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The Effect of Firm Size on the Relationship Between Tax Avoidance and Cash Holdings

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ABSTRACT

The accumulation of cash by corporations creates an agency conflict between management and shareholders, which benefits management at the expense of shareholders. A company's ability to generate profits depends on several factors, but lack of cash on hand is one of the most critical, increasing the risk of insolvency for that business. In the context of modern corporations, where there is separation between agent (management) and principals (owners), it is argued that the agent does not always act and perform its duties in the best interests of owners. Due to the asymmetric information between agent and principals, tax avoidance activities, in this case, can be used as a tool to facilitate the opportunistic behaviour of managers which at the end increasing costs borne by the owners (Dhaliwal et al. 2011). With this in mind, the study's overarching goal is to learn how much a different firm size makes in the correlation between tax evasion and cash on hand among Muscat Stock Exchange-traded corporations from 2011 to 2020. This study adopted the companies listed on the Muscat Stock Exchange as its statistical population; 20 companies were chosen using the process of systematic elimination. Hypotheses were examined using a multivariate regression technique and aggregated data. Moreover, the research found that the firm's size negatively modifies the correlation between tax avoidance and cash on hand. This study provides an insight that agency theory in the context of tax avoidance and corporate cash holdings in developing countries such as Oman needs to be explored further as the agency conflict in Indonesia as a developing country is more principal-principal conflicts.

INTRODUCTION

Usually, a significant part of the firm's assets is kept in cash or tradable securities, which varies between 8 and 22% in most cases (Tsai, Mai, and Bai, 2021). Cash reserves held by companies have increased significantly over the past decades. Some companies keep excess cash compared to their needs for reasons such as information asymmetry or using it for future investment opportunities.

The term liquid assets are used to describe cash and assets that are easily converted into cash. Cash is the most liquid asset. Other assets have different amounts of liquidity, which depends on their ease of liquidation.

Apart from cash, other assets have two dimensions: (1) the time required to convert assets into cash, (2) the degree of certainty regarding the liquidation of assets. Liquidity management involves identifying these two types of assets that the firms will hold. Against the benefits of saving cash, there are costs. If the imperfections of the capital markets increase the borrowing interest rate against the lending rate, maintaining liquidity will have a cost. In such a situation, there should be holdings between the benefits of liquidity and maintenance costs. At this time, the desired and optimal amount of liquidity will be determined by the final analysis of the yield obtained from maintaining liquidity.

Keynes has identified three motivations for holding cash: trading motivation, foresight motivation, and speculative motivation (speculation). Giving and receiving are the need for cash for business payments. Foresight motivation to keep some money should be done by keeping a fund (cash) or savings to face possible unexpected events. The speculative motive depends on holding cash to take advantage of anticipated changes in stock prices.

There are numerous hypotheses regarding the optimal level of cash on hand. However, they all agree on the need to consider investment prospects, financial leverage, cash flows, and the size and liquidity of assets.

According to the tradeoff theory, businesses find the right quantity of cash to keep on hand by striking a balance between the advantages and disadvantages of doing so. To determine the ideal level of cash on hand, businesses weigh the costs and benefits of having cash and make adjustments accordingly. The key idea of this theory is that organizations whose management adopts a proactive strategy based on cost-benefit analysis to maintain cash have a sweet spot for cash reserves.

Companies' cash reserves are partly affected by their efforts to minimize tax liability. Businesses use tax evasion strategies whenever possible (Khadamipour et al., 2014). Corporations can avoid paying taxes by taking advantage of legal loopholes in the local tax system. Slack off (tax avoidance). Less money taken out of the farm's account to pay tax debt means less money taken out of the farm's account, which may be used to improve the farm's financial base and reduce the farm's reliance on external resources while increasing the farm's reliance on internal resources (the level of cash holdings). Firm size, among other criteria, undoubtedly affects tax evasion actions and their effect on cash on hand.

2. LITERATURE REVIEW AND HYPOTHESES

Managers may hoard cash because they prefer not to take unnecessary risks. Managers looking to pad their own pockets often do so at the expense of their investors. Cash investment can negatively affect company value since it gives management discretion to act contrary to capital market norms. Management theories based on the assumption of agency costs allow for the accumulation of capital at the expense of shareholders for the benefit of the management team (Faroghi, Amiri, and Farzadi, 2015). When a company's low cash reserves, it must seek outside funding to meet its immediate financial obligations. This, however, will not be without its own costs. Therefore, each rial of extra cash is worth more to investors if they can keep it in the companies. However, the scenario changes if the firms' liquidity levels are stable at the time of debt maturity; in this case, investors would place less value on each rial of more cash since they will recognize that it will no longer create more value for the firms. The research was conducted by Sun, Yang, and Rahman (2012).

