



This is a repository copy of *Does capital structure matter? Evidence from family-owned firms in Jordan*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/205411/>

Version: Accepted Version

---

**Article:**

Al-Haddad, L.M., Saidat, Z. [orcid.org/0000-0003-4866-4765](https://orcid.org/0000-0003-4866-4765), Seaman, C. [orcid.org/0000-0003-4818-5051](https://orcid.org/0000-0003-4818-5051) et al. (1 more author) (2023) Does capital structure matter? Evidence from family-owned firms in Jordan. *Journal of Family Business Management*. ISSN 2043-6238

<https://doi.org/10.1108/jfbm-09-2022-0115>

---

This author accepted manuscript is deposited under a Creative Commons Attribution NonCommercial 4.0 International (<http://creativecommons.org/licenses/by-nc/4.0/>) licence. This means that anyone may distribute, adapt, and build upon the work for non-commercial purposes, subject to full attribution. If you wish to use this manuscript for commercial purposes, please contact [permissions@emerald.com](mailto:permissions@emerald.com)

**Reuse**

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial (CC BY-NC) licence. This licence allows you to remix, tweak, and build upon this work non-commercially, and any new works must also acknowledge the authors and be non-commercial. You don't have to license any derivative works on the same terms. More information and the full terms of the licence here: <https://creativecommons.org/licenses/>

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<https://eprints.whiterose.ac.uk/>

# **Does Capital Structure Matter? Evidence from Family-Owned Firms in Jordan**

**Lara M. Al-Haddad**

Faculty of Economics and Administrative Sciences, Yarmouk University,  
Irbid, Jordan

**Zaid Saidat**

Department of Finance and Banking, Applied Science Private University,  
Amman, Jordan

**Claire Seaman**

Department of Business, Enterprise and Management, Queen Margaret University,  
Musselburgh, UK, and

**Ali Meftah Gerged**

Department of Accounting and Finance, Faculty of Business and Law,  
De Montfort University, Leicester, UK and  
Faculty of Economics, Misurata University, Misrata, Libya

# Does Capital Structure Matter? Evidence from Family-Owned Firms in Jordan

## ABSTRACT

**Purpose:** This study examines the potential impact of capital structure on the financial performance of family-owned firms in Jordan.

**Design/methodology/approach:** Using panel data of 107 listed companies from 2019 to 2021, we use a multivariate regression model to empirically examine the role that family firms' capital structure can play in engendering financial performance in the short and long terms.

**Findings:** Our evidence indicates that family businesses rely on equity as their primary source of funding. This approach has been proven to be detrimental to their financial performance, as evidenced by the negative impact of capital structure on family firms' financial performance in the current study.

**Originality:** Capital structure-related decisions are essential to a firm's performance. Thus, there have been numerous empirical studies examining the relationship between capital structure and corporate performance in various settings worldwide. However, the findings of these studies are inconclusive. Also, there are relatively few empirical studies investigating the association between capital structure and the performance of family firms in emerging countries, particularly Jordan. This study, therefore, addresses this empirical gap in extant literature.

**Keywords:** Capital Structure; Family Firms; Firm Performance; Jordan; Non-Family Firms.

**JEL Classification:** G1; G30; G32.

## **1. INTRODUCTION**

Shareholder wealth is intricately tied to corporate performance. Enhancing corporate performance, both in the short and long term, is a primary concern for shareholders, investors, and the overall economy. Among the numerous factors influencing corporate profitability, capital structure stands out as a crucial determinant (Gill et al., 2009; Hamid et al., 2015). The composition of a company's capital structure, encompassing the mix of debt and equity utilized for financing operations, plays a pivotal role in determining its competitive performance. Consequently, corporate managers and fund providers must collaboratively determine the most suitable financing strategy. Failure to adopt an appropriate combination of debt and equity can adversely impact the profitability and sustainability of a firm (Ting and Lean, 2011; Shubita and Alsawalhah, 2012). Thus, careful consideration of the capital structure decision becomes imperative for managers, albeit a challenging endeavour given the varying leverage practices across firms.

Contrary to previous research, this study focuses on revealing the associations between the capital structure of family firms and their financial performance within an emerging economy (Alharbi et al., 2022). Family-owned enterprises possess unique characteristics that yield diverse findings in terms of risk aversion and capital structure preferences (Hansen & Block, 2021). For instance, family businesses often exhibit an excessive aversion to risk (Shleifer and Vishny, 1986) and implement mechanisms to mitigate agency costs between owners and managers (Villalonga and Amit, 2006). As a result, they tend to employ less debt, aiming to minimize the risk of bankruptcy and the need for interest payments as a form of management discipline. However, due to

their long-term vision for survival, family firms often maintain high levels of leverage to retain control over their businesses (Casson, 1999; Anderson and Reeb, 2003).

