#### Beyond The **Boundaries:** Relevance R&D of Innovation, **Financial** Ratios, and Revenue Diversification Driving in **Business** Growth in **Technology** Firms

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The National Association of Securities Dealers Automated Quotations Stock Market Abstract (NASDAQ) is the world's largest stock market, a significant source of investment in technology companies. Research and development (R&D) is one of the most critical components of the NASDAQ's growth strategy. The purpose of this research is to examine how R&D investment affects business growth, discuss how it relates to critical financial ratios like Return on Equity (ROE) and Return on Assets (ROA), and evaluate the revenue diversification tactics used by NASDAQ-listed technology companies 2018-2022. The results show that ROA positively influences revenue growth, which impacts business growth. However, ROE has no partial effects on business growth, and only one independent variable, the ROA variable, partially affects revenue growth. Further analysis reveals that R&D innovation positively contributes to financial stability, while prudent revenue diversification strategies bolster long-term corporate growth. These findings highlight the importance of effectively combining innovation and financial metrics to enhance business performance. Future research on growth strategies and corporate management in the rapidly advancing technological era can benefit significantly from these findings.

Keywords

R&D Innovation, Financial Ratios, Business Growth, Revenue Diversification

## INTRODUCTION

Technology companies continuously search for methods to set themselves apart from the competition and attain long-term success in today's fiercely competitive (Monteiro, 2019). Technology market companies are at the forefront of innovation in the National Association of Securities Dealers Automated Quotations Stock Market (NASDAQ), where they must push the boundaries of traditional business growth. The significance of maintaining sustainable financial health, implementing prudent revenue diversification strategies, engaging in rapid technological and transformation, fierce competition, and elevated consumer expectations cannot be overstated in the context of research and development (R&D) innovation (O'Connell et al., 2022).

Technology companies listed on the NASDAQ must deal with the complicated problem of combining financial stability, revenue diversification tactics, and innovation to achieve optimal growth. A company's capacity to lead in innovation largely depends on its level of R&D investment, but the specifics of how this relates to revenue diversification strategies and financial health need to be thoroughly addressed (He & Su, 2022). Investment in R&D is proven to be able to significantly increase the innovation and competitiveness of companies. Businesses that make R&D investments have a higher chance of surviving and thriving because they can create new goods and services that provide market advantages (Han et al., 2022). These creative endeavors give rise to competitive advantages and lay the foundation for future technologies (Kang et al., 2019).

Technology companies' business strategies rely heavily on innovation and research and development investments (Tidd & Bessant, 2018). Innovation of cutting-edge products and services as the cornerstone of sustainable corporate growth can only be achieved through efficient research and development (Sarpong et al., 2023). Companies must incorporate research and development (R&D) into their strategy to maintain sustainable competitiveness in an environment where technology is rapidly evolving.

Financial ratios are critical when assessing the performance and economic health of technology companies. These ratios provide important information on liquidity, profitability, solvency and business efficiency. According to (Gitman & Zutter, n.d.), financial ratios provide a reliable picture of the effectiveness of business operations and the profit capacity of assets. Financial ratio analysis, such as ROE and ROA, provides а more thorough understanding of the financial health of a business. In the context of this study, ROE and ROA are expected to offer an important perspective on the relationship between R&D investment and financial performance of NASDAQ technology companies, thus providing a foundation for a deeper understanding of the broader implications of business expansion (Yin et al., 2023).

Revenue diversification is an important strategy for technology companies looking to reduce their dependence on specific products or market segments (Lestari et al., Nugrahanti 2019). 2023; et al., Diversification includes not only the introduction of new goods or services but also the exploration of untapped markets. Tech companies can lower risks and build more stable and durable business models by diversifying their revenue sources. especially in the face of volatile and markets. А changing thorough understanding of these tactics will provide a solid foundation for creating long-term business expansion plans (Herrera & Trujillo-Díaz, 2022).

