Journal of Emerging Technologies in Accounting, Auditing and Finance
ETAAF
Vol.1, No.4, Winter 2023

Investigating the Role of Company Ownership in Investment Efficiency with Emphasis on Business Strategy

Zoleikha Yousefi Ghasem Abadi
MA. in Accounting, Payame Noor University, Tehran, Iran.
z.yousefi5621@gmail.com

Ali Reza Momeni
Assistant Professor, Department of Accounting, Payame Noor University, Tehran, Iran.
(Corresponding Author)
Momeni50688@gmail.com

Submit: 2024/01/24 **Accept: 2024/04/24**

Abstract

Objectives: The purpose of this study is to investigate the role of company ownership in investment efficiency, focusing on business strategy.

Design/methodology/approach: This research is applied, with a causal correlation methodology. The statistical population of the study included all firms listed on the Tehran Stock Exchange. Using a systematic sampling method, 135 companies were selected as the sample and examined over an 8-year period from 2015 to 2022. Three types of institutional ownership—management, family ownership—were considered.

Results: The results of testing the research hypotheses indicated that institutional ownership, as well as family ownership, have a direct and significant relationship with the investment efficiency of the company. However, managerial ownership showed no relationship with the efficiency of the company's investment. The interaction of family ownership with business strategy impacted investment efficiency. However, the interaction of institutional ownership and managerial ownership with business strategy did not affect the efficiency of the company's investment.

Innovation: The current research provides evidence that the types of company ownership have an impact on investment efficiency and emphasizes that the role of business strategy cannot be overlooked.

Keywords: Business Strategy, Investment efficiency, Corporate Ownership.

1. Introduction

Investment is the act of using funds to create future profitable returns. Investment efficiency refers to a company's performance in utilizing assets and generating income, measuring the productivity and resource utilization of business organizations and companies (Partovi and Besharatpour, 2021). According to Modigliani and Miller (1958), investment opportunities are ways to enter the market, with investing in companies considered a sound strategy. This theory suggests that companies should invest in projects with positive net present value until their final profit equals their cost, defining investment efficiency conceptually (Maleki et al., 2020; Aksar et al., 2022).

As large joint-stock companies emerged and active investors became prevalent in the capital markets, ownership of company shares shifted from individuals to institutions, laying the foundation for major shareholders. This shift raises the question: Does ownership structure impact a company's investment efficiency?

In general terms, strategy is the plan and vision of future goals for an entity in the market in which it operates. To achieve these goals, the entity formulates and pursues a strategy, crucial tasks in management science that form the basis of vital decisions for managers of companies and businesses (Tanani and Mohebkhah, 2014).

The second goal of this study is to determine whether business strategy has any impact on the relationship between ownership structure and investment efficiency.

Investment is a key component of company operations and normal activities, essential for capital development and the interests of investors and stakeholders. The more efficiently investments are made, the more benefits will be realized by the beneficiaries, leading to a stronger competitive position in the market.

Internal factors of a company, including ownership structure, play a significant role in influencing managerial decisions, with owners influencing decisions based on the extent of their influence. Additionally, the business strategy of a company is crucial in guiding investment decisions and shaping managerial thinking.

One important factor that researchers have recently focused on is the type of company strategy in the market. A company's strategy outlines its plans to outperform competitors and can provide solutions to various challenges. Given the lack of definitive findings on the impact of business strategy on the relationship between company ownership and investment efficiency, there is a research gap that needs to be addressed.

2. Theoretical, empirical, and hypotheses development

Investment is one of the main factors in the development of businesses; therefore, concerns related to investment are among the most important concerns of companies worldwide. Investment efficiency is crucial in achieving corporate goals and must be executed excellently to maximize shareholders' wealth (Bobaker et al., 2022). Investment efficiency can be seen as the performance of a company, measuring the productivity and utilization of its resources. According to Modigliani and Miller (1958), investment opportunities provide companies with access to appropriate investments. This theory suggests that investors will continue to invest in projects with positive net present value until the company's marginal profit and cost are equalized, defining investment efficiency conceptually (Siddiqueo & Rasheed, 2023).

Various internal and external factors within a company influence investment efficiency. Institutional researchers are increasingly interested in the differences between various forms of ownership, as they believe ownership types impact a company's procedures and outcomes. Recent research has explored the connection between ownership structure and company performance (Alkurdi et al., 2021; Bano et al., 2018). Efficient investment plays a crucial role in a company's sustainable development and production, creating value for shareholders. Efficient

investment occurs when there is no deviation from a positive or negative net present value, allowing businesses to provide benefits for future generations and contribute to the country's economic growth. Previous research has identified several determinants of optimal investment, including business strategy, corporate social performance, and corporate governance (Cao et al., 2019). Empirical studies have shown that family ownership, management, and institutional relationships impact investment efficiency (Cao et al., 2020; Shahzad et al., 2018). Different types of ownership have varying effects on investment efficiency. Institutional owners influence management investment decisions through oversight, expertise, proposals, risk-taking behavior, and improved financial disclosure to reduce agency friction and information asymmetry. Additionally, entity-owned companies increase investment efficiency through market activities (Cao et al., 2020; Siddique et al., Rashid, 2023). Therefore, the first hypothesis of the present study is as follows:

H1: There is a significant relationship between institutional ownership and investment efficiency.