This study focuses on capital structure in Jordan for several reasons. First, we selected Jordan due to the unique characteristics of its business landscape, where family-oriented enterprises account for over 90% of the market and contribute approximately 70% to the nation's GDP (Saidat et al., 2022). These family-run businesses, which are primarily small and medium-sized enterprises, also play a substantial role in employment. However, despite their prevalence, there is a lack of research on the capital structure and leverage practices of Jordanian family businesses.

Second, the concentration of ownership and prominent family influence among companies listed on the Amman Stock Market (ASE) in Jordan is notable (Alfandi & Marco, 2022). This makes the equity market the main source of financing for family businesses in Jordan. Third, one distinctive aspect of this study is the banking system in Jordan, which sets it apart from Western nations. Jordan's banking system comprises both conventional commercial banks and Islamic banks. These two types of banks have differing credit policies that can impact corporate performance and default risk (Ratten et al., 2017). Since bond markets and Mutual Funds markets in Jordan are underdeveloped, both commercial and Islamic banking systems serve as vital sources of loans for Jordanian companies (Zeitun & Tian, 2014). Consequently, exploring the impact of capital structure on firm performance from the perspective of this dual banking system offers a fresh perspective.

Lastly, it is essential to note that both Islamic and non-Islamic banks in Jordan have implemented a credit policy favouring short-term loans over long-term loans (Saidat et

al., 2019). As a result, banks focus their lending activities on the services sector rather than the industrial sectors, which typically require long-term financing. This credit policy adopted by banks can potentially affect the capital structure of borrowing companies, leading them to choose suboptimal capital structures. Consequently, these companies, especially smaller firms that are more vulnerable to insolvency may face short-term vulnerability when confronted with an increase in interest rates compared to their larger counterparts.

Our statistical analysis demonstrates a negative relationship between capital structure and the financial performance of family-owned firms in Jordan. Notably, our findings indicate that Jordanian family businesses excessively rely on equity as their primary source of financing, which restricts their growth potential and operational expansion. Theoretical arguments support the idea that family firms' aversion to relinquishing control exacerbates their resistance to using debt financing, ultimately undermining their value. Consequently, our research suggests that family firms should adopt a more balanced financing approach, incorporating both equity and debt, to enhance their financial performance.

This study contributes to the existing literature by providing empirical evidence of the role played by a balanced capital structure in improving the financial performance of family firms in emerging economies, with a specific focus on Jordan. Additionally, we discuss the optimal level of leverage that can maximize firm value for family businesses compared to their non-family counterparts in Jordan.

The subsequent sections of this paper are organized as follows: Section 2 provides a comprehensive review of the relevant literature, discussing the methodologies employed and key findings. Section 3 outlines the data collection and methodological

framework, detailing the variables utilized in the analysis. Section 4 presents and analyzes the empirical findings derived from our study. Finally, Section 5 summarizes the main conclusions and highlights directions for future research.

## **2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

The issue of capital structure is a highly debated topic in corporate finance. The lack of a unified theory on whether to use debt or equity contributes to the controversy (Myers, 2001). The original capital structure theory developed by Modigliani and Miller (1958), which served as a basis for many studies, concluded that in a perfect market without taxes, the distribution of debt and equity is irrelevant to a company's value. However, Modigliani and Miller (1963) later found that under imperfect market conditions, the presence of tax advantages can benefit firms that utilize more debt in their capital structure, thus increasing their value. They also suggested a positive relationship between performance and leverage. In contrast, Kraus and Litzenberger (1973) argued that there is an optimal level of leverage beyond which increasing debt would decrease the firm's value (Vargas, 2014). Additionally, De Vries (1993) highlighted the longer-term perspective of family businesses, suggesting that they may be more cautious about relying on excessive debt due to the potential loss of control and power (Ntoug et al., 2017; Mishra and McConaughy, 1999).

Another theory, the pecking order theory proposed by Myers and Majluf (1984), rejects the idea of an optimal capital structure and suggests that firms prefer internal financing over external financing. However, when internal resources are exhausted, external finance becomes necessary. In the case of family businesses, owners tend to favour internal funding to maintain control within the family and avoid external debt and equity financing (Jorissen et al., 2001). Myers and Majluf (1984) also argued that information asymmetry between managers and investors creates agency problems,

as managers possess more information and act in the interest of existing shareholders.

Addressing the agency problem, Jensen and Meckling (1976) developed the agency theory, stating that a firm's ownership structure affects its cash flow. They suggested that an appropriate balance of debt and equity can help reduce overall agency costs. However, family businesses with concentrated ownership structures are less susceptible to agency problems (Saidat et al., 2019). According to Chen and Jaggi (2001), combining the interests of major shareholders can reduce agency costs and improve performance. Family owners, who have the motivation and power to take control of administrative positions, can minimize free-rider agency costs and increase profits (Anderson and Reeb, 2003).

