

Influence of Ownership Structure on the Capital structure of manufacturing

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ABSTRACT

Aim: The main aim of the current research is to examine the impact of ownership structure on the capital structure of manufacturing firms in the United Kingdom.

Method: The study adopted a secondary quantitative methodology in which data for total assets (indicating firm size), debt-to-equity ratio (indicating capital structure), family ownership, ownership concentration, and institutional ownership of ten manufacturing organisations were selected for the period of 2018-2020 from publicly available sources. The data was statistically analysed through descriptive tests, correlation analysis, and fixed effect GLS test.

Findings: The study found that there is a significant influence of firm size on the capital structure of the companies. Similarly, family ownership and ownership concentration were also found to be positively and significantly impactful on capital structure. In contrast, no significant impact of institutional ownership on the capital structure was found.

Future implications: The study provides a basis for further research in changing macroenvironmental dimensions of the businesses, which are also impacting their capital structure.

Keywords: *Ownership structure, capital structure, Manufacturing firms, UK*

INTRODUCTION

In the contemporary business world, innovation in terms of financial management is one of the core strategies for achieving financial sustainability and growth for any organisation. Capital structure is the method through which a company determines the right balance of stock and debt financing to maximise profits while minimising exposure to risk (Musallam et al., 2020; Khaw, 2019). Due to its significance, the capital structure has been seen as an essential part of any company's approach to financing. According to Kumar et al. (2017), a firm's capital structure decision is crucial because it affects the company's ability to compete in a highly competitive market and because stakeholders in the company stand to benefit financially from the decision. There has been a lot of research into how capital structure affects a company's bottom line.

The literature demonstrates that an effective capital structure can increase a company's worth. However, in contexts with varying economic, legal, and institutional norms, the capital structure can take various shapes due to a number of influencing factors. One aspect that affects the manner in which a company is financed is its structure of ownership (Kumar et al., 2017). According to Muchtar et al. (2018), the establishment of debt to equity ratio generates financial risk, which is the additional risk beyond the business risk of the manufacturing firm. Even though capital leverage has a marginal influence on the cost of capital available to a firm, above a certain limit, its influence may become significant due to the firm's aggravating risk complexion. (Brahmana et al., 2019).

The influence of ownership structure on the capital structure of manufacturing has been the subject of a significant amount of research. The capital structure of a company has a crucial impact on its success of that company, and as such, it is often seen as one of the most significant considerations when formulating a company's funding (Utama et al., 2017). As stated by Brahmana et al. (2019), a firm's capital structure decision is crucial due to the necessity to maximise the wealth of business stakeholders and the fact that the decision has a substantial impact on the firm's ability to compete in a competitive atmosphere. There has been a lot of research into how capital structure affects a company's performance, such as in the studies of Nenu et al. (2018), Vu et al. (2020), and Hirdinis (2019). For a number of reasons, including the fact that the level of business debt has increased

dramatically over the past several years, necessitating an explanation of the influence of debt level on firm performance (Rajput et al., 2017). A manufacturing business can keep a combination of debt and equity. Consequently, the research problem is to determine if the advantages of ownership concentration outweigh the drawbacks. This is a problem that must be addressed due to the fact that various economic sources have different cost and benefit structures. Similar results occur with different forms of ownership (Ramli et al., 2019). Research by Varghese et al. (2020) explicated that small shareholders, who often have little influence on stock prices, are frequently ignored as rules are developed to best suit the narrow interests of the majority shareholders. Corporate governance becomes even more important in this situation. It guarantees that the company will fully recognise the interests of every shareholder. In order to balance the interests of all stakeholders, including shareholders, management, suppliers, financiers, consumers, the community, and the government, a good corporate governance framework must be in place. Additionally, Setiawan et al. (2016) explicated that there is still disagreement in the corporate finance literature as to whether the importance of ownership structure or board characteristics is greater, despite the fact that corporate governance mechanisms like ownership structure and board characteristics are crucial to the success of the organisation.

The manufacturing industry is considered the backbone of the UK economy due to its high export potential. The manufacturing industry is the preferred investment sector among investors. The successes of each individual industry segment are to be appreciated for this. According to Wang et al. (2018), the government has a goal of expanding the manufacturing industry sector, which is regarded as having significant potential. The impact of various types of ownership and structure on a manufacturing company's profitability was examined. This is due to the fact that many companies in the UK are controlled by families or controlling shareholder groups, which can have an impact on the managers' decisions regarding debt policy and, therefore, the manufacturing firm's success (Musallam, 2020). This study used that premise to look at how company ownership and debt policy affect the profitability of publicly traded UK manufacturing firms. The study will be able to make recommendations after collecting data for further analysis of manufacturing firms or organisations that have been listed on the stock exchange of the UK.

