

-RESEARCH ARTICLE-

THE INFLUENCE OF TAXES ON THE INVESTMENT EFFICIENCY IN THE IRAQ STOCK EXCHANGE CONSIDERING THE COMPANY'S CHARACTERISTICS

Ali Abduladheem Baqer

Post-Graduate Institute for Accounting and Financial Studies,
University of Baghdad, Iraq

ORCID: <https://orcid.org/0009-0009-4227-2059>

Email: ali@pgiafs.uobaghdad.edu.iq

—Abstract—

This research investigates the impact of taxation on investment efficiency within the Iraq Stock Exchange (ISE), with a focus on firm-level characteristics. The dataset comprises information from 35 firms listed on the ISE covering the period 2012 to 2023. The analysis employed multiple linear regression, with hypothesis testing and statistical evaluation conducted using EVIEWS 13. To address the study's aim, the corporate tax rate was applied as the measure of taxation, whereas investment efficiency was assessed through a firm-specific equation reflecting the structural features of companies listed on the ISE. The findings reveal that higher corporate tax rates reduce investment efficiency. Moreover, the analysis shows that firm size and age exert no statistically significant influence on investment efficiency. In contrast, company performance, represented by return on assets and reported losses, is affected by tax rates. The results further suggest that a uniform tax framework may limit investment efficiency, although this restriction is less pronounced for firms with stronger operational outcomes and varies in the case of loss-incurring firms. Based on these results, the study advocates a reassessment of existing tax frameworks. Introducing more adaptable tax measures and enhancing the management of available resources may strengthen investment efficiency in the market and foster broader economic development.

Keywords: Taxation, Investment Efficiency, Company Size, Company Age, Company Performance, Losses.

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INTRODUCTION

Investment is a central driver of economic development, as it interacts with multiple economic variables. Governments frequently employ fiscal policy to attract and stimulate investment through tax incentives and concessions (Islam et al., 2020). For this reason, many states aim to establish a supportive investment climate to draw both domestic and foreign capital. Such an environment facilitates the inflow of financial resources, expertise, and advanced technologies. Within this context, taxation becomes a key fiscal policy tool, shaping the flow of international investment. By aligning tax incentives with corporate tax rates, states can encourage substantial capital inflows (Opoku et al., 2022).

Taxation policy represents one of the most influential fiscal instruments for guiding economic activity and promoting investment. Taxes directly influence capital costs and net returns after taxation, thereby shaping corporate decisions regarding the scale and timing of investment expansion. Iraq's tax framework incorporates both direct and indirect taxes. This study focuses specifically on corporate taxation, a direct tax borne by the company itself (Chugunov et al., 2021). After 2003, significant reforms were introduced, with Order No. 1/2004 fixing the corporate tax rate at 15 percent (Yousif & El-Joumayle, 2024). This reform created a more predictable system, facilitating the analysis of how tax burdens relate to investment efficiency across time. The research is situated in the institutional context of the ISE. Following its post-2003 restructuring and the creation of the Iraqi Securities Commission, the market has been overseen by an independent body modelled on international regulatory frameworks. This institutional reform improved oversight and strengthened the regulatory environment, thus establishing a suitable foundation for examining tax–investment relationships in an emerging market setting (Biro, 2024). Stability in the regulatory structure, combined with the fixed corporate tax rate, allows for a clearer investigation of tax effects on investment efficiency, free from frequent legislative changes that might otherwise obscure empirical findings (Jacob, 2022).

While prior studies have considered investment efficiency in the Iraqi market and examined taxation as a revenue source, limited scholarship integrates the dual perspectives of corporate taxation and company-specific attributes to explain variations in investment efficiency. Understanding this relationship in emerging markets is of particular importance, since it reflects the intersection of public finance, corporate finance, and development economics, with implications for economic diversification and long-term growth. Evidence suggests that corporate taxation exerts greater influence on investment outcomes in emerging economies compared with developed contexts, as weaker institutional capacity and financial constraints magnify the role of taxation. Accordingly, the present study provides both a theoretical and empirical foundation for assessing how Iraq's 15 percent corporate tax rate, within its specific institutional framework, influences investment efficiency on the ISE.

Relevant financial theories offer insights into these dynamics. The trade-off theory highlights how corporate taxation shapes financing and investment behaviour through the valuation of debt tax shields, whereby reductions in corporate tax rates diminish the advantage of debt financing. Theories concerning emerging markets add further dimensions, recognising the challenges of liquidity limitations, institutional weaknesses, and financial frictions. In environments with restricted access to external capital, corporate taxation becomes more decisive because it directly affects internal cash flows essential for sustaining investment. Moreover, institutional quality, including rule of law, regulatory oversight, and corruption control, significantly moderates how tax policies translate into investment efficiency. Weak institutional frameworks reduce the effectiveness of tax policy transmission (Jacob, 2022). This recognition defines the research gap addressed by the present study.

