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# Analyzing the Moderating role of Board Structure in Relation between Tax Avoidance and Business Strategy: New Insight from Emerging Economy

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**Purpose:** Taxation basically occupies an important place in the strategic decisions of companies, therefore, business are thinking to adopt a dynamic and active method for tax management. This study examine the moderating role of board independence, and board size in the relation between tax avoidance, and business strategy in developing economy of the Pakistan.
**Design/Methodology/Approach:** The sample of study consist of 125 non-financial companies listed on Pakistan stock exchange with time period of 5 years from 2013 to 2017 on annual basis. Study uses static (fixed effect, & random effect) and dynamic (GMM) panel data estimation techniques.
**Findings:** The result shows that increase in board size of a prospector firm will increase its trend to avoid taxes. The finding also reveals that an increase in the independent directors in prospector firms will decreases tax avoidance activities in emerging economies. Additionally, result shows that firm profitability and leverage are negatively related to tax payments while firm size show positive association with tax payments.
**Implications/Originality/Value**: Among others, this study suggests that tax authorities should advocate the prospector firms to increase the number of independent directors on board because there presence cause a reduction in tax avoidance activities and increase tax payments.



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## Introduction

Taxation basically occupies an important place in the strategic decisions of companies, therefore, business are thinking to adopt a dynamic and active method for tax management (Anouar, 2017). According to Hanlon & Heitzman, (2010) tax avoidance definition might imply 'different things to different people'. Therefore, terms like tax management, tax sheltering, tax planning and tax aggressiveness are mostly used interchangeably to tax avoidance in literature (Chen et al., 2010; Minnick & Noga, 2010; Tang & Firth 2011). The activities of tax avoidance not only just cause a rise in cash flow but it also cause an increase in the accounting earnings in certain situations. The activities of corporate tax avoidance are considered as value enhancement activities to the companies (Yee et al., 2018; Higgins et al., 2011). An argument established by Slemrod (2016), that there should be present an optimal level of tax avoidance or tax planning for each firm that can balance the follow-on benefits and costs in such a manner as to maximize the value of shareholder. It was then further specified that for avoiding the reduction in distributable wealth of the company, tax avoidance strategies have turn out to be common practices (Annuar et al. 2014). Tax aggressiveness can cause effect on shareholder's return that are linked to investment decisions and can also affect managers who may get benefit from tax savings (Tang, 2016; Wilde &Wilson 2018; Philips, 2003). Therefore, for society, government, authorities and policymakers, tax avoidance become a source of concern (Chen et al., 2010). The public-private firms use tax planning more aggressively (Motta & Martinez, 2015). Tax avoidance is basically influenced and affected by many factors. Firm level characteristics like, size, economies of scale through foreign operations, capital intensity, leverage (Dyreng et al., 2010; Noor, Mastuki & Bardai, 2008) have key influence on tax avoidance.

Porter (2002) gives the definition of business strategy as these are made of a range of actions aimed to generate a position in a given situation. Miles et al. (1978) developed a typology consisting of 4 types of business firms that are prospectors, defenders, analyzers and reactors. Prospectors are flexible, risk takers and adaptive organizations and this enable them to respond the changing competitive landscapes and new opportunities quickly. In this way the technological flexibility permits the prospectors to respond to the changes rapidly. In order to coordinate and facilitate their multiple and diverse operations, the control in prospector firms is decentralized. Basically the prospector firms avoid long and lengthy commitments to single technological procedure by keeping the degree of routinization at low and by leveraging skills and knowledge of employees (Bentley et al., 2013 and Hsu et al., 2018). By following (Heggins et al., 2011; Bentely et al., 2013; Hsu et al.,2018; Higgins et al.,2015), this study basically focus on the prospector type whose strategy continuum contain prospector at one end and defender that is opposite to prospector, on other end.

The influencing relation between business strategy and tax avoidance is of major interest. Corporate governance is vital in regulating various actors and planning processes. Theoretically, many studies (Desai & Dharampala, 2006; Hanlon & Slemrod, 2009; Chen et al., 2010; Lanis & Richardson, 2011) show that few governance mechanisms have a negative impact on tax evasion. Furthermore, Pratama (2017) found that many proxies of company characteristics like age, size, and profit have a significant impact on tax avoidance practises. CEOs and directors play an essential role in the selection of strategies related to tax management and they are accountable for resource allocation (Minnick and Noga, 2010). In this regard, Irawati et al. (2019) has also clarified that the board's effectiveness in director's functions could cause improvement in corporate governance. Minton et al. (2011) find that larger and more independent boards are associated with lower levels of risk taking. Therefore, the board expertise levels among independent directors are positively related to risks.

Many studies examine tax avoidance while considering agency roles, and some use global data to discover numerous dimensions of corporate governance as determinants (Chen et al. 2013; Minnick & Noga 2010). Several recent studies link tax evasion to executive compensation (Rego & Wilson 2012; Desai & Dharampala 2006), family firm status (Steijvers & Niskanen 2014;

Moore et al. 2017), and institutional ownership (Khurrana & Moser 2013). Desai and Dharmapala (2006) argue that good governance systems can overcome tax avoidance systems. Many proxies that represent corporate governance includes entrenchment, board composition, board compensation and executive compensation (Minnick & Noga, 2010) use. In the same way, Wahab and Holland (2012) used ownership structure, board structure and the compensation structure as corporate governance proxies. Higgins et al. (2015) determine the association between tax avoidance and firm's business strategy. Another study examine the impact of business strategy, profitability and leverage on tax avoidance while taking firm size as control variable (Lubis et al., 2017). Furthermore, the relationship between tax avoidance and business strategy is not found when corporate board structure is used as a moderator, indicating the need to expand the tax avoidance literature in emerging markets like Pakistan.