The primary aim of the research is to empirically analyse and explore the significance and influence of Ownership Structure on the Capital structure of manufacturing in the UK. The objectives of the study are:

- To determine the significance of capital structure in manufacturing
- To identify the factors of ownership structure on manufacturing in the UK
- To empirically analyse the influence of ownership structure on the capital structure of Manufacturing firms in the UK

LITERATURE REVIEW

A capital structure in manufacturing refers to the combination of debt and equity used to finance the company's operations and growth (Bajagai et al., 2019). Two primary types of corporate financing are debt financing and equity financing. To reduce their capital cost, most manufacturing companies use a combination of a financing structure that combines debt and equity to pay for their fixed assets (Lyngstadaas et al., 2020). In this respect, leverage measures how much debt a company has in relation to its total assets (Munawar et al., 2020). The field of capital structure now includes discussions of capital structure decision-making (Saona et al., 2018). A company's capital structure refers to the various ways in which a company raises money to fund its day-to-day activities and future expansion (Jiang, 2021). The cost of capital is reduced through the use of a combination of firm and equity investments (Haron, 2018). The financial structure decision of an organisation is related to capital structure (Jiang et al., 2021). An organisation's potential to develop and satisfy its stakeholders is directly tied to the capital structure decisions it makes (Bajagai, 2019). The establishment of such a system is crucial for the success of any enterprise seeking expansion or increased manufacturing market value.

Businesses in the manufacturing sector that expand tend to be more successful globally. The increased performance of these manufacturers is a direct result of their willingness to engage in high-risk investment strategies (Grewatsch et al., 2017). Many businesses choose a growth plan to improve their long-term success. In today's fast-paced and highly competitive business world, the ability to make sound decisions that affect the company's long-term performance is essential.

H01: There is no impact of firm size on the capital structure of a business firm

H1: There is a significant impact of firm size on the capital structure of a business firm

A general characteristic of the UK's ownership structure is the dominance of state shares, the concentration of ownership, and the low percentage of management ownership (Utama et al., 2017). As a result of their distinctive ownership structures, UK-listed manufacturing enterprises' corporate governance practises differ from those of other countries, including Germany, China,

and others (Khaw, 2019). The central government, local government bureaus, and local state asset management corporations all hold shares in state-owned enterprises (Brahmana et al., 2019).

The family ownership structure is one of the oldest and simplest organisational ownership setups in existence, which is found in several old businesses. For instance, the majority of listed companies in developing countries are family-controlled. Research by Zraiq et al. (2019) demonstrated that since more than 46% of businesses are owned by families, it is customary for family members to hold significant influence over how the company is run. This may be accomplished by holding the role of chairman, serving on the board, or having authority over senior management positions. Conflicts of interest between the dominant family and minority stakeholders may arise as a result. Compared to non-family executives, family owners will have more of an impact on the business. As per Zraiq et al. (2019), this is done to protect the family's members, especially those with more senior stock in the company, and to ensure the family's long-term and sustainable survival in the business.

The study of D'Este and Carabelli (2022) shows a link between risk experienced by sampled enterprises and active family ownership. This study also discovers a negative correlation between organisations' willingness to take risks and the number of internal directors. Overall, the findings support the theoretical justifications for engaging professional managers to lead family-owned businesses and demonstrate the effect of family managers on firms' risk-taking decisions. Meanwhile, data from Kotler et al. (2019) on the UK reveals that 111 family businesses (55.2%), including 20 out of 22 FGEs, are held by families with UK nationality. The owners of the remaining 90 family businesses are international families from 27 other nations. 34 of these businesses are held by families from European Union member nations (16.9%), while 23 are owned by US-national families (11.4%).

A high concentration of ownership is the most distinguishing attribute of UK-listed manufacturing firms (Wang et al., 2018). State-owned shares, which make up a disproportionately large portion of government capital, are untradeable in order to preserve the government's dominant position in the manufacturing markets. The shares are widely dispersed, and most publicly traded manufacturing companies are nevertheless dominated by a small number of shareholders (Rajput,

2017). The company is completely controlled by the first major shareholder. Other small shareholders hold fewer shares and lack the ability to influence the firm's financial decisions.