In the context of Jordan, firms listed on the Amman Stock Market (ASE) exhibit high ownership concentration and a strong family presence, aligning with the agency theory (Alfandi & Marco, 2022). The higher level of insider ownership, such as family shareholders, can alleviate agency issues by aligning the interests of insiders and owners. This alignment may provide strong incentives and capabilities for insiders to improve performance and share prices, as they share the benefits and losses from the company's performance (Dana, 2000). Additionally, family businesses in Jordan possess in-depth knowledge of their operations, leading to increased profitability and more effective distribution of financial resources.

Previous studies examining the relationship between capital structure and the performance of family firms have produced inconsistent findings (Chang et al., 2023). Some studies, like Amran and Che-Ahmad (2011) and Umar et al. (2012), found a positive relationship between capital structure and performance, suggesting that debt



financing can enhance family businesses' performance. Conversely, Salim and Yadav (2012) and Gill et al. (2009) discovered a negative relationship between capital structure and profitability, indicating that less profitable firms tend to rely more on debt. In the context of Jordan, Shubita and Alsawalhah (2012), Ramadan and Ramadan (2015), and Al-Taani (2013) reported negative or insignificant associations between debt and profitability. However, no study has explored the relationship between capital structure and the performance of family firms, specifically in Jordan. Given the importance of family businesses in the Jordanian economy, this study aims to contribute to the existing literature in emerging economies by investigating the composition of capital structure in Jordanian family firms and how it influences their financial performance compared to non-family firms.

Based on the multi-dimensional nature of capital structure, this study formulates hypotheses on the relationship between capital structure and performance in family firms, considering various proxies of capital structure.

*H<sub>1</sub>: There is a significant relationship between short-term debt to total assets and performance.*

*H<sub>2</sub>: There is a significant relationship between long-term debt to total assets and performance.*

*H<sub>3</sub>: There is a significant relationship between total debt to total assets and performance.*

### **3. DATA AND METHODOLOGY**

#### **3.1 Sample and Data Collection**

A sample of Jordanian family firms listed in the ASE between 2019 and 2021 is employed in the current study with the same standards as earlier studies, where companies with incomplete annual reports, data that is inadequate, or financial institutions that are subject to different regulations are excluded from the study. Firms are referred to as family-owned firms if two or more family members are listed as the

company's major shareholders, and together, they possess at least 10% of the equity. By employing this selection procedure, the sample was reduced from 229 to 107 during the period 2019-2021. The data for classifying the family firms was manually gathered from firms' annual reports, while the financial data was collected from firms' financial statements at the Securities Depository Centre (SDC).

### ***3.2 Corporate Performance Measurement***

Corporate performance measures are used by shareholders as an indicator of monitoring and control that meets the company's goals (Eccles, 2012). According to Omondi & Muturi (2013), a company's performance is a function of the organisation's ability to obtain and manage its resources in order to develop a competitive advantage (Gallegos Mardones & Ruiz Cuneo, 2020). Corporate performance can be divided into two main categories, namely; accounting-based measures, for example, ROA (Haniffa and Hudaib, 2006; Abdallah and Ismail, 2017; Saidat et al. 2019: 2020; Marashdeh et al. 2021) and market-based measures, for example, Tobin's Q (Christensen et al., 2015; Saidat et al. 2020; Alhaddad et al. 2022).

The ROA, which is calculated by dividing net income by total assets, and Tobin's Q ratio of market capitalization, as well as the total debt to total assets measurement, were the two financial performance measurements used in this study. This is in line with most of the literature (see, e.g., Chazi et al., 2018; Alhaddad et al., 2022).

### ***3.3 Capital Structure Measurement***

The capital structure can be defined as a mixture of a company's debt and equity capital that is used to finance the company's operations. Hence, the decision on the financing method is vital as it directly affects the return of the company. Different methods are employed in empirical studies to measure capital structure. For example,

Hamid et al. (2015) compute the debt ratio by dividing total debt by total assets to represent the capital structure. While Anderson and Reeb (2004) calculate the debt ratio using an alternative formula by dividing total liabilities by total assets. In order to get an acceptable result, research typically uses several measurements as the proxy for the capital structure, such as a combination of total debt to total assets, short-term debt to total assets and long-term debt to total assets (Hamid et al., 2015; Nguyen & Nguyen, 2020; Ngatno, 2021; Boshnak, 2022). These components were employed in the current study to investigate the capital structure and its effects on performance.

### ***3.4 Control Variables***

Hamid (2015) identified very useful firm-specific characteristics when assessing corporate performance, firm size and sales growth. Firm size is the natural logarithm of total sales and is expected to be positively associated with family firm performance because of access will help to enhance the opportunity to expand their firm empire. At the same time, sales growth is one of the firm-specific factors that have significant and consistent with capital structure theories (Nadaraja et al., 2011). In this study, sales growth is measured by the current year's sales minus the previous year's sales divided by the previous year's sales and found that profitability increases with sales growth and is expected to be positively associated with corporate performance.