The objective of this study is to analyze the nexus between board structure, tax avoidance and the business strategy. Precisely, we examine the moderating role of board independence, and board size in the relation between tax avoidance, and business strategy in developing economy of the Pakistan. This study shed light on how governance mechanisms can moderate and influence tax avoidance decisions. The sample of this study consist of 125 non-financial companies listed on Pakistan stock exchange with time period of 5 years from 2013 to 2017 on annual basis. The results of the dynamic panel data estimation technique i.e. generalized method of moment (GMM) shows that increase in board size of a prospector firm will increase its trend to avoid taxes. The finding also reveal that that an increase in the independent directors in prospector firms will decreases tax avoidance activities in emerging economies.

This study adds to the literature in several ways. *Firstly*, it add to the organizational theory literature by examining the firm's business strategies in relation to tax avoidance and governance. *Secondly*, it add to the existing literature on the moderating role corporate governance mechanisms in relation between business strategy and tax avoidance. Prior studies used many attributes of governance for determining their effect on tax avoidance like compensation at several positions of management (Rego & Wilson ,2009), and other board characteristics (e.g., Armstrong et al. 2015; Richardson et al. 2013; Robinson et al. 2012; Lanis; Minnick & Noga, 2010). Also, Minnick and Noga, (2010) by using one of the feature of corporate governance characteristics - board size and number of independent directors - for determining their moderating effect on tax avoidance and business strategy. Also, we are extending the Anwar & Hasnu (2016) by using business strategy measurements effecting tax avoidance. *Thirdly*, this study also contributes by extending the literature on the relationship between tax avoidance, business strategies and corporate governance to the emerging economies. Therefore, it is the first in its type which examines the role of corporate governance characteristics as moderators in the relationship between tax avoidance and business strategy in the emerging equity market of Pakistan.

Next section discuss the hypothesis development of the study which is followed by the data and research methodology, then the subsequent section describes the empirical findings which is followed by the conclusion of the study.

## Review of Related Literature

This section discusses the brief review of related literature.

### Business Strategy and Tax Avoidance

Taxes are stated to be deducted from corporate cash flows (Khan, Anwar & Husnain, 2021). In this method, the owners strive to maximize wealth by avoiding taxes and distributing dividends. Martinez and Ferreira (2019) describe tax avoidance as affecting shareholder returns (Tang, 2016; Wilde & Wilson, 2018), and thus it is the general compensation of managers who profit from tax savings (Phillips, 2003). Most of the research on tax avoidance (Armstrong et al. 2009; Dyreng et al. 2009; Phillips 2003; Khan, Anwar & Husnain, 2021) have focused on business characteristics such size, capital intensity, the size of overseas activities, leverage and R&D expenses. Miles et al. (1998) show a link between tax preparation and lower effective tax rates (ETR).

Business strategies influence tax avoidance habits, and the costs and benefits of tax planning vary depending on the strategic type (Higgins et al., 2015). According to Dunbar and Phillips (2001), prospectors will outsource more of their tax planning and compliance tasks. Prospector-type enterprises focus on innovation and development rather than cost reduction. In reality, defense is more likely to avoid the uncertainties and risks associated with aggressive tax planning. Otherwise, prospector firms are well prepared to deal with the risks that arise from aggressive tax evasion strategies (Sadjiarto et al., 2020). Prospectors are companies that focus on innovation and are seeking for new markets. They often have a higher effective tax rate (Hsu et al. 2014). The lower the ETR, the more tax avoidance. However, Novitaria and Santoso (2013) discovered that the business strategies of enterprises have no substantial impact on the level of tax evasion. According to Higgins et al. (2013), business prospectors have a higher tax avoidance potential than defenders. The environment of emerging countries is characterized by a wide range of complications, which is due to a scarcity of resources and a lack of predictability, both of which are required for positive growth.

The unexpected and fractious environment in developing nations has formed a time horizon that ignores long-term planning and providence from a strategic standpoint. As a result, when the developed world promotes and practises long-term planning ideas, they confront numerous challenges when they are implemented in developing countries (Parnell et al., 2015; Zamani et al., 2013). According to Shah and Amjad (2011), Pakistan has a high power distance, strong masculinity, and low individualism, and these findings are consistent with Hofstede's (2010) findings in Pakistan, who also have no horizon for long-term planning and a high level of uncertainty avoidance. Because of Pakistan's growing young population, natural wealth, geostrategic and geopolitical relevance, and cultural characteristics, the experiments and difficulties for strategists in Pakistan are diverse. As a result, there is a chance that firm performance and strategic conduct, as well as the highlighted assumptions, will not hold true under some circumstances (Anwar & Hasnu, 2016). Because the literature suggests that there is a link between business strategy and tax avoidance, we can propose the following hypothesis:

$H_1$: There is significant impact of business strategy on tax avoidance.