Companies that keep a limited amount of their assets in cash and quasi-cash. Also, many companies increase the level of their cash assets. (Ferreira and Villa 2004) by researching the ratio of cash to assets of European Monetary Union companies, they concluded that these companies account for 15% of all. They keep their assets in cash or quasi-cash. The equilibrium hypothesis predicts an inverse link between the size of a company and its cash on hand. Large corporations may usually have more consistent cash flows because of their more significant financial resources. Therefore, they are less likely to go bankrupt and have more funding options than small businesses (Titman & Vasil, 1988). Due to the significance of liquidity management in the oman capital market, it is worthwhile to investigate how firm size moderates the correlation between tax avoidance and cash on hand.

Bates et al. (2006) also reported that US industrial companies' average ratio of cash to assets increased by 129% from 1980 to 2004. According to what was said and also many other issues, it is possible to understand the result of the increasing importance of cash and its effect on companies, so it is a logical reason to motivate the firms and their shareholders to take measures to avoid taxes in order to achieve their primary goal, which is to increase the percentage of shareholders' interests. This is while the recent researches showed that managers might turn to tax avoidance that is only for their own interests, they should not necessarily pursue the interests of the shareholders, in other words, complex tax transactions that are aimed at concealment of income from tax authorities and the government can prevent shareholders from closely monitoring managers in order to prevent or limit opportunistic actions of managers. This complexity and ambiguities have been done intentionally so that managers can pave the way for daring actions to make profits at the expense of shareholders with their opportunistic actions. This is why managers have been able to hide their opportunistic practices by using complex tax avoidance structures.

Therefore, on the one hand, the conflict of interest between the government and shareholders and, on the other hand, the conflict of interest between managers and shareholders can be considered as the two primary motivations for tax avoidance in companies. Therefore, managers turn to different tax planning. It can include returns for companies that are created from savings caused by tax savings. This issue will lead to an increase in net cash flows and profit after tax deduction, which will ultimately positively affect the firms' value. (Desai 2009). The pecking order theory of Myers and Majlufs (1984) and the free cash flow theory of Jensen (1986) try to elucidate the topic further. The first theory raises the issue of funding under adverse selection conditions, arguing that enterprises resort to costly external borrowing only when their internal options have been depleted. The second hypothesis relies on the concept of moral hazard and holds that managers will be motivated to look out for their own interests if they are given the freedom to allocate cash flows as they see fit. When it comes down to it, cash on hand is determined by factors unique to each company. Cash on hand is also influenced by financing limitations (Almeida, Campello, & Weisbach, 2004; Denis & Sibilkov, 2009).

It has been shown that 1'financing limitations and firm-specific variables are the most studied factors in explaining cash on hand. The factors influencing the amount of cash that US companies keep on hand have been the subject of research conducted by Opler, Pinkowitz, Stulz, and Williamson (1999). The authors' findings provide credence to the tradeoff theory, which proposes that businesses weigh the costs and benefits of retaining cash at the margin. The issue of financial limitations on liquidity demand is examined by Almeida et al. (2004). It was determined that even cash-strapped businesses should have some cash on hand for emergencies and to put toward future initiatives. Denis and Sibilkov (2009) show that cash hoarding is a common practice among cash-strapped businesses to avoid more expensive forms of external borrowing. In their 2004 study, Ozkan and Ozkan look into how a company's ownership and board composition affects its cash reserves. Cash reserves, investor safety, and ownership structure are all topics Ferreira and Vilela (2004) investigate. To illustrate why minority investors in developing nations' enterprises place a higher value on dividends than cash, Pinkowitz, Stulz, and Williamson (2006) propose a link between investor protection and cash holdings.

2.1 Firm size and cash holdings

One of the most studied factors concerning a firm's cash on hand is its size. Large corporations rely less on their own resources since they face fewer financial hurdles. These businesses can produce cash

because of their consistent cash flows. Consequently, there should be an inverse relationship between business size and liquidity. An extensive body of research supports this connection, which is explained by employing the tradeoff theory (Almeida et al., 2004; Bates et al., 2009; Bigelli & Sanchez-Vidal, 2012; Drobetz & Gruninger, 2007; Opler et al., 1999).

