The Impact of Firm Life cycle on the Corporate Tax Avoidance Strategies

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Abstract

The aim of this research is to evaluate the relationship between firm life cycle stages and corporate tax avoidance. This study has been conducted on the non-financial sector companies of Pakistan listed on the Pakistan stock exchange. The sample consists of 100 companies out of 443 total non-financial companies over the period of 2008-2015. Tax avoidance has been estimated using two proxies i.e. GAAP_ETR and LETR. Moreover, firm cycle stages, based on Dickinson's model (2011), have been measured using the cash flow operations of the company i.e. operating, investing and financing activities. The empirical findings are consistent with the Resource Based Theory (RBT) perspective and indicate that there is a significant relationship between firm cycle stages and corporate tax avoidance. Furthermore, Robustness tests show that firms tend to evade taxes in the introductory, shake-out and decline stages; however, firms are less likely to engage in tax planning in growth and maturity stages of their firm life cycle. In conclusion, companies are less incentivized to engage in tax avoidance in their peek stages due to certain cash flows (stable profit stream) and more motivated to do so near their shaky dawn and impending doom (unstable profit stream).The results of this thesis have several implications for tax authorities and Government to counter the menace of tax evasion from the Pakistani Economy by enhancing check and balance on firms in their subsequent phases of low profits and reduce the ever growing fiscal deficit and black economy.

Key Words: Firm Life Cycle, Tax Avoidance, Dickinson's Model, Resource Based Theory

Introduction

This current study examines the impact of firm life cycle on the different tax avoidance strategies adopted by the firms by analyzing the non-financial listed companies listed on the Pakistan Stock Exchange (PSX). The firms are dynamic enteritis which evolves in to different distinct stages throughout their life (Quinn & Cameron, 1983). This chain of evolution of firm's life cycle starts from its starts to the end and this whole phenomenon is called firms life cycle. Thus, the study of relationship between corporate tax avoidance and firm life cycle stages is necessary and significant because it associate real corporate decisions of avoiding tax according to firm's life cycle. Corporate taxes remarkably affect business economic decisions as they are significant portion of cash flows generated by a firm (Dyreng, Hanlon & Mmaydew, 2008; Hanlon & Heitzman, 2010). As per literature, Firms tend to evade taxes in

introductory, shake-out and decline phases, but are more likely to fulfill their tax obligations in growth and maturity stages where firm has significant amount of cash available.

According to the research of Quinn and Cameron (1983), firms and business entities evolve continuously in their life span and the path of evolution is determined by various internal and external factors. The internal factors that drive evolution are strategy choices, financial capabilities and managerial resources however; the external factors include competitive environment and macroeconomic factors (Quinn & Cameron, 1983; Miller & Friesen, 1984). Firm life cycle stages model or firm growth models have been used to understand the concept of entrepreneurial growth. This prime focus of these models is changes in the nature of firm throughout its life cycle and changing roles of the people in it specially founding fathers or owners of the company. Some of the growth models include life cycle models by Greiner (1972), Churchill and Lewis (1983) and Lester and Parnell (2008). The current study has been carried out by focusing on the Dickinson (2011) model of firm life cycle stages.

Life cycles of a firm are separate and distinct phases that change according to the changes in the external and internal environment of the firm and also from the strategic choices of the executives and shareholders. According to Lev and Zarowin (1999), the pace of business change has escalated over time and the value-relevance of earnings has decreased over the years. These findings conclude that a non-earning based relevance would be useless for both investors and stakeholders of a firm. Zarowin and Lev (1999) further argue that firms are an amalgamation of multiple products, each with a distinct product life cycle stage and it is difficult to capture the life cycle of a firm at that level rather than at the whole industry level. Firm level has multiple products with separate overlapping life cycle stages that are difficult to gauge (Zarowin & Lev, 1999).

Governments all over the globe rely upon generated revenues, majority of which is generated from various taxes, to offset the fiscal expenditures incurred on numerous sectors of the economy, especially, health, defense, education, building infrastructure, industries, and agriculture sector. Tax avoidance is an omnipresent phenomenon that has been in existence since the concept of taxation itself. This phenomenon is being practiced by each and every social class, industry and economic system. Taxation has a history of about two thousand and five hundred years ago as mentioned by Plato. The Ducal Palace of Venice (Italy) had a stone with a hole. Through that hole, people were cautioned about the consequences of tax evasion (Tanzi & Shome, 1993). Although this drawback has continuously been a difficult issue, very little attention has been paid to the current, particularly in Pakistan, till recent years (Akram, 2012). Developing countries all over the globe are making concerned efforts to establish sound self sufficient capabilities. In this regard, domestic revenue mobilization is an imperative for those countries on account of three reasons. First and foremost, it is crucial for governments, in order to ensure a sustainable process of development. Tax revenues in developing countries are less sufficient. Secondly, governments favor tax payer's demands which show good administration and responsibility. Lastly, tax revenues incorporate entire population of a country; therefore, it has greater impact on people and their personal income.

In the light of above mentioned goals, there should be an effective tax system designed to ensure tax compliance. According to Global Financial Integrity Report (2010), developing countries lose approximately $1 trillion each year due to illegal financial flows of money earned through illegitimate means (Global financial integrity, 2010). Baker (2005) also estimated that corporate gains and false transactions done in developing countries with the purpose of reducing taxable income aggregated $350 billion a year. Another researcher by Jayasinghe (2007) argues that it is hard to measure the level of tax avoidance in any economy or country that is the prime reason behind tax evasion widely been used

as a measure of tax non-compliance. Corporate taxation has been an extremely significant and demanding issue for over two decades. Many multinationals have recently faced scrutiny for their opaqueness to regulators and stakeholders about their tax obligations. Well known and established companies like Apple Inc., Starbucks, Google, Amazon and others have been inquired for unethical tax practices. These companies have been blamed for using complex corporate tax rules, loopholes to evade taxes, and tax havens to aid them in tax avoidance. Although, many of their practices have not been proved illegal, yet these companies had to face a lot of repute damage for not paying what some believe to be "a fair share of taxes".

The global recession, a complete downturn of the economy that revolted the world in 2008 was a large contributing factor that demanded greater tax transparency. In 2009, there were a significant number of tax information exchange agreements all around the world (Kuhn, 2014). Apart from tax authorities and regulators demanding greater tax transparency, there are tax activists and important stakeholders that also require the businesses to be more tax transparent. For example, many of the typical users of financial reports for a business such as shareholders, analysts and creditors are asking increased transparency. Other stakeholders including consumers, media, government officials and international organizations have also showed interest in businesses to become more transparent with their tax obligations. Many of them are concerned with how well the companies are making a contribution to the economy and whether or not; their tax obligations are fulfilled (Sikka & Willmott, 2013;Ernst & Young, 2013).