Technology companies can significantly increase business growth by integrating research and development innovation, financial ratios, and revenue diversification. Through this integration, firms can allocate resources to research and development projects efficiently, thus ensuring innovation efforts are in line with consumer demand 2023). (Sarpong et al., Technology companies can also use financial ratios to evaluate the economic sustainability of their innovation projects and make appropriate resource allocation decisions.

A number of case studies have shed light on the effective integration of financial ratios, revenue diversification, and R&D innovation in enhancing the business growth of technology firms (Liu & He, 2023). Technology companies are more likely to see sustainable growth if they make strategic research and development investments, use financial ratios to track and improve their financial performance, and diversify their revenue streams by entering new markets or providing additional goods and services. The integration of these tactics can also help businesses become more competitive by helping them stay ahead of market trends, create cutting-edge goods and services, and create significant market niches (Li & Jiang, 2016).

In examining the factors that influence business growth, several key variables need to be carefully considered. One of the essential variables is R&D investment, which has been proven to significantly increase innovation and competitiveness of firms (van de Wal et al., 2020). Investment in research and development not only expands a company's business horizon, but also provides a competitive advantage that can strengthen its position in the market. In addition, revenue diversification strategies also play an important role in business growth. (Kral & Janoskova, 2021) asserts that revenue diversification can reduce risk and increase the stability of a company's income, making it a relevant strategy in achieving sustainable growth.

A company's financial health is also a major factor affecting overall business growth. In a study by (Zhabin, 2023), it was found that good financial health provides a strong foundation for a company's long-term growth. Ensuring a company's finances are in solid shape not only creates stability, but also provides flexibility in the face of economic challenges that can come at any time.

By taking a close look at these variables and explaining their relationship with business growth in detail, this article aims to provide a deeper understanding of the key factors that business stakeholders need to consider. As such, this article is expected to make a valuable contribution to the current understanding of promoting sustainable and successful business growth.

# LITERATURE REVIEW AND HYPOTHESIS

# Resource-Based View Theory

Understanding the resources and capabilities of technology companies is aided by applying the Resource-Based View (RBV) theory. RBV emphasizes a company's distinct resources. knowledge, and intangible assets that add to its competitive advantage (Lubis, 2022). RBV emphasizes the significance of technological capabilities, such as patents and competitiveness, in fostering technological innovation in the context of technology-based start-ups (Chatterjee et al., 2023). Furthermore, RBV acknowledges entrepreneurship that positively moderates the relationship between technological competitiveness and innovation, thereby promoting technological innovation (Ahn et al., 2022). Consequently, RBV offers a theoretical framework for investigating how internal elements, like capabilities and resources, can produce a competitive edge and spur technological innovation in technology companies.

## Finance Theory

This theory, which has its roots in corporate finance principles, highlights the significance of financial metrics in evaluating company's health and prospects. а Company performance is gauged by metrics like Return on Equity (ROE) and Return on Assets (ROA). While ROE calculates the return generated for shareholders by dividing net income by shareholders' equity, ROA calculates a company's profitability by dividing net income by total assets. The effect of ROA and ROE on financial performance has been examined in several research. For instance, research indicated that profit growth was positively and significantly impacted by ROA, ROE, and ROI (Panigrahi & Vachhani, 2021). According to (Lewar et al., 2023), another research that looked at the relationship between IPO underpricing and ROA, ROE, and the Price Earnings Ratio (PER) discovered that all three ratios had a significant effect. Furthermore, research that looked into the connection between ROE and industry profitability found a strong one (Kurnia & Filianti, 2021). These results emphasize how crucial ROA and ROE are for evaluating financial performance and projecting future profitability.

