



The Effect of Financial Microeconomics and Macroeconomics Factors on the Sustainable Growth of the Listed Egyptian Firms

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Abstract

In the world of business, measuring a company's performance is crucial to determine its success. The concept of financial sustainability has become a critical factor for companies aiming to achieve long-term success. The crucial factor in determining a company's financial sustainability is its sustainable growth rate (SGR). In the context of frequent financial crises and the COVID-19 pandemic, the study of factors that may influence firms' sustainable growth rate has become excessively pressing. This research investigated the effect of internal financial decisions, especially investment, financing, dividends, and working capital management along with the impact of macroeconomic factors, especially GDP growth rate, inflation, and interest rate, on firms' sustainable growth rate. The study was conducted on a sample of non-financial firms in the EGX30 index. The study covered the period from 2009 to 2021, which provides an extensive timeline for analysis. This study is crucial for decision makers, policymakers, investors, and stakeholders as it provides valuable insights into the factors that determine the long-term growth and success of non-financial Egyptian listed firms. This research depended on the quantitative research method. Testing the research hypotheses involved regression models. The results indicated that financial leverage, dividends policy, and working capital management showed a significant negative effect, whereas the other variables demonstrated insignificant effects on the sustainable growth rate of the sample under the study. The results suggest that the impact of internal financial decisions and macroeconomic factors on the sustainable growth must be used with care as the effect may differ depending on other contexts and industries. Overall, the results highlight the complexity and variability of factors influencing sustainable growth in different sectors, emphasizing the need for careful consideration and tailored approaches when assessing and promoting sustainable growth across different sectors of business in Egypt. These results suggest that there are additional variables and factors that should be considered when investigating sustainable growth in Egypt, such as firms' profitability, governance, firms' ability to adapt to economic changes, and ownership structure.

Keywords: Financial Sustainability, Sustainable Growth Rate, Investment Decision, Financing Decision, Dividend Decision, Working Capital, Gdp Growth Rate, Inflation, Interest Rate.

Introduction

The measurement of a company's performance to determine its success is an essential aspect of business analysis and evaluation. RL and Mishra (2022) indicated that net profit margin is one of the best metrics of firms' performance. As time passed, the business world became more complex, and criticisms

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have pointed out that profit alone cannot capture the complete picture of a company's performance. Zhou et al. (2022) mentioned that attention is paid to firms' financial sustainable development especially in the context of frequent financial crises and COVID-19 pandemic. Lu et al. (2022) confirmed that during the COVID-19 crisis, firms with strong sustainability were more flexible and less affected regarding financial performance. Radasanu (2015) mentioned that sustainable growth rate (SGR) is a crucial factor in determining a company's long-term financial sustainability. Sustainable Growth Rate is a financial metric that calculates the maximum growth rate a company can achieve without the need for external financing while maintaining a stable financial structure. Sustainable growth is an essential aspect of a firm's long-term success, and investigating the key factors that impact it is crucial for businesses. As recent studies have shown, financial decisions play a significant role in determining a company's sustainable growth rate. Investment decision, financing decision, dividend decision, and working capital management is the most important firms' decisions that influence firms' sustainable growth rate (Zhao et al., 2022; Vuković et al., 2022; Lontchi et al., 2022; Chen et al., 2022; Sunardi, 2021; Nastiti et al., 2019; Nugroho et al., 2018).

For a broader understanding of the factors influencing the sustainable growth of companies, it is crucial to study in a comprehensive way the impact of macroeconomic factors on it. Macroeconomic factors refer to economic indicators that affect the overall performance of an economy. A high level of economic growth refers to the expanding of the economy, which gives a positive indicator for companies and investors. However, high inflation rates can lead to decreasing purchasing power and a decrease in investment and a subsequent decrease in the sustainable growth rate. According to Huy et al. (2021), one of the primary factors affecting the relationship between inflation and firms' sustainable growth rate is investment decision. Liu et al. (2022) confirmed that interest rates have a significant effect on firms' ability to sustain growth. High interest rates increase the cost of borrowing for firms, which can lead to a decrease in investment and output and can negatively impact long-term growth aspects of firms. Therefore, understanding the effect of macro-economic variables on a firm's sustainable growth rate is crucial for firms to make informed financial decisions and maintain their long-term growth prospects.

Briefly, the core objective of this research is to study the effect of the combination of firms' internal financial decisions and macro-economic factors in one model. The analysis was conducted at two levels: first, by examining all firms in the sample to identify overall trends and patterns, and second, by analyzing different sectors within the sample to understand variations across industries as a new contribution of research on sustainable growth rate of Egyptian companies listed in Stocks Exchange Market.

The Main Regression Model is: Theoretical Framework and Literature Review

In the context of financial sustainability, various theories come into play when examining the factors that influence companies' financial decisions and their ability to achieve long-term sustainability. The theories include agency theory, signaling theory, pecking order theory, and trade-off theory. Agency theory focuses on conflicts of interest between shareholders and managers, while Signaling theory explores how companies communicate their financial health to external stakeholders. Concerning the Pecking order theory, it suggests that companies prioritize internal financing over external financing. Finally, the Trade-off theory emphasizes the need for companies to balance between profitability and risk in their capital structure and investment choices.

Nguyen and Nguyen (2021) investigated the effect of debt and dividend policies in mitigating the negative impact of overinvestment on the performance of firms. The study was conducted on non-financial Vietnamese firms listed on the Ho Chi Minh and Hanoi Stock Exchange from 2008 to 2018. The study stated that leverage decisions, dividend policies, and investment policies are the most important financial decisions for a company to determine its performance. The results of the study referred to that overinvestment is negatively associated with firm performance. It revealed that debt and dividend policy moderated the

negative effect of overinvestment on firm performance. Drawing from agency theory, the study emphasized the importance of efficient investment to increase profitability and fulfill firms' commitments to debtholders and shareholders.

Bitok et al. (2021) investigated the impact of financial leverage on the financial sustainability of micro-finance institutions in Kenya. Guided by agency theory, their study spanned from 2010 to 2018, aiming to identify the relationship between financial leverage and the growth of microfinance institutions. The results indicated a positive and significant impact of financial leverage in enhancing the financial sustainability of these institutions. Both descriptive and inferential statistics were employed to analyze the data with the assistance of STATA software.

Hasanuddin et al. (2021) analyzed the effect of the leverage, the liquidity ratio, the investment opportunity set, and firm size on the quality of earnings. The leverage has been measured through debt-to-equity ratio, the liquidity has been measured through current ratio, and the earnings quality has been measured through the portion of income generated