Gravelle (2009) estimates that the United States government loses up to $60 billion in corporate tax revenues due to tax avoidance (Gravelle, 2009). Graham and Tucker (2006) took a sample of 44 tax evasion cases and estimated that these shelters reduce total assets by approximately 9%. Mills, Erickson and Maydew (1998) documented proof consistent of $1 marginal investment in tax planning generating $4 in tax savings by the use of a sample of 160 large companies. Therefore, there is a significant interest in evaluating firm-level determinants of tax avoidance in the previous literature and documenting explanations for cross-sectional differences in corporate tax planning.

The rampant and perpetuating problem of tax avoidance has tormented the system of Pakistan since its inception in 1947. In the later years, government of Pakistan realized that there a significant reduction in governmental tax revenues. The tax revenues started to decline after 1991 as a percentage of gross domestic products (GDP). The ongoing concern of public finance is that tax revenues from various sources are unable to meet the fiscal expenditure of the government and this is a leading cause of huge fiscal deficit. These sources include sale tax, corporate tax, and management fee etc.

Thus, the purpose of this study is to predict the relationship among corporate tax avoidance and firm's life cycle phases. Tax avoidance in relation to firm life cycle stages has not been studies in Pakistani context before; therefore, this study has greater utility for Pakistani economy. Taxes paid by individuals and corporate sector are used by government for capital expenditure. Increase in tax income causes increase in governmental revenue which is then spent on building economy. These taxes help to redistribute wealth in economy from rich to poor. These taxes have a significant role in building a strong and healthy economy. Businesses and firms tend to neglect their duties towards the economy by avoiding taxes. Managers use window dressing and other accounting techniques to understate profits before taxes in financial statements and ultimately evade taxes. Management has greater incentives in avoiding taxes as they increase the net income. They tend to deceive the stakeholders and investors by showing a false image of the company. This study tends to explain the propensity of firms to get involved in tax avoidance according to the stage of life cycle that they are in. this study has been carried out on the

non financial sector business companies that are listed on the Karachi stock exchange (KSE), Pakistan. This would contribute to government and other auditing authorities to keep check and balance on firms according to the phase in which they evade maximum taxes. This study also investigates whether firms in Pakistan avoid taxes according to the life cycle stages or otherwise. Moreover, most of the firms are family owned in Pakistan, so this study helps to determine whether or not, this has an impact on increased tax avoidance. As we know that Pakistan's market is not that matured and mostly firms are family owned. In family owned businesses mostly shares are controlled by family members and very little rights are distributed in outsiders to concentrate ownership that leads to violate rights of minority shareholders and also increases the probability of a company involved in risky tax evasion strategies to maximize shareholder's return.

The purpose of this study is to determine the linkage between firm life cycle stages and corporate tax avoidance. The sole objective of a shareholder in business is wealth maximization that may naturally lead to companies involving in minimizing taxes and creating tax haven and thus enhancing the earning per share (Avi-Yonah, 2015). Avi-Yonah (2015) further claims that this was not always a motivating factor driving managers working in organizations. On the contrary, this perspective has evolved over the past few decades due to numerous factors. First, there is an increased influence on enhancing earnings per share by frequent usage of equity based compensation for managers for example stock options in the recent years. Secondly, big accounting firms started marketing and selling tax shelters to their corporate clients and thus altered the landscape of taxes in early 1990s. Lastly, lower effective tax rates and enhanced earnings per share among some companies have pressurized other firms similar in the sector to adopt aggressive tax policies and strategies in an effort to stay in the competition.

Literature Review

Tax avoidance greatly influences corporate economic decisions as they are significant part of a business's cash flows (Dyreng, Hanlon & Maydew, 2008; Hanlon & Heitzman, 2010). According to Chittenden (2003), taxes are a bone of contention among the government and individuals given the absence of governmental regulations and availability of loopholes for both individuals and firms to evade due taxes. The cost of compliance is also very high for corporate sector. Avi-Yonah (2015) argued various reasons to be doubtful regardless of the proliferation of the contemporary viewpoint that excessive tax avoidance is an innate component of shareholder's wealth maximization. According to Avi-Yonah (2015), firms have an affirmative duty to pay due taxes, even under an aggressive view of the company (Avi-Yonah, 2015). If CSR is not a part of the legitimate business functions to pursue, then such societal problems should be handled by the government instead. Otherwise, if firms are relieved from the responsibility of paying due taxes then governments would not be able to collect sufficient revenues to solve the social issues for which it is held responsible. The outcome of such a scenario would be that neither the firms nor government would be able to deal with the economic and social problems that arise due to lack of tax revenues. This would lead to a chaos situation and cause the government to go into bankruptcy. Therefore, the aggregate theory keeps an account of all these possible outcomes and binds the firms to their tax duties as well as enables the governments to perform economic and social duties that firms alone cannot perform.

Avi-Yonah (2015) discusses that in the past, firms maintained a healthy competition among each other without adopting aggressive tax policies or creating tax havens. There is insufficient empirical evidence that supports the linkage of lower tax effective rates and higher stock prices or earnings per share (Dyreng et al., 2010). However, if the notion is accepted that companies are not voluntarily engaged in

aggressive or hostile tax avoidance, it still leaves a question of how to determine the difference between legal tax planning and mere tax sheltering activities of the firms that the tax law making authorities forbid (Armstrong, Blouin & Larcker, 2012). The legitimacy of these strategies are hard to determine by IRS and courts because of the technicalities of accounting procedures, however, corporate managers are well aware of the type of transaction that is meant to evade taxes or otherwise genuine. Thus, there lies a legitimate responsibility on the firm to police its own behavior rather than tax authorities. Moreover, corporate managers are responsible to draw a line between legal and illegal corporate tax planning transactions or strategies (Dechow, Ge & Schrand, 2010).

The word 'tax' has been derived from the Latin language word "taxo", that means "rate". It can also be defined as a financial fare or other imposed on the taxpayer whether an individual or a legal entity, by the state or governing body to fund the annual expenses. The tax revenue is the most valued source of public revenue. Taxes are mandatory payments imposed by the governing body or state on companies and individuals in order to meet the expenses incurred for the public benefit. Tax evasion is distinct from tax avoidance in such that tax avoidance is defined as an illegitimate effort to decrease the tax obligation through false representation of income or adopting fraudulent techniques to bypass tax laws. These techniques include understatement of assets or taxable income and results in non compliance of tax liabilities. Tax evasion is an offence that is prosecutable by both civil and criminal courts (Mateen, 2017).