**Insert Table 1 About Here**

### ***3.5 Research models***

We employ secondary data techniques in our analysis to obtain the most comprehensive understanding of the unique characteristics of capital structure in family businesses in Jordan (Dana & Dana, 2005). The current study uses a

multivariate pooled OLS model to empirically explore any potential associations between family-owned enterprise performance and capital structure. The following models have been adopted for analysis:

$$ROA_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 FSIZE_{it} + \beta_3 SGROWTH_{it} + \varepsilon_{it} \dots\dots\dots (1)$$

$$ROA_{it} = \alpha_0 + \alpha_1 STD_{it} + \alpha_2 FSIZE_{it} + \alpha_3 SGROWTH_{it} + \varepsilon_{it} \dots\dots\dots (2)$$

$$ROA_{it} = \lambda_0 + \lambda_1 TD_{it} + \lambda_2 FSIZE_{it} + \lambda_3 SGROWTH_{it} + \varepsilon_{it} \dots\dots\dots (3)$$

And,

$$TOBIN'S Q_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 FSIZE_{it} + \beta_3 SGROWTH_{it} + \varepsilon_{it} \dots\dots\dots (4)$$

$$TOBIN'S Q_{it} = \alpha_0 + \alpha_1 STD_{it} + \alpha_2 FSIZE_{it} + \alpha_3 SGROWTH_{it} + \varepsilon_{it} \dots\dots\dots (5)$$

$$TOBIN'S Q_{it} = \lambda_0 + \lambda_1 TD_{it} + \lambda_2 FSIZE_{it} + \lambda_3 SGROWTH_{it} + \varepsilon_{it} \dots\dots\dots (6)$$

Where;

$\beta_0, \alpha_0, \lambda_0$  is the equation's intercept.

$\beta, \alpha, \lambda$  is a coefficient of regression.

ROA is the return on asset, net income over the total asset.

Tobin's Q is the total market value of the firm over the total asset value of the firm.

STD is short-term debt over total assets.

LTD is long-term debt over total assets.

TD is total debt over total assets.

FSIZE is a natural logarithm of a firm's total assets.

SGROWTH is the current year's revenues minus the previous year's revenues divided by the previous year's revenues.

$i$  is firm,  $t$  is period, 2019, 2020 and 2021.

E is the error term.

#### 4. FINDINGS AND DISCUSSION

This section demonstrates the analysis of data using multivariate regression along with descriptive statistics and correlation analysis. Table 2 provides the descriptive statistics for the dependent, independent and control variables used to test our

hypothesis. In the first step, we analyse the composition of the capital structure of family businesses in Jordan. Surprisingly, though, according to the data, Jordanian family businesses heavily rely on shares to fund their financial requirements, with a TD ratio of about 37%, meaning that they finance their assets with almost 63% of shares. This unbalanced financing approach poses questions about those firms' financial performance. Such a question we seek to answer in the second stage of our analysis.

**Insert Table 2 About Here**

### ***Correlation Coefficient Matrices***

Table 3 below presents the correlation between the capital structure variables and financial performance variables by using the Pearson correlation test. No multicollinearity is generally seen between them. Only a small number of variables indicate higher correlations, but still, they do not correlate more than 0.8. Using the analysis above, Table 3 reveals that there is a positive correlation between capital structure variables and Tobin's Q for all family-owned companies at the 10% significance level. In contrast, these variables are negatively correlated with performance as measured by ROA.

**Insert Table 3 About Here**

### ***4.1 Regression results and discussion***

The following tables summarise the findings of the impact of capital structure proxies (namely, short-term debt, long-term debt, total debt, and control variables) on the financial performance of family-owned companies as determined by the return on assets (ROA) and Tobin's Q. The findings are jointly significant at levels of significance of 1%, 5% and 10%.

**Insert Table 4 About Here**

**Insert Table 5 About Here**

The first hypothesis that there is a relationship between LTD and performance is supported by Tables 4 and 5, which demonstrate that in family firms, LTD has a considerable impact on performance as assessed by ROA. At the same time, LTD has a positive and insignificant impact on a firm's performance measure (Tobin's Q). A negative relationship, on the other hand, means that performance declines as long-term debt position rises. In other words, utilising high debt ratios might result in reduced profitability as borrowing debt is generally more expensive than equity. Additionally, family-run businesses are more likely to employ internal resources rather than external ones to grow. Indeed, a lot of family firms run and raise money on their own at first, often because they lack the same performance recorded history as compared with older businesses (James, 1999). Hence, the negative and significant coefficient of LTD does not support the literature that argues that long-term debt increases a firm's value, which may be a result of Jordanian companies' financial structures having a low proportion of long-term debt (Tian & Zeitun, 2007). It is crucial to emphasize that both Islamic and non-Islamic banks operating in Jordan have implemented a credit policy that prioritizes short-term loans over long-term loans (Saidat et al., 2019). As a result, banks concentrate their lending activities on the services sector rather than the industrial sectors, which typically require long-term financing. This credit policy, embraced by banks, can potentially impact the capital structure of borrowing companies, leading them to make suboptimal choices regarding their capital structures.