Family firms utilize the social-emotional wealth approach in their business decisions to influence corporate investment decisions and investment efficiency. They must preserve capital for the next generation, which may impact their investments more or less (Shahzad et al., 2018). Family firms are averse to losses and prioritize maintaining their reputation and preserving capital for future generations. Therefore, they opt for low-risk investments and focus on effectively utilizing resources to maximize profitability through product quality (Ting et al., 2016). Shahzad et al. (2018) demonstrated that family ownership has a positive impact on investment efficiency. Therefore, the second hypothesis of this study is as follows:

H2: There is a significant relationship between managerial ownership and investment efficiency.

According to representation theory, when ownership and control of a company are separated from managers, management has the power to make strategic choices that prioritize their own interests over those of the shareholders, resulting in decreased investment (Cao et al., 2019). Managers' investments in the company can help reduce conflicts of interest between directors and shareholders. Companies with higher management ownership tend to outperform those with lower managerial ownership (Li et al., 2007). The alignment of shareholders' interests with management can be achieved by granting incentive shares to managers (Siddique & Rashid, 2023). Therefore, the third hypothesis of this study is as follows:

H3: There is a significant relationship between family ownership and investment efficiency.

A company's business strategy has a significant impact on organizational structure, resource allocation, long-term goals, and vision (Park & Byun, 2022). Strategy, in general terms, is the plan and vision of future goals for an entity in the market in which it operates. To achieve its goals, the company formulates and pursues a strategy. In management science, the development and formulation of strategy are two crucial tasks for managers, forming the basis of vital decisions for companies and businesses. Managers must ensure the survival and excellence of the organization.

Today, most organizations do not adopt a single comprehensive strategy but instead use a set of related strategies designed at different levels of the company (Akbari et al., 2019). Each strategy is aligned with environmental conditions, other company strategies, and the strengths and weaknesses of the unit. The success of these strategies relies on their integration and coordination across all levels.

Business strategy is typically implemented at the product or strategic business unit level, focusing on improving the competitive position of a company's goods and services in a specific industry or market segment. Organizations often use one of four types of adaptive strategies to reduce environmental impact and maximize opportunities: defenders, attackers, forward-looking analysts, and passives. Defenders (defensive strategy) and attackers (offensive strategy) represent

opposite ends of the strategy spectrum (Tanani and Mohebkhah, 2014).

The company's business strategy can impact the efficiency and capital allocation (Siddique & Rashid, 2023). Therefore, the fourth through sixth hypotheses of the present study are as follows:

H4: Business strategy influences the relationship between institutional ownership and investment efficiency.

H5: Business strategy influences the relationship between managerial ownership and investment efficiency.

H6: Business strategy influences the relationship between family ownership and investment efficiency.

Siddique and Rashid (2023) conducted research on the impact of ownership structure on investment efficiency, taking into account the influence of business strategy. They found that institutional ownership, managerial ownership, and family ownership all play a role in affecting investment efficiency, and that business strategy acts as a moderator for these relationships.

Aksar et al. (2022) analyzed the effect of cash holding on investment efficiency, considering the role of corporate governance in companies facing financial crises. Their results indicated that corporate governance increases cash holding and investment efficiency in Indian companies, while reducing it in Pakistani companies. They also found that in financially troubled companies in Pakistan, corporate governance strengthens the link between cash holding and investment efficiency, but does not have a moderating effect in Indian companies.

Ezzi et al. (2022) explored the mediating effect of corporate governance on the relationship between blockchain technology and investment efficiency. Their study revealed that the implementation of blockchain technology significantly improves corporate investment efficiency, with corporate governance playing a crucial role in mediating this relationship. Companies with better corporate governance performance experience a greater positive impact of blockchain technology on investment efficiency.

Rhodiawarni et al. (2022) argued in their study "Business Strategy and Competition in Industries" that aggressive companies outperform defenders financially, particularly in the two years following strategy implementation.

Airavati et al. (2022) suggested in their study "Family Firms' Investment Efficiency" that family businesses prioritize risk avoidance in investment decisions to protect their reputation. They also found that family firms with higher social responsibility tend to have higher investment efficiency.

Kumar et al. (2022) investigated the adoption of Information and Communication Technology (ICT) as an emergency business strategy during the Covid-19 crisis in small and medium-sized enterprises. Their findings indicated that the adoption of ICT during and after the pandemic was aligned with company needs, and that different IT adoption factors influence perceived benefits and organizational performance in Indian SMEs.