The problem statement is framed through two questions: Does taxation affect investment efficiency within the ISE, and does this influence vary with firm-level characteristics such as size, age, performance, and loss status? To answer these, the study adopts an empirical framework that seeks to balance the objectives of revenue generation with the creation of an enabling investment climate. By exploring these issues, the study clarifies the link between tax policy and investment efficiency in the ISE, offering insights to inform future policy design and laying the foundation for further inquiry. The ultimate aim is to contribute to shaping an investment environment that strengthens market performance. For this purpose, investment efficiency is measured using a standard accounting-based indicator, with the corporate tax rate representing the tax burden. Company attributes, including size, age, performance, and loss condition, are incorporated as moderating and control factors. Additional control variables such as leverage, liquidity, investment opportunities, board independence, and fluctuations in flows, investment, and sales are also considered. By applying this methodological framework, the study addresses a significant gap in the local literature, examining how taxation interacts with company characteristics in a modern institutional setting supported by rigorous statistical analysis.

Research Objectives

The research explores the extent to which taxation influences investment within the ISE by examining how the prevailing corporate tax rate shapes investor decisions. It further aims to formulate recommendations that can enhance the investment climate while maintaining an appropriate balance between generating tax revenues and stimulating market activity. The specific objectives of the study are:

- To analyse the impact of corporate tax rates on the investment efficiency of firms listed on the ISE.
- To assess how firm-specific attributes, namely size, age, performance, and loss

status, influence the relationship between corporate taxation and investment efficiency.

LITERATURE REVIEW

Investment efficiency is generally defined as the capacity of firms to allocate resources towards projects that yield a positive net present value while avoiding both under-investment and over-investment (Alsayegh et al., 2022). Among the factors influencing this efficiency, tax policy, particularly corporate taxation, plays a central role in shaping the cost of capital, which in turn affects the scale and timing of investment decisions. Foundational studies demonstrate that higher tax burdens diminish expected after-tax returns, reducing firms' incentives to invest, especially for those highly sensitive to changes in the marginal cost of capital (Sikes & Verrecchia, 2025). Evidence from developing economies reinforces this view, indicating that elevated tax rates hinder investment efficiency by limiting opportunities for tax avoidance and imposing substantial compliance costs, both of which magnify the negative effects on capital expansion (Rabbi & Almutairi, 2021).

A growing body of research shows that firm-level characteristics moderate the relationship between taxation and investment efficiency. Large firms, due to economies of scale, diversification opportunities, and better access to finance, generally exhibit higher efficiency in their investment choices than smaller firms (Wu et al., 2023). Similarly, longer operational history, accumulated expertise, and enhanced market knowledge contribute to more effective investment decisions. Nevertheless, the magnitude of tax effects varies with firm size and profitability. Smaller or less profitable firms are typically more vulnerable to shifts in taxation than larger or financially stronger firms (Ali & Shabn, 2024). Other findings highlight that firms with high financial leverage face greater tax sensitivity because debt servicing obligations amplify risk exposure (Odhiambo et al., 2025). These insights emphasise the importance of incorporating firm characteristics such as size, age, performance, and loss status into models that investigate the interaction between taxation and investment efficiency. Although much of the empirical literature arises from developed economies, applications in emerging markets are especially valuable given differences in institutional quality, financing limitations, and compliance costs. Studies in these contexts reveal that taxes can erode investment efficiency through effects on compliance, transparency, and financial reporting practices, the strength of which differs across institutional environments (Le et al., 2024). The ISE provides a particularly relevant case for such analysis. Following its restructuring after 2003 and the introduction of a new regulatory framework, the exchange has operated under a fixed 15 percent corporate tax rate since the reforms of 2004. This creates a relatively stable environment in which the long-term implications of taxation on investment efficiency can be assessed within an evolving institutional structure.

Despite some research addressing investment efficiency in Iraq and separate work on the role of taxation in generating public revenue, few studies integrate these perspectives to analyse how corporate taxes interact with firm-specific factors to influence efficiency. This gap underlines the need to examine the relationship directly using data from Iraqi firms listed between 2012 and 2023. The scarcity of local research, compared with the abundance of studies in advanced economies, provides an incentive to investigate whether the mechanisms identified in the international literature apply in Iraq's market environment. Financial theory also contributes to understanding these dynamics, particularly the interplay between dividend policies, capital structure decisions, and taxation. While dividend neutrality is proposed under conditions of perfect markets, the presence of taxation, transaction costs, and information asymmetries complicates this assumption. In such settings, financial policies, including taxation, significantly constrain or enhance investment activity. Theories such as dividend neutrality, the bird-in-hand hypothesis, and the tax-preference view of capital gains provide different perspectives on how taxation influences investor behaviour and firm value. These theoretical positions offer an explanatory framework for variations in investment efficiency across firms and sectors when subject to diverse tax regimes and institutional settings (Tahat et al., 2022).