Tax compliance has become a bone of contention for small businesses, because of the lack of sanctions and high compliance cost associated with it. In comparison, there are a variety of opportunities available for both firms and individuals not to pay tax liabilities (Chittenden et al., 2003). Corporate tax avoidance is defined by Hanlon and Heitzmen (2010), as all transactions and arrangements that facilitate the reduction in the amount corporate tax expenses paid by a firm (Dyreng et al., 2008; Lisowsky, Robinson & Schmidt, 2013). Consistent with prior researches of Hanlon and Heitzmen (2010), corporate tax avoidance follows a continuous pattern that ranges its passiveness to aggressiveness.

Passive is complying with tax provisions of the state while aggressive is restructuring transactions and arrangements with the aim to evade taxes or reduce taxable income. According to Hogye (2000), tax avoidance is defined as the change in behavioral patterns of the tax payers to hunt for loopholes in the existent tax laws in order to reduce the tax obligation (Hogye, 2000). Another researcher, Jaya singh (2007) states that individuals and companies fail to disclose their earnings in a fair manner, in order to reduce the tax levied upon them. This refers to a black economy that involves false reporting of income due to high tax rates etc. It also represents the practices of false representation of earnings source and intentional overstatement of exemptions (Chiumya, 2006). In the words of Dyreng et al. (2008), tax avoidance can also be defined as the decrease in explicit tax income and resembles any business dealing that misrepresents corporation's explicit tax obligations (Dyreng et al., 2008). This explanation does not take account of lobbying practices of the firms aimed at receiving special benefits, creation of tax havens to evade taxes (Hanlon & Heitzman, 2010).

Moreover, this definition does not distinguish between the 'legitimate' and illegitimate' means of tax avoidance for multiple reasons. Firstly, a considerable number of business tax transactions are considered legal in technical terms. Secondly, the question of the legality of tax transaction arises after it has already taken place. Lastly, tax avoidance is identical to both certain tax positions and uncertain tax positions which are considered legitimate by the tax authorities (Hanlon & Heitzman, 2010).

On the contrary, Weisbach (2003) came across a different perspective regarding tax avoidance. Weisbach (2003) concludes that tax avoidance is categorized as legal tax effort while tax evasion is

marked as illegitimate tax effort. He further states that this categorization is a naïve approach to tax planning since nobody has been able to distinguish between illegal and legal tax planning efforts. Some recent examples of tax avoidance are creation of offshore companies for tax sheltering, manipulating accounting techniques, and legal manipulation. Offshore tax sheltering refers to the activity of using artificial transaction to transfer income to low tax countries and thus creating tax havens as in the case of Mossack franseca (Panama based accounting firm). Similarly expenses are recognized in high tax countries. Accounting techniques to understate taxable income are transfer pricing, charging royalties and administrative fee, and the use of revolving short term loans between head quarters and divisions to reduce the earnings reported. Managers are incentivized to engage in tax planning due to encouragement by shareholders or owners to invest in shares of the corporation. Lanis and Richardson (2011) argue that there is a positive correlation among share ownership of board members and managers and the tax aggressiveness policies of their companies.

The empirical studies discussed in the remaining part of this research will use a number of terms to determine tax avoidance such as "tax evasion", aggressive tax planning" and "tax sheltering". The broad definition of tax avoidance described earlier covers all these terms. Tax avoidance greatly influences corporate economic decisions as they are significant part of a firm's cash flows (Dyreng, Hanlon & Maydew, 2008; Hanlon & Heitzman, 2010).

There is a well-established literature on tax design principles that govern modern tax systems with the aim to guide tax payers, government, practitioners and tax authorities. This principle based approach can be credited to Smith (1176). Smith (1176) states that there are four "cannons for taxation" that provides a guiding framework of tax behavior of companies. These four "cannons of taxation" include proportionality (i.e. people should share or contribute in proportion to their income), efficiency (economy in collection), certainty (tax liabilities should not be vague), and convenience of payment (well-devised system of collection).

The proxy used in this research paper is based on accounting information (especially cash flow patterns) that can be linked to these concepts from economic literature. Specifically, cash flows proxy can be better aligned with the functional form of firm's performance. Economic theory predicts that a non-linear progression of multiple variables of firm characteristics such as earnings, return on net operating assets (RNOA), asset turnover (ATO), profit margins, debt, sales, dividend payout ratio, size, age and other similar characteristics are consistent with the division of results from cash flow operations of a firm life cycle stages proxy measure. According to the life cycle model of Dickinson (2011), firms, on average pass through five stages in their life namely: Introduction, growth, maturity, shake-out and decline (Dickinson, 2011; Gort & Kleppr, 1982; Miller et al., 1984).

According to Miller (1984), firms in their introduction stage engage in proper and viable positioning of their brand in the market in terms of the products and service they offer (Mmiller et al., 1984). Since firms in their early stages of inception are struggling with insufficient resources and market pressures as well as lack legitimacy, their success is dependent upon external sources of finance i.e. leverage (Cameron & Whetten, 1981; Freeman, Carroll & Hannan 1983; Grabowski & Mueller, 1975; Quinn et al., 1983). Moreover, innovation and a heavy budget of technology and research are needed to gain a competitive advantage over potential competitors in the market (Gort et al., 1982; Mansfield, 1962; Miller et al., 1984). Miller and Quinn (1983) argue that in order to succeed, firms need to bring flexibility in their decision making and this would also lead to facilitate innovation and proactively(Miller et al., 1984; Quinn et al., 1983). As a consequence of lack of ability to develop a sound competitive advantage and substantial

legitimacy, firms are more likely to fail in this stage due to the severe competition and entry barriers (Freeman et al., 1983; Hannan & Freeman, 1984; Javanovic, 1982).

However, if the firm is successful in the initial struggle by launching its product or service capably in the market and gaining a substantial position in the eye of potential competitors, it can swiftly move from introduction to the expansion stage known as Growth stage. The firms start to harness the external opportunities in the market that leads to considerable and certain cash flows flowing towards it. However, the firms still need financial financing to carry out its operation viably (Grabowski et al., 1975; Mueller, 1972). These certain cash flows and investments help the company to built sufficient entry barriers and improves its market positioning in the eye of current and prospective competitors (Spence, 1981; Wernerfelt, 1985). Moreover, the investments in the production processes together with the lack of resource constraint enable the firm to develop learning and economies of scale and scope advantage in response to entry threats of the market (Spence, 1981). As the performance increases, firms are encouraged to change their corporate structure from concentrated to more decentralized and supporting mutual cooperation of various departments and divisions (Miller et al., 1984; Smith, Mitchell & Summer 1985).