Kung et al. (2022) examined the relationship between business strategy, corporate social responsibility, and the intra-corporate wage gap. They concluded that social responsibility mitigates the impact of business strategy on the intra-corporate wage gap in aggressive companies compared to defensive firms, primarily due to differences in employee wage growth.

Habib and Hasan (2017) studied business strategy, overvalued stocks, and stock price crashes. Their results showed that trading strategy affects the risk of stock price crashes, with a greater impact in aggressive and defensive companies.

Faraji et al. (2023) conducted a study titled "The Effect of Managers' Ability on Investment Efficiency, Overinvestment, and Underinvestment," which found that managerial abilities have a positive and direct impact on the investment efficiency of companies. Additionally, managerial abilities were found to have a positive and direct effect on overinvestment. However,

the study also revealed that managerial abilities have a negative effect on underinvestment.

Naghshbavdi and Seyekkar (2022) conducted a study titled "The Impact of Financial Reporting Quality, Family Ownership, and Audit Quality on Investment Efficiency," which found a significant relationship between the quality of financial reporting and investment efficiency. However, no significant relationship was found between family ownership and investment efficiency. The quality of the audit did not moderate the relationship between family-owned companies and investment efficiency.

Bahrami and Farhadtosaki (2021) conducted a study titled "The Relationship between Managers' Overconfidence, Internal Financing, and Investment Efficiency," which found that the overconfidence of internal finance managers directly affects investment efficiency. When overconfidence is combined with financing through internal resources, it can reduce the efficiency of investment.

Partovi and Besharatpour (2021) conducted a study titled "The Impact of Free Cash Flow on Investment Efficiency," which found that excessive investment from free cash flow has a direct and significant effect on investment efficiency.

Rostami et al. (2021) conducted a study titled "The Impact of Competition in Product Market and Life Cycle on the Business Strategy of Companies," which found that product market competition significantly affects business strategy. Companies in high-competitive industries tend to adopt defensive business strategies. Additionally, the life cycle of a company significantly affects its business strategy, with companies in the growth stage being more likely to have aggressive strategies.

Asadi et al. (2021) conducted a study on "The Moderating Role of Business Strategy on the Relationship between Social Responsibility and Economic Performance of the Company," which found that corporate social responsibilities in different dimensions can increase economic value added and market value added. Business strategy has a positive and significant effect on this relationship, with more aggressive business strategies having a greater impact.

Masoumi and Nesagaran (2021) conducted a study on "Investigating the Effect of Managers' Overconfidence and Free Cash Flow on Firms' Investment Efficiency," which found that free cash flow and managerial overconfidence both have significant effects on the investment efficiency of companies.

Pourmousa and Sharifzadeh Darban (2021) examined the effect of liquidity on the relationship between financial constraints and investment, finding that financial constraints directly affect investment efficiency and that free cash flow moderates this relationship.

Mamarabadi et al. (2019) conducted a study on "The Relationship between Business Strategy and Weaknesses of Internal Controls," using least squares and logistic regression methods for testing research hypotheses. The study found a significant relationship between business strategy and weaknesses in internal controls.

Moradi et al. (2018) investigated the relationship between audit quality, auditor expertise criteria, and investment efficiency, finding a negative and significant relationship between auditor expertise in the industry and return on investment.

Shehri Anaghiz et al. (2016) studied the effects of corporate governance on investment efficiency, finding that corporate governance has a direct effect on investment efficiency.

Baradaran Hassanzadeh et al. (2014) studied the effects of agency costs and financing constraints on capital efficiency, finding that financial constraints have no significant relationship with investment efficiency, while agency costs have a significant negative effect on investment efficiency.

3. Research Methodology

Due to the basic theoretical foundations related to the variables under study, the present research is classified as applied research in terms of its purpose and method. It is considered descriptive-causal research because it

aims to study variables as they are, without manipulating them. Historical and post-event data were collected using library and archival methods to test the research hypotheses.

The statistical population of this study includes all firms listed on the Tehran Stock Exchange, excluding those with financial periods ending other than March, those that changed their financial period during the study, and firms with insufficient information for comparability. Investment companies, banks, and insurance firms were also excluded to ensure data homogeneity.

A total of 135 companies were selected using a systematic screening pattern, and data was collected over an 8-year period from 2015 to 2022. By combining data from different time periods, the researcher obtained complete and reliable information.

To investigate relationships in the study, it is recommended to use regression analysis with powerful standard error tools. A multivariate linear regression model is suitable for this research due to the combined nature of the data. The software Eviews 12 can be utilized for regression analysis, along with appropriate statistical methods to test hypotheses effectively.