Global evidence consistently shows that elevated taxation discourages investment and that firm-level characteristics shape the extent of this effect (Xiong et al., 2023). Yet, few studies have rigorously explored this interaction in Iraq, particularly using longitudinal models that account for the post-2003 reform period. The current study therefore seeks to address this gap by analysing the relationship between corporate taxation and investment efficiency in the ISE, explicitly considering the moderating roles of firm size, age, performance, and loss condition. Such an approach not only strengthens the generalisability of the findings but also provides an empirical foundation for tax and investment policymaking in emerging markets. In conclusion, the review highlights three key points: (1) taxation affects investment efficiency through its influence on the cost of capital and after-tax returns; (2) firm characteristics, notably size, age, performance, and capacity to absorb losses, alter the magnitude of this effect; and (3) the institutional framework of post-2003 Iraq, characterised by a fixed corporate tax rate and enhanced regulatory oversight, presents a valuable setting for empirical investigation. The hypotheses and econometric framework of the present study are thus constructed on this theoretical and empirical basis, tailored to the specific conditions of the Iraqi market and the availability of its data.

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The Conceptual Framework of the ISE

Financial markets serve as a channel through which foreign capital inflows are realised and domestic savings are mobilised, subsequently directed towards investments in financial instruments and assets issued by public authorities, governments, and corporations to fund projects over time (Inderst, 2021). In Iraq, the market was initially founded in 1992 under the name Baghdad Stock Exchange (SE). Following the political and institutional changes after 2003, it was renamed the ISE. Under Temporary Law No. 74 issued on 18 April 2004, two institutions were created within the capital market sector: the ISE and the Iraqi Securities Commission. Consequently, the ISE was formally re-established in June 2004 under the supervision

of the Commission, which operates as an independent body modelled on the United States Securities and Exchange Commission (SEC). Since 2005, the ISE has functioned as the sole stock exchange in Iraq (Altaee et al., 2024). The objectives of the ISE can be summarised as follows (Mio et al., 2020):

1. Ensuring that operational standards align with the expectations of investors, thereby enhancing confidence in the market.
2. Safeguarding investor interests by maintaining efficient and trustworthy market operations.
3. Promoting fair and orderly trading in securities.
4. Overseeing member transactions relating to securities services and procedures while defining the rights and responsibilities of the relevant authorities to ensure legal protection.
5. Supporting the capital-raising efforts of companies already listed or preparing for listing.
6. Participating in investment education initiatives to raise awareness among investors regarding opportunities within the stock market.
7. Collecting, analysing, and disseminating data and information to support the goals set out under the governing legislation.
8. Establishing connections with Arab and international markets to advance the development of the Iraqi securities sector.
9. Undertaking additional activities and services necessary to fulfil its institutional objectives.

The Tax System in Iraq

The Iraqi tax framework is shaped by a series of laws introduced at different historical stages, reflecting the nature of the prevailing political systems at the time of their enactment. The structure of taxation plays a critical role in influencing economic development directly, making its continuous evaluation essential to simplify procedures and ensure greater effectiveness (Raheem & Al-Zwainy, 2020). As one of the primary fiscal policy instruments, the tax system embodies the fundamental principles of the society in which it operates. Moreover, it serves as a mechanism for stimulating both domestic and foreign investment, controlling inflationary pressures, enhancing production, and expanding employment opportunities. The Iraqi tax system is composed of two main categories. The first relates to direct taxation, which is borne entirely by the taxpayer and levied on income or property, whether the taxpayer is an individual or a corporate entity. The second relates to indirect taxation, where the burden is transferable to another party, distinguishing it from direct taxation (Al-Khazaali RC, 2024). Within the scope of this study, attention is directed specifically to corporate taxation, a principal component of direct taxes.

Tax Policies Followed to Encourage Investment in the ISE

Taxation influences investment behaviour by altering profit expectations. When profit opportunities are high, the inclination to invest increases, whereas reduced profitability discourages investment. Consequently, taxation functions as a mechanism for directing capital flows; sectors subject to higher tax rates tend to attract less capital, while those with lower rates appear more appealing to investors seeking higher returns. In this sense, taxation is strategically employed as an instrument to guide investment patterns (Beer et al., 2020). In the Iraqi context, an examination of tax policies over specific periods reveals their influence on investment efficiency within the ISE. Corporate tax, as a form of income taxation, occupies a central position in the country's fiscal structure (Kazar, 2023). Historically, the corporate tax rate prior to 2003 ranged between 35 and 50 percent, a level considered excessive and unfavourable for attracting foreign capital to the Iraqi market. Recognising this limitation, the Iraqi Tax Administration undertook significant reforms after 2003. Through Decree No. 1 of 2004, it reduced the corporate income tax rate to 15 percent, applying this uniform rate to limited companies, joint-stock firms, foreign enterprises operating in Iraq, and start-ups permanently established within the country. This policy adjustment was designed to encourage greater investment participation.