H02: There is no impact of family ownership on the capital structure of a business firm

H2: There is a significant impact of family ownership on the capital structure of a business firm

The question of the type of ownership appropriate for a firm is dependent on the extent of management and non-management ownership of shares of the firm. According to Santarelli (2018), institutional ownership is defined as the largest external non-management shareholders, including individual investors, institutional investors, and the founding family of the company. Distributed shareholders own a relatively tiny fraction of the company's stock and therefore are unlikely to have any influence over strategic or operational choices. Institutions such as banks, manufacturing firms, insurance firms, etc., are examples of institutional investors. By diversifying their holdings, institutions could help mitigate the company's exposure to non-systemic risk (Xinyuan, 2017). Institutional investors are concerned with the company's profitability and have well-diversified portfolios. For this reason, they have a vested interest in keeping an eye on management and weighing in on financial choices at the company. A recent study by Paramanatham et al. (2018) found that institutional owners and investors favour a high debt level as a means of curbing management opportunities. Institutional investors can play a key role in reducing the use of debt as a disciplining function (Drobet et al., 2018). Companies in the manufacturing sector with high levels of concentrated institutional ownership should use fewer current liabilities.

According to Kumar et al. (2017), firm-size liquidity is the capacity of a business to fulfil its legal liabilities. The internal company must take into account the degree of liquidity and the elements that affect it as a basis for developing policies for the development of a business entity from year to year. One way to assess firm size viability is to look at its liquidity and see if it has the cash on hand to run its operations efficiently. Determining a company's level of liquidity enables one to determine whether or not the business requires sufficient funds to operate efficiently. According to the findings of Zamzamin et al. (2021), liquidity has a constructive and sizable impact on profits. In addition, there is no relationship between liquidity and the value of a company. Whether a firm

size is large or small doesn't matter to its performance, as measured by ROA or MBV, as stated by Khaw (2019). Given that the natural logarithm of total assets is not directly proportional to the value of the assets, large firm size is no guarantee of high performance. Gross domestic product (GDP) had a positive and significant impact on firms' financial and market performance (Ramli et al. 2019). Profits may improve as a result of an expanding economy. With more disposable income available to consumers, businesses are able to increase production and boost their bottom lines as a result of higher profits. In addition, a flourishing economy can boost the efficiency of markets and the value of businesses. According to Khaw (2019), one of the macroeconomic elements that affect a company's value is economic growth. Several analyses have confirmed a correlation between company size and capitalisation.

H3: There is a significant impact of ownership concentration on the capital structure of a business firm

H4: There is a significant impact of institutional ownership on the capital structure of a business firm

Conceptual Model

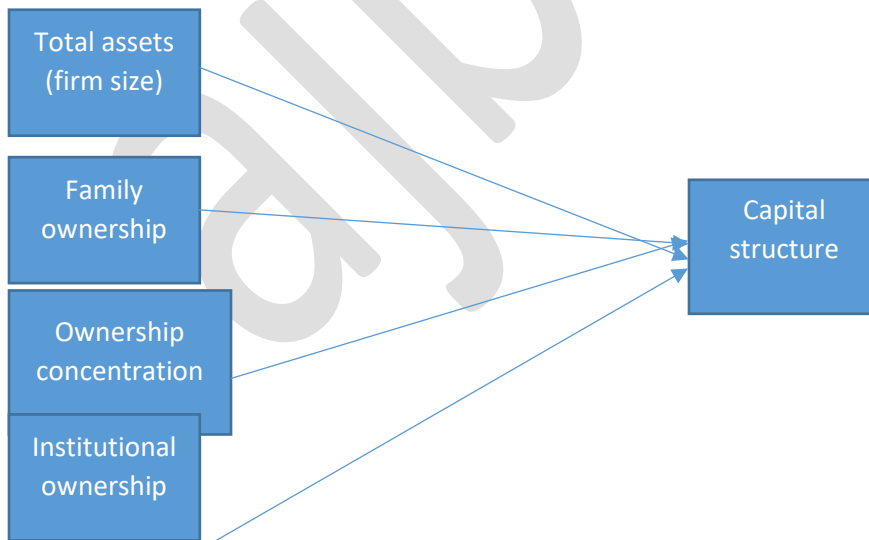


Figure 1. Conceptual framework for empirical analysis (Author, 2022)