**Moderating Role of Board Size in the Relation between Business Strategy and tax Avoidance**

The level of tax avoidance can also be affected by governance but the magnitude and its direction of impact is still among the empirical questions (Martinez & Ferriera 2019). Primarily, the board size, board independence and board composition, the CEO duality, frequency of board meeting and contribution alongside the characteristics and features of directors of board have been examined empirically by numerous investigators in the literature of governance (Cho & Kim , 2007; Latif et al.,2013; Jermias & Gani, 2014 and Fauver et al., 2017). The optimum number of members of board of directors should be determine in a manner that it can ensure the presence of the sufficient independent directors. According to Mashaykhi and Seyedi (2015), when there are smaller number of board members on the board then they make it happen the discussion of problems and their solutions to resolve the problems of company and hence also increase efficiency of the company. Coles et al., (2008) find out that the boards differ with the company’s characteristics. They concluded that the complex firms used to have large boards with having more outsiders in board. The value of the complex companies increase with an increase in board size, but the value of simpler companies decrease as the board size increases.

Small boards might become more agile when they are making their decisions (Sarwar, Ming, Husnain & Naheed, 2018), like their decision of diverting the resources for the management of taxes (Minnick & Noga, 2010). The large size of board can cause a reduction in the functional effectiveness of the managers regarding different types of programs and different varieties of strategies (Richardson & Lanis, 2011). In this way, when the board size increase then the tax avoidance also increases.

It is predicted finely that composition and board size have influential impact on effectiveness of monitoring function. Hoseini et al. (2019) also state that an increase in the board of director's size can further cause increase on tax avoidance. Although there present many conflicting opinions on the fact that how the board composition have impact on monitoring and as a result on the performance of the firm. Previous papers on governance states that board composition which is composed of board size and the percentage of the insiders on the board is related to the agency problems degrees (Core et al., 1999; Yermack, 1996). In this respect Armstrong et al., (2013) and Desai & Dharmapala,( 2006) describe that tax avoidance gives the directors opportunity to get the incentives as this also provide more profits based on the contract with shareholders. Based on the above explanation this study can hypothesize about the moderating effect of board size as:

$H_2$: Board Size significantly moderates the relationship between business strategy and tax avoidance.

**Moderating Role of Number of Independent Directors on Board in the Relation between Business Strategy and tax Avoidance**

From an organization agency point of view, board address the essential inward system for controlling administrators' astute conduct, which assists with adjusting investors' and supervisors' inclinations (Jensen, 1993). The literature have find that larger boards having inside directors in large amount are incline towards having more agency problem (Mengyun, Um-E-Habiba, Akbar, Memon, & Husnain, 2021) and the results shows that the accepted association is smaller, and the boards who have more independent directors have chances of improvement in performance with greater shareholder wealth (Minnick & Noga ,2010). According to Hu et al. (2010) the board independence usually provides protection to shareholders from rude behavior of management.

The independent directors can give more useful information and knowledge from their experience and from their own industry that can help in management of tax. These independent directors present in the boards can also have willingness in diverting the resources for management of tax as a method to certify good performance of company. The independent directors presence is also act as a balancing force in the corporate board and their presence can reinforced and strengthens the elements needed for good governance in the firm (Bhagat, 2008). Yeung, (2010) also concluded that a rise in the independence of the members of board may lead towards the reduction in the actual tax rates and also describe that the elements of good corporate governance can lead towards more strict tax policy for firm. The independent board members should maintain and support the owners' interests and it can also stimulus the tax aggressiveness level (Ibrahim & Angelidis 1995). This literature tracks down that large boards with additional inside board directors will in general have more agency issues. It is the governance of the organization that coordinates which tax management system the firm pursues. Independent board members center their concentration more on the tax management related to foreign unfamiliar duty the executives, while the large boards focus more around overseeing the domestic taxes (Minnick & Noga, 2010). Following hypothesis could be constructed from above views.

$H_3$: Number of independent directors on board significantly moderate the relationship between business strategy and tax avoidance.

## Control Variables

Many studies show that return on asset (ROA) as a proxy of profitability of a company has association with the ETR. When the company wants to avoid the taxes then it has positive link with tax avoidance (Surbakti, 2012). The firms with greater ROA (profitability) get an opportunity for positioning themselves in the tax planning which can decrease the amount of tax burden on them (Chen et al., 2010 ; Rinaldi & Cheisviyanny, 2015). The firm size also influences tax aggressiveness and is a significant determinant of good governance (Ettredge et al., 2011; Wahab et al.,2020). The firm size can be estimated from the complete resources claimed by the organization. This can be measured by transforming into normal (natural) logarithm of total assets (Benardi et al, 2008; Rinaldi & Cheisviyanny, 2015). If the values of leverage ratio is higher then the interest amount arising from debt and then this will also have an impact on the reduction of the firm's burden of tax (Kurniasih & Sari, 2013). Therefore, it seems possible to decrease the indication of practices of tax avoidance. Hope, Ma, and Thomas (2013) clarified that the firms with more leverage seems to avoid the corporate taxes because in this way the firms may get benefit from financing by the means of debt. Therefore, this study uses profitability, firm size and leverage as control variables.