### DiversificationTheory

Companies that implement revenue diversification as a business strategy include adding new revenue streams that are unrelated to their primary source of income (Yustvarani & Yuliana, 2020), Technology companies can use this tactic to boost their growth and stability. Its objectives are to lower risks, increase economic productivity, and enhance financial stability and In a market economy, competitiveness. diversification reduces risks, maximizes resource utilization, and enables businesses to respond swiftly to shifting market conditions (Kosala & Heengama, n.d.).

## **HYPOTHESIS**

# *R&D Innovation as a Driver of Business Growth*

Several studies have emphasized how crucial R&D is to fostering innovation and business expansion in technology-intensive industries. Innovations in R&D frequently make it easier to create new goods or services, enabling businesses to enter new markets, grow their clientele, and boost earnings. Innovation in R&D is a significant factor in the expansion of companies.

Research and development spending and high-tech exports have been shown to have a non-linearly positive and significant impact on economic growth (Minviel & Ben Bouheni, 2022). Regardless of the size of product and the company, process innovation are especially useful in boosting business performance (Turnbull et al., n.d.). expenditures are essential for R&D stimulating innovation and increasing market capital invested. Economic growth, competitiveness, the labor market, and the reduction of inequality are all significantly impacted by R&D development (Raychev et al., 2020). Innovation, in conjunction with new and developing technologies, greatly aids in achieving and maintaining a competitive advantage in the product and service industries (McManus, 2020). Thus, generating innovation and investing in R&D crucial for propelling are corporate expansion and gaining a competitive advantage in the marketplace.

# Financial Ratios and Business Growth

A company's financial performance can be evaluated using two financial ratios: return on equity (ROE) and return on assets (ROA). While ROE gauges a company's ability to make money from its capital, ROA

assesses how successful a business is at making money from its assets (Hidayat, n.d.). ROA and ROE can have an impact on the growth of the company's revenue or profits. While some research indicates a positive and significant relationship between ROA and ROE and profit growth, other research suggests no meaningful relationship (Anggraeni & Banani, 2021). In order to increase their revenue growth and financial performance, businesses should be aware of these two financial ratios (Safitri & Mukaram, 2018).

# Revenue Diversification and Business Growth

Multiple research investigations have examined the relationship between revenue diversification and business expansion in technology companies. The research conducted by (Khamidi & Fauzi, n.d.) the impact of examined product diversification on sales volume and turnover. revealing a robust correlation between the two. In their analysis of Samsung's business strategy and diversification tactics, (Wilyanto et al., 2023) emphasized how diversification aided the company in establishing a solid position in the technology sector. A model evaluating the impact of external technology acquisition on firm performance was put forth by (Laila et al., 2019), who emphasized the significance of internal R&D initiatives and absorption capacity. Revenue diversification and business growth in technology companies have been studied in several papers.

#### **Conceptual Framework**

This is the conceptual framework of this research:



Figure 1. Conceptual Framework

#### Research Hypothesis

This is the hypothesis in this research:

H<sub>1</sub>: R&D innovation affects business growth

 $H_2$ : ROA has an impact on business growth

H<sub>3</sub>: ROE affects business growth

 $H_4$ : Income diversification affects business growth

 $H_5$ : R&D Innovation, ROA, ROE, and Revenue Diversification simultaneously affect business growth.

## **RESEARCH METHODS**

An explanatory research approach is combined with a quantitative method of analysis. According to (Sugiyono, 2013), descriptive research aims to elucidate the relationships between the variables under investigation and their respective positions. The secondary data used in this research were gathered through the documentation method, specifically through the collection of annual reports covering 2018-2022. The research's target population consists of NASDAQ-listed technology companies. By establishing specific criteria for sampling, the sampling technique was applied in conjunction with a purposive sampling method, which is non-random sampling. Table 1 displays the sample criteria that are listed below.

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No.	Criteria	Total
1	NASDAQ Sector Technology Companies	593
2	Technology Companies in America	(136)
3	Analyst Rating Strong Buy	(241)
4	Market Capital Mega >200 Billion	(207)
5	Company with the same financial statements	(1)
	Total Data	8

Source: www.nasdaq.com (2023)

The list of businesses included in this research can be seen in Table 2, which displays the companies list based on the criteria mentioned above.