Firm Size

The company's total assets can be used to express the company's size, or the natural logarithm of the company's total assets can be used to determine the company's size. This study also uses this equation to measure company size (Ullah, 2012; Aslam and Ullah, 2017; Ali et al., 2021).

$$\boldsymbol{FIRM\ SIZE} = LTA_t = In(Total\ Assets)$$

Cash holdings

Cash holdings is the total financial ratio of comparing the amount of cash in the company with its total assets and measuring cash retention using the following formula:

$$\text{Cash Holding} = \frac{\text{Total Cash+Equivaley}}{\text{Total Assets}-\text{Cash}}$$

2.2 Tax avoidance and cash holdings

According to conventional economic theory, stockpiling funds increases shareholder value, which is calculated as the difference between the marginal benefit and marginal cost of maintaining the cash on hand (A. Dittmar, Mahrt-Smith, & Servaes, 2003). Contrary to common belief, however, tax avoidance is an example of managers seizing an opportunity to further their own self-interests within the framework of agency theory. Starting with the findings of S. Chen et al. (2010), we know that companies have decided to minimize the amount of money they pay in taxes to the General Department of Taxation to maximize the returns for their executives and stockholders. That the process by which one can lower tax payments to the General Department of Taxation was outlined by the inquiry was made clear. Companies have utilized methods based on algorithms to make transactions more involved. As a result, those who relied on the financial data were misinformed about the nature of the economic transaction and failed to properly assess the company's financial performance (S. Chen et al., 2010; Mihir A Desai & Dharmapala, 2008).

This study uses the following formula to calculate ETR, which is utilized as a proxy for tax avoidance.

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

However, conflicts between management and shareholders can also affect the desire to minimize tax payments (S. Chen et al., 2010). According to research published in 2011 by Y. Chen, Huang, Pereira, and Wang and J.-B, there is a positive correlation between company tax avoidance and firm opacity. Kim, Li, and Zhang. More specifically, this research showed that managers try to conceal facts on financial statements to lessen their tax obligations (for example, lower profit, lower revenue, or higher cost).

As detailed by Hanlon and Slemrod (2009) and J.-B, businesses have evaded paying taxes. Kim et al. (2011), which causes a consistent drop in stock price. Due to the manager's concealment of facts, the board and shareholders could not promptly make appropriate adjustments and choices. Managers decide whether to invest or hoard cash consistently because they aim to optimize their profits, as shown by the research of Opler, Pinkowitz, Stulz, and Williamson (2001). Since it is common knowledge that cash is highly liquid and easily transferable, managers tend to hoard more of it when agency costs rise (Myers & Raghuram, 1998). Research (A. Dittmar, MahrtSmith, & Servaes, 2003a; Jensen, 1986) suggests that this activity served a practical goal for the individuals involved.

Faulkender and Wang (2006), Dhaliwal et al. (2011), and Hogan and Noga (2012) all suggested that small businesses benefited from relatively straightforward taxation compared to their larger counterparts. Because of this, they did not anticipate that tax evasion would have a negative effect on corporations' cash reserves. They concluded that, like M. Z. Frank and Goyal (2014) and Di and Hanke (2013), companies

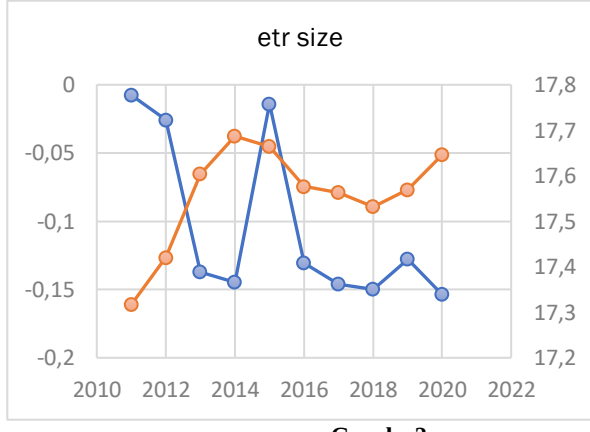
that engage in tax avoidance are more likely to keep a large amount of cash on hand during economic downturns. In this study, a market-to-book ratio below 33% of the industry distribution was considered trouble. According to the authors, when circumstances are challenging, small businesses that use corporation tax evasion hoard cash and avoid investing in the stock. On the other hand, Harford, Mansi, and Maxwell (2012) contended that when company tax avoidance results in a rise in cash, managers prefer spending the money rather than putting it away for future use.

Ramazani and Yoppy (2020) conclude that tax avoidance does not have a positive effect on the value of the company in the manufacturing sector of the consumer goods industry Also, it is possible for the size of the company to reduce the impact of tax evasion on the value of the company for the manufacturing companies listed on the Indonesia Stock Exchange in 2016–2020. It is clear that as mentioned in the previous studies, there is a discrepancy in the results of the studies with regard to the effect of variables and their relationship to each other, and just as the size of the company has a meaningful effect that causes a change in the course of the study, so the researcher initially had to study a sample of the research variables and their influence by means of a graph that facilitates the process of developing the hypotheses of the study depending on the type of relationship.