Moreover, the risk of losing family wealth in the event of bankruptcy is reduced by the low level of long-term debt (Fama and Jensen, 1985). The belief that family

businesses assess risk differently for their long-term debt, given their efforts to maintain the long-term sustainability of the company, is consistent with this our findings.

From the figures in Tables 4 and 5, as expected, the short-term debt is predicted to have an impact on performance. Therefore, we accept the hypothesis that short-term debt influences both backwards-looking performance (ROA) and forward-looking performance (Tobin's Q). This indicates that short-term debt exposed family firms to the risk of refinancing as it has a negative impact on ROA and Tobin's Q. Further, the negative relationship between performance and short-term debt supports the pecking order theory that states that profitable firms (including family firms) have lower long and short-term debt, as firms exploit retained earnings before entering external markets (Myers, 1984). However, the majority of family businesses rely on equity financing during their early stages of development, but as they get bigger, significant debt financing is required to fund their operations.

From Hypothesis 3, TD is expected to influence the financial performance of family-owned firms. From the regression results in Tables 4 and 5, TD is found to have a negative and significant effect on both performance measures (i.e., ROA and Tobin's Q). Specifically, higher debt rates are expected to be linked to higher costs of capital and lower financial performance. Therefore, we accept the hypothesis that there is a significant relationship between total debt to total assets as a proxy of capital structure and both accounting-based (ROA) and market-based (Tobin's Q) measures of the financial performance of family firms in emerging economies.

Regarding the control variables, a firm's size is found to have a positive and significant effect on the performance measures ROA and Tobin's Q. This means that

an increase in the asset base of a firm should lead to improved performance, and this should be the case if the family firm makes maximum use of its assets. Similarly, sales growth is found to have a positive and significant effect on the accounting-based measure of financial performance (i.e., ROA) only.

## **5. CONCLUSION**

The crucial concern for shareholders, investors, and the economy as a whole is to improve corporate performance in the short and long term in order to increase corporate value and maximise the wealth of shareholders. Capital structure is one of the primary factors that affect corporate stability (Gill et al., 2009; Hamid et al., 2015). The primary motivation of this study was to explore the determinants of the financial performance of family-owned companies in Jordan. The study employs various leverage ratios to examine the impact of capital structure on accounting-based firm value (ROE) and market-based firm value (Tobin's Q) of family businesses in Jordan.

Our findings present relevant and current empirical evidence on the factors that affect family-owned firms' financial performance. Our results show that family businesses in Jordan implement an unbalanced financing approach with more focus on equity-based financing. This limited structure of capital is generally proven to be detrimental to firms' accounting-based and market-based financial performance. Our evidence implies that corporate managers should diversify their financing techniques if they want to grow and enhance their backwards-looking and forward-looking financial performance indicators in the short and long terms.

Although this research study has been thoroughly conducted, there is a number of limitations that can be recognised. First, the study focuses only on non-financial firms listed on the Amman Stock Exchange. We excluded financial firms in this study



due to differences in governance provisions and reporting standards between non-financial firms and their financial counterparts. Hence, we recommend future studies to investigate capital structure choice in family-owned banks in the Jordanian context. Second, our study is based on secondary data. A deeper understanding of the capital structures in Jordanian family businesses might be obtained if secondary data were to be complemented with primary data.