Table 1: How to Choose a Statistical Sample of Research

The statistical population in 2022		**546**
Lack of Corporate Responsibility	-189	
Firms with stock trading freezes	-31	
Firms that have changed the course of finance	-50	
Firms that entered the stock market during the research period	-92	
Investment Firms, Banks, and Holdings	-49	
Final Sample of Research		**135**

3.1. Regression model

Following Siddique and Rasheed (2023) research, the following models are introduced to test the research hypotheses:

The regression model tests the first, second, and third hypotheses

$$\begin{aligned}\mathrm{INEFF}_{it} = \beta_0 + \beta_1 \mathrm{Inst-own}_{it} + \beta_2\, \mathrm{Manage-own}_{it} \\ + \beta_3 Family-own + \beta_4 \mathrm{Age}_{it} \\ + \beta_5 \mathrm{Leverage}_{it} + \beta_6\, \mathrm{Firm\ size}_{it} \\ + \beta_7\, \mathrm{Growth}_{it} + \beta_8\, \mathrm{Cash}_{it} + \varepsilon_{it}\end{aligned}$$

The regression model tests the fourth, fifth, and sixth hypotheses.

$$\begin{aligned}\mathrm{INEFF}_{it} = \beta_0 + \beta_1 \mathrm{Inst-own}_{it} + \beta_2\, \mathrm{Manage-own}_{it} \\ + \beta_3 Family-own + \beta_4\, \mathrm{Strategy}_{it} \\ + \beta_5 \mathrm{Inst-own}_{it} \times \mathrm{Strategy}_{it} \\ + \beta_6 \mathrm{Manage-own}_{it} \times \mathrm{Strategy}_{it} \\ + \beta_7 Family-own \times \mathrm{Strategy}_{it} \\ + \beta_8 \mathrm{Age}_{it} + \beta_9 \mathrm{Leverage}_{it} \\ + \beta_{10}\, \mathrm{Firm\ size}_{it} + \beta_{11}\, \mathrm{Growth}_{it} \\ + \beta_{12}\, \mathrm{Cash}_{it} + \varepsilon_{it}\end{aligned}$$

3.2. Operational definitions of variables

Independent variables of research: company ownership structure (institutional, managerial, and family ownership)

First independent variable: Inst-own

The percentage of shares is owned by institutional investors such as banks, insurance companies, and so on, as well as those holding more than 5% of the company's shares.

Second independent variable: Manage-own

Management ownership is the amount of shares held by the board of directors of the company, which is ultimately the sum of shares held by the board of directors of the company as managerial ownership.

The third independent variable: is family ownership.

To identify family companies in this research, we will follow studies such as Mehrazin et al. (2013), Sahe et al., and Amour et al. (2022). Family ownership will be defined as follows:

The actual shareholder must own a minimum of 20% of the company's common stock, or one of the board

members must own at least 5% of the common stock. Alternatively, the combined shares of the actual board member and their family members must total at least 5% of the company's shares. Companies meeting these criteria will be classified as family companies and assigned a code of (1), while the rest will be assigned a code of (0).

The dependent variable of research: Investment Efficiency (INVEFF)

Following the research by Seydico and Rashed (2023), the Biddle model (2009) is utilized to determine investment efficiency. The residual value of the model highlights overinvestment and underinvestment. The absolute error value of the model reveals investment inefficiency and serves as an inverse measure of efficiency, as demonstrated in the study by Taghizadeh Khanghah and Badavaran Hendi (1397). To obtain a direct measure of investment efficiency, the absolute error value of the model is multiplied by -1. The model is represented as follows:

$$Investment_{i,t} = + \beta \beta 0_1 \, salegrowth_{i,t} + \varepsilon_{it}$$

In the above model:

Investment: The ratio of change in total fixed assets and long-term investment over the average total assets of the company.

Sales growth: Sales growth (sales period minus previous sales divided by previous period)

Modification Variable Research: Business Strategy

In this research, we are using the combined scoring system developed by Ittner and Larcker (1997) to determine the type of strategy employed by each company, following the methods outlined by Rostami et al. (2021) and Tenani and Mohebkhah (2014). This system involves analyzing five key ratios: sales growth rate, advertising cost to total sales, number of employees to sales, market value of the company to its book value, and the ratio of fixed assets to total assets.

The scoring process begins by dividing the companies into five groups based on the first four ratios, with the top quantile receiving a score of 5, the bottom quantile receiving a score of 1, and the middle companies receiving scores based on their respective quantiles. The companies are then ranked based on the fifth ratio, again divided into five groups with the highest quantile receiving a score of 1, the lowest quantile receiving a score of 5, and the middle companies receiving scores accordingly.

By combining the scores from these two steps, we calculate a final score for each company, ranging from 5 to 25. Companies with total scores between 5 and 15 are classified as defensive firms, while companies with scores between 15 and 25 are classified as aggressive. The total score of 5-25 serves as an indicator of the company's business strategy.

