

# INTERACTIONS OF LEVERAGE AND FIRM PERFORMANCE: THE MODERATING EFFECTS OF AGENCY COSTS

Swati Kumaria Puri

WHITIREIA AND WELTEC

## ABSTRACT

This research aims to investigate the impact of leverage on the performance of small and large publicly listed firms in New Zealand. Further, it explored the moderating effect of agency costs on the association between leverage and firm performance. The research sample includes quarterly data from New Zealand firms from 2010 to 2021. To test the hypotheses, univariate and multivariate methods were used, such as correlation and panel data regression. The empirical results show that leverage has a significant positive impact on the performance of small firms, but a negative impact on their market value. In large firms, the opposite trend occurs, with firms having a higher market value when they have a higher level of debt in their capital structure. Additionally, the findings show that agency costs have a considerable impact on the relationship between leverage and firm performance. Regardless of the size of the firm, the market value and performance of firms improve when agency cost is introduced as a moderating variable. This study supports the theory that agency costs contribute to enhancing firms' market value by allowing managers to allocate their discretionary spending to more profitable, value-enhancing projects, leading to fewer agency conflicts. The insights can be instrumental in improving the overall performance of firms by achieving an optimal debt structure and utilising debt effectively.

*Keywords: Agency problems, agency costs, leverage, corporate performance, market value*

## INTRODUCTION

Capital structure determinants are often used in studies to analyse how finance decisions impact a firm's performance and profitability. According to Modigliani and Miller (1958), capital structure is irrelevant in perfect markets and does not influence firm value. However, in 1963, Modigliani and Miller revised the irrelevance theory, stating that since interest expenses are tax deductible firms with higher debt ratios have a higher value. Due to the imperfect nature of real economies, numerous finance decision theories have been developed over time to demonstrate the importance of capital mix (Modigliani and Miller 1963). According to capital structure theory, an optimal mix of capital should increase market value per share by ensuring a low average cost of capital (Modigliani and Miller 1963). Akintoye (2008) argues that firm performance is affected by business risk, taxes, managerial behaviour, and financial flexibility. It is further asserted that the most crucial aspect of determining an optimal capital mix is balancing risk and expected return, which is determined by capital structure (Akintoye 2008). Using this objective, firms can maximise their value and minimise their cost of capital by combining debt and equity in the optimal way by rationally combining debt and equity (Abdullah et al., 2021). Kinsman and Newman (1999) emphasize the significance of exploring how capital structure choices (e.g., debt level) influence firm performance. Kinsman and Newman (1999) emphasise the importance of examining the relationship between capital structure choices (e.g., debt level) and firm performance. They assert that the main reason managers study debt level and firm performance is to examine the relationship between debt level and shareholder wealth since their primary goal is to maximise shareholder's wealth (Kinsman & Newman, 1999).

Several researchers have followed Jensen and Meckling (1976) hypothesis that capital structure can affect firm performance and conducted numerous studies exploring this relationship. However, research findings demonstrate that this relationship tends to be contradictory and mixed. A large body of evidence indicates that leverage is positively correlated with firm performance (Champion, 1999; Ghosh et al., 2000; Hadlock & James, 2002; Roden & Lewellen, 1995; Taub, 1975). On the other hand, several studies have shown that leverage is negatively correlated with firm performance (Fama & French, 1998; Gleason et al. 2000; Simerly & Li, 2000).