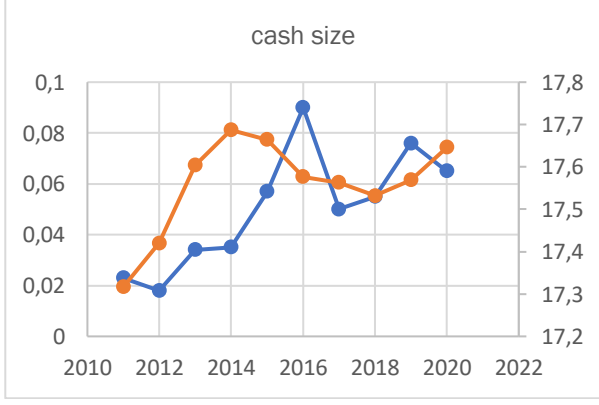
To verify the validity of the results, the researcher relied on the sample data of two companies on the Muscat Stock Exchange for 10 years, from 2010 to 2021, and compared all the companies through the three schemes (I, II, and III) that were tested. We note the occurrence of anomalies in the relationship between the level of cash holding and tax avoidance of the two companies above that are unjustified for the years 2011, 2015, and 2020 in graph (1) and 2011 and 2015 in graph (2), which leads to the question about the impact of the company's size for those years negatively or positively, as this question leads us to make a third, non-inevitable comparison to reach the edge of the information we aim to reach.



Graphs 1.



Graphs 2.



Graphs 3.

According to the proposed theoretical foundations, research hypotheses were developed as follows:

Hypothesis 1: tax avoidance has a negative effect on the level of cash Holdings.

Hypothesis 2: Firm size has a positive effect on cash Holdings.

Hypothesis 3: Firm size reduces the effect of tax avoidance on cash holdings.

3. DATA AND DESCRIPTIVE STATISTICS

This study builds upon earlier work by analyzing how different company sizes influence the connection between tax evasion and cash on hand. The model also takes into account contextual factors specific to Oman. Descriptive statistics of variables are provided in Table 1

Table1. Summary Statistics

Max	*Min*	*Median*	*Mean*	
0.611	0.000	0.096	0.072	Cash holdings
0.472	-1.876	-0.121	-0.148	Tax avoidance
19.356	14.312	17.382	17.013	Size
7.376	-29.208	-2.179	-2.543	Size*Tax Avoidance
0.992	-0.828	-0.160	-0.189	Info Asymmetry
7.80	-7384031	3871805	1.24e	Working capital
4.10	-8.47	784268.5	2514124	FCF
32.300	0.507	1.174	2.594	Tobin-Q

Notes: The table provides a snapshot of some key indicators for Muscat -listed enterprises from 2011 through 2020. The cash-on-hand indicator (CASH) is the ratio of cash and short-term investments to total assets. The Effective Tax Rate (ETR) currently in effect is calculated as the ratio of taxable revenue to tax expense minus deferred tax expense. .fcf is Free cash flow. wc is working capital. Size is a firm size, that is, the natural log of assets. Q is the ratio of Market to book ratio of total assets.

As shown in table (1), the average variable of "tax avoidance" in Oman capital market companies is equal to -0.148, which shows that the average tax avoidance (the inverse index of the effective tax rate) in Oman's capital market was equal to 33.5%. On the other hand, the average variable of "financial leverage" is equal to 0.346, which shows that, on average, companies' debts were 34.6% of their assets.

According to the variance inflation factor test results, the degree of collinearity among the explanatory variables is at the optimal level, and there will not be a problem in the regression results. Also, the significance level of the Chow test statistic in all research models is smaller than the expected error level. The fixed effects model will be used according to the level of significance obtained by the Brash-Pagan test. It is necessary to perform the Hausman test in order to choose between the random effects model and the fixed effects model.

The significance level obtained for the Hausman test is smaller than the expected error level of 0.05. Therefore, it will be preferable to use the fixed effects model to test the research hypotheses. Also, the Wooldridge test shows the existence of autocorrelation between the residuals in all research models. The modified Wald test was used to perform the heterogeneity of variance test. The results indicate the existence of the problem of heterogeneity of variance in the mentioned models.

In the first hypothesis of the research, the effect of tax avoidance on cash holdings in the muscat Stock Exchange has been tested. Also, in the second hypothesis, the effect of company size on cash holdings has been tested.