Table 2: How to Score a Business's Competitive Strategy

Quantile	Sales Growth Rate	Advertising Costs	Number of Employees	Market Value of the Company	Fixed Assets
		Total Sales	Total Sales	Book Value of the Company	Total assets
First	5	5	5	5	1
Second	4	4	4	4	2
Third	3	3	3	3	3
Fourth	2	2	2	2	4
Five	1	1	1	1	5

3.3. Control variables of research

Building on previous research, such as Seydiko and Rashed (2023), and other studies in this field, the following factors have been identified as control variables to mitigate potential unwanted effects on the investment efficiency of companies:

Growth: Calculated as sales revenue minus previous sales divided by previous period sales.

Leverage: The ratio of total liabilities to total assets.
Age: The natural logarithm of the year of establishment of the company from the desired year.
Cash: The ratio of operating cash at the end of the period to total assets.
Company Size (SIZE): Natural logarithm of total assets.

4. Research Findings

The main central indicator is the average, which represents the equilibrium point and center of gravity of the distribution and is a good indicator of the centrality of the data. For example, the average value for the leverage variable is 0.54, indicating that most data is centered around this point. In general, dispersion parameters are a criterion for determining the amount of dispersion from each other or their scattering relative to the average. One of the most important dispersion parameters is the standard deviation. The value of this parameter is equal to 31.3 for institutional ownership and investment efficiency (0.09), which shows that these two variables have the highest and lowest standard deviations, respectively. The lowest and highest in each variable.

The results from Table 4 indicate that the significance level of the test in the research models is less than 5%, showing a difference in variance in disturbing sentences. Additionally, the significance level of the serial autocorrelation test in the research model, with a significance level lower than 5%, suggests the presence of serial autocorrelation in the model. By using robust standards and error-resistant facilities in the final model, the issues of variance and serial autocorrelation have been successfully addressed (Aflatooni, 2018).

Based on the results from Table 5, it is evident that the significance level of variables in the stability test is less than 5%, indicating the stability of the variables.

Furthermore, the results from Table 6 show that the significance level of the Chow test for the models in the research hypothesis test is less than 5%, suggesting the acceptance of the panel data pattern necessary for the Hausman test as outlined in (Platonic, 2018). Additionally, the obtained results indicate that the significance level of the test in the hypothesis test model of the research is less than 5%, confirming the acceptance of fixed effects.

Table 3: Descriptive statistics of research variables

Variable	Mean	Max	Min	ST.D
Inst-own	53.6	90.17	0.0000	31.3
INEFF	-0.079	-0.001	-0.50	0.092
Manage-own	56.3	88.6	0.0000	26.6
Family-own	0.17	1.00	0.00	0.38
Strategy	14.98	24.00	6.00	3.04
Age	3.64	4.24	2.48	0.36
Leverage	0.54	1.38	0.10	0.21
Firm size	14.89	20.00	11.11	1.73
Growth	0.36	1.80	-0.39	0.47
Cash	0.11	0.48	-0.21	0.13

Table 4: Results of White, Brush Godfrey

Test Model	Test Statistics	Sig
White Test	126.05	0.0000
White Test	214.45	0.0000
The Brush Godfrey Test	11.99	0.0025
The Brush Godfrey Test	11.24	0.0036

Table 5: Stability Test Quantity of Variables

Variable	Test Statistics	Sig	Results
Inst-own	-9.35637	0.0000	Stationary
INEFF	-34.4894	0.0000	Stationary
Manage-own	-4.11442	0.0000	Stationary
Strategy	-14.1043	0.0000	Stationary
Age	-76.7269	0.0000	Stationary
Leverage	-12.8010	0.0000	Stationary
Firm size	-9.27232	0.0000	Stationary
Growth	-28.8606	0.0000	Stationary
Cash	-8.35455	0.0000	Stationary

Table 6: F-Limmer (Chow) and Hausman Test Results

Test Model	Test Statistics	Sig
F Limer	2.372	0.0000
F Limer	2.110	0.0000
Hausman	129.7	0.0000
Hausman	124.2	0.0000

Table 7: Test results for 1, 2, and 3 hypotheses

Variables	Coef	ST.D	Statistic t	Sig	VIF
Inst-own	0.0002	9.60e05	2.84	0.004	2.17
Manage-own	0.0001	57.40e05	1.41	0.15	1.54
Family-own	0.027	0.011	2.37	0.017	1.56
Age	0.19	0.031	6.07	0.0000	1.06
Leverage	0.038	0.012	3.09	0.002	1.21
Firm size	-0.034	0.003	-9.99	0.0000	1.16
Growth	0.002	0.004	0.59	0.54	1.09
Cash	0.004	0.013	0.29	0.76	1.14
C		-0.27	0.083	-3.23	0.001
Coefficient of determination		0.33			
Watson Durbin		2.01			
F		3.348			
Sig		0.0000			