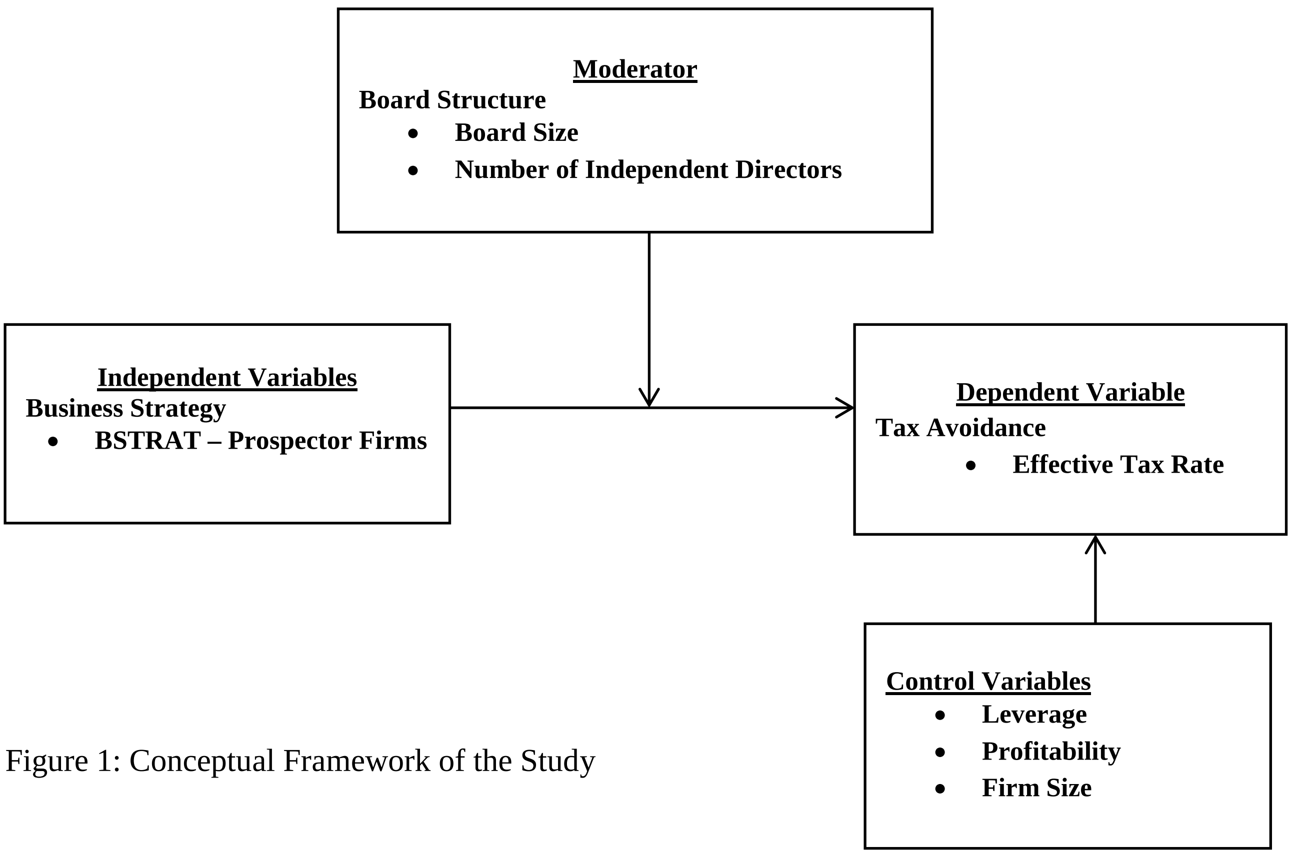


Figure 1: Conceptual Framework of the Study

## Data and Research Methodology

This study used data from firms listed on the Pakistan stock exchange over five years (2013-2017), and all data gathered through annual reports, company websites, and the Pakistan stock exchange's website. This study excludes firms in the financial sector, as they have different requirements for capital structure and other firm policies; also, we omitted firms for which data was not available, resulting in a total of 625 observations used in the analysis.

**Table 1 Sample Selection**

| Details | Sample | Observations |
|---|---|---|

| | | |
|---|---|---|
| Total Sample from non-financial listed firms | 152 | 760 |
| Excluded firms from sample (due to non-availability of data) | (27) | (135) |
| Total sample used for analysis | 125 | 625 |

**Measurement of Variables**

This section explains the operational definition of the studied variables.

**Tax Avoidance**

In previous studies, the most commonly used and largely recognized statistic has been the effective tax rate (Dyreng et al., 2010; Hoi et al., 2013; Watson 2015). For this study, GAAP-ETR was used to calculate tax avoidance. Tax aggressiveness is measured by the percentage of tax expense divided by pre-tax book income (McClure, Lanis, Wells, & Govendir, 2018). This study used following formula for measuring GAAP_ETR as proxy of tax avoidance.

$$GAAP\ ETR = \frac{Total\ Tax\ Expense}{Income\ before\ tax}$$

**Measurement of Business Strategy**

We measure the business strategy by using the following three ratio which is consistent with the existing literature (Anwar & Hasnu, 2016; Higgins et al., 2015; Watson, 2015; Hsu et al., 2018).