**Author Contributions:**

*All authors contributed equally to the study.*

**Disclosure statement**

*The authors declare no conflicts of interest.*

## REFERENCES

- Abdallah, A. A. N., & Ismail, A. K. (2017). Corporate governance practices, ownership structure, and corporate performance in the GCC countries. *Journal of International Financial Markets, Institutions and Money*, 46, 98-115.
- Alfandi, A. M., & Marco, V. (2022). Electronic Word of Mouth Effects on Middle East Destination Overall Image and Behavioral Intention: An Empirical Study in Jordan. In *New Governance and Management in Touristic Destinations* (pp. 134-151). IGI Global.
- Alhaddad, L., Gerged, A. M., Saidat, Z., Ali Al-Qudah, A., & Aziz, T. (2022). Do multiple directorships stimulate or inhibit firm value? Evidence from an emerging economy. *International Journal of Accounting and Information Management*, 30(4), 546-562.
- Alharbi, R. K., Yahya, S., & Ramadani, V. (2022). Financial literacy, access to finance, SMEs performance and Islamic religiosity: evidence from Saudi Arabia. *International Journal of Entrepreneurship and Small Business*, 46(2), 259-285.
- Al-Taani, K. (2013). The relationship between capital structure and firm performance: evidence from Jordan. *Journal of Finance and Accounting*, 1(3), 41-45.
- Amran, N. A., & Che-Ahmad, A. (2011). Board Mechanisms and Malaysian Family Companies' Performance. *Asian Journal of Accounting and Governance*. (2). pp. 15–26.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: evidence from the S&P 500. *The Journal of Finance*, 58(3), 1301-1328.
- Anderson, R. C., & Reeb, D. M. (2004). Board composition: Balancing family influence in S&P 500 firms. *Administrative science quarterly*, 49(2), 209-237.
- Boshnak, H. (2022). The impact of capital structure on firm performance: evidence from Saudi-listed firms. *International Journal of Disclosure and Governance*, 1-12.
- Casson, M. (1999). The economics of the family firm. *Scandinavian economic history review*, 47(1), 10-23.
- Chang, E. P., Zare, S., & Ramadani, V. (2022). How a larger family business is different from a non-family one? *Journal of Business Research*, 139, 292-302.
- Chazi, A., Khallaf, A., & Zantout, Z. (2018). Corporate governance and bank performance: Islamic versus non-Islamic banks in GCC countries. *The Journal of Developing Areas*, 52(2), 109-126.
- Chen, C. J. P., and Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, 19, 285-310.
- Christensen, J., Kent, P., Routledge, J., & Stewart, J. (2015). Do corporate governance recommendations improve the performance and accountability of small listed companies? *Accounting & Finance*, 55(1), 133-164.
- Dana, L. P. (2000). *Economies of the Eastern Mediterranean Region: economic miracles in the making*. World Scientific.
- Dana, L. P., & Dana, T. E. (2005). Expanding the scope of methodologies used in entrepreneurship research. *International Journal of Entrepreneurship and Small Business*, 2(1), 79-88.
- De Vries, M. F. K. (1993). The dynamics of family-controlled firms: The good and the bad news. *Organizational dynamics*, 21(3), 59-71.

- Eccles, R. G., Ioannou, I., & Serafeim, G. (2012). *The impact of a corporate culture of sustainability on corporate behaviour and performance* (Vol. 17950). Cambridge, MA, USA: National Bureau of Economic Research.
- Fama, E. F., & Jensen, M. C. (1985). Organizational forms and investment decisions. *Journal of Financial Economics*, 101-119.
- Gallegos Mardones, J., & Ruiz Cuneo, G. (2020). Capital structure and performance in Latin American companies. *Economic research-Ekonomska istraživanja*, 33(1), 2171-2188.
- Gill, A., Biger, N., Pai, C., & Bhutani, S. (2009). The determinants of capital structure in the service industry: evidence from the United States. *The Open Business Journal*. 2(1). pp. 48–53.
- Hamid, M. A., Abdullah, A., & Kamaruzzaman, N. A. (2015). Capital structure and profitability in family and non-family firms: Malaysian evidence. *Procedia Economics and Finance*, 31, 44-55.
- Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of business finance & accounting*, 33(7-8), 1034-1062.
- Hansen, C., & Block, J. (2021). Public family firms and capital structure: A meta-analysis. *Corporate Governance: An International Review*, 29(3), 297-319.
- James Jr, H.S. (1999), "What can the family contribute to business? Examining contractual relationships". *Family Business Review*, 12(1), pp.61-71.
- Jensen, M. C., & Meckling, W. H. (2019). Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate Governance* (pp. 77-132). Gower.
- Jorissen, A., Laveren, E., Martens, R., & Reheul, A. (2001). Differences between family and non-family firms. *Faculty of Applied Economics, Antwerp*.
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, 28(4), 911-922.
- Marashdeh, Z., Saidat, Z., Alkhodary, D., & Al-Haddad, L. (2021). Agency theory and the Jordanian corporate environment: why a single theory is not enough. *Academy of Accounting and Financial Studies Journal*, 25(5), 1-15.
- Mishra, C. S., & McConaughy, D. L. (1999). Founding family control and capital structure: The risk of loss of control and the aversion to debt. *Entrepreneurship theory and practice*, 23(4), 53-64.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American economic review*, 53(3), 433-443.
- Muritala, T. A. (2012). An empirical analysis of capital structure on firms' performance in Nigeria. *International Journal of Advances in Management and Economics*, 1(5), 116-124.
- Myers, S. C. (2001). Capital structure. *Journal of Economic Perspectives*, 15(2), 81-102.
- Myers, S. C., & Majluf, N. S. (1984). Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics*, 187-221.
- Nadaraja, P., Zulkafli, A. H., & Masron, T. A. (2011). Family ownership, firm's financial characteristics and capital structure: evidence from public listed companies in Malaysia. *Economia Seria Management*, 14(1), 141-155.