At this stage, market becomes saturated as maximum volume of firm's products or services have been floated in the market that leads to a decrease in return of investment (Grabowski et al., 1975; Mueller, 1972). At this point, firms are ready to enter the next stage of their life cycle i.e. maturity. In the maturity phase of a firm, firms are more focused towards achieving economies of scale and scope rather than generating excess earnings after tax (Cameron et al., 1981; Miller et al., 1984; Quinn et al., 1983; Smith et al., 1985). The investment opportunities in the market decline and the firms start to distribute excess funds among the shareholders as dividends and increase its stock price artificially by buying back its shares from the market (DeAngelo & Stulz, 2006). Generally, firms in their maturity stages are more cautious about their competition and behave in response to their competitors rather than acting proactively (Miller et al. 1984). The stability of mature firms is also evident in the form of standardized operating procedures (SoPs), rules formalization and set objectives (Cameron et al. 1981; Quinn et al. 1983). Innovation, in the maturity stage of a firm is still a vital function and most likely to arise from experience that is gained over time (Chen, Katila, McDonald & Eisenhardt, 2010).

Companies are not able to sustain their market position and competitive advantage over competitors due to weak or poor efficiency lead to market failure and may end up in the shake-out stage. The firm is incapable to maintain innovation and market edge (Jovanovic, 1982; Jovanovic & MacDonald, 1994). It must be noted here that there is no difference in the labeling of stages as well as the number of stages for example Miller (1984), labeled the shake-out stage as revival stage due to the fact that some companies are capable of regenerating after a period of slow or weak efficiency and growth that drove them in to poor performance (i.e. second growth stage (Miller et al., 1984). Similarly, firms in the shake-out stage are able to reverse the negative effect and return to good performance by strategy renewal and implementation, diversification or a combination of both (Quinn et al., 1983). It has been discussed above that formalization and standardization of procedures have made it harder for firms in the maturity stage to respond to external environmental changes like structural inertia, a key to success is flexibility of restructuring processes (Hannan et al., 1984; Quinn et al., 1983).

Unfortunately, if the firm is doomed and incapable to revive from the weak or slow growth marking its failure in the market, it might enter the next stage that is the last stage of its life cycle i.e. decline. This phase also includes the firms that were not successful in building substantially viable position in the market near to their inception (i.e. introduction stage failure). Additionally, this stage for new firms

might be a consequence of their "liability of newness". The liability of newness is a phenomenon that relates to the firms that move immediately from introduction to decline stages without reaching the growth or maturity phases (Freeman et al., 1983; Hannan et al., 1984). Miller (1984) argues that firms in the decline stage are trapped in a vicious cycle of poor performance and stagnant growth models predicting its doom (Miller et al., 1984). Ultimately, this downward spiral of low growth and poor performance cause the firm to go into bankruptcy and exit the market.

In the light of resource based dependence theory, firms exploit resources to gain a competitive edge in market including cash, innovation, and investment along with excessive tax avoidance to generate positive income after tax (Koester, Shevlin, & Wangerin, 2013). An increase in income due to tax avoidance allows the firms to compete in the market (Helfat & Peteraf, 2003; Spence, 1981). Moreover, lack of knowledge about the certainty of future cash flows and profits as well as reduced forecasting is a typical trait of the firm in introduction stage (Javanovic, 1982). All these factors contribute to the management's engagement in fraudulent and artificial transactions to understate accounting profits and reduce tax liability, especially if they are associated with management incentives (Desai & Dharmapala, 2006). Hanlon and Hoopes (2014) argue that larger firms are frequently audited by IRS and tax authorities whereas smaller firms are neglected (Hanlon, Hoopes & Shroff, 2014). On the basis of above argument, the following hypothesis can be developed:

H 1: *corporate tax avoidance is significantly positive in the introduction phase of the firm life cycle.*

Growth phase and tax avoidance

In accordance with the resourced dependence theory, firms in their growth stage are in process of becoming self-sufficient due to certain cash flows and enhanced market investment opportunities. The management is confident about the performance of the business and firm earnings increase gradually. There is less incentive for management to understate profits in order to reduce taxable income. However, as the firms enter the growth stage, it has more exposure to the international markets and therefore, more opportunities to employ excessive tax planning. The management is willing to take on more risk as the firm expands in multiple geographical segments and diversifies its product line (e.g. Ahmed & Jinan, 2011; Young & Huang, 2004). According to Hanlon and Heitzmen (2010), growth stage firms have the ability to use intangible assets in order to move income and expenses to variable tax jurisdictions that are considered legitimate transactions and thus, enable the firms to save excessive tax income (Hanlon & Heitzman, 2010).

Another opportunity provided by the growth stage is that management now has a better understanding of the outside environment in which it operates and it can utilize its resources effectively which gives it more autonomy in employing those resources for tax-planning (Koester et al. 2013). However, reputation and goodwill is another aspect that drives the firm to act more responsibly towards the economy and tax authorities (Austin & Wilson, 2013; Dyreng, Hoopes & Wilde, 2015; Graham, Hanlon, Shevlin & Shroff, 2014; Hanlon & Slemrod, 2009). These stakes curb the desire to engage in designing aggressive policies for tax avoidance (Austin & Wilson, 2013; Graham et al., 2014).

H 2: *Corporate tax avoidance is significantly negative in growth phase of a firm life cycle.*

Maturity stage and tax avoidance

As it has been discussed above, firms in mature stages have reduced investment, innovation, and

resource capability maintenance (Barclay & Smith, 2005; Dickinson, 2011; Drake, 2015; Helfat & Peteraf, 2003). Management is more concerned with achieving a competitive advantage against in the market and less interest in tax planning efforts (Koester et al. 2013). Ultimately, it can be stated that firms in their growth and maturity stages have less incentive to engage in tax planning strategies than in introduction, shake-out and decline stages. In the mature stage, there is less innovation and assets are maintained and disposed off when necessary. The book-tax difference of income is small. Overall, firms in their mature stage have stable net income and reduced sales growth as well as low cash volatility; therefore, they are more dependent upon retained earnings of the business. In addition, Filatotchev et al. (2006) argues that the enhanced need of monitoring and control of governance structures limits the chances of involved in risky tax planning (Robinson, Xue & Zhang, 2012). Management is also cautious of the potential reputational and goodwill cost aligned with public image and tax authorities' image. (Higgins et al. 2015).