Characteristics of Corporate Tax in Iraq

Corporate taxation in Iraq is characterised by several distinct features. First, it is a tax-in-kind, meaning that liability is imposed directly on the company itself, without consideration of the personal circumstances of individual shareholders. Thus, shareholders are not granted the legal exemptions provided under the Income Tax Law, which apply only to natural resident persons. Second, it is levied on an annual basis, with the tax obligation assessed for each twelve-month accounting period. The taxable period corresponds to the financial year in which income is calculated in order to determine the payable amount. Third, it is assessed on net income, whereby the final accounts or income statements prepared by companies form the basis for calculation. Taxable income is established by deducting allowable expenses, as recognised by law, from the total legally acknowledged revenues (Wang, 2022). Fourth, the corporate tax is proportional in nature, applied at a uniform fixed rate. According to current regulations, the applicable rate stands at 15 percent across all categories, including limited companies, private shareholding companies, mixed joint-stock companies, and foreign firms registered in Iraq (Almosawi & Wahaib, 2024).

Dividend Policy and the Market Share

Within financial literature, three divergent theories attempt to explain the link between dividend policy and the market value of firms, alongside the degree to which taxation exerts influence on this relationship (Azekkar et al., 2025). The first is the Neutrality Theory, advanced by Modigliani and Miller, which asserts that dividend pay-outs

have no bearing on either share prices or required rates of return (Ogley, 2022). According to this view, firm value is determined primarily by profit generation capacity (revenue power), derived from the utilisation of assets and the level of financial risk undertaken. This theory rests on several assumptions: capital markets are perfectly efficient, all investors have cost-free and equal access to information on securities, there are no brokerage fees or taxes, and no tax distinctions exist between dividends and capital gains.

Furthermore, investors are assumed to behave rationally, seeking to maximise wealth regardless of whether gains arise from cash distributions or increases in share prices. Under conditions of full certainty, no practical difference is recognised between equity and debt financing, meaning equity alone could serve as the principal funding source. Based on these assumptions, changes in dividend policy are irrelevant to firm valuation, since investors remain indifferent as to whether earnings are retained or distributed. However, in real-world settings, these assumptions are not fully valid because investors incur transaction costs, taxes are unavoidable, and dividend distribution policies demonstrably affect share value, thereby limiting the applicability of Neutrality Theory. As Brigham and Ehrhardt emphasise, the theory's assumptions are flawed when applied outside idealised conditions.

In contrast, the Dividend Preference Theory, often referred to as the Bird-in-Hand theory, is supported by Lintner and Gordon. This perspective suggests that investors favour dividend payments over reinvested earnings, since the risk associated with dividends is perceived as lower than that of uncertain capital gains (Rubio B et al., 2021). Its rationale is grounded in several premises: dividends are assumed to be non-taxable, whether realised as direct distributions or investment profits; both investment returns and required rates of return remain constant, representing the opportunity cost of equity; corporate management is assumed to rely on internal equity financing rather than external borrowing; the firm's growth rate is stable; the required return on equity exceeds the growth rate; and dividend distribution occurs at a fixed proportion of earnings. This reasoning aligns with the proverb "a bird in the hand is better than two in the tree," reflecting the belief that guaranteed dividends are valued more highly than the uncertain promise of future investment returns (Olarinde et al., 2020).

Tax Preference Theory

Building on this reasoning, the Tax Preference Theory argues that investors place greater value on capital gains than on distributed dividends. This preference arises because capital gains represent deferred earnings that are typically subject to lower taxation than dividends. Two principal factors underpin this tendency. First, the timing of taxation creates an advantage: a tax obligation postponed to the future has a lower present cost than an immediate liability, meaning that even if dividends and capital gains are taxed at identical rates, the timing discrepancy results in a relative

advantage for gains. Second, if an investor retains ownership of shares until death, no capital gains tax is applied. Instead, the inheritor may adopt the market value of the share at the time of death as its cost basis, effectively nullifying the tax burden on prior capital appreciation (Heitzman & Lester, 2022).

METHODOLOGY

Research Design and Method

The research employed a descriptive-analytical approach with an inferential dimension to assess the effect of corporate tax rates on investment efficiency while accounting for firm-specific attributes. To test the proposed hypotheses, multiple linear regression models were constructed, incorporating control variables to account for additional factors that could influence the outcomes. The analysis was based on annual data drawn from companies listed on the Iraq Stock Exchange within the study period, which were compiled and processed using the statistical software outlined in the subsequent section.

Study Population and Sample

The study population comprised 35 firms listed on the Iraq Stock Exchange over the period 2012–2023, generating a balanced panel dataset consisting of 420 firm-year observations for each variable under investigation. Inclusion was limited to companies that maintained complete and consistent records of all variables relevant to the analysis throughout the study horizon, thereby ensuring the reliability and integrity of the dataset.