Table 2. Companies List				
No.	Companies List	Code		
1	Apple Inc.	AAPL		
2	Microsoft Corporation	MSFT		
3	Alphabet Inc.	GOOG		

No.	Companies List	Code
4	Nvidia Corporation	NVDA
5	Meta Platforms, Inc.	META
6	Broadcom Inc.	AVGO
7	Adobe Inc.	ADBE
8	Advanced Micro Devices, Inc.	AMD
-	(0000)	

Source: www.nasdaq.com (2023)

# Research Variables *R&D Innovation (X*<sub>1</sub>)

Research and Development (R&D) innovation is crucial in modern societies, particularly in the 21st century. The rapidly changing and turbulent environment demands new and innovative solutions, which require introducing a project approach to management (Korolev et al., 2023). Enterprises with a stable release of new goods and services that fully satisfy the needs of society are of particular innovative value (Csiszárik-Kocsir & Dobos, 2023).

Innovation in research and development (R&D) refers to creating novel products, services, or processes through innovative means. One of the critical elements that can impact a company's future success is its R&D innovation (Yuliana, n.d.). It is computed by dividing total sales by total R&D expenditure.

 $R\&D\ Innovation = \frac{R\&D\ expense}{Total\ Revenue}$ 

# Return on Assets (X<sub>2</sub>)

ROA, a profitability ratio, evaluates how well a company uses its assets to generate net income. It is used to assess how well a company can use the total amount of money invested in its operational activities to profit using its assets (Kasmir, 2016).

$$ROA = \frac{Net \ Income \ after \ Tax}{Total \ Asset} \ x \ 100\%$$

# Return on Equity $(X_3)$

Profitability ratio called return on equity (ROE) is used to assess how well a business uses the capital of its shareholders to produce net income (Kasmir, 2016).

$$ROE = \frac{Net \ Income \ after \ Tax}{Total \ Equity} \ x \ 100\%$$

### Revenue Diversification (X<sub>4</sub>)

By diversifying its sources of income, a company can lower risk by implementing revenue diversification as a business strategy. One way to quantify revenue diversification is to examine the percentage of revenue from different business segments or sources (Palepu et al., 2020).

$$DIV = \frac{Other Segment Revenue}{Total Revenue} X 100\%$$

# Business Growth (Y)

This variable represents a company's overall business growth and performance, which can be assessed using a variety of metrics based on the specific business aspect under investigation. A metric's ability to accurately gauge business growth is contingent upon the business's context, the analysis's goal, and the data at hand. On the other hand, revenue growth is a metric frequently used by numerous organizations to measure business growth and is thought to be effective (Brealey et al., 2014).

*Revenue Growth* =

 $\frac{\text{Last Year's Revenue} - Current Year Revenue}{\text{Last Year's Revenue}} \times 100\%$ 

### Data Analysis Technique Normality Test

A data normality test aims to determine whether or not the independent and dependent variables in a regression model have normal data distributions. Examining the Normality Probability Plot, which contrasts the cumulative distribution from the normal distribution, is a more trustworthy approach. The regression model satisfies the normality assumption if the data spreads around the diagonal line and follows its direction or if the histogram graph displays a typical distribution pattern. Other than that, the Normality test is visible in the Kolmogorov-Smirnov test, where the criteria utilized to make this choice are, according to (Ghozali, 2016). The distribution is normal if the significant value is greater than 0,05, and the non-normal value is less than 0,05.

# Multicollinearity Test

(Ghozali, 2016) states that if the VIF value is less than ten and the independent variables have a tolerance value greater than 0,10, it can be inferred that there is no multicollinearity among the independent variables in the regression model.