The economy of New Zealand shares many similarities with other developed countries, but also exhibits unique features due to its unique geography, industry composition, policy priorities, and other attributes (Ministry of Business, Innovation and Employment (MBIE), 2022). Due to its economic structure and sensitivity to external factors, New Zealand's leverage-performance dynamics may differ from those in larger and more diversified economies (MBIE, 2022). Despite extensive research on capital structure choices and their effect on firm performance in developed markets, few studies have been undertaken to determine the about impact of leverage on performance in New Zealand firms. It could be helpful to gain insight into how factors specific to New Zealand, such as industry composition, regulatory environment, and market structure, contribute to the relationship between leverage and firm performance. To address this gap, this research examined the impact of leverage on the value of firms and their financial performance for both small and large firms in New Zealand. Secondly, it examined how agency costs moderates the relationship between financial leverage and firm performance. More specifically, this research addresses the following four research questions:

1. What is the relationship between financial leverage and a firm's return on equity (ROE) for both small and large firms?
2. What is the relationship between financial leverage and a firm's return on assets (ROA) for both small and large firms?
3. What is the relationship between financial leverage and a company's Tobin's Q for both small and large firms?
4. Do agency costs moderate the relationship between financial leverage and ROE, ROA, and Tobin Q for both small and large firms?

This research contributes to the literature in two ways. Firstly, it adds to the theoretical literature on the impact of leverage on the performance and market value of New Zealand firms. Since the amount of leverage can differ between small and large firms, there are variations in performance results between small and large firms (Murray & Goyal, 2001; Rajan and Zingales, 1995). Secondly, there is robust evidence that agency costs play a critical role in moderating the relationship between leverage and a firm's performance (Jensen and Meckling, 1976). It is possible for firms to mitigate the conflict of interest between managers and shareholders by implementing measures that reduce discretionary expenditures by managers (Fama & French, 1998; Servaes and McConnell, 1990). This research contributes to understanding how financial leverage and agency costs affect market value and performance of firms, emphasising their relevance to businesses of all sizes in New Zealand, as well as how management can maximise the performance of their firms through optimal debt management.

## LITERATURE REVIEW

### Effect of Financial Leverage on Firm Performance

According to the financing constraint literature, financial measures, including profitability and financial leverage, are critical to explaining firm growth dynamics (Oliveira & Fortunato, 2006). However, there are contradictory views in the literature regarding the relationship between financial leverage and firm performance.

Several empirical studies reveal a positive correlation between debt level and firm performance. According to Taub (1975), there is a significant positive correlation between debt and profitability for firms from the United States of America (USA) after studying factors affecting debt-equity ratios. In addition, Grossman and Hart (1982) and Williams (1987) find that high leverage encourages managers to act more in shareholders' interests. Using leveraged buyouts as an example, Roden and Lewellen (1995) find that profitability is significantly correlated with debt as a percentage of total buyout financing. The same results are documented by Hadlock and James, (2002) in a study on USA-based firms. According to Margaritis and Psillaki (2010), higher leverage is associated with improved efficiency. In their study, Cheng and Tzeng (2014) find that leverage and firm value were positively correlated until a firm reached its optimal capital structure. Taking a sample of seven firms listed on both the Bombay Stock Exchange and the National Stock Exchange, Vijayalakshmi and Manoharan (2015) examined the impact of leverage on the market value of firms and indicated that leverage had a significant positive impact on the market value of firms.

According to Gleason et al. (2000), capital structure is negatively related to performance in a set of European retail firms. A similar set of results was reported by Booth et al. (2001) for ten developing countries, among them Brazil, Mexico, South Korea, Zimbabwe, and Malaysia. Based on a set of manufacturing and service firms in Belgium, France, Italy, and the United Kingdom, Goddard et al. (2005) find a negative correlation between a firm's gearing ratio and profitability. Additionally, Nunes et al. (2010) find a negative relationship between leverage and performance for Portuguese service firms. They suggest that as leverage levels increase, losses increase due to negative net present value projects leading to higher costs of financial distress, bankruptcy, and/or liquidation. Similarly, Kester (1986) report a negative relationship between leverage and profitability for the USA and Japan.