The results of the test of the first and second hypotheses of the research are listed in Table 2.

Table 2. Regression results with ETR

$Cash_{it} = \beta_0 + \beta_1 TAX_{it} + \beta_2 LEV_{it} + \beta_3 SIZE_{it} + \beta_4 SPR_{it} + \beta_5 FCF_{it} + \beta_6 QT_{it} + \beta_7 WC_{it} + e_{it}$					
P-value	z	*Standard error*	*coefficient*	*variables*	
0.000	-9.93	1.344	-1.335	*Tax*	
0.902	0.12	0.0018	0.0002	*Lev*	
0.004	2.91	0.0266	0.077	*size*	
0.250	1.15	0.115	0.132	*Spread*	
0.350	-0.93	0.615	-0.057	*FCF*	
0.749	0.32	0.046	0.014	*Q*	
0.114	-1.58	0.011	-0.017	*WC*	
0.004	2.87	0.178	0.511	β_0	
125.08	*Wald* :*statistics*		*51.04*		:*Adjusted-r2*
0.0000	:*prob*				

Source: own

According to the results of Table (2), the significance level obtained for the variable statistic "tax avoidance" is equal to 0.000 and smaller than the expected error level of 0.05; And it indicates that tax avoidance has a significant effect on the level of cash holdings. Also, the coefficient of this variable is negative and equal to -1.335, which shows that with the increase in tax avoidance, the level of cash holdings decreases, so the first hypothesis will not be rejected.

Also, according to the results of Table (2), the significance level obtained for the variable statistic "company size" is equal to 0.000 and smaller than the expected error level of 0.05; And it indicates that the size of the company has a significant effect on the level of cash holdings. Also, the coefficient of this variable is positive and equal to 0.077, which shows that with the increase in the size of the company, the level of cash holdings increases, so the second hypothesis of the research will not be rejected.

The results of the third hypothesis test are listed in the following Table 3.

Table 3. Results of hypothesis 3

$Cash_{it} = \beta_0 + \beta_1 TAX_{it} + \beta_2 SIZE_{it} + \beta_3 TAX \times SIZE_{IT} + \beta_4 QT_{it} + \beta_5 WC_{it} + e_{it}$					
P-value	z	Standard error	coefficient	variables	
0.104	1.63	0.025	0.041	*Tax*	
0.010	-2.57	0.003	-0.009	*Size*	
0.000	5.74	0.040	0.230	*size*tax*	
0.000	-5.72	0.0011	-0.006	*Q*	
0.571	-0.57	0.050	0.028	*WC*	
0.002	3.06	0/0.065	0.2002	β_0	
38.66	:*Wald statistics*		*24.70*		Adjusted-r2
0.0000	::*prob*				

Source: own

According to the results of Table (3), the coefficient of the variable ((tax avoidance)) in the first hypothesis model (without entering the moderating variable) is equal to -1.335. With the entering of the moderating variable of company size (the third hypothesis model), it equals 0.230. Therefore, it can be concluded that the company's size has weakened the relationship between tax avoidance and the level of cash holdings. The third hypothesis of the research will not be rejected.

CONCLUSION

It appears that in Oman's capital market, managers can abuse their companies' resources without fear of repercussions because of their tax techniques, which necessitate restricting the flow of information about their businesses to the capital market. Therefore, the money saved by the firm due to a reduction in tax payments is used for the managers' personal splurging instead of investing back into the business.

According to the study's second hypothesis test findings, a company's cash reserves grow in proportion to its size. If true, the research supported by this hypothesis runs counter to the holdings theory while supporting the free cash flow model. According to the free cash flow theory, large corporations should have more leeway in their investment and financial policies, resulting in a more significant surplus of liquid assets.

Researchers found less correlation between tax avoidance and cash on hand as company size increased in the third hypothesis test. In other words, as a corporation grows more extensive, the negative impact of tax evasion on cash on hand decreases. It appears that in Oman (Muscat) capital market, company size and tax evasion are replacement mechanisms for each other, with the former having less impact on the number of cash holdings for larger firms. Cash loss due to planning appears to have decreased due to improved monitoring of managers' activities in larger organizations (tax avoidance).

As a result of the negative effect tax avoidance has on a company's cash reserves, it is recommended that users of financial statements employ the index developed for this study in order to gauge the extent to which a company is avoiding taxes and to make an educated guess as to the size of the company's non-cash assets. Furthermore, it is recommended that firm financial managers and financial analysts examine the company's liquidity by calculating the quantity of cash holdings, paying closer attention to the company size component and tax evasion.

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