METHODOLOGY

Research methodology pertains to the underlying philosophy of research which also guides the approaches of data collection and analysis. There are two types of research philosophy: positivism and interpretivism (Saunders et al., 2015). As the present study is contextual to factual knowledge, the researcher has prioritised positivism in the current study and has assessed the influence of ownership structure on the capital structure of manufacturing in the United Kingdom. The further justification for adopting positivism is that it increases the researcher's ability to collect relevant data while taking personal perspectives into account (Babones, 2016). Since the current research revolves around the influences of ownership structure on the size of the firm, it is imperative that the study is based on precise empirical pillars. Additionally, it promotes the use of objective measures and fundamental factors, which makes it easier for the researcher to eliminate preconceptions in the data-gathering process.

The methods and presumptions used to gather, analyse and interpret data are collectively known as the research methodology (Woiceshyn and Daellenbach, 2018). However, there are two primary methodologies that are frequently used by researchers: the deductive and inductive approaches. The purpose of this study is to investigate the impact of ownership structure on the capital structure of UK manufacturing. Therefore, a deductive technique was used in this study because that is the best choice for the subject and purpose of the analysis. The justification for adopting this strategy is that it supports the researcher in narrowing down the empirical approach for ownership structures based on existing theoretical foundations of corporate governance. According to Azungah (2018), the deductive method is most appropriate for quantitative analyses, and it aids the researcher in formulating new hypotheses based on the current systematic review.

Based on the nature of the current research, the researcher has relied on the secondary quantitative research method for the design of the study. Quantitative research, influenced by positivism, allows one to evaluate hypotheses about the impact of capital structure on the capital structure of UK manufacturing with the use of statistical methods and techniques (Tobi and Kampen, 2018).

It also helps the researcher get rid of systematic and personal biases, which makes the research more reliable.

The author has used a secondary quantitative technique, in which the data was extracted for ten major manufacturing firms either based in the UK or working from the UK. Secondary research is being used because it is the most effective method for gathering the most recent and relevant data necessary through companies' financial reports for analysing the influence of ownership structure on the capital structure of manufacturing in the United Kingdom and, more specifically, in the manufacturing industries.

RESULTS

Descriptive statistics

Descriptive statistics are used to analyse the patterns in statistical data regarding trends of the variables.

Table 1 - Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Debt to equity ratio	30	0.974067	0.972869	0.002	5.36
Total assets	30	8.25E+07	8.03E+07	2332200	2.95E+08
Family ownership	30	0.1	0.305129	0	1
Ownership concentration	30	0.4	0.498273	0	1
Institutional ownership	30	0.8	0.406838	0	1

As shown in Table 1 above, through a total number of observations of 30 for the 10 organisations, the arithmetical mean for the debt-to-equity ratio has been found to be around 0.974. In contrast, the standard deviation is 0.972. Such close values of mean and standard deviation indicate that most data are near the normal curve, with very few outliers in the dataset. Conversely, with

standard deviation values of family ownership, ownership concentration, and institutional ownership, it can be asserted that a number of outliers must be present in the dataset. This is attributable to the significant differences among the in-ownership aspects of the studied organisations.

Correlation analysis

A correlation analysis depicted in table 2 below indicates the statistical association among the variables.

Table 2 - Correlation Analysis

	Debt to equity ratio	Total assets	Family ownership	Ownership concentration	Institutional ownership
Debt to equity ratio	1				
Total assets	0.0559*	1		0.05	
Family ownership	-0.2649	-0.3352	1	0.1572	0.0701
Ownership concentration	-0.3085	0.2223	0.4082*	1	0.0972
Institutional ownership	0.2378	0.0251	-0.6667*	0.1021	1
	0.3032	0.3785*	0.0001	0.5915	

Through analysis of their Pearson coefficients, it can be observed that total assets are significantly correlated with the debt-to-equity ratio for all ten organisations of the study. Meanwhile, ownership concentration was found to be strongly correlated with family ownership. This means that in most cases where ownership concentration is observed, a family ownership structure is found. This also means that family ownership structures usually tend to concentrate the ownership value of the organisations, which also maintains their influence on the decision-making processes,

despite the organisation being publicly listed. In contrast, the correlation of family ownership with the debt-to-equity ratio was found to be negative and weak. It indicates that, in most cases, higher family ownership is associated with a low debt-to-equity ratio. In general, this is a good sign for any business because a low debt-to-equity ratio means that most of the invested sum in the company comes from non-debt sources, which do not turn in financial liabilities quickly. In turn, it means that family ownership structures could be better for companies suffering from high debt-to-equity ratios, as the owner family or group may be able to arrange investable funds for the company without taking the debt liability. Finally, it was found that institutional ownership is moderately and negatively correlated with family ownership, with a Pearson coefficient of -0.6667. It indicates that a greater extent of family ownership lowers the extent of institutional ownership. In context, it could mean that pathways for institutional ownership of businesses are generally hindered by the presence of strong family ownership.