#### Heteroscedasticity Test

This test determines whether variance inequality between the residuals of different observations occurs in the regression model. The scatterplot diagram method is the one employed in this research. There is no heteroscedasticity if there are no clear patterns, such as the points spread above and below the number 0 on the Y axis (Kendrik et al., 2019).

#### Autocorrelation Test

The autocorrelation test, according to (Ghozali, 2016), is intended to determine whether there is a correlation between an error in the period t (being) and an error in the period t -1 (prior) in a linear regression model. to put it to the test with the provisions using the Durbin-Watson test. There is no positive or negative autocorrelation if du <dw <4 -du.

#### Multiple Linear Regression Analysis

The relationship between the dependent and independent variables is ascertained in this research by applying the linear regression method. The following is a simple linear regression formula.

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e_i$$

Description:

Y	: Business Growth
а	: Constant
$b_1 - b_4$	: Parameter regression coefficient
	of each variable

X <sub>1</sub>	:	Innovation	R&D

- X<sub>2</sub> : Return On Asset (ROA)
- X<sub>3</sub> : Return On Equity (ROE)
- X<sub>4</sub> : Revenue Diversification (DIV)
- e<sub>i</sub> : Other factors

# Coefficient of Determination (R<sup>2</sup>)

As per (Ghozali, 2016), the coefficient of determination quantifies the extent to which the model can account for the fluctuations in the dependent variable. Between zero and one is the range of the coefficient of determination. A low  $R^2$  value indicates a minimal capacity of independent variables to explain variations in the dependent variable. Values near one show that the independent variables provide practically all of the information required to predict how the dependent variable will vary.

# Simultaneous Hypothesis Testing (F - Test)

This test determines whether the independent variables simultaneously affect

the dependent variable (Ghozali, 2016) states that the calculated  $F_{count} < \text{and } F_{table}$  are compared with the testing criteria to determine whether the proposed hypothesis is accepted or rejected. If  $F_{count} \leq F_{table}$ , then  $H_0$  is obtained  $H_1$  is left at a = 0,05, and if  $F_{count} \geq F_{table}$ , then  $H_0$  is left and  $H_1$  is accepted at a = 0,05.

#### Partial Hypothesis Testing (t-Test)

This test is used to ascertain each independent variable's partial impact on the dependent variable (Ghozali, 2016) states that this test is carried out by combining the  $t_{count}$  and  $t_{table}$ . The test criteria,  $H_0$  is accepted and  $H_1$  is rejected at a = 0,05 if  $t_{count} \le t_{table}$  or  $-t_{count} \le t_{table}$ , and  $H_0$  is rejected and v is accepted at a = 0,05 if  $t_{count} \ge t_{table}$  or  $-t_{count} \ge t_{table}$ .

#### RESULTS AND DISCUSSION Normality Test

Based on Table 3, the Kolmogorov-Smirnov test shows that the variable has a significance value of 0,200, indicating that the data is usually distributed. This can be seen from the value of Asymp.Sig. The 2tailed value of 0,200 is higher than 0,05.

		Unstandardized		
		Residual		
Ν		40		
Normal	Mean	,000000		
Parameters <sup>a,b</sup>	Std. Deviation	,14364827		
Most Extreme	Absolute	,112		
Differences	Positive	,112		
	Negative	-,074		
Test Statistic		,112		
Asymp. Sig. (2	-tailed)	,200 <sup>c,d</sup>		

Table 3. Kolmogorov-Smirnov Test

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

#### Multicollinearity Test

Table 2 demonstrates that the VIF value for every variable is less than 10, and the tolerance value obtained for every variable is more significant than 0,10. Then it can be said that multicollinearity does not exist.

Model		Collinearity	Statistics
		Tolerance	VIF
1	X1_Inovasi_R&D	,560	1,787
	X2_ROA	,644	1,554
	X3_ROE	,436	2,293
	X4 DIV	,883	1,132

Table 4. Multicollinearity test

a. Dependent Variable: Business Growth

#### Heteroscedasticity Test

Figure 3 demonstrates that there is no discernible pattern and that heteroscedasticity does not exist when the points are dispersed above and below the number 0 on the Y-axis.



