidance measures of ACCTETR and LRETR. This shows that large size firms avoid more taxation. These results are in agreement to the findings of Ginesti et al. (2020), which suggested larger firms through their resources practice tax avoidance.

5.1. Implications

The study has both policy and practical implications based on the results and findings. It is recommended that policy makers when drafting tax policies for the listed companies should also consider the ownership type, especially the family ownership. Importantly, the policy makers should not only strengthen their tax policies but they should also develop tax policies which provide in-depth tax audits of particularly family-owned firms. Moreover, the policy makers should promote financial transparency by necessitating the firms to increase their financial disclosures. It has been empirically supported that the countries and firms with higher levels of transparency lead to less avoidance of tax (Kerr, 2019).

This study also has practical implications, especially for companies. The public listed firms of Pakistan should adopt a strong corporate governance practice to reduce the agency problems within their firms. Especially through an efficient audit quality the avoidance of tax practices of family firms can be mitigated. This is mandated by the study of Gaaya et al. (2017) which found that firms owned by families avoid taxation more aggressively, this way the minority shareholders rights and interests are exploited; however, the effective audit quality reduces the family firm's aggressive avoidance of tax activities.

5.2. Study limitations and future directions for research

The present study is limited to the sample of listed firms which are non-financial based in Pakistan from the years 2011 to 2020. Future researchers should further explore how the corporate governance mechanism, especially the board composition influences the tax avoidance of the family firms.

5.3. Conclusion

The study examined whether the firms owned by families avoid excessive taxation in comparison to the firms

that are not owned by families from the sample of listed non-financial firm of Pakistan. By using the quantile regression approach, it was found that firms owned by families engaged in more avoidance of tax in comparison to firms not owned by families in Pakistan. Furthermore, firm level characteristic variables such as age of firm, leverage, liquidity and size were incorporated also into the study. It was found that firm characteristics variables had a significant impact over the avoidance of tax. Additionally, tax avoidance problem in the family-owned firms can be explained due to the agency problems in the firms. Importantly, the agency problem type II is more prominent.

REFERENCES

Arosa, B., Iturralde, T., & Maseda, A. (2010). Ownership structure and firm performance in non-listed firms: Evidence from Spain. *Journal of Family Business Strategy*, *1*(2), 88-96.

Aguilera, R. V., & Crespi-Cladera, R. (2012). Firm family firms: Current debates of corporate governance in family firms. *Journal of Family Business Strategy*, *3*(2), 66-69.

Armstrong, C. S., Blouin, J. L., Jagolinzer, A. D., & Larcker, D. F. (2015). Corporate governance, incentives, and tax avoidance. *Journal of accounting and Economics*, *60*(1), 1-17.

Arif, I., & Rawat, A. S. (2018). Corruption, governance, and tax revenue: evidence from EAGLE countries. *Journal of transnational Management*, *23*(2-3), 119-133.

Al-Hadi, A., Taylor, G., & Richardson, G. (2022). Are corruption and corporate tax avoidance in the United States related?. *Review of Accounting Studies*, *27*(1), 344-389.

Azeem, M., Ahmad, N., Majid, S., Ur Rehman, J., & Nafees, B. (2023). Corporate governance, financial constraints, and dividend policy: Evidence from Pakistan. *Cogent Economics & Finance*, *11*(2), 2243709.

Almaharmeh, M. I., Shehadeh, A., Alkayed, H., Aladwan, M., & Iskandrani, M. (2024). Family Ownership, Corporate Governance Quality and Tax Avoidance: Evidence from an Emerging Market—The Case of Jordan. *Journal of Risk and Financial Management*, *17*(2), 86.

Bartholomeusz, S., & Tanewski, G. A. (2006). The relationship between family firms and corporate governance. *Journal of small business management*, *44*(2), 245-267.

Bukhari, H., & Haq, I. (2020). Tax reforms in Pakistan.