H 3: *corporate tax avoidance is significantly negative in maturity phase of a firm life cycle.*

Shake-out phase and tax avoidance

It has been argued that operating cash flows decrease, and uncertainty of future cash flows increase, followed by reduced innovation, investment and profits marks shake-outs and firms seeks opportunities to reduce taxable income in attempt to generate substantial profits to run the business operations day-to-day (Black, 1998; Miller & Friesen, 1984). Hence, firms in shake-out stages evade taxes and are more likely to search for tax-planning strategies because corporate taxes are a major expenditure. At this stage, the business must develop strategies through asset disposal or organizational restructuring or a combination of both. Supposedly, the larger items or long term assets like Property, plant and equipment are disposed off in such a manner that accumulated depreciation exceeds the accounting depreciation; this would lead to a higher book-tax difference and may allow the firm to decrease its earnings before tax (Drake, 2015).

As we know that investors evaluate the firms based on their potential to generate positive cash flows and stable earnings; financially constraint firms rely on accounting manipulation of pre-tax income to generate badly needed cash (Black, 1998). Here, strategies might include carry forward losses, tax deferrals and liquidation/restructuring (Richardson et al., 2015). Monitoring is reduced and governance structure is opaque, which allows management to aggressively pursue in tax avoidance during shake-out phase (Koester et al., 2013; Richardson et al., 2015).

H 4: *corporate tax avoidance is again significantly positive shake-out phase of a firm life cycle.*

Decline stage and tax avoidance

The resource dependence theory argues that firms in the decline stage are market with less than optimum resources. This is caused due to frequent disposal of assets; write-downs in the valuation of long term assets, losses carried forward and increased liabilities. Here, the increase in taxable income relative to accounting income creates a lesser book-tax difference for firms (Drake, 2015). Firms in the decline stage are more cautious about the earnings and management has more incentive to engage in tax saving activities due to volatility of cash flows and decreased liquidity (Akhtar, 2012; Brondolo, 2009; Edwards et al., 2016; Richardson et al., 2015). Edward et al. (2016) claims that firms in financial distress will take action to minimize tax expenses (Edward et al., 2016). Overall in the light of resource based dependence theory, we can conclude that tax avoidance is estimated to from a U-shaped pattern across a firm's life cycle stages depending upon the variability of resources at each stage.

H 5: *Corporate tax avoidance is significantly positive in decline phase of a firm life cycle.*

Methodology

Research Design

The current study has been carried out in order to evaluate the impact of firm's life cycle stages on corporate tax avoidance. This research is essentially descriptive and analytical in nature and statistical hypothesis testing has been used to investigate the relationship between dependent and independent variable. The type of research employed is quantitative research whilst data has been taken from secondary sources. The following section discusses the information about the population, sample and data collection.

Population and Sample

In this research, a sample of 100 non-financial firms that are listed on the Karachi stock exchange (KSE) is included out of the total population of 443 non-financial listed firms. The data has been collected for the period of 8 years i.e. 2008-2015. The data is collected from the website of State bank of Pakistan (SBP) and financial reports of the companies available on their official website. The research excludes financial firms from the sample and population mainly because of the difference in their accounting practices and estimates relative to non-financial firms. Financial firms also face several regulatory constraints that would be difficult to manage in this research.

Dependent and independent Variables

In this research, dependent variable is corporate tax avoidance while independent variable is firm life cycle stages. The dependent variable has been quantified using the ETR proxies i.e. GAAP_ETR and LETR. Hanlon and Heitzman (2010) claimed the usage of employing several different proxy measures in order to avoid the constraints associated with any specific measure.

They also argue that business decisions such as organizational restructuring and strategic designs are influenced by book-tax differences and taxable income. There is sufficient literature to prove the viability of ETR proxies in order to determine the levels of tax avoidance. There are other measures to determine tax avoidance that include book-tax difference, tax sheltering and cash non-conformity. GAAP_ETR is measured as a ratio of tax expenses divided by pretax book income; however LETR is measures as long-run book effective tax rate.

The firm life cycle includes introduction, growth, maturity, shake-out and decline stages, each of which has been quantified using the cash flow patterns of the firm in accordance with the Dickinson's model (2011). OANCE means operating cash flows, IVNCF means investing activity cash flows and FINCF shows financing cash flows:

(1) Introduction: if OANCF < 0, IVNCF < 0 and FINCF > 0;

(2) Growth: if OANCF > 0, IVNCF < 0 and FINCF > 0;

(3) Mature: if OANCF < 0, IVNCF < 0 and FINCF < 0;

(4) Decline: if OANCF > 0, IVNCF > 0 and FINCF $\leq$ or ≥ 0; and

(5) Shake-Out: the remaining firm years are classified into the shake-out stage.

Control Variables

There are seven control variables in this research i.e. Firm size, PPE, Leverage, Profit, Change in Sales, Cash holdings of a firm, and a vector dummy of firm years. Existing literature suggest that size and economies of scale are correlated with tax avoidance (e.g. Mills, Erickson, & Maydew, 1998; Rego, 2003). Basically, larger firms benefit from bulk production advantages in tax planning, therefore, this research controls for size (SIZE) and capital intensity (PPE) of a firm. Tax shield provided by the debt obligations of a firm increase their propensity to involve in tax planning practices. Hence, Leverage (LEV) has a positive correlation with tax avoidance (Gupta & Newberry, 1997). On the other hand, firm profitability (PROFIT) has a direct relation with tax evasion as firms with high pretax profits are incentivized to engage in tax planning. McGuire (2012) states that companies in their growth stage are more likely to evade taxes therefore, this study controls for growth opportunities that are reflected in intangible assets of the business, sales and cash holdings (INTANG, ΔSALE and CASH). The control variables have been measured s follows:

Firm size (e.g. measured as the number of total assets possessed by the firm)leverage (e.g. measured as long-term debt divided by lagged assets), cash holdings for the firm (e.g. measured as cash and short term investments divided by lagged assets), Profitability of the firm (e.g. measured as operating income divided by lagged assets), Property, plant and equipment for the firm (e.g. measured as PPE divided by lagged assets), intangible assets of the firm (e.g. measured as intangibles divided by lagged assets), Sales (e.g. determined as net change in sales measured lagged assets for the firm) and Years (e.g. A dummy variable to control for years impact).

Empirical Results

Descriptive Statistics

Table 1 shows the descriptive statistics of the variables included in the regression model of this research. Table 1 shows a combined descriptive statistics.