Data Sources and Tools

The dataset was compiled from the published financial statements and annual reports of the listed firms, after which the information was organised and processed using Microsoft Excel. Subsequent statistical analyses and model estimations were conducted through EViews 13, which facilitated the generation of descriptive statistics, the estimation of regression equations, and the execution of diagnostic tests to assess the validity and robustness of the models.

Variables and their Operational Definitions

- **Dependent Variable – Investment Efficiency (INV):** Measured as net investment cash flows for the later year (reverse sign) divided by total assets, consistent with accounting-financial literature.
- **Main Independent Variable - Tax Rate (TR):** The applicable corporate tax rate (a constant 15% according to the Iraqi legal framework after 2004), used as an indicator of the company's tax burden.
- **Firm Characteristics (Changing/Interactive and Controlling Factors):**

- **Size (SIZE):** The natural logarithm of total assets.
- **Age (AGE):** The natural logarithm of the number of years since the company's listing date until the measurement year.
- **Performance (ROA):** Return on assets = net profit/total assets.
- **Losses (LOSS):** A binary variable that takes the value (1) for a loss-making company and (0) otherwise.
- **Other Control Variables:** Financial leverage (total liabilities/total assets), liquidity (cash/total assets), investment opportunities (market value/book value), board independence (percentage of independent directors), cash flow volatility, investment volatility, and sales volatility.

Standard Model and Estimation Plan

Two fundamental models were estimated using the ordinary least squares (OLS) approach, based on annual data for the listed firms (Dodoo et al., 2020).

- Model (1): To Evaluate (H1)

$$INV_{ti} = \alpha + RT\beta_{ti} + \Gamma'Z_{ti} + \varepsilon_{ti}$$

Where INV_{it} is investment efficiency, TR_{ti} is tax rate, and Z_{ti} is vector of control variables (size, age, ROA, losses, leverage, liquidity, investment opportunities, board independence, cash flow/investment/sales volatility).

- Model (2): To Evaluate (H2) by Including Interaction Coefficients

$$INV_{ti} = \alpha + \beta TR_{ti} + \sum_K \delta_k (TR_{ti} \times Char_{k,ti}) + \Gamma'Z_{ti} + \varepsilon_{ti}$$

Where the interaction coefficients specified in the original text include $TR \times SIZE$, $TR \times AGE$, $TR \times ROA$, $TR \times LOSS$ with the same control variables mentioned above.



Figure 1: Conceptual Model

Figure (1) presents the research model, where the independent variable, represented by taxes, is hypothesised to influence investment efficiency in the ISE (Saleem, 2024)

Diagnostic and Model Validation Procedures

The verification plan comprises the following procedures (Kumar, 2023):

- The overall significance of the model was evaluated using the F-statistic, alongside the coefficient of determination (R^2) and adjusted R^2 to assess explanatory power.
- The Durbin–Watson (DW) test was applied to identify potential autocorrelation in the residuals.
- The variance inflation factor (VIF) was employed to detect multicollinearity among the independent variables, following the standard threshold criterion ($VIF < 10$).

ESTIMATIONS

Table 1 presents the descriptive statistics of the variables over the twelve-year study period (2012–2023), with a total of 420 observations recorded for each research variable.

Table 1: Descriptive Statistics of the Study Variables

Variable	Mean	Median	Max	Min	S.D
INV	0.059	0.026	0.772	0.000	0.095
TR	0.055	0.000	0.329	-0.373	0.086
SIZE	22.371	22.382	27.049	19.245	1.376
AGE	3.413	3.332	4.317	2.197	0.376
ROA	-0.028	0.018	0.349	-4.339	0.355
LOSS	0.362	0.000	1.000	0.000	0.481
LEV	0.554	0.225	19.782	0.001	1.464
CASH	0.178	0.103	2.466	-0.048	0.228
MTB	3.267	2.081	561.819	-1,817.272	100.265
IB	0.902	0.882	1.000	0.000	0.113
VCASH	0.070	0.042	1.011	0.000	0.104
VINVEST	0.043	0.011	0.332	0.000	0.063
VSALES	0.125	0.060	2.507	0.000	0.239

- The mean value of investment efficiency (IVN) during the study period was 0.059, with a maximum of 0.772 and a minimum of 0.000, and a standard deviation of 0.095.
- The mean tax rate (TR) was 0.055, ranging from -0.373 to 0.329, with a standard deviation of 0.086.
- The average firm size (SIZE) was 22.371, with values between 19.245 and 27.049, and a standard deviation of 1.376.
- The mean firm age (AGE) was 3.413, with a maximum of 4.317 and a minimum of 2.197, and a standard deviation of 0.376.
- The average return on assets (ROA) was -0.028, ranging from -4.339 to 0.349,

with a standard deviation of 0.355.

- The mean value of the loss variable (LOSS) was 0.362, with values ranging between 0.000 and 1.000, and a standard deviation of 0.481.