### Firm Size and Financial Leverage

According to Rajan and Zingales (1995), there is a positive correlation between leverage and profitability, as well as firm size with leverage. Antonious, et al. (2008) validated this finding and concluded that leverage ratios are positively associated

with firm size. Murray and Goyal (2001) suggest that bigger firms have a greater capacity for debt and can, therefore, have a higher tax shield, supporting the static trade-off theory that proposes a positive relationship between profitability and financial leverage. However, Syed et al. (2006) examined determinants of capital structure and concluded that firm size and leverage were negatively correlated. This finding aligns with pecking order theory of capital structure which suggests that managers prioritize firms' financing operations using first retained earnings (internal financing), then debt financing, and finally equity financing (Myers, 1977). Considering that firm size impacts firm performance and that the relationship between leverage and firm performance is controversial, firm size may provide some explanation for the relationship between leverage and firm performance. Based on this hypothesis, we conducted empirical analysis and investigated whether the firm size is relevant in explaining the ambiguous relationship between leverage and firm performance.

The current research examined the relationship between leverage and performance of both small and big firms. It tested whether the relationship between leverage and firm size is invariant to sample splitting, assuming the firm size represents the threshold variable when the sampling is based on firm size. Based on the discussion thus far, it can be concluded that there is a negative relationship between financial leverage and firm performance. Therefore, the following hypotheses is proposed:

- H1: There is a positive relationship between financial leverage and firm performance (ROE and ROA) in small firms.
- H2: There is no positive relationship between financial leverage and firm performance (ROE and ROA) in small firms.
- H3: There is a positive relationship between financial leverage and a firm's market value Tobin's Q in small firms.
- H4: There is no positive relationship between financial leverage and a firm's market value (Tobin's Q) in small firms.
- H5: There is a positive relationship between financial leverage and firm performance (ROE and ROA) in large firms.
- H6: There is no positive relationship between financial leverage and firm performance (ROE and ROA) in large firms.
- H7: There is a positive relationship between financial leverage and a firm's market value (Tobin's Q) in large firms.
- H8: There is no positive relationship between financial leverage and a firm's market value (Tobin's Q) in large firms.

#### **The Moderating Effects of Agency Costs on the Relationship Between Capital Structure and Firm Performance**

The agency cost theory propounds that agency costs occur due to 'principal-agent' relationships between managers and shareholders or between creditors and shareholders (Jensen & Meckling, 1976). Further, Jensen and Meckling (1976) contend that debt influences agency costs. As a firm's shareholders' interests diverge from its managers' interests, agency costs associated with equity can be reduced through leverage. In firms with higher debt levels, debt holders closely monitor the firm and managers are less free to engage in non-value-maximising activities (Servaes and Connell, 1990). According to Kalash (2019), shareholders-managers' agency theory can reduce agency problems and boost firm performance. Servaes and McConnell (1990) argued that an increase in debt proportion may increase investments in high-risk projects to cover interest payments. Thus, as debt grows, lenders will be more inclined to improve monitoring, thereby reducing agency costs. In small firms, unrestricted risk sharing, and specialisation of management may be less beneficial than controlling the agency problems that arise in these businesses (Servaes and McConnell, 1990). Using this method, managers and owners have fewer conflicts of interest, thus eliminating costly control mechanisms (Fama & French, 1998). By assessing how agency costs influence the relationship between capital structure and firm performance, Sdiq et al. (2022) concluded that agency costs have both positive and negative impacts on the correlation between capital structure and firm performance. Various researchers (Abdullah et al., 2021; Grossman & Hart 1982; Hoang et al., 2019; Jensen 1986; Jensen & Meckling 1976; Williams 1987) have suggested that firms can raise capital via debt financing when leverage is low. This reduces agency conflicts and costs, since managers are less likely to act in their own interests, resulting in an improved performance for the firm. Based on the above discussion, it can be concluded that agency costs play a significant role in moderating the relationship between capital structure and financial performance. Consistent with the above arguments, the following hypotheses is proposed.