The results of Table 7 show that the institutional ownership variable has a positive coefficient (0.0002) and a significance level below 5% (0.004), indicating a direct relationship with investment efficiency. Therefore, the first hypothesis of the research is accepted at a 5% error level. The managerial ownership variable, with a significance level of 5% (0.15), does not have a significant relationship with investment efficiency. Therefore, the second hypothesis of the research is not accepted at a 5% error level. The family ownership variable, with a positive coefficient (0.027) and a significance level below 5% (0.017), shows a direct relationship with investment efficiency. Therefore, the third hypothesis of the research is accepted at a 5% error level.

Control variables such as company age, financial leverage, and company size, with a significance level below 5%, have a significant relationship with the dependent variable of the research. The coefficient of determination is 33%, indicating that the independent

and control variables in the model explain 33% of the variation in the dependent variables. Additionally, Watson's kamera value is 2.01, falling within the range of 1.50 to 2.50, showing that there is no strong correlation between the error terms. The collinearity statistics are below 5, indicating no strong correlation between the variables in the research. Test statistics (F) with a significance level of less than 5% suggest that the research model is a good fit.

The results of Table 8 show that the interaction of institutional ownership with business strategy, with a significance level above 5% (0.51), does not affect investment efficiency. Therefore, the fourth hypothesis of the research is not accepted at the 5% error level. The interaction of managerial ownership with business strategy has a significance level higher than 5% (0.54) on capital efficiency. The assessment is not effective, so the fifth hypothesis of the research is not accepted at the 5% error level. The interaction of family ownership with business strategy, with a positive coefficient (0.003) and a significance level of less than 5% (0.022), affects investment efficiency. Therefore, the sixth hypothesis of the research is accepted at the 5% error level. The control variables of company life, financial leverage, size of the company, and sales growth, with a significance level below 5%, have a significant relationship with the dependent variable of the research. The coefficient of determination is equal to 32%, indicating that the independent variables and controls in the model have been able to explain 32% of the variation in the dependent variable. Additionally, Watson's camera value is 2.00, which falls between 1.50 and 2.50, showing that there is no strong correlation between the error terms in the model. The collinearity statistics are below 5, indicating that there is no strong correlation between the variables in the research. Test statistics (F) with a significance level below 5% show that the research model is a good fit.

Table 8: The results of the 4, 5, and 6 hypotheses

Variables	Coef	ST.D	Statistic t	Sig	VIF
Inst-own	9.32e05	0.0003	0.29	0.76	2.18
Manage-own	0.0002	0.0002	0.93	0.35	3.12
Family-own	0.078	0.023	3.29	0.001	3.65
Strategy	0.007	0.001	4.33	0.0000	1.50
Inst-own× Strategy	-1.22e05	1.86e05	-0.65	0.51	1.05
Manage-own × Strategy	-1.16e05	1.90e05	-0.60	0.54	2.83
Family-own × Strategy	0.003	0.001	2.28	0.022	3.38
Age	0.14	0.034	4.20	0.0000	1.11
Leverage	0.026	0.010	2.44	0.014	1.28
Firm size	-0.029	0.004	-7.24	0.0000	1.33
Growth	-0.017	0.005	-3.02	0.002	1.45
Cash	0.004	0.013	0.36	0.71	1.16
C	-0.28	0.093	-3.05	0.002	-
Coefficient of determination	0.32				
Watson Durbin	2.00				
F	3.0538				
Sig	0.0000				

5. Research Results

The purpose of this study is to investigate the role of company ownership in investment efficiency, with a focus on business strategy. Investment is a key factor in business development, and investment efficiency is crucial for achieving corporate goals and maximizing

shareholder wealth. Efficient investment is essential for company growth and sustainable production, creating value for shareholders. Efficient investment occurs when there is no deviation from a positive or negative net present value. Investment efficiency enables businesses to benefit future generations and drive economic growth.

Different types of ownership have varying effects on investment practices. Institutional owners influence management decisions by providing oversight, expertise, proposals, and risk-taking behavior for long-term investments. They also improve financial disclosure to reduce agency friction and information asymmetry. The first hypothesis of this research confirms a positive relationship between institutional ownership and investment efficiency, indicating that increased institutional ownership leads to greater investment efficiency.

The separation of ownership and control, as outlined in the representation theory, allows management to make strategic decisions that align with shareholders' interests and promote investment. The results show that managerial ownership does not impact investment efficiency, supporting the representation theory. Family firms prioritize preserving capital for future generations, influencing their investment decisions and efficiency. Family ownership is positively correlated with investment efficiency, likely due to power distribution among family members and a focus on long-term capital preservation.