#### Autocorrelation Test

Table 5 displays the values of du = 1,720, dw = 1,771, 4-du = 2,280 (du < dw < 4-du), where (n = 40 samples and k = 4) independent variables. Thus, it can be said that autocorrelation is absent from the regression equation model.

Table 5. Autocorrelation	on Test
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Model	du<	dw	<4-du
1	1,720	1,771	2,280

Source: Processed Data (2023)

# Multiple Linear Regression Analysis

The multiple linear regression equation is derived as follows using Table 6 as a basis:

$$CapY = -0.058 + 0.332 X_1 + 1.410 X_2$$
$$-0.156 X_3 + 0.176 X_4$$

0,058 is the constant value. This continuous value shows that the value of business growth falls by 0,058 if the independent variables R&D Innovation, ROA, ROE, and DIV are taken as constants or equal to 0.

#### Table 6. Multiple Linear Regression Analysis Test Outcomes

В
-0,058
0,332
1,410
-0,156
0,176

Source: Processed Data (2023)

#### Coefficient of Determination (R<sup>2</sup>)

Table 7 indicates that the Adjusted R Square value is 0,178, or 17,8%, meaning that variations in R&D Innovation, ROA, ROE, and DIV can account for changes in business growth variables, with other factors influencing the remaining 82,2%.

Table 7. Results Coefficient of determination	Table 7.	Results	<b>Coefficient o</b>	of determination
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Model	Adjusted R Square		
1	0,178		
0	-1 D-1- (0000)		

Source: Processed Data (2023)

#### Simultaneous Hypothesis Testing (F-Test)

Table 8 illustrates  $F_{table}$  value is 2,61 with a significant value of 0.05, and the F subcount is 3,111 with a substantial value of 0,027. As a result,  $F_{count} > F_{table}$ , or 3,111> 2,68, indicates that business growth is influenced by R&D innovation, ROA, ROE, and DIV all at the same time.

Table 8	. Results	of F-Test
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Model	Fcount	Ftable	Sig	Standard
Regresi	3,111	2,61	0,027	<0,05
Source: Pro	ocessed D	ata (2023	)	

# Partial Hypothesis Testing (t-Test)

Following data processing with the SPSS software, the following outcomes of the t-test can be obtained:

Table	9.	Results	of	t-Te	est
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Variable	t <sub>count</sub>	t <sub>table</sub>	Sig
R&D	0 564	~1 68385	0 576
Innovation (X <sub>1</sub> )	0,504	<1,00000	0,570
ROA (X <sub>2</sub> )	3,345	>1,68385	0,002
ROE (X <sub>3</sub> )	-1,500	<1,68385	0,143
DIV (X <sub>4</sub> )	1,157	<1,68385	0,138

Source: Processed Data (2023)

# DISCUSSION

# Effect of R&D Innovation on Business Growth

It is evident from the test results conducted for this research that R&D innovation has no bearing on business growth. Revenue growth is unaffected by each 1% increase in R&D innovation, as indicated by the regression coefficient value of 0.332. The significance figure is 0.576 based on the t-test results of  $t_{count} < t_{table}$  (0,564 < 1.68385). This number exceeds the probability value, which is equal to 0.05, or 5%. The interpretation H<sub>1</sub> is accepted when the significance level is 0,576 > 0,05.

However, past research indicates that R&D innovation can significantly impact business growth, especially in technologydriven industries. For example, previous studies like (Han et al., 2022;Sarpong et al., 2023) have found a positive relationship between R&D spending and business performance metrics. In this research, the lack of a significant correlation might be due to the differing industry contexts or the sample size employed. Thus, while our findings do not show a significant positive effect, it is advisable for businesses not to completely disregard R&D investments.