**Marketing expense ratio (MESR)**

This is the proportion of marketing expenses to sales (Bentley et al., 2013; Thomas & Ramaswamy, 1996). The ratio reflects the firms' proclivity towards innovation. This percentage demonstrates the company's concentration on developing new products and services. It improves marketing efficiency and divides prospectors and defenders into two groups.

$$MESR = \frac{Marketing\ Expenses}{Sales}$$

**Cost of goods sold to sales ratio (COGSR)**

The major goal of the cost-to-goods-sold-to-sales ratio is to determine how focused a company is on internal efficiency, which leads to production efficiency which is high for prospectors and low for defenders firms (Lin et al., 2014; Anwar & Hasnu, 2016).

$$COGSR = \frac{Cost\ of\ Goods\ Sold}{Sales}$$

**Annual Sales Growth Rate (ASGR)**

ASGR is a historical rate of growth that reflects a company's strategic growth orientation. A high score indicates prospectors, while a low score indicates defenders (Anwar & Hasnu, 2016).

$$CASGR = \frac{Ending\ value}{Beggining\ value} - 1$$

**Operationalization of Business Strategy**

The strategic orientation is scored using three ratios: MESR, COGSR, and ASGR. A score of 3 is given to firms with the highest ratio points, 2 is given to firms with moderate ratio points, and 1 is given to firms with the lowest ratio points. Summated scores are 9 for maximum and 3 for minimum. This study uses BSSTRA as a dummy variable to measure business strategy, where 1 indicates prospector nature and 0 indicates defender nature which is consistent with the existing literature (*Anwar & Hasnu, 2016; Hsu et al., 2018)*. Figure 2 shows a score continuum from 1 to 9. The continuum has two ends, one for 1 to 4 and the other for 5 to 9. Firms with a score of 6 to 9 are prospectors.

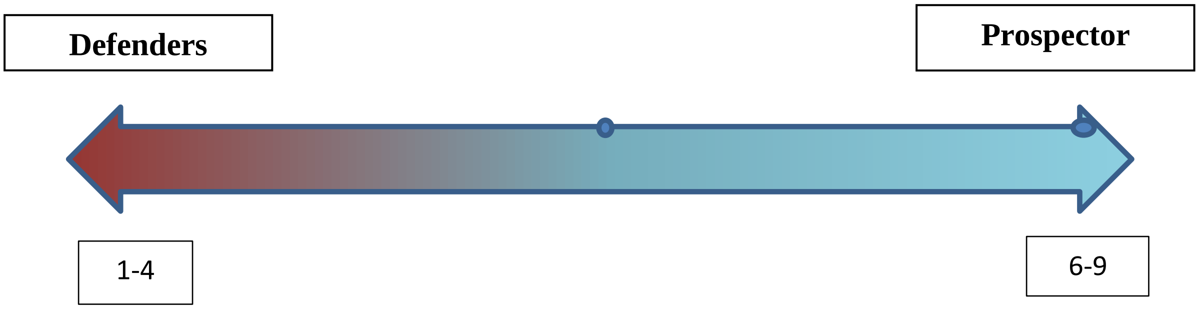


**Figure: 2 Business Strategy Continuum**

**Moderators**
This study also uses the following two moderator variables.

**Board Size**
Board size can be measure as the number of the directors on the board. This measurement basically reflects the control that is exercised by member of board over the managers (Lanis & Richardson, 2011). In previous studies, the board size is measured by the number of directors in the firm (Fahriani & Priyadi, 2016). This study measured board size (BS) as follow (Haung et al., 2012; Wang, 2012);

$$Board\ Size = \log(Total\ number\ of\ directors\ (members) on\ the\ board)$$

**Board Independence**
The independent directors of a company are outside directors and these directors have no link with the firm beside of being member of board of directors. Subsequently, the board independence can be measured by taking the percentage of independent directors on board which is consistent with the existing literature (Huang *et al.* 2012; Ahmed and Duellman ,2007);

$$Number\ of\ Independent\ Directors = \frac{Independent\ Directors\ on\ the\ Board}{Total\ Directors\ on\ the\ Board}$$

**Control Variables**
This study also uses the following control variables.

**Profitability**
The profitability of any company is its capacity to generate the profits. The companies with higher ROA (profitability) tend to have the higher ETR (Dhamara & Violita, 2018; MengYun et al., 2021). ROA can be measured by dividing net income to total assets.

$$ROA = \frac{Net\ Income}{Total\ assets}$$

**Firm Size**
Firm size of a company can be measured by the total assets that are owned by the company. Consistent with existing studies, we uses the natural logarithm of total assets of a company for the measurement of firm size (Sarwar, Ming, Husnain & Naheed, 2018)

$$Firm\ Size = LTA = \ln(Total\ Assets)$$

**Leverage**
Leverage reduces the company's gross income and increases the tax burden (Wahyuni et al., 2017). This factor affects a corporation and motivates them to carry out their tax planning (Cheng, Huang, Li & Stanfield, 2012). We utilized the following formula for firm leverage

(Sarwar, Ming, Husnain & Naheed, 2018)

$$Leverage = DER = \frac{Debt}{Total\ Equity}$$

**Econometric Analysis - Generalized Method of Moment (GMM)**

For testing the hypothesis of the moderating effect of board size (BS) in the relation between business strategy (BSRAT) and tax avoidance, this study formulate the following regression model:

$$Tax\ Avoidance = \beta_0 + \beta_1\, Business\ Strategy + \beta_2 Interaction + \beta_3 Control + \varepsilon_t$$

$$GAAP\_ETR_t = \beta_0 + \beta_1\, BSTRAT_t + \beta_2 BS_t + \beta_3 BSTRAT_t * BS_t + \beta_4 LTA_t + \beta_5 ROA_t + \beta_6 DER_t + \varepsilon_t \ldots\ldots (1)$$

Where, GAAP_ETR shows the effective tax rate, BSTRAT shows the business strategy, BS shows the board size, BSTRAT*BS shows the interaction term between business strategy and board size, LTA shows the log of total asset, ROA shows the return on asset, and DER shows the debt to equity ratio.