- H9: Agency costs positively moderate the relationship between leverage and performance (ROA and ROE) in small firms.
- H10: Agency costs do not positively moderate the relationship between leverage and performance (ROA and ROE) in small firms.
- H11: Agency costs positively moderate the relationship between leverage and market value (Tobin's Q) in small firms.
- H12: Agency costs do not positively moderate the relationship between leverage and market value (Tobin's Q) in small firms.
- H13: Agency costs positively moderate the relationship between leverage and performance (ROA and ROE) in large firms.
- H14: Agency costs do not positively moderate the relationship between leverage and performance (ROA and ROE) in large firms.
- H15: Agency costs positively moderate the relationship between leverage and market value (Tobin's Q) in large firms.
- H16: Agency costs do not positively moderate the relationship between leverage and market value (Tobin's Q) in large firms.

## DATA AND METHODOLOGY

### Data

The research sample includes quarterly data of non-financial publicly listed New Zealand firms from quarter 1, 2010 to quarter 1, 2021. The dataset is an unbalanced panel consisting of 11 years or 44 quarters of 69 New Zealand firms. This research excluded all financial firms because the nature of their liabilities is different from non-financial firms (Fama & French, 1992). This research used data from the Thomson Reuter DataStream database to obtain firm-level financial variables. It is one of the leading providers of financial data, and analytics to economists and research communities (Thomson Reuters Datastream Economic). All selected continuous variables are winsorised at 5% to eliminate the effect of outliers.

### 3.2. Methodology

This research examined how leverage impacts corporate financial performance and market value using indicators (ROE, ROA, and Tobin's Q) for both small and large firms. Using the median value of assets, the sample was divided into small and large firms to analyse the impact of variables on each group. Firms with assets below the median are classified as small firms while firms with assets over the median were classified as large firms. Multiple regression techniques are used to assess the objectives and test the developed hypotheses. The model uses heteroscedasticity-robust standard error estimates to verify the heteroscedasticity assumption of regressions.

The model is constructed as follows:

$$Y_{it} = b_0 + b_1 Lev_{i,t} + b_2 S_{it} + e$$

Where Y represents the dependent variable ROE, ROA, and Tobin's Q, and  $Lev_{i,t}$  is the firm's financial leverage.  $Lev_{i,t}$  is the ratio of total debt to total assets for firm  $i$  at time  $t$ .  $S$  represents firm size as the control variable. A second set of regressions was conducted to determine the effect of moderator agency costs on leverage and firm performance in both small and large firms. The analysis was performed using the baseline equations with agency costs as a moderating variable.

### Measurement of Variables

#### Dependent variables

Three variables were used to determine the performance and market value of firms. Prior studies have used ROA as an indicator of profitability since it is the most comprehensive measure of a firm's performance (Russo et al. 1997; Puri, 2022). It measures how effectively a firm generates income from its assets. Additionally, ROE was used as an indicator of corporate shareholder returns (Artiach et al. 2010). The ROE measures how efficiently firms manage the shareholders' capital (Abdullah et al., 2021; Li et al., 2018, Puri, 2022). Following various researchers (Albertini, 2013; Garg, 2015; Yu & Zhao, 2015) the third variable used extensively to measure market value was Tobin's Q. Tobin's Q is calculated as the market value of equity plus the book value of debt divided by total assets (Tretiakova et al., 2021; Puri, 2022). Several studies have confirmed that Tobin's Q measures market value accurately as it reflects a firm's performance as well as its expectations for its future (Diab et al., 2019; El Ghoul et al., 2017; Li et al., 2018).

#### Independent Variable

Leverage is the use of borrowed funds by a firm. A firm's financial leverage was measured as the ratio of total debt to total assets. Several scholars (Detthamrong, 2017; Margaritis & Psillaki, 2010) have used this variable as a measure of financial leverage.

#### 3.3.3. Moderating Variable

Several proxies can be used to measure agency costs. Following previous studies, the asset utilisation ratio was used to determine the agency costs (Ang et al. 2000; Kontuš, 2021). This ratio measures how efficiently management uses the firm's assets and evaluates the ability of management to make optimal use of assets. It is important to note that the asset utilisation ratio is the only inverse proxy for agency costs meaning that agency costs increase as asset utilisation decreases. A high asset utilisation ratio indicates efficient use of assets, and this inversely correlates with agency costs (Tian and Estrin 2007; Vijayakumaran 2019).