Impact of Tax Rates on the Effectiveness of Investments

The study investigated the influence of tax rates on investment efficiency. To test the hypotheses, multiple linear regression analysis was employed, with the results presented in [Table 2](#).

Table 2: Impact of Tax Rates on the Effectiveness of Investments

Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
C	7.232	2.929	2.469	0.014	-
TR	-0.139	0.065	-2.148	0.032	1.492
SIZE	0.001	0.004	0.354	0.724	1.244
AGE	-0.009	0.014	-0.624	0.533	1.393
ROA	0.031	0.020	1.558	0.120	2.390
LOSS	-0.026	0.013	-1.957	0.051	2.062
LEV	0.002	0.005	0.460	0.646	2.209
CASH	-0.021	0.025	-0.868	0.386	1.554
MTB	0.000	0.000	-0.286	0.775	1.022
IB	-0.070	0.044	-1.598	0.111	1.210
VCASH	0.076	0.055	1.381	0.168	1.629
VINVEST	0.338	0.081	4.193	0.000	1.247
VSALES	-0.018	0.020	-0.903	0.367	1.081
R-Squared	0.138	Adjusted R-Squared		0.105	
F-Statistic	4.293	Prob (F-Statistic)		0.000	
Durbin-Watson Stat			1.516		

The statistical analysis in the above table confirms the significance of the model, as the probability value of the F-statistic was less than 0.05 and equal to 0.000, which validates the model and ensures the reliability of its results. The Durbin–Watson statistic recorded a value of 1.567, which falls within the acceptable range of 1.5 to 2.5, indicating the absence of autocorrelation problems and eliminating concerns about spurious regression in the time-series data of the study sample. The R-squared was 0.138, showing that the independent variable explains approximately 14 per cent of the variation in the dependent variable, while the adjusted R-squared was 0.105, indicating an explanatory power of about 11 per cent. The remaining 89 per cent of the variation is attributable to factors outside the scope of the model. The VIF values for the independent variables did not exceed the threshold of 10, with the highest recorded value being 2.390. This confirms the absence of multicollinearity among the independent variables. Furthermore, the probability value of the tax rate variable was 0.032, which is below the 0.05 significance level, thereby supporting the acceptance of the hypothesis. This implies that the tax rate exerts a negative effect on investment efficiency, meaning that higher tax rates reduce investment efficiency among

companies listed on the Iraq Stock Exchange.

Impact of Tax Rate on Investment Efficiency

The effect of the tax rate on investment efficiency was further examined by incorporating company characteristics, namely size, age, performance, and loss status. To evaluate the hypotheses, a multiple linear regression model with interaction terms was estimated, as presented in Table 3. The regression model proved statistically significant, as the probability value of the F-statistic was less than 0.05, recorded at 0.000. This confirms the validity of the model and the reliability of its results. The Durbin–Watson statistic was 1.582, which falls within the acceptable range of 1.5 to 2.5, indicating the absence of autocorrelation and eliminating concerns of spurious regression in the time series of the study sample. The R-squared reached 0.228, suggesting that the independent variables explained approximately 23 percent of the variation in investment efficiency. The adjusted R-squared was 0.191, meaning that 19 percent of the variation was accounted for by the independent variables, while the remaining 81 percent was attributable to factors outside the scope of the model.

Table 3: Impact of Tax Rate on Investment Efficiency Considering the Company's Characteristics

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.830	1.840	1.538	0.152
TR	-0.228	0.729	-0.313	0.760
SIZE	0.006	0.003	2.089	0.061
AGE	-0.021	0.009	-2.419	0.034
ROA	0.015	0.003	4.927	0.001
LOSS	-0.028	0.007	-3.790	0.003
TR*SIZE	-0.010	0.025	-0.392	0.702
TR*AGE	0.075	0.117	0.638	0.537
TR*ROA	0.611	0.228	2.675	0.022
TR*LOSS	0.256	0.070	3.688	0.004
LEV	0.001	0.001	0.947	0.364
CASH	0.001	0.010	0.089	0.931
MTB	0.000	0.000	-0.546	0.596
IB	-0.057	0.034	-1.667	0.124
VCASH	0.012	0.029	0.418	0.684
VINVEST	0.311	0.081	3.827	0.003
VSALES	-0.008	0.010	-0.840	0.419
R-Squared	0.228	Adjusted R-Squared		0.191
F-Statistic	6.129	Prob (F-Statistic)		0.000
Durbin-Watson Stat		1.582		

Further analysis showed that the probability value of the tax rate interaction with company size was greater than 0.05, recorded at 0.702. This led to the rejection of the hypothesis, indicating that company size does not moderate the relationship between

the tax rate and investment efficiency. Similarly, the probability value of the tax rate interaction with company age was 0.537, which is also above the 0.05 threshold, suggesting that firm age has no moderating effect. In contrast, the interaction between the tax rate and company performance (measured by return on assets) produced a probability value of 0.022, which is below the 0.05 threshold. This supports the acceptance of the hypothesis, confirming that firm performance significantly moderates the relationship between taxation and investment efficiency. Likewise, the interaction between the tax rate and loss status was significant, with a probability value of 0.004, leading to hypothesis acceptance. This implies that firms experiencing losses respond differently to tax burdens, which in turn influences their investment efficiency.