Table 1: Summarized Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
Size	15.7417	1.61153	10.47212	20.1323
Lev	.1426599	.1517505	0	1.057045
Cash	.1066635	.1569337	0	1.211088
Profit	.1567051	.1513845	-.1728783	1.172798
Ppe	.5157419	.2592827	0	1.647048
Salech	1.13e-07	1.11e-06	-2.33e-06	.0000203
Getr	.2499275	.1722299	0	1
Letr	.2567634	.1555717	.0006673	1

Table 2 presents the life cycle wise descriptive statistics. Table 1 represents that the mean values

of GAAP_ETR and LETR are 0.2499275 and .2567634 respectively. The mean value for Size 15.7417 indicates the presence of many mature firms in sample. However, the low mean values of LEV .1426599 shows that the firms do not rely much on external financing. The higher mean values for CASH (.1066635), PROFIT (.1567051), PPE (.5157419) and SALECH (1.13e-07) indicates that firms have high cash, profit and sales turnover.

The following table 2 shows that, on average, the firms have higher tendency to engage in tax avoidance in the introduction and decline stages relative to growth and maturity stages. Lesser values for ETR represent high levels of tax avoidance. For examples, the mean GAAP_ETR values for firms in maturity (.2619282) and growth stages (.2374434) are higher as compared to introduction (.1823762), shakeout (.202881) and decline (.2597773). Further analysis shows that GAAP_ETR increases progressively over the introduction, growth and maturity stages, while declines sharply after maturity stage as it reaches the decline stage. Therefore, an inverted U-shaped pattern is formed. Table 2 graphically shows the tax proxy measure GETR over the different life cycle stages. It shows an inverted U-shaped pattern, suggesting that there is significant tax avoidance in the introduction, shake-out and decline stages when the firm is unstable in finances and lower tax evasion in growing and maturity stages of the firm life cycle.

Table 2: Lifecycle-wise descriptive statistics

Variable	Statistics	Introduction	Growth	Maturity	Shake-out	Decline
GAAP_ETR	Mean	.1823762	.2374434	.2619282	.2597773	.202881
	Standard deviation	.1576317	.2227418	.1525068	.1703482	.1094744
	Min	0	0	0	0	.0285567
	Max	.8481821	1	1	1	.4441674
LETR	Mean	.2312692	.251834	.2576621	.257953	.2249615
	Standard deviation	.1460562	.2026993	.1282319	.1571654	.0846007
	Min	.0509768	.0014125	.0006673	.000744	.0841886
	Max	.7738315	1	.825163	1	.3474693
SIZE	Mean	15.56565	15.89356	15.75951	15.88541	16.14096
	Standard deviation	1.469789	1.580404	1.591032	1.625841	1.752406
	Min	12.79319	12.88717	12.43968	12.67918	13.00166
	Max	18.4262	19.43783	20.1323	19.14778	18.92011

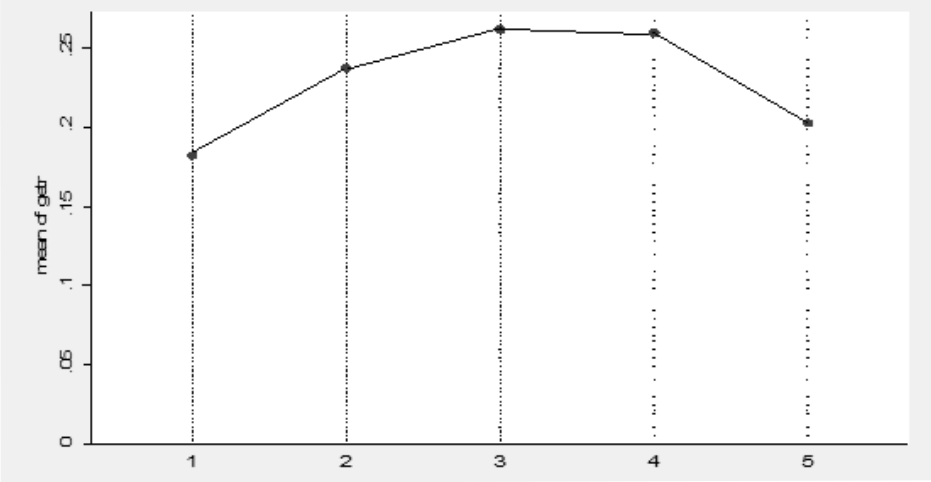
LEV	Mean	.2083197	.2450146	.1191391	.0950699	.1303829
	Standard deviation	.1651412	.2040765	.1161182	.113564	.2254031
	Min	0	0	0	0	0
	Max	.7010062	1.057045	.7328923	.541716	.9914945
CASH	Mean	.043876	.0648063	.1159644	.1356904	.191808
	Standard deviation	.0678529	.1186517	.1509929	.1795914	.2532192
	Min	.000766	.0006135	0	0	.0027476
	Max	.3587839	.7616912	1.211088	.76498	1.136474
PROFIT	Mean	.0737473	.1031846	.1885362	.1343875	.1453876
	Standard deviation	.0761638	.1294916	.1570873	.1134725	.1020994
	Min	-.1728783	-.0626958	-.1619469	-.0613928	.0309397
	Max	.2812009	1.172798	.8353874	.6044219	.346705
PPE	Mean	.6063814	.6756173	.5032134	.399084	.3982292
	Standard deviation	.2448183	.2836703	.2102297	.2429298	.3895753
	Min	.0602849	.0057789	0	0	.0005058
	Max	1.334811	1.647048	1.589185	.9465412	1.398813
SALECH	Mean	7.85e-08	6.80e-08	4.60e-08	-1.37e-08	-2.67e-08
	Standard deviation	4.62e-07	4.05e-07	1.91e-07	1.68e-07	1.79e-07
	Min	-2.33e-06	-5.53e-07	-1.63e-06	-1.12e-06	-7.90e-07
	Max	1.51e-06	4.24e-06	1.93e-06	5.04e-07	1.52e-07

*Statistical significance at the 10% level (two-tailed tests). ** Statistical significance at the 5% level (two-tailed tests).

***Statistical significance at the 1% level (two-tailed tests).

Graphical Representation

The flowing table provides Graphical representation of the mean GETR across the firm life cycle stages.



The graph of LETR represents the relationship of LETR with firm life cycle stage. The graphical diagram shows the mean values of LETR and various life cycle stages by Dickinson's model (2011). The line is bent low in the introduction, decline and shake-out stage. However, the line rises upward in the growth and maturity stages. This is inclined with the findings of this research.

Pearson Correlation Results

The following table 3 represents the Pearson correlation test results. It shows that some of the control variables and tax avoidance proxy measures are highly consistent with various life cycle stages. As per the expectations, GAAP_ETR measure is negatively (positively) correlated ($p<0.01$) with the introduction, shake-out and decline (growth and mature) stages. Similarly, LETR is negatively (positively) correlated with introduction, shakeout and decline stages.