Business strategy plays a significant role in organizational structure, resource allocation, and long-term goals. The interaction of different ownership structures with business strategies can impact investment efficiency. The study found that the interaction of business strategy with institutional and managerial ownership does not affect investment efficiency, but it does impact investment efficiency in family-owned companies. Family companies, with their focus on maximizing efficiency and making strategic choices aligned with long-term goals, tend to have higher investment efficiency compared to other ownership structures.

In conclusion, this study highlights the importance of ownership structures and business strategies in influencing investment efficiency. Family ownership, in particular, plays a crucial role in driving investment efficiency through strategic decision-making aligned with long-term goals. The results of this study align with previous research findings and provide valuable insights for companies seeking to optimize their investment strategies.

References

Abdelbaset Queiri, Araby Madbouly, Sameh Reyad, Nizar Dwaikat (2021). Corporate governance, ownership structure, and firms' financial performance: insights from Muscat Securities Market (MSM30). The current issue and full-text archive of this journal are available on Emerald Insight at: https://www.emerald.com/insight/1985-2517.ht.

Akbari, M.; Farkhondeh, M.; and Ayat, Z. (2019).Investigating the Effect of Competition in the Product Market on Financial Performance with Moderators of Disclosure Quality: Firms Listed on the Tehran Stock Exchange. Asset Management and Financing, Vol. 7, No. (24), Volume (1), pp. 29–44.

Alkordi, A., Hamad, A., Thneibat, H., & Elmarzouky, M. (2021). Ownership structure's effect on financial performance: An empirical analysis of Jordanian listed firms. Cogent Business and Management,8(1).https://doi.org/10.1080/23311975.2021.1939930.

Asadi, Leila; Jerjerzadeh, Alireza; and Ka'bAmir, Ahmad (2021). The moderating role of business strategy on the relationship between dimensions of social responsibility and corporate economic performance. Explorations of Business Administration, No. 26, Volume 39, pp. 167-205.

Bahrami, Samaneh, Farhadtoski, and Omid (2021). The relationship between managers' overconfidence and internal financing and

investment efficiency. New research approaches in management and accounting. No. (78), Volume (5), pp. 1–16.

Bano, S., Tahir, F., Abbas, S. K., & Ansari, U. A. (2018). Ownership concentration, corporate governance, and firm performance: Evidence from Pakistan. Indian Journal of Public Health Research & Development, 9(10), 975–983.

Cao, Y., Dong, Y., Lu, Y., & Ma, D. (2020). Does Institutional Ownership Improve Firm Investment Efficiency? Emerging Markets Finance and Trade, 56(12), 2772–2792. https://doi.org/10.1080/1540496X.2018.1486705

F. Ezzi, M. Abida, A. Jarboui(2022). The Mediating Effect of Corporate Governance on the Relationship Between Blockchain Technology and Investment Efficiency - Journal of the Knowledge Economy, 2022 - Springer Received: 22, Accepted: 5 January 2022.pp1-18.

Faraji Bahreghani, Zeinab and Daroghe Hazrati, F. and Abdi Taleb Beigi, H., (1402), The Impact of Managerial Ability on Investment Efficiency, Higher Investment and Lower Investment, 9th International Conference on Management and Accounting Sciences, Tehran.

Hassanzadeh, R.; Badavar Nahandi, Y.; Negahban, L. (2014). The Effect of Financial Constraints and Agency Costs on Investment Efficiency. Financial Accounting Research, No. 19, pp. 89–106.

Kong, X, F Jiang, and L Zhu (Economic Modelling) (2022): Business strategy, corporate social responsibility, and the within-firm pay gap. Economic Modelling. Volume 106, January 2022, 105703 https://doi.org/10.1016/j.econmod.2021.105703.

Kumar, V., Verma, P., Mittal, A., Tuesta Panduro, J.A., Singh, S., Paliwal, M., and Sharma, N.K. (2022), "Adoption of ICTs as an emergent business strategy during and following the COVID-19 crisis: evidence from Indian MSMEs,", Benchmarking: An International Journal, Vol. ahead-of-print No. ahead-of-print.

Lee, L. (2019). Ownership Structure, Governance and Stock Liquidity in Vietnam, submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy, The School of Economics and Finance, QUT Business School, Queensland University of Technology, Brisbane, Australia (6).

Habib, A., & Hasan, M.M. (2017). Business strategy, overvalued equities, and stock price crash risk. Research in International Business and Finance, 39, 389-405.

Li, D., Moshirian, F., Nguyen, P., & Tan, L. W. (2007). Managerial ownership and firm performance: Evidence from China's privatizations. Research in International Business and Finance,21(3),396413.https://doi.org/10.1016/j.ribaf.2007.02.001

Maleki, M.; Safavi Heyer, S.Elmira; Naziri, P. (2020). The role of quality internal control in increasing investment efficiency. Accounting and Management Outlook, Vol. (3), No. 33, pp. 62–72.