#### Effect of ROA on Business Growth

Regression analysis carried out in this research indicates that ROA positively influences revenue growth, which impacts business growth. The regression coefficient value of 1,410 suggests that profit growth will increase by 1,410 for every 1% increase in ROA. According to the t-test, the probability value, which is 0,05, or 5%, is greater than the result of the  $t_{count}$ >  $t_{table}$  (3,345> 1,68385), where the significance figure is 0,002. If 0.002 <0.05 is the significance level, then the interpretation H<sub>2</sub> is not accepted.

Our results align with previous studies by (Panigrahi & Vachhani, 2021) which demonstrated a strong positive correlation between ROA and business growth. High ROA indicates efficient use of assets to generate profit, which translates to overall business growth. This consistency supports the robustness of our findings and provides a solid basis for businesses focusing on optimizing asset utilization.

#### Effect of ROE on Business Growth

The regression analysis performed in this research clarifies that ROE does not affect revenue growth. Revenue growth and a one percent increase in ROE do not correlate, according to the regression coefficient value of -0,156. The t-test indicates that the computed t value is less than the  $t_{table}$  (-1,500 < 1,68385). The significance number, 0.143, is greater than the probability value, which equals 0,05 or 5%. (0,143> 0,05). If both the significance level of 0,143 > from 0,05 and the  $t_{count}$  criterion <  $t_{table}$ , then H<sub>3</sub> is accepted.

Contrary to expectations, these findings differ from prior research such as (Kurnia & Filianti, 2021), which posited a positive relationship between ROE and business growth. One explanation could be the specific economic context or industry conditions during the data collection period. Further research might be needed to clarify this negative relationship and its potential causes.

# Effect of Revenue Diversification on Business Growth

It is evident from the research's regression analysis that revenue diversification has no bearing on revenue growth. The regression coefficient value of -0,176 indicates no effect on revenue growth for every additional one percent of ROE. Based on the t-test, the calculated t value is smaller than the t sub - table 1,157 < 1.68385). The probability value, equivalent to 0,05 or 5%, is less than the significance figure, which is 0,138 (0,138> 0,05). If the significance level is more significant than 0.05 and the t count criterion is less than the t table, then  $H_4$  is deemed acceptable.

Research (Herrera & Trujillo-Díaz, 2022) found a positive correlation between income diversification and business growth, but this study shows the opposite effect. This inconsistency is in line with the inconclusive results of our study, which suggests that the effect of diversification on business growth may be context-dependent.

Overall, our study sheds light on the varied effects of different financial metrics on business growth, aligning with, contradicting, or expanding upon the findings of previous research. Further investigation and larger sample sizes might be required to validate these findings across different industry settings.

# Effect of R&D Innovation, ROA, ROE, and Revenue Diversification on Business Growth

The results of Table 8 (F-test or simultaneous test) indicate that the significance value is less than 0.05 and the  $F_{count}$  is greater than the  $F_{table}$  (3,111> 2,61). This indicates that the dependent variable is impacted by all independent variables at the same time. According to the adjusted R Square value, the three independent variables have 17,8% business growth 82,2%; however, it's subject to other factors. The adjusted Square value is utilized since more than two independent variables exist in this research. H<sub>5</sub> is approved since the test results demonstrate a simultaneous influence.

#### CONCLUSION

The research aims to determine how the chosen independent variables-R&D Innovation, ROA, ROE, and Revenue Diversification-affect business growth in technology companies listed on the NASDAQ between 2018 and 2022. The test's findings demonstrate that, in contrast to R&D Innovation, ROE, and Revenue Diversification, which have no partial effects on business growth, only one (one) independent variable-the ROA variablehas a partial impact on business growth. Yet, if the test is run concurrently, the dependent variable (business growth) will be impacted simultaneously by all independent variables (R&D Innovation, ROA, ROE, and Revenue Diversification).

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