For testing the hypothesis of the moderating effect of board independence (NID) in the relation between business strategy (BSRAT) and tax avoidance, this study formulate the following regression model:

$$GAAP\_ETR_t = \beta_0 + \beta_1\, BSTRAT_t + \beta_2 NID_t + \beta_3 BSTRAT_t * NID_t + \beta_4 LTA_t + \beta_5 ROA_t + \beta_6 DER_t + \varepsilon_t \ldots\ldots (2)$$

Here, GAAP_ETR shows the effective tax rate, BSTRAT shows the business strategy, NID shows the number of independent directors in board, BSTRAT*NID shows the interaction term between business strategy and board independence, LTA shows the log of total asset, ROA shows the return on asset, and DER shows the debt to equity ratio.

Due to unobserved heterogeneity, endogeneity, and simultaneity baseness in panel data analysis, researchers apply the generalized method of moments – GMM – (Sarwar, Ming & Husnain, 2020; Sarwar, Kutan, Ming & Husnain, 2020) for the estimation of the above two equations.

**Empirical Results**

Results from the table 2 shows that average value of effective tax rate is 0. 1632 with a standard deviation of 0. 1625. The size of board of directors has average value 8.0231 and standard deviation is 1.2365. Board independence mean value is 0. 7532 and standard deviation is 1.2142. The log of firm size has a mean value of 13.2563 with standard deviation of 0.5963 and these results are in line with previous research (Martinez & Ramalho, 2014). Average value of profitability is 0. 1423 with a standard deviation of 0. 1326 and these results are consistent with existing literature (Arieftiara et al., 2019).

**Table 2 Descriptive Statistics**

| Variables | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|
| ETR | 0.1632 | 0.1625 | -0.0236 | 0.60124 |
| BS | 8.0231 | 1.2365 | 4 | 12 |
| NID | 0.7532 | 1.2142 | 0 | 6 |
| LTA | 13.2563 | 0.5963 | 14.2356 | 16.2563 |
| ROA | 0.1423 | 0.1326 | -0.5936 | 0.6985 |
| DER | 0.6123 | 0.4126 | 0.0856 | 0.9658 |

**Correlation Matrix**

Correlation matrix describes the relationship between dependent variable, independent variable and controls. Table 3 represents the correlation matrix of this study. Board size and GAAP_ETR are negatively correlated while NID has positive relation with GAAP_ETR. Firm profitability and leverage are negatively correlated which means that they are highly opposite in relative trends

**Table 3 Correlation Matrix**

| | ETR | BS | NID | LTA | ROA | DER |
|---|---|---|---|---|---|---|
| ETR | 1 | | | | | |
| BS | -0.0452 | 1 | | | | |
| NID | 0.1425 | 0.3214 | 1 | | | |
| LTA | 0.2351 | 0.0652 | 0.0752 | 1 | | |
| ROA | -0.0632 | -0.1243 | -0.1234 | 0.0752 | 1 | |
| DER | -0.0231 | -0.0652 | -0.0231 | -0.0921 | -0.2931 | 1 |

## Moderating role of board size in the relationship between business strategy and tax avoidance

This study applied generalized method of moment for the estimations of equations 1 and results are presented in Table 4. L1 is lag of ETR that is insignificant with a negative value of -0.2412 (p-value=0.125). Table shows the existence of negative and significant relation between business strategy and GAAP_ETR. The moderate factor of board size and business strategy (BSBSTRAT) shows negative and significant relation with tax payments. Board size as a control variable is significantly related to tax payments with a negative value. Firm profitability and leverage are negatively related to tax payments while firm size show positive association with tax payments.

**Table 4 Board Size as a Moderator**

| Independent Variables | GAAP_ETR (Dependent Variable) | |
|---|---|---|
| | Coefficient | Standard Error |
| L1 | -0.2412 | 0.0412 |
| BSTRAT | -0.1325*** | 0.1401 |
| BS | -0.0125** | 0.0172 |
| BS*BSTRATT | -0.0312*** | 0.0182 |
| LTA | 0.0921** | 0.0231 |
| ROA | -0.0081* | 0.0014 |
| DER | -0.0321** | 0.0325 |
| Constant | 1.8123 | 0.3213 |
| Sargan test (P-value) | 0.1712 | 0.1932 |

## Moderating Role of Board Independence in the Relationship between Business Strategy and tax Avoidance

Table 5 represent the results of analysis of moderating role of board independence in relationship between business strategy and tax avoidance. L1 show insignificant impact of lag GAAP_ETR. Business strategy shows significant (p-value=0.001) and negative relation with tax payment. Board independence is positively and significantly related with tax rates. Result shows that board independence significantly positively moderates the relation between business strategy and tax payment in emerging economy. Firm profitability and leverage are negatively related to tax payments while firm size show positive association with tax payments.