Hausman Test

The following table 3 depicts the results of the Hausman statistical test conducted on the variables. Additionally, the Hausman test has been used to determine if random or fixed effect models exist. Likely, At-Sahalia and Xiu (2019) recommended using the Prob chi-square value to determine if a random or fixed impact exists in their investigation. The random effect is favoured when the Prob chi-square value is found to be larger than the threshold set at 0.05, but the fixed effect is preferred when the null hypothesis is rejected, and the alternative hypothesis is accepted (At-Sahalia & Xiu, 2019).

Table 3 - Hausman Test

	(b)	(B)	(b-B)	$\sqrt{\text{diag}(V_b - V_B)}$
	fe	re	Difference	S.E.
Total assets	-6.39E-08	-6.39E-08	0	0
Family ownership	-	-	-	-

Ownership concentration	-	-	-	-
Institutional ownership	-	-	-	-

After applying the aforementioned cut-off, it can be seen that $\text{Prob} > \chi^2$ is found to be $0.000 < 0.05$, indicating that the null hypothesis is accepted and a fixed effect model will be used, as indicated in the table below.

Fixed Effect GLS Test

The Fixed effect GLS model in the present study has been tested through this equation:

$$SP_{i,t} = \beta_0 i_{i,t} + \beta_1 \text{Size}_{i,t} + \beta_2 \text{Leverage}_{i,t} + \beta_3 \text{CSR}_{i,t} + \epsilon_{i,t}$$

Table 4 - GLS Fixed Effect Model

Debt to equity ratio	Coef.	Std. Err.	t	P> t	[95% Conf . Interval]
Total assets	6.398744	1.93E-08	-3.3	0.004	-1.04E-07 -2.34E-08
Family ownership	0.734584	0.59979		0.002	
Ownership concentration	0.145969	0.57829	1.22	0.034	1.8969 7.465
institutional ownership	0.114567	0.78926	0.15	0.899	2.0876 5.589
_cons	6.243362	1.598817	3.9	0.001	2.8969 9.584
Number of obs = 30				R-sq:	min = 3
Number of groups = 10				within =	avg = 3.0
F (1,19) = 10.91				0.3647	between =
Prob > F = 0.0037				0.15	max = 3
				overall =	
				0.311	

Significant at 1 % ***, 5%

**, 10% *

From table 4 above, it can be observed that total assets have a coefficient of 6.398744 for their association with the debt-to-equity ratio. Meanwhile, its P-value is also $0.004 < 0.05$, indicating that Total assets positively and significantly impact the debt-to-equity ratio of the company. In the context of the current study, it means that capital structure is significantly and positively influenced by firm size. In contrast, family ownership is found to have a coefficient of only 0.734584 with a debt-to-equity ratio. Although the association over a period of selected time is weak, the strong P-value shows that family ownership has a positive and significant impact on the debt-to-equity ratio of the company. Ownership concentration also exhibited a similar kind of association with the debt-to-equity ratio, in which the high P-value indicated a high significance of the impact on the debt-to-equity ratio of the business. However, institutional ownership was found to have a low coefficient and low P-value, indicating that institutional ownership does not significantly impact the debt-to-equity ratio of the business. In context, it asserts that institutional ownership does not significantly impact the capital structure of a business company, nor is it impacted by the changing capital structure.