Furthermore, SIZE, CASH, SALECH and PROFIT are negatively (positively) correlated ($p<0.01$) with the introduction and growth stages, whereas LEV and PPE are positively (negatively) correlated ($p<.01$) with the introduction and growth stages while negatively (positively) correlated ($p<.01$) with maturity, shake-out and decline stages. In general, the correlations among the tax avoidance proxies, life cycle stages measures and control variables are generally in the predicted directions. Therefore, the correlation test results provide substantial evidence for the validity of the key concepts and measures.

Table 3: Pearson Correlation matrix

Variable	Introduction	Growth	Maturity	Shake-out	Decline
GAAP_ETR	-.146**	-0.0110	0.0653	0.01000	-0.0186
LETR	-0.0358	-0.0543	0.0331	0.0148	-0.0289
SIZE	--0.0605	-0.0291	0.0720	.0618	0.0484
LEV	0.164**	0.289***	-0.176**	-0.0885	-0.0771
CASH	-0.120**	-0.149**	0.0765	0.0458	0.147**
PROFIT	-0.162***	-0.137**	0.209***	-0.0774	-0.00238
PPE	0.106	0.261***	-0.0401	-0.170***	-0.145**
SALECH	-0.0289	-0.0263	-0.0347	-0.0386	-0.0462
p<0.05,	p<0.01**,	p<0.001***			

Regression Analysis

Regression model

In this section, empirical testing of correlation between a firm's life cycle stages and tax avoidance has been done by the use of fixed effect regression analysis to account for the unobserved time invariant characters of firm life cycle. Because this research claims that a business exhibit different levels of tax avoidance in various stages of its life cycle, a regression model with business fixed effects seems appropriate (e.g. Wooldridge, 2010). My model is estimated as follows:

$$TAX\ AVOID_{it} = \alpha_{0it} + \beta_{1-4} FLC\ DUM_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \beta_7 CASH_{it} + \beta_8 PROFIT_{it} + \beta_9 PPE_{it} + \beta_{11} CHSALE_{it} + YEARDUMMIES + \alpha_i + \varepsilon_{it},$$

Where i=business I, t=financial years 2008-2015, and α=business specific unobserved fixed effects. I have used 2 proxy measures of tax avoidance (TAX AVOID) in my main analysis (i.e. GAAP_ETR and LETR). The key variable of interest in this research is FLC_DUM. This research predicts that more tax avoidance during the introduction (INTRODUCTION) and decline (DECLINE) stages, and low tax avoidance in growth (GROWTH) and maturity (MATURITY) phases.

Table 4: Firm's Fixed Effects of Firm Life Cycle and Firm Characteristics on Tax Avoidance

	GAAP_ETR (Dependent Variable)				
	MODEL 1	**MODEL 2**	**MODEL3**	**MODEL4**	**MODEL5**
	Introduction	**Growth**	**Maturity**	**Shake-out**	**Decline**
INTERCEPT	.9369185***	.9357171***	.9468983***	.9623512***	.9319958***
	(3.94)	(3.89)	(3.92)	(4.00)	(3.89)
Firm life cycle	-.0821645***	.0275298	.0048108	-.0236908	-.0917196**
	(-3.83)	(1.69)	0.38	1.36	-2.77
SIZE	-.0421186**	-.0417178*	-.0429421**	-.0440589**	-.0413708**
	(-2.70)	-2.64	-2.71	-2.79	-2.63
LEV	-.0059236	-.0506157	-.0235145	-.0218373	-.0391256
	-0.07	-0.60	-0.28	-0.26	-0.47
CASH	.1271931	.129154	.1351463*	.132346*	.1231398*
	(2.33)	2.24	2.34	2.29	2.14
PROFIT	-.2994874***	-.2847974***	-.286794***	-.283510***	-.2926881***
	(-4.88)	-4.60	-4.62	-4.58	-4.75
PPE	-.0010734	-.0143643	-.0083179	-.0042039	-.0021951
	(-0.02)	-0.27	-0.15	-0.08	-0.04
SALECH	-1895.63	-3149.737	-2826.849	-2690.984	-2934.952
	(-.32)	-0.52	-0.47	-0.45	-0.49
YEARS FE	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
N	669	669	669	669	669
Adj. R^2	0.0702	0.0676	0.0666	0.0647	0.0666
p<0.05,	p<0.01**,	p<0.001***			

It is evident from the fixed effect regression table that the p values for introduction stage of firm life cycle dummy variable is significant with GAAP_ETR. And its negative value (-.0821645) indicates high level of tax avoidance. Similarly, the p values for decline stage (-.0917196) are also significant with GAAP_ETR. The lesser values of ETR represent higher levels of tax avoidance. Hence, the regression results are consistent with the literature. The positive values of firm life cycle variable in the Growth (.0275298) and maturity stage (.0048108) with respect to GAAP_ETR indicate that the levels of tax avoidance are negative or low.

The results further represent that PROFIT is highly significant with GAAP_ETR. The co-efficient values for PROFIT are highly significant with GAAP_ETR which may indicate that business profit has also a strong association with tax avoidance. Similarly, SIZE coefficient is also significant for GAAP_ETR. In conclusion, the negative value of firm life cycle stages with respect to GAAP_ETR (Introduction, shake-out and decline) indicates higher value of tax avoidance. The positive values of firm life cycle stages indicate negative tax avoidance. Overall, regression results show a moderate relationship between firm life cycle stages and corporate tax avoidance.

Table 5: Firm's Fixed Effects of Firm Life Cycle and Control Variables on Tax Avoidance (LETR)

	LETR (Dependent Variable)				
	MODEL 1	**MODEL 2**	**MODEL3**	**MODEL4**	**MODEL5**
	Introduction	**Growth**	**Maturity**	**Shake-out**	**Decline**
INTERCEPT	.3397463*	.3110256	.3711078*	.3473292*	.3378931*
	(2.03)	(1.86)	(2.23)	(2.07)	(2.03)
Firm life cycle	-.0107834	.0264745*	-.0207232	.0038117*	-.0514504
	-0.67	2.22	-2.17	0.29	-1.98
SIZE	-.004677	-.0027664	-.0057691	-.0052189	-.0043561
	-0.43	-0.26	-0.54	-0.48	-0.41
LEV	-.0363454	-.067445	-.0733044	-.0436826	-.0547241
	-0.53	-0.98	-1.06	-0.64	-0.80
CASH	-.0107222	-.012278	-.0143133	-.010806	-.0087231
	-0.25	-0.29	-0.34	-0.25	-0.21
PROFIT	-.0782929	-.0773122	-.0766663	-.0771055	-.0776866
	-1.62	-1.62	-1.60	-1.60	-1.62

PPE	.0083453	.00302	.0088295	.0090378	.0118013
	0.21	0.08	0.22	0.23	0.30
SALECH	10991.38	9645.628	11195.22	10897.75	8972.201
	0.85	0.75	0.87	0.84	0.70
YEARS FE	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES
N	483	483	483	483	483
Adj. R^2	.0139	0.0133	0.0167	0.0150	0.0133

p<0.05, p<0.01**, p<0.001***

Fixed Effect Regression Results

The negative values of firm life cycle dummy variable in the introduction (-.0107834), shake-out (.0038117) and decline (-.0514504) with respect to LETR shows high level of tax avoidance. The p values for growth and shake-out stage of firm life cycle are significant for LETR.