#### Control variables

This research used firm size as the control variable. It has been proposed by Ibhagui and Olokoyo (2018) that firm size plays a significant role in determining the relationship between capital structure and firm performance. Additionally, larger firms have the advantage of generating internal funds and accessing external capital more easily (Puri, 2022). This research measured firm size as the natural logarithm of total assets (Puri, 2022; Garca-Meca et al. 2015).

Figure 1: Descriptions of Variables

SUMMARY VARIABLES	MEASUREMENT
ROA	The ratio of a firm's net profit to total assets
ROE	The ratio of net income to shareholders' equity
Tobin's Q	The market value of equity plus book value of debt divided by total assets
Leverage	The ratio of a firm's total debt to the book value of its assets
Agency costs	The ratio of the firm's sales to total assets
Size	The natural logarithm of the book value of a firm's asset

## EMPIRICAL RESULTS

### Univariate Analysis

Table 1: Summary Statistics for all Continuous Variables

VARIABLE	N	MEAN	SD	MIN.	MAX.
ROA	2,561	5.01	9.98	-26.47	20.73
ROE	2,595	8.32	14.41	-32.51	32.16
Tobin's Q	2,670	1.60	2.06	0.20	8.50
Lev	2,521	24.52	15.09	0	55.59
Firm Size	2,879	13.50	1.54	10.34	15.84
Agency Cost	2,864	0.61	0.58	0.048	1.99

Table 1 presents the summary statistics showing all continuous variables of 69 New Zealand firms evaluated over 11 years. For the sample firms, the average ROE was 8.32% which indicates that, on average, the firms in the sample are generating 8.32 cents for every dollar invested. The ROA of 5.1 indicates that, for every unit of total assets owned, the firms in the sample generated an average profit of 5%. According to Tobin's Q, the average market value of firms is 1.60 which indicates that the market values of the firms is 1.60 times their replacement cost of assets. Based on the mean values in the sample, it can be concluded that the firms in the sample are profitable. On average, agency costs were 0.6, which means that the firms generated 60 cents of sales for every dollar the firms held in assets. Furthermore, the mean values for firm size and leverage are 13.8 and 24.5, respectively which suggests that the selected firms have debt in their capital structure.

Table 2: Correlation Matrix for all Variables

	ROA	ROE	TOBIN'S Q	LEVERAGE	FIRM SIZE	AGENCY COSTS
ROA	1					
ROE	0.847	1				
Tobin's Q	-0.293	-0.224	1			
Lev	0.184	0.077	-0.4173	1		
Firm Size	0.195	0.281	-0.1478	0.402	1	
Agency Cost	0.184	0.206	0.147	-0.191	-0.319	1

Table 2 presents correlation coefficients of key variables for the final sample. As the correlation coefficients between explanatory variables are below 0.50, the issue of multicollinearity is not of great concern. Among independent variables, there was no significant correlation. There is no significant correlation among independent variables, As expected, ROE and ROA are highly correlated ( $r = 0.84$ ), thereby indicating that they can be used interchangeably as a proxy for firm performance.

## Multivariate Analysis

Table 3: Panel Data Regression

	SMALL FIRMS			LARGE FIRMS		
	ROA (1)	ROE (2)	TOBIN'S Q (3)	ROA (4)	ROE (5)	TOBIN'S Q (6)
Lev	0.0452***	0.0447**	0.0253***	-0.041**	-0.046*	-0.004
	0.004	0.046	0.000	0.028	0.093	0.617
Firm size	1.409***	2.132***	-0.714***	1.585***	2.319***	-0.844***
	0.000	0.000	0.000	0.000	0.000	0.000
Constant	-14.52***	-21.20***	11.19***	-15.91***	-22.65***	12.88***
	0.000	0.000	0.000	0.000	0.000	0.000
Observations	2,389	2,424	2,350	2,389	2,424	2,350
R-squared	0.11	0.08	0.07	0.10	0.13	0.12