- Ngatno, Apriatni, E. P., & Youlianto, A. (2021). Moderating effects of corporate governance mechanism on the relation between capital structure and firm performance. *Cogent Business & Management*, 8(1), 1866822.
- Nguyen, H. T., & Nguyen, A. H. (2020). The impact of capital structure on firm performance: Evidence from Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(4), 97-105.
- Ntoug, L. A., Vila Biglieri, J. E., De Oliveira, S. H. M., Benjamim, M. F., Outman, B. C., & Masárová, E. (2017). The impact of ownership structure on firm performance: The role of chairman and CEO in Portugal. *Corporate Board: role, duties and Composition*, 13 (2), 6-19.
- Omondi, M. M., & Muturi, W. (2013). Factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. *Research journal of finance and accounting*, 4(15), 99-104.
- Ramadan, Z. S., & Ramadan, I. Z. (2015). Capital structure and firm's performance of Jordanian manufacturing sector. *International Journal of Economics and Finance*, 7(6), 279-284.
- Ramalho, J. J., Rita, R. M., & da Silva, J. V. (2018). The impact of family ownership on capital structure of firms: Exploring the role of zero-leverage, size, location and the global financial crisis. *International Small Business Journal*, 36(5), 574-604.
- Ratten, V., Rammal, H., & Ramadani, V. (2017). Islamic finance: An entrepreneurial management perspective. *Entrepreneurship and Management in an Islamic Context*, 119-132.
- Saidat, Z., Abdelrahim, H. J. I., Alkhodary, D., Aldomy, R., & Kassab, A. (2022). An insight into Family Business and Entrepreneurship in Jordan. *Journal of Positive School Psychology*, 5569-5582.
- Saidat, Z., Alrababa'a, A. R., & Seaman, C. (2022). Family-owned Banks in Jordan: do they perform better? *Journal of Family Business Management*.
- Saidat, Z., Seaman, C., Silva, M., Al-Haddad, L., & Marashdeh, Z. (2020). Female Directors, Family Ownership and Firm Performance in Jordan. *International Journal of Financial Research*, 11(1), 206-219.
- Saidat, Z., Silva, M., & Seaman, C. (2019). The relationship between corporate governance and financial performance: Evidence from Jordanian family and nonfamily firms. *Journal of Family Business Management*, 9(1), 54-78.
- Saidat, Zaid, Tareq O. Bani-Khalid, Lara Al-Haddad, and Zyad Marashdeh. "Does family CEO enhance corporate performance? The case of Jordan." *Economics & Sociology* 13, no. 2 (2020): 43-52.
- Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia-Social and Behavioral Sciences*, 65, 156-166.
- Salteh, H. M., Ghanavati, E., Khanqah, V. T., & Khosroshahi, M. A. (2012). Capital structure and firm performance; Evidence from Tehran Stock Exchange. *International Proceedings of Economics Development & Research*, 43(1), 225-230.
- Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of political economy*, 94(3, Part 1), 461-488.
- Shubita, M. F., & Alsawalhah, J. M. (2012). The relationship between capital structure and profitability. *International Journal of Business and Social Science*, 3(16).
- Tian, G. G., & Zeitun, R. (2007). Capital structure and corporate performance: evidence from Jordan. *Australian Accounting Bussiness and Finance Journal*, 1(4).

Ting, I. W. K., & Lean, H. H. (2011). Capital structure of government-linked companies in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 7(2), pp. 137–156.

Umar, M., Tanveer, Z., Aslam, S., & Sajid, M. (2012). Impact of capital structure on firms' financial performance: Evidence from Pakistan. *Research Journal of Finance and Accounting*, 3(9), 1-12.

Valeri, M., Fondacaro, R., De Angelis, C., & Barella, A. (2020). The use of cryptocurrencies for hawala in the Islamic finance. *European Journal of Islamic Finance*.

Vargas Sánchez, A. (2014). OPTIMAL CAPITAL STRUCTURE IN THE PRESENCE OF COSTS OF FINANCIAL DISTRESS. *Investigación & Desarrollo*, 1(14), 44-65.

Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics*, 80(2), 385-417.

Zeitun, R., & Tian, G. G. (2014). Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business & Finance Journal*, Forthcoming.