Table 6: Additional Analysis

GAAP_ETR (Dependent Variable)	Model 1
Intercept	0.938***
	3.94
INTRODUCTION	-0.098***
	-3.80
GROWTH	-0.005
	-0.25
MATURITY	-0.018
	-1.04
DECLINE	-0.108***
	-3.20

Control Variables	
	-0.041
SIZE	
	-2.63
	-0.025
LEV	
	-0.30
	0.112**
CASH	
	1.96
	-0.306***
PROFIT	
	-5.02
	0.007
PPE	
	0.13
	-1933.530***
SALECH	
	-0.33
YEARS	YES
FIRM FE	YES
N	669
Adj R^2 /Pseudo R^2	0.113

*Statistical significance at the 10% level (two-tailed tests). ** Statistical significance at the 5% level (two-tailed tests).

The above table 6 shows the regression results for Dickinson's (2011) model of firm life cycle stages and a measure of tax avoidance i.e. GAAP_ETR. Specifically, firms have been classified into five distinct stages namely: introduction, growth, maturity, shake-out and decline. Five dummy variables have been created for each distinct life cycle stage. However, to avoid multi-co linearity issue from the model, the shake-out stage has been removed from the model because it is theoretically vague according to Dickinson's model (2011). Therefore, the regression results shows that in comparison to shake-out stage, the introduction and decline phases of the life cycle are positively correlated with tax avoidance ($p<.05$ or better), however, the growth and maturity stages are significantly negatively associated with tax avoidance ($p<.01$ or better). Model 1 shows that in comparison to the Shake-out stage of firm life cycle, the introduction and decline stages have lower GETRs of 9.8% and 10.8% respectively. The GETRs of growth and maturity stages are higher (5% and 18% respectively). Variation in tax avoidance in different life cycle stages is therefore, consistent with GAAP_ETR, specifically in the introduction and

decline stage. Hence, the additional regression results are consistent with the main regression model shown above.

In essence, the results largely support the resource-based dependence theory in catering for the variations in tax avoidance across distinct firm stages. Especially, after controlling for the known indicators of tax avoidance and firm and year fixed effects, the findings indicate that tax avoidance is significantly negative in the growth and maturity stages and significantly positive in the early introduction and later decline stages, relative to shake-out stage. This supports the theory of resource dependence that businesses in the early stage of their life deal with resource constraints and therefore engage in seeking opportunities to increase their after tax profits. This is achieved by adopting aggressive tax-planning strategies. Moreover, in the decline stage, businesses are losing revenues and cost of bankruptcy is high. Therefore, businesses tend to evade taxes to be able to stay liquid and pay their obligations.

Sufficient earnings and certainty of cash flows in the growth and mature stages enable the management to worry less about the tax saving strategies and the businesses engage in maintaining their better image by becoming more tax compliant. Mature businesses realize their full potential in terms of exploiting current investment opportunities unless new innovation presents itself (Barclay& Smith, 2005; Dickinson, 2011).

Conclusion

Taxes are not only an integral source of government revenues, they are also used as an essential tool of fiscal policy to attain economic goals. Tax recovery from businesses and firms listed on the stock exchange are an important source of government revenues in Pakistan. Hence, tax evasion by corporate sector causes an immense damage to the economy of the Country. In this regard, the data of 100 non-financial companies listed on the KSE for the period of 2008-2015 was selected to develop the research hypotheses. After that, the hypotheses were tested using the statistical significance at the 1% level (two-tailed tests).

panel data method. The reasoning behind selection of firms for the period of 2008-2015 is that taxes of companies are finalized after one or more years in Pakistan. The results indicate that there is a strong positive relationship between corporate tax avoidance and firm life cycle stages. This research contributes greatly to the existing literature and focuses on the financial and accounting implications of a company's life cycle phases. This research also extends the body of literature on tax avoidance activities with reference to Pakistani context.

There is a lack of research on the topic of firm life cycle stages and their relation with corporate tax avoidance in Pakistan and how the cash flow operation of the firm like operating, investing and financing activities affect the propensity of firm to engage in tax planning. Overall, the results of this research study are highly consistent with those of Dickinson's model (2011) and resource based theory postulates. The robustness test confirmed that businesses and firms avoid their tax obligations in the introductory, shake-out and decline stages of their firm life cycle. The reasons are resource constraints and uncertainty of cash flows to the business. Therefore, management has more incentive to involve in excessive tax planning strategies. However, as the cash flows become certain in the growth and maturity phase, the firms start paying off their due tax obligations and management is less concerned with aggressive tax planning strategies. In growth and maturity stages, firms engage in building a better public image and goodwill creation. Hence, an inverted U-shaped pattern is formed of tax avoidance across firm life cycle phases. This is aligned with the postulates of dynamic resource based theory. The

descriptive and regression results indicate that firm life cycle is a major predictor of firm tax avoidance. Since tax avoidance cannot be directly measured due to unique characteristics of a firm, therefore I have used two proxy measures to evaluate tax avoidance i.e. GAAP_ETR and LETR. Tax avoidance is a perpetuating problem that corrodes the public commons by depleting governments of sufficient resources in order to provide satisfactory services for the betterment of society, including the businesses that operate in that society. Tax avoidance corrodes trust among regulators and the regulated.

Future researches could investigate the relation between management strategies, effective resource usage as well as tax avoidance. Also, tax avoidance can be studied in relation to other firm attributes such as size, leverage, profitability and performance. Future research can also inculcate financial firms listed on the Karachi stock exchange as well as take account of tax avoidance by the non-listed firms of Pakistan. A comparative study can be developed to evaluate the difference between firms that are family owned and others to determine who have the greater propensity to avoid taxes. The time frame can be increased to generalize the results more accurately.

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