Cubbin, J., and Leech, D. (1983). The effect of shareholding dispersion on the degree of control in British companies: theory and measurement. *The Economic Journal*, *93*(370), 351-369.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms?. *Journal of financial economics*, *95*(1), 41-61.

Cheng, Q. (2014). Family firm research–A review. *China Journal of Accounting Research*, *7*(3), 149-163.

Chyz, J. A., & White, S. D. (2014). The association between agency conflict and tax avoidance: A direct approach. In *Advances in Taxation* (pp. 107-138). Emerald Group Publishing Limited.

Cooper, D. R., Schindler, P., & Sharma, J. K. (2015). *Business research methods*. Mcgraw-hill.

Chen, H., Yang, D., Zhang, X., & Zhou, N. (2020). The moderating role of internal control in tax avoidance: Evidence from a COSO-based internal control index in China. *The Journal of the American Taxation Association*, *42*(1), 23-55.

Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-run corporate tax avoidance. *The accounting review*, *83*(1), 61-82.

Doo, S. and Yoon, S.S., (2020). Tax-motivated income shifting and board structure: Evidence from Korean business groups. *Journal of Contemporary Accounting & Economics*, *16*(3), p.100221.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, *14*(1), 57-74.

Fernando, A. C., Muraleedharan, K.P., Satheesh., E.K. (2018). *corporate governance: Principles, policies, and practices*. Pearson India

Flamini, G., Vola, P., Songini, L., & Gnan, L. (2021). The determinants of tax aggressiveness in family firms: an investigation of Italian private family firms. *Sustainability*, *13*(14), 7654.

Gaaya, S., Lakhal, N., & Lakhal, F. (2017). Does family ownership reduce corporate tax avoidance? The moderating effect of audit quality. *Managerial Auditing Journal*, *32*(7), 731-744.