**Table 5 Board independence as a moderator**

| Independent Variables | GAAP_ETR (Dependent Variable) | |
|---|---|---|
| | Coefficient | Standard Error |
| L1 | -0.2351 | 0.0564 |
| BSTRAT | -0.0913*** | 0.0364 |
| NID | 0.0214** | 0.0236 |
| NID * BSTRAT | 0.0010** | 0.0287 |
| LTA | 0.0712* | 0.0346 |
| ROA | -0.0102** | 0.0024 |
| DER | -0.0321** | 0.0234 |
| Constant | 1.4268 | 0.4213 |

| | | |
|---|---|---|
| Sargan test (P-value) | 0.1524 | 0.1421 |

**Discussion of Results**

Results show a negative relation between business strategy and tax payment. Therefore, we can deduce a positive relation of business strategy with tax avoidance. This statement suggests that those firms who follow prospector strategy tend to avoid more taxes as compared to others. This study results are consistent with previous studies (Higgins et al., 2011, 2015; Hsu et al., 2018; Martinez & Ferreira, 2019). This is happen due to the fact that cost of tax avoidance which must be borne by prospector type firms is not an obstacle for them. This is because prospector gets high income from a broad market share and from sale of their unique products that can adjust to changes in consumer tastes and trend therefore, they have few competitors (Higgins et al.,2011; Sadjiarto et al., 2020). These results support H1 that is 'there is significant impact of business strategy on tax avoidance.'

Moderating effect of board structure in the relationship between business strategy and tax avoidance is different with respect to characteristics. As negative and significant relation of board size with tax payments give an indication that higher the board size lower will be tax payments which ultimately increase tax avoidance. In the same way moderating effect of board size with business strategy shows negative and significant results. These results support our second hypothesis H2 and in line with previous researches (Holland & Wahab, 2012; Paratma, 2017). Therefore, we can say that increase in board size of a prospector firm will increase its trend to avoid taxes. Board independence results show positive and significant relation with tax payment which give an indication that an increase in independent directors in board will increase tax payments that ultimately decrease tax avoidance which are consistent with existing literature (Aburajab et al., 2019; Chytis et al., 2018). The moderating effect of board independence with business strategy (NIDBSTRAT) is significance and positive which implies that an increase in the independent directors in prospector firms will decrease tax avoidance. These supports our third hypothesis.

Firm size has a positive impact on tax payment which means larger the size of a firm higher will be tax payments and tax avoidance will be low. These results are supporting political cost theory, according to which large firms aim to avoid negative reputation while maximizing financial performance (Martinez & Ferreira, 2019; Halioui et al. 2016; Boussaidi & Hamed 2015). ROA results are negative and indicate that as the profitability increases tax payments will decrease, these results are similar to prior research (Pratama, 2017). The results of this study give evidence that leverage has negative relationship with tax payment. These results suggest that firms with higher the debt to equity ratio (DER) are associated with reduced ETR and are consistent with prior researches (Higgins et al., 2011; Sadjiarto et al., 2020; kasim & saad ,2019).

**Conclusion of Study**

This study aimed to investigate the relationship between corporate board structures, business strategy and tax avoidance in emerging equity market. Specifically this study investigate the extent to which business strategy effect the decisions of firms regarding tax avoidance in the presence of board size, and independent director in corporate board. The sample of this study consist of 125 companies listed on Pakistan stock exchange with time period of 5 years from 2013 to 2017 on annual basis. Due to unobserved heterogeneity, endogeneity, and simultaneity baseness in panel data analysis, researchers apply the generalized method of moments – GMM - for the estimation of the models.

This study concluded that business strategy has significant and negative relation with tax payment means the firms with prospector type strategies show inclination toward tax avoidance.

In the presence of moderator, the tax avoidance activities of prospector type firms show mixed results depending upon the moderating variable being used. The larger board size tend to show an increase in tax avoidance activities and on the other hand, board independence will decrease the tax avoidance activities of prospector firms. The findings of this study extend existing literature (Higgin et al., 2011; Minnick and Noga, 2010; Armstrong et al. 2015; Richardson et al. 2013) in different dimension by determining the moderating effect of corporate governance characteristics in relation between tax avoidance and business strategy. This study suggest through its findings that the tax authorities should suggest the prospector firms to increase the number of independent directors on board because there presence cause a reduction in tax avoidance activities and increase tax payments.

As a future research direction, we suggest that other types of corporate governance characteristics such as CEO mechanisms, compensations, female director in board, CEO duality can be used as moderators with different dimensions in relation between tax avoidance and business strategies in context of developing as well as developed economies. Future studies can also use other dimension of the business strategy to determine its effect on tax avoidance in both developing and developed economies.

**References**


Adams, R. B., & Ferreira, D. (2007). A theory of friendly boards. *The journal of finance*, *62*(1), 217-250.

Burke, R. J., & Mattis, M. C. (Eds.). (2013). *Women on corporate boards of directors: International challenges and opportunities* (Vol. 14). Springer Science & Business Media.

Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of financial economics*, *87*(2), 329-356.

Desai, M. A., & Dharmapala, D. (2006). Corporate tax avoidance and high-powered incentives. *Journal of financial Economics*, *79*(1), 145-179.

Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2010). The effects of executives on corporate tax avoidance. *The accounting review*, *85*(4), 1163-1189.