Table 3 presents the results of the panel regressions for three different outcome variables: ROE, ROA, and Tobin's Q. The regression in the specification controls for firm fixed effects. It shows the estimation outcomes for leverage on financial performance and market value. All variables (except for the dummy variable) are winsorised at 5%. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

Finally, a fixed effect multi-regression was performed to test the posited hypotheses. Table 3 presents the results of the panel regressions for three different outcome variables: ROE, ROA, and Tobin Q. In small firms, financial leverage positively impacts the performance of firms and market value as measured by ROE and ROA, and Tobin's Q. Columns 1, 2 and 3 show that the increase in leverage in small firms has increased the performance indicated by ROA and ROE by 4.5 % and 4.4 % and the market value by 2.5 %. Therefore, we accept the first and third hypotheses. However, in large firms, the increase in financial leverage has a significant negative effect on the performance of firms and no impact on the market value of firms Columns 4 and 5 show that the increase in leverage has led to a decrease in ROE and ROA by 4%. The results contradict hypotheses five and seven, which suggest a positive relationship between leverage and firm value and performance. Hence, the null hypotheses six and eight are accepted.

Table 4: Panel Data Regression with Agency Costs as a Moderating Variable

	SMALL FIRMS			LARGE FIRMS		
	ROA (1)	ROE (2)	TOBIN'S Q (3)	ROA (4)	ROE (5)	TOBIN'S Q (6)
Lev with Agency cost as a moderating variable	-0.005	0.134***	0.011***	0.0357**	0.120***	0.0286***
	0.737	0.000	0.030	0.300	0.000	0.000
Firm size	1.110***	2.488***	-1.159***	1.023***	1.479***	-1.190***
	0.000	0.000	0.000	0.000	0.000	0.000
Constant	-9.952***	-26.65***	17.68***	-9.021***	-12.59***	17.83***
	0.000	0.001	0.001	0.000	0.001	0.000
Observations	2,389	2,424	2,350	2,389	2,424	2,350
R-squared	0.114	0.123	0.182	0.114	0.143	0.189

Table 4 presents the results of the panel regressions for three different outcome variables: ROE, ROA, and Tobin's with agency cost as a moderating variable. The regression in the specification controls for firm fixed effects. All variables (except for the dummy variable) are winsorised at 5%. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

Table 4 reports the empirical results of taking agency costs as the moderating variable. The performance of small and large firms as measured by ROE is improving when agency costs are considered as a moderating factor by 13.4% and 12% as shown in columns 2 and 5. ROA increases by 3.5% in large firms as indicated in column 4. The researchers reject the null hypothesis and accept hypotheses nine and eleven based on our findings, which suggest that agency costs positively moderate the relationship between leverage and profitability. It is noteworthy that the moderating effects of agency costs

increase the market value of both small and large firms by 1.1% and 2.8% respectively. Consequently, null hypotheses are rejected and hypotheses thirteen and fifteen are accepted, which indicate that agency costs positively moderate the relationship between leverage and market value.

## DISCUSSION

The purpose of this research was to investigate the relationship between financial leverage and firm performance for publicly listed firms on the New Zealand stock exchange. There is convincing evidence in the results indicating that financial leverage has a considerable impact on the financial performance and market value of firms. There is further evidence that agency costs moderate the relationship between leverage and firm financial performance. Key findings can be summarised as follows.