**Table 1:**  
The Operational Definition of Research Variables

<b><i>Dependent variables</i></b>		
<b>ROA</b>	Return on Assets	Net Income / Total Assets
<b>Tobin's Q</b>	Tobin's Q	Total Market Value of Firm/ Total Asset Value of Firm
<b><i>Independent variables</i></b>		
<b>LTD</b>	Short-term debt	Short-term debt/total assets
<b>STD</b>	Long-term debt	Long-term debt/total assets
<b>TD</b>	Total debt	Short-term debt + long-term debt/ Total Assets
<b><i>Control variables</i></b>		
<b>FSIZE</b>	Firm Size	Natural logarithm of firm's total assets
<b>SGROWTH</b>	Sales Growth	Current year's revenues minus the previous year's revenues divided by the previous year's revenues

**Table 2:**  
Descriptive Statistics

<b>Variable</b>	<b>Mean</b>	<b>Min</b>	<b>Max</b>	<b>S.D</b>
<b>LTD</b>	0.151	0.000	0.558	0.107
<b>STD</b>	0.220	0.000	0.544	0.103
<b>TD</b>	0.371	0.000	1.49	0.185
<b>FSIZE</b>	12.142	7.691	18.215	1.633
<b>SGROWTH</b>	0.292	-9.920	1.494	0.00433
<b>ROA (%)</b>	4.3412	-15.6	14.8	6.3879
<b>Tobin's Q</b>	.0168	-.01196	0.0611	0.0473

**Note:** Variables are operationally defined in Table 1.

**Table 3:**  
Pearson Correlation of Variables

<b>Variable</b>	ROA	Tobin's Q	LTD	STD	TD
ROA	1				
Tobin's Q	-0.198	1			
LTD	-0.249***	0.063***	1		
STD	-0.298***	0.074***	.200**	1	
TD	-0.352***	0.049**	.719***	.796***	1

Note: Variables are operationally defined in Table 1. \*\*\*Correlation is significant at the 0.01 level, \*\*Correlation is significant at the 0.05 level, and \*Correlation is significant at the 0.1 level.



**Table 4:**  
ROA Regression Results

Variables	Model (1)		Model (2)		Model (3)	
	Coef.	P(Sig)	Coef.	P(Sig)	Coef.	P(Sig)
<i>LTD</i>	-0.247	<b>0.090*</b>				
<i>STD</i>			-0.041	<b>0.024**</b>		
<i>TD</i>					-0.369	<b>0.006***</b>
<i>FSIZE</i>	0.014	<b>0.004**</b> *	0.073	<b>0.008***</b>	0.061	<b>0.007***</b>
<i>SGROWTH</i>	1.014	<b>0.063*</b>	1.137	<b>0.019**</b>	1.049	<b>0.081*</b>
<i>R-squares</i>	0.110		0.171		0.146	
<i>Prob&gt; F, chi2</i>	0.000		0.000		0.000	

**Notes:** Variables are operationally defined in Table 1. **Model (1)**  $ROA_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 FSIZE_{it} + \beta_3 SGROWTH_{it} + \varepsilon_{it}$ , **Model (2)**  $ROA_{it} = \alpha_0 + \alpha_1 STD_{it} + \alpha_2 FSIZE_{it} + \alpha_3 SGROWTH_{it} + \varepsilon_{it}$ , and **Model (3)**  $ROA_{it} = \lambda_0 + \lambda_1 TD_{it} + \lambda_2 FSIZE_{it} + \lambda_3 SGROWTH_{it} + \varepsilon_{it}$   
**\*\*\*Correlation is significant at the 0.01 level; \*\*Correlation is significant at the 0.05 level, and \*Correlation is significant at the 0.1 level.**

**Table 5:**  
Tobin's Q Regression Results

Variables	Model (1)		Model (2)		Model (3)	
	Coef.	P(Sig)	Coef.	P(Sig)	Coef.	P(Sig)
LTD	0.741	0.332				
STD			-25.306	<b>0.058***</b>		
TD					-14.271	<b>0.074***</b>
FSIZE	0.608	<b>0.082***</b>	0.529	<b>0.023**</b>	0.706	0.209
SGRO	1.072	0.214	1.003	0.197	0.0762	0.133
WTH						
R-squares	0.082		0.121		0.116	
Prob>F, chi2	0.000		0.000		0.000	

**Notes:** Variables are operationally defined in Table 1. **Model (1)**  $Tobin's Q_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 FSIZE_{it} + \beta_3 SGROWTH_{it} + \varepsilon_{it}$ , **Model (2)**  $Tobin's Q_{it} = \alpha_0 + \alpha_1 STD_{it} + \alpha_2 FSIZE_{it} + \alpha_3 SGROWTH_{it} + \varepsilon_{it}$ , and **Model (3)**  $Tobin's Q_{it} = \lambda_0 + \lambda_1 TD_{it} + \lambda_2 FSIZE_{it} + \lambda_3 SGROWTH_{it} + \varepsilon_{it}$

**\*\*\*Correlation is significant at the 0.01 level; \*\*Correlation is significant at the 0.05 level; and \*Correlation is significant at the 0.1 level.**