Fallan, L. (1999). Gender, exposure to tax knowledge, and attitudes towards taxation; an experimental approach. *Journal of Business Ethics*, *18*(2), 173-184.

Hanlon, M., & Slemrod, J. (2009). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. *Journal of Public economics*, *93*(1-2), 126-141.

Higgins, D., Omer, T. C., & Phillips, J. D. (2015). The influence of a firm's business strategy on its tax aggressiveness. *Contemporary Accounting Research*, *32*(2), 674-702.

Hsu, P. H., Moore, J. A., & Neubaum, D. O. (2018). Tax avoidance, financial experts on the audit committee, and business strategy. *Journal of Business Finance & Accounting*, *45*(9-10), 1293-1321.

Huang, H. H., Lobo, G. J., Wang, C., & Xie, H. (2016). Customer concentration and corporate tax avoidance. *Journal of Banking & Finance*, *72*, 184-200.

Khan, M., Srinivasan, S., & Tan, L. (2017). Institutional ownership and corporate tax avoidance: New evidence. *The Accounting Review*, *92*(2), 101-122.

Khan, M. T., Anwar, M. M., & Husnain, M. (2021). The Relationship Between Corporate Diversification and Tax Avoidance: Empirical Evidence from the Emerging Economy of Pakistan. Journal of Accounting and Finance in Emerging Economies, 7(1), 35-52.

Khaoula, A., & Ali, Z. M. (2012). The board of directors and the corporate tax planning: Empirical Evidence from Tunisia. *International Journal of Accounting and Financial Reporting*, *2*(2), 142.

Khaoula, F., & Moez, D. (2019). The moderating effect of the board of directors on firm value and tax planning: Evidence from European listed firms. *Borsa Istanbul Review*, *19*(4), 331-343.

Lanis, R., & Richardson, G. (2011). The effect of board of director composition on corporate tax aggressiveness. *Journal of accounting and Public Policy*, *30*(1), 50-70.

Lin, C., Tsai, H. L., & Wu, J. C. (2014). Collaboration strategy decision-making using the Miles and Snow typology. *Journal of Business Research*, *67*(9), 1979-1990.

Mashaykhi, B., & Seyyedi, S. J. (2015). Corporate governance and tax avoidance. *Journal of Knowledge Accounting*, *6*(20), 83-103.

McClure, R., Lanis, R., Wells, P., & Govendir, B. (2018). The impact of dividend imputation on corporate tax avoidance: The case of shareholder value. *Journal of Corporate Finance*, *48*, 492-514.

Mengyun, W., Um-E-Habiba, Akbar, D., Basit Memon, M. A., & Husnain, M. (2021). Analyzing the Role of Board Independence towards Corporate Cash Holding: Evidence from Listed Family Firms of Emerging Economy. Journal of Contemporary Issues in Business and Government, 27(3), 1360-1369.

MengYun, W., Husnain, M., Sarwar, B., & Ali, W. (2021). Board Financial Expertise and Corporate Cash Holdings: Moderating Role of Multiple Large Shareholders in Emerging Family Firms. *Complexity*, 2021.

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman Jr, H. J. (1978). Organizational strategy, structure, and process. *Academy of management review*, *3*(3), 546-562.

Minnick, K., & Noga, T. (2010). Do corporate governance characteristics influence tax management? *Journal of corporate finance*, *16*(5), 703-718.

Moore, J. A., Suh, S., & Werner, E. M. (2017). Dual entrenchment and tax management: Classified boards and family firms. *Journal of Business Research*, *79*, 161-172

Prabowo, M. A., Jamin, M., Saputro, D. J., Mufraini, A., & Agustia, D. (2017). Female executive officers and corporate social responsibility disclosure: evidence from the banking industry in an emerging market. *Journal for Global Business Advancement*, *10*(6), 631-651.

Pratama, A. (2017). Company characteristics, corporate governance and aggressive tax avoidance practice: A study of indonesian companies. *Review of Integrative Business and Economics Research*, *6*(4), 70.

Sarwar, B., Kutan, A., Ming, X. and Husnain, M. (2020), "How do talented managers view dividend policy? Further evidence from Chinese equity market", International Journal of Emerging Markets, Vol. 15 No. 3, pp. 559-586.

Sarwar, B., Ming, X., & Husnain, M. (2020). Economic policy uncertainty and dividend sustainability: new insight from emerging equity market of China. Economic research-Ekonomska istraživanja, 33(1), 204-223.

Sarwar, B., Xiao, M., Husnain, M. and Naheed, R. (2018), "Board financial expertise and dividend-paying behavior of firms: New insights from the emerging equity markets of China and Pakistan", Management Decision, Vol. 56 No. 9, pp. 1839-1868.

Tandean, V. A., & Winnie, W. (2016). The effect of good corporate governance on tax avoidance: An empirical study on manufacturing companies listed in IDX period 2010-2013. *Asian Journal of Accounting Research*.

Wilde, J. H., & Wilson, R. J. (2018). Perspectives on corporate tax planning: Observations from the past decade. *The Journal of the American Taxation Association*, *40*(2), 63-81.

Zemzem, A., & Ftouhi, K. (2013). The effects of board of directors' characteristics on tax aggressiveness. *Research Journal of Finance and Accounting*, *4*(4), 140-147.