RESULTS AND DISCUSSION

The descriptive statistics of the study sample, covering the period 2012–2023 and comprising thirty-five firms with a balanced panel of 420 observations for each variable, indicate that the mean investment efficiency was 0.059, accompanied by notable dispersion, while the average corporate tax rate was 0.055. The table dedicated to descriptive statistics provides further details, including minimum and maximum values, standard deviations, and other distributional properties of the dataset prior to model estimation. To assess the principal hypothesis concerning the effect of corporate taxation on investment efficiency, a multiple linear regression model was employed with the inclusion of relevant control variables. The model yielded statistical significance overall, as confirmed by the F-test, and demonstrated a moderate explanatory capacity. The R^2 stood at 0.138, with an adjusted mean value of 0.105.

The Durbin–Watson statistic recorded a value of 1.516, indicating the absence of problematic autocorrelation among residuals. Multicollinearity diagnostics showed that VIF values were within acceptable thresholds, with the highest observed VIF being 2.390. At the coefficient level, the tax rate was negatively and significantly associated with investment efficiency ($\beta = -0.139$, $p = 0.032$), suggesting that higher tax burdens reduce the efficiency of resource allocation. In addition, investment volatility displayed a positive and significant relationship with investment efficiency, whereas the significance of the other control variables varied within conventional statistical bounds. These results confirm the first hypothesis, supporting the notion of a direct and negative relationship between taxation and investment efficiency. When the regression framework was extended to incorporate moderating effects through interaction terms with firm characteristics, the model's explanatory power improved. The R^2 increased to 0.228, with the adjusted mean at 0.191, while the F-test remained highly significant. The Durbin–Watson statistic rose slightly to 1.582, reinforcing the validity of the diagnostic assumptions.

Under this specification, the direct coefficient of the tax rate lost statistical significance, indicating that its influence is mediated through firm-specific channels. Specifically, the interaction between tax rate and return on assets was positive and significant ($\beta = 0.611$, $p = 0.022$), showing that stronger operating performance can mitigate the adverse impact of taxation on efficiency. Similarly, the interaction between tax rate and losses was also positive and significant ($\beta = 0.256$, $p = 0.004$), reflecting the distinct behaviour of loss-making firms in response to tax burdens. By contrast, the interactions with firm size and age were not statistically significant, implying that these variables do not constitute meaningful moderating mechanisms in this context. Among the non-interacting variables, firm age was negatively and significantly related to investment efficiency, return on assets remained positively significant, losses were negatively significant, and investment volatility continued to exhibit a positive and significant association. These results lend support to the moderating roles of performance and losses, but not to those of size and age, thereby partially validating the second hypothesis.

In summary, the findings indicate that corporate taxation exerts a dampening effect on the efficiency of investment allocation, though this influence is contingent upon firm-specific characteristics, most notably operational performance and the incidence of losses. The evidence further demonstrates that models incorporating interaction terms with firm characteristics provide a more comprehensive and nuanced explanation of the observed variance in investment efficiency than those excluding such factors, while still meeting robustness criteria including R^2 , Durbin–Watson, and VIF. These insights underscore the importance of designing differentiated tax policy measures that account for firm heterogeneity when assessing the impact of corporate taxation on investment efficiency in the Iraq Stock Exchange.

RECOMMENDATIONS

This discussion is framed around the primary objective of the study, namely, to investigate the influence of the corporate tax rate on investment efficiency in the Iraq Stock Exchange during 2012–2023, while testing the moderating roles of firm characteristics (size, age, performance, and losses) through a multiple regression framework supported by control variables and standard diagnostic procedures. The findings are drawn from the statistical outputs of the baseline and extended models, as indicated in the hypothesis-testing tables and validated by diagnostic indicators including the F-test, R^2 , Durbin–Watson statistic, and VIF. The baseline estimations reveal that the corporate tax rate exerts a negative and statistically significant impact on investment efficiency. This indicates that higher tax burdens diminish the ability of firms to channel resources into efficient investment opportunities. The overall model demonstrated high statistical significance, moderate explanatory strength, and no evidence of autocorrelation or multicollinearity, as confirmed by the Durbin–Watson and VIF tests. These results align with the theoretical mechanism in which taxation

affects the cost of capital and net after-tax return, thereby dampening incentives to invest when other factors remain constant.