Masoumi, S.R.; Nasagaran, M. (2021). The Effect of Management Overconfidence and Free Cash Flow on Firms' Investment Efficiency. Journal of Industrial Management and Engineering, No. 7, pp. 71–82.

Mehrazin, A.R.; Ghabdian, Bashir; Foroutan, Omid; Taghipour, M. (2013). Family Ownership, Non-family Corporate and Profit Management. Audit Knowledge, Vol. (13), No. 52, pp. 1–16.

Momarabadi, M., Ghafourian Tashradi, M., and Davoodi, M. (2019). Investigating the relationship between business strategy and the weakness of internal controls. Research in Accounting and Economic Sciences. Volume 3, Issue 5, pp. 79–86.

Moradi, M.; Jafari, S.M.; and Ehtesham, M. (2018). The Impact of Auditor Expertise in Industry on Investment Efficiency. New Research in Management and Accounting. New Volume, No. (23), pp. 145–166.

Muhammad Aksar, Shoib Hassan, Muhammad Bilal Kayani, Suleman Khan, Tanvir Ahmed(2022) Cash holding and investment efficiency nexus for financially distressed firms: The moderating role of corporate governance. Management Science Letters 12 (2022) 67–74. doi: 10.5267/j.msl.2021.7.001

Muhammad Siddique, Abdul Rasheed (2023). The Impact of Business Strategy on Corporate Ownership and Investment Efficiency. Central European Management Journal, Vol. 31, issue. 1.

Napoleon, Abbas. (2016). Statistical analysis with reviews in accounting and financial management research, Tehran, Termeh Publication.

Naqshbandi, Nader; Three Works, Davood (2022) The Impact of Financial Reporting Quality, Family Ownership and Audit Quality on Investment efficiency. Accounting and Management Outlook. Vol 5, Shanah (69), pp. 72–86. (in Persian).

Park, W., & Byun, C. G. (2022). Effect of Managerial Compensation and Ability on the Relationship between Business Strategy and Firm Value: For Small and Medium-Sized Enterprises (SMEs). In Sustainability (Switzerland) (Vol. 14, Issue 8). https://doi.org/10.3390/su14084689.

Partovi, Parsa; Besharatpour, F. (2021) The Effect of Free Cash Flow on Investment Efficiency Using Panel Generalized Torque Regression. Financial Accounting and Audit Research. No. (50), pp. 33-54.

Pourmousa, Aliakbar, Sharifzadeh Darban, Seti (2021) The effect of firm liquidity on the relationship between financial constraint and investment. Accounting and Management Perspective, Volume (4), No. (39), pp. 53-64.

Quah, H. Haman, J. & Naidu, D. (2021). The effect of stock liquidity on investment efficiency under financing constraints and asymmetric information: Evidence from the United States. Accounting & Finance, 61, 2109-2150.

Rostami, Vahab, Rezaei, Leila, and Bazargani, Zeinab (1400) The Effect of Competition in Product Market and Life Cycle on Firms' Business Strategy with an Emphasis on New Companies. Intelligent Business Management Studies, Allameh Tabataba'i University, Volume 9, Issue 36.

RudiawarniBambang, Felizia Arni, TjahjadiDian Agustia, Noorlailie Soewarno(2022) Business strategy and industrial competition: the case of manufacturing companies. International Journal of Business Environment, vol. 13, No. 1 Published Online: January 5, 2022pp 35-59.

Boubaker, S., VA Dang, andS., Sassi (2022). Competitive pressure and firm investment efficiency: Evidence from corporate employment decisions, European Financial, Vol. 28, Issue 1, pp. 113–161.

Shahzad, F. (2018). Financial reporting quality, family business, and Investment efficiency. Air University, Islamabad.

Shahzad, F., Rehman, I. U., Nawaz, F., & Nawab, N. (2018). Does family control explain why corporate social responsibility affects investment efficiency? Corporate Social Responsibility and Environmental Management, 25(5), 880–888. https://doi.org/10.1002/csr.1504

Shari Anaghiz, Saber; Hassas Yeganeh, Yahya; Sadidi, M.; Narei, Benjamin, (2016) The Relationship between Corporate Governance and its Dimensions with Investment Efficiency of Firms Listed on Tehran Stock Exchange. Experimental Studies of Financial Accounting, No. 52, pp. 1-28.

Tanani, M. & Mohebkhah M. (2014) Investigating the Relationship between Business Strategy and Earnings Quality and Return on Equity in Listed Firms on the Stock Exchange. Empirical Accounting Research. No. 13. pp. 105-127.

Ting, I. W. K., Kweh, Q. L., Lean, H. H., & Ng, J. H. (2016). Ownership structure and firm performance: The role of R&D.Institutions and Economies, 8(4), 1–21.