Firstly, financial leverage is positively associated with the profitability of small firms. Taub (1975), Grossman and Hart (1982) and Williams (1987) confirm that with the increase in debt, managers engage in value-maximising activities, thereby increasing the efficiency of firms (Margaritis & Psillaki, 2010) and encouraging managers to maximise shareholder's wealth (Kinsman and Newman, 1999). The positive relationship between debt and performance in small firms signifies that with the increase in debt, managers aim at optimal debt structure (Akintoye, 2009). Additionally, a positive relationship between market value and leverage in small firms suggests that investors consider firms with debt as efficient firms. This aligns with previous studies which suggest that there is a significant positive impact of leverage on a firm's market value (Vijayalakshmi & Manoharan, 2015). Furthermore, the empirical findings indicate that high leverage encourages managers to act more in shareholders' interests. Margaritis and Psillaki (2010), Grossman and Hart (1982) and Williams (1987) found that leverage and firm value were positively correlated until a firm reached its optimal capital structure (Cheng & Tzeng, 2014).

Secondly, for large firms, financial leverage has a negative association with the performance of firms and no significant relation with the market value of firms. An explanation for the negative relationship is the non-management of debt funds by the managers of firms leading to inferior performance (Antoniou et al., 2008, Syed et al., 2006). A key takeaway is that it is important for these firms to strike a balance between leverage and equity to sustain their performance outcomes (Kinsman and Newman, 1999). The empirical findings align with pecking order theory for financing. According to this theory, debt capital is more expensive to use than retained earnings due to the interest charges associated with it which impacts profitability, Myers (2011). This leads to a conservative attitude of managers with respect to leverage considering leverage to be a risky and expensive proposition (Goddard et al., 2005).

Thirdly, agency costs, moderate the relationship between financial leverage and firm performance, for both small and large firm sizes (Jensen & Meckling, 1976). The empirical findings indicate that with agency costs as a moderating variable, leverage positively correlates with firm performance and market value. An increased asset utilisation ratio indicates efficient use of assets and reduced agency costs. The findings relate to previous research findings which propound that when there is additional debt in the capital structure, managers pay greater attention to the firm's performance, invest in profitable projects, and engage in value-maximising activities. This aligns with the principles of agency theory outlined in seminal works such as Berle and Means (1932), Jensen (1986), and Jensen and Meckling (1976). Furthermore, an increase in asset utilisation can indicate a firm's ability to monitor and control its assets. It indicates that managers are being held accountable for their decisions, reducing the possibility of agency-related issues (Abdullah et al. 2021; Grossman & Hart 1982; Hoang et al. 2019; Williams 1987).

Furthermore, the results show that with the increase in leverage, there is a reduction in agency costs. In agency theory, shareholders and managers may have conflicting goals and motivations, thus creating conflicts of interest and leading to agency costs shareholders (Jensen & Meckling, 1976). By incentivising managers to maximise firm performance, conflicts are mitigated, thus eliminating costly control mechanisms (Fama & French, 1998) and thereby reducing agency costs (Servaes & McConnell, 1990). These results support the theory that debt reduces agency-related conflicts by reducing the cash flow available for manager discretionary costs.

Overall, integrating agency cost considerations into capital structure decisions may result in more effective monitoring, better management control, and enhanced firm performance (Abdullah et al., 2021; Grossman & Hart 1982; Hoang et al., 2019; Jensen 1986; Jensen & Meckling 1976; Williams 1987). It is more likely that managers will choose a capital structure that balances the benefits of debt (such as tax shields) with the costs (such as financial distress and agency costs) (Servaes and McConnell, 1990). Investors may also use this finding when making investment decisions to consider how much impact asset utilisation has on corporate performance.

## SCOPE AND LIMITATIONS

This research was based on published data from firms from New Zealand, resulting in a small sample size. It is possible to conduct future studies using a larger sample size and a broader range of countries. There is a considerable difference between different industries regarding their capital structure decisions and agency costs, so expanding the research to

include other industries such as banking, telecommunications, and insurance would be of significant value. Furthermore, the research could be conducted using other measures of capital structure and agency costs, such as the operating expenses ratio and free cash flow ratio. The findings may not be relevant to emerging economies or other countries whose economic conditions, regulatory environment, or business practices differ from those of New Zealand.

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