Ginesti, G., Ballestra, L. V., & Macchioni, R. (2020). Exploring the impact of firm-level legality on tax avoidance. *European Management Review*, *17*(2), 499-514.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis 6th Edition.
Hao, L., & Naiman, D. Q. (2007). *Quantile regression* (No. 149). Sage.
Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of accounting and Economics*, *50*(2-3), 127-178.
Hasan, M. M., Al-Hadi, A., Taylor, G., & Richardson, G. (2017). Does a firm's life cycle explain its propensity to engage in corporate tax avoidance?. *European Accounting Review*, *26*(3), 469-501.
Hussain, S., & Safdar, N. (2018). Tunneling: Evidence from family business groups of Pakistan. *Business and Economic Review*, *10*(2), 97-121.
Hair, J. F., Page, M., and Brunsveld, N. (2020). *Essentials of business research methods*. Routledge.
Haque, N. U., & Husain, A. (2023). A Small Club. *The Pakistan Development Review*, *62*(2), 281-299.
Jenson, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360.
Jacob, M., Rohlfing-Bastian, A., & Sandner, K. (2021). Why do not all firms engage in tax avoidance?. *Review of Managerial Science*, *15*, 459-495.
Kuan, T. H., Li, C. S., & Liu, C. C. (2012). Corporate governance and cash holdings: A quantile regression approach. *International Review of Economics & Finance*, *24*, 303-314.
Khan, M., Srinivasan, S., & Tan, L. (2017). Institutional ownership and corporate tax avoidance: New evidence. *The Accounting Review*, *92*(2), 101-122.
Khan, S., & Kamal, Y. (2022). A comprehensive dataset of board of directors attributes of Pakistan stock exchange listed non-financial firms. *Data in Brief*, *41*, 107879.
Khan, S., Kamal, Y., Hussain, S., & Abbas, M. (2022). Corporate governance looking back to look forward in Pakistan: a review, synthesis and future research agenda. *Future Business Journal*, *8*(1), 24.
Kovermann, J., & Wendt, M. (2019). Tax avoidance in family firms: Evidence from large private firms. *Journal of Contemporary Accounting & Economics*, *15*(2), 145-157.
Kerr, J. N. (2019). Transparency, information shocks, and tax avoidance. *Contemporary Accounting Research*, *36*(2), 1146-1183.
Khelil, I., & Khlif, H. (2023). Tax avoidance in family firms: a literature review. *Journal of Financial Crime*, *30*(4), 1021-1035
La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The journal of finance*, *54*(2), 471-517.
Lisowsky, P., Robinson, L., & Schmidt, A. (2013). Do publicly disclosed tax reserves tell us about privately disclosed tax shelter activity?. *Journal of Accounting Research*, *51*(3), 583-629.
López-González, E., Martínez-Ferrero, J., & García-Meca, E. (2019). Does corporate social responsibility affect tax avoidance: Evidence from family firms. *Corporate Social Responsibility and Environmental Management*, *26*(4), 819-831.
Lee, C. H., & Bose, S. (2021). Do family firms engage in less tax avoidance than non-family firms? The corporate opacity perspective. *Journal of Contemporary Accounting & Economics*, *17*(2), 100263.
Mata, J., & Machado, J. A. (1996). Firm start-up size: A conditional quantile approach. *European Economic Review*, *40*(6), 1305-1323.
McGuire, S. T., Omer, T. C., & Wang, D. (2012). Tax avoidance: Does tax-specific industry expertise make a difference?. *The accounting review*, *87*(3), 975-1003.
Martinez, A. L., & Ramalho, G. C. (2014). Family firms and tax aggressiveness in Brazil. *International business research*, *7*(3), 129.
Marwat, J., Rajput, S. K. O., Dakhan, S. A., Kumari, S., & Ilyas, M. (2023). Tax avoidance as earning game player in emerging economies: evidence from Pakistan. *South Asian Journal of Business Studies*, *12*(2), 186-201.
Sacristán-Navarro, M., & Gómez-Ansón, S. (2007). Family ownership and pyramids in the Spanish market. *Family Business Review*, *20*(3), 247-265.
Nanda, S., & Panda, A. K. (2019). A quantile regression approach to trail financial performance of manufacturing firms. *Journal of Applied Accounting Research*, *20*(3), 290-310.
Oats, L., & Tuck, P. (2019). Corporate tax avoidance: is tax transparency the solution?. *Accounting and Business Research*, *49*(5), 565-583.
Qawqzeh, H. K. (2023). The effect of ownership structure on tax avoidance with audit quality as a moderating variable: evidence from the ailing economics. *Journal of Financial Reporting and Accounting*.
Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994–1998 Spanish data panel. *Small business economics*, *25*, 447-457.
Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of management journal*, *46*(2), 179-194.

Sheikh, M.F., Shah, S.Z.A. and Akbar, S., (2018). Firm performance, corporate governance and executive compensation in Pakistan. *Applied economics*, *50*(18), pp.2012-2027.
Samo, A. H., & Murad, H. (2019). Impact of liquidity and financial leverage on firm's profitability–an empirical analysis of the textile industry of Pakistan. *Research Journal of Textile and Apparel*, *23*(4), 291-305.
Taylor, G. and Richardson, G., (2012). International corporate tax avoidance practices: Evidence from Australian firms. *The International Journal of Accounting*, *47*(4), pp.469-496.
Toumi, F., Bouraoui, M. A., & Khlif, H. (2022). National culture and tax avoidance: a quantile regression analysis. *Arab Gulf Journal of Scientific Research*, *40*(2), 196-211.
Uddin, M., Chowdhury, A., Zafar, S., Shafique, S., & Liu, J. (2019). Institutional determinants of inward FDI: Evidence from Pakistan. *International Business Review*, *28*(2), 344-358.
Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value?. *Journal of financial Economics*, *80*(2), 385-417.
Wang, F., Xu, S., Sun, J., & Cullinan, C. P. (2020). Corporate tax avoidance: A literature review and research agenda. *Journal of Economic Surveys*, *34*(4), 793-811.
Xu, S., Wang, F., Cullinan, C. P., & Dong, N. (2022). Corporate tax avoidance and corporate social responsibility disclosure readability: Evidence from China. *Australian accounting review*, *32*(2), 267-289.