DISCUSSION

The current study intended to examine the influence of the ownership structure of manufacturing firms on their capital structure. In this respect, the researcher utilised the variables of family ownership, ownership concentration, and institutional ownership as the constant variables, whose values were determined by examining the management reports of the ten selected firms. The researcher denoted capital structure through the debt-equity ratio of the companies, whereas capital structure was represented through firm size since it is an easily available variable for most firms. While examining the influence of capital structure, the study found that the debt-to-equity ratio has a considerable influence on firm size. In light of the literature, it can be asserted that debt to equity ratio is a variable which holds as much importance in determining the firm value as other

leading ratios. For instance, Return on Assets (ROA), Debt to Asset Ratio (DAR), Current Ratio (CR), Firm Size, and Dividend Pay-out Ratio are a few variables that investors consider when determining a company's capacity to raise firm value (DPR). The level of the company's profitability is a key metric to use in determining the worth of the business. ROA is referred to as profitability. An indicator of how much assets contribute to generating net income is the ROA ratio. Mutmainah (2015) asserts that a company's size may be determined by looking at its total assets, revenue, or capital. Enterprises with large total assets have matured, are thought to have promising futures during a period of relative stability, and have been able to turn a profit as opposed to companies with smaller total assets.

Debt to equity ratio also has a close bearing on the kind of ownership structure that firms are able to enact in a given external market environment. Due to this, a finance manager is concerned with choosing the best financing mix (debts and equity) for the firm since businesses want to adopt a financing mix that minimises expenses and maximises their financial performance. Businesses can adopt varying levels of the debt-to-equity ratio, according to Dare and Sola (2010). Examples include 100% equity: 0% debt, 100% debt: 100% equity, and X% equity: Y% debt. The use of debt financing communicates management's confidence in the company's future prospects and its ability to repay debt in the future. Nowadays, a company's size is crucial to its success due to the phenomenon of economies of scale. Institutions should reduce the company's exposure to non-systemic risk by diversifying their assets. This is also demonstrated by the current study, which showed that a similar relationship between ownership concentration and the debt-to-equity ratio was also seen, with a high P-value indicating a significant influence on the company's debt-to-equity ratio. Institutional ownership was discovered to have a low coefficient and low P-value, indicating that it has little effect on the company's debt-to-equity ratio. According to the context, neither institutional ownership nor a changing capital structure has a substantial influence on a company's capital structure.

The profitability of the firm is a concern for institutional investors, whose portfolios are well-diversified. They, therefore, have a stake in monitoring management and contributing to financial decisions made by the organisation. In a recent study by Paramanatham et al. (2018), it was discovered that institutional owners and investors prefer a high debt level as a way to limit

management possibilities. Institutional investors can be useful in decreasing the use of debt as a kind of discipline (Drobet et al., 2018). Less current liabilities should be used by manufacturing companies with highly concentrated institutional ownership. In the current study, the researcher found that for all ten of the study's organisations, it can be seen through an examination of their Pearson coefficients that total assets and the debt-to-equity ratio are substantially associated. In the meanwhile, it was discovered that family ownership and ownership concentration had a substantial correlation. This indicates that a family ownership structure is seen in the majority of situations when ownership concentration is detected. This also implies that despite the organisation being publicly listed, family ownership structures typically tend to concentrate the ownership value of the organisations, maintaining their control over the decision-making processes. However, there was a modest and negative link between family ownership and the debt-to-equity ratio.

Table 5. Hypothesis status

S. No.	Hypothesis tested	Status
1	There is a significant impact of firm size on the capital structure of a business firm.	Accepted
2	There is a significant impact of family ownership on the capital structure of a business firm.	Accepted
3	There is a significant impact of ownership concentration on the capital structure of a business firm.	Accepted
4	There is a significant impact of institutional ownership on the capital structure of a business firm.	Rejected

CONCLUSION AND FUTURE IMPLICATIONS

The current study investigated the impact of ownership on the capital structure of business organisations, for which the study focused on analysing ten distinct Britain-based organisations. Through analysis of their publicly available financial data for the period from 2018 to 2020, the study found that for all 10 of the study's organisations, total assets and debt-to-equity ratios are substantially connected. In the meanwhile, it was discovered that family ownership and ownership concentration had a substantial correlation. However, there was a modest and negative link between family ownership and the debt-to-equity ratio. It shows that a low debt-to-equity ratio is typically linked to increased family ownership. A similar relationship between ownership concentration and the debt-to-equity ratio was also seen, with a high P-value indicating a significant influence on the company's debt-to-equity ratio. However, it claims that neither institutional ownership nor a changing capital structure has a substantial influence on a company's capital structure.

Since the current study is conducted amidst a growing global financial crisis, it holds significant value in terms of depicting the deep relationship between an organisation's capital structure and its ability to increase its capital size. The study will facilitate future research in this direction which can be conducted for a much broader organisational base or for another region.

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