When interaction terms were introduced, the evidence highlighted that the tax effect operates conditionally, depending on firm-specific characteristics. The interaction of tax with performance (proxied by return on assets) was positive and significant, suggesting that firms with higher operational efficiency are better positioned to counterbalance the negative impact of taxation. Similarly, the interaction of tax with losses was significant and positive, indicating that loss-making firms display a differentiated response to the tax burden compared to profitable firms. By contrast, the interaction of tax with firm size and age yielded no significant results, implying that these characteristics do not provide strong moderating channels in this sample. At the non-interaction level, performance maintained a significant positive relationship with investment efficiency, while losses and firm age displayed negative associations. Investment volatility continued to exert a positive influence. Collectively, these results underscore the necessity of adopting a differentiated perspective when assessing tax impacts, recognising the heterogeneity of firm characteristics. These findings must be interpreted within the context of a relatively stable institutional and fiscal environment. Since the 2004 reforms, Iraq has applied a fixed corporate tax rate of 15 percent, creating a consistent framework for analysis across the study period. The availability of annual data from thirty-five listed companies between 2012 and 2023 enabled a longitudinal assessment of tax-investment linkages within an emerging market, where compliance costs, reporting quality, and institutional capacity differ significantly from those of developed economies.

The evidence suggests that uniform tax designs may constrain investment efficiency, though the extent of the constraint is reduced in firms with strong operational performance and varies among loss-making firms. Consequently, effective policy should move beyond standardised approaches and instead employ a differentiated package of measures tailored to the sensitivity of specific firm segments. At the macroeconomic level, stability in tax regulations, combined with improved enforcement and reduced compliance costs, would help diminish investment-related uncertainty. At the microeconomic level, selective interventions could include incentives for productivity-enhancing investments (for instance, accelerated depreciation or targeted investment allowances) and more flexible rules for handling corporate losses (such as forward and backward carryover provisions). Linking these measures to demonstrable improvements in operational performance may enhance investment discipline while minimising risks of misuse.

In light of the established positive association between performance and investment efficiency, firms are encouraged to prioritise operational efficiency, strengthen working capital management, and reinforce governance in project appraisal and selection, with strict reliance on net present value metrics, robust capital approval

procedures, and comprehensive post-implementation evaluation. The findings also highlight the beneficial role of investment volatility in improving efficiency, provided that the risks are addressed through careful planning, risk management, and transparent disclosure practices. Liquidity and credit risk management are further recommended as supportive tools for mitigating the adverse short-term effects of taxation on investment behaviour. Notwithstanding these insights, the study is subject to limitations. The evidence is restricted to annual panel data from thirty-five firms and employs OLS regression, with investment efficiency measured as the ratio of subsequent-year net investment flows to total assets. These constraints limit generalisability and highlight the need for further research using more advanced panel econometric techniques, such as GMM or scaling methods, to address possible endogeneity and reverse causality. Additionally, expanding the measurement of tax burden to incorporate effective rates and compliance costs, while accounting for sectoral differences, governance structures, and reporting quality, would yield deeper insights. Extending the dataset across time and including responses to regulatory changes would also strengthen causal inference. These limitations, while inherent to the methodological scope adopted here, mark clear avenues for future enquiry.

CONCLUSION

This study examines the influence of the corporate tax rate on investment efficiency in the Iraq Stock Exchange between 2012 and 2023, with particular attention to whether firm characteristics—namely performance, loss status, size, and age—alter this relationship. Multiple linear regression models were employed, incorporating control variables, standard diagnostic tests, and interaction terms to account for conditional channels through which tax effects may operate. The findings indicate that higher corporate tax rates significantly restrict investment efficiency, as heavier tax burdens reduce firms' capacity to allocate resources towards productive projects. Nonetheless, this effect is not uniform across firms. Stronger operating performance was found to alleviate the adverse impact of taxation on efficiency, while firms reporting losses responded differently to the tax burden. Conversely, firm size and age showed no significant moderating influence in this sample. These results align with the theoretical framework that links taxation to the cost of capital and after-tax returns, highlighting the relevance of interactive modelling in explaining efficiency differences across firms. By situating the analysis within an emerging market, the study contributes to the limited body of literature exploring the interaction between tax regimes and investment efficiency, while emphasising the role of firm-specific factors. From a practical standpoint, the evidence suggests that effective tax policy design should adopt a differentiated approach that targets segments most sensitive to tax burdens, while also maintaining policy stability and reducing compliance costs. At the organisational level, the results underscore the importance of enhancing investment governance, improving operational efficiency, and managing financial risks to mitigate tax-induced constraints on investment decisions. The study

acknowledges certain limitations, particularly regarding the scope of variables, methodology, timeframe, and sectoral coverage. These constraints provide a foundation for future research to adopt more robust causal techniques, extend the dataset, and investigate the moderating roles of sectoral variation, governance structures, and disclosure practices. Such developments would not only broaden the applicability of the findings but also strengthen scholarly discourse on the nexus between taxation and capital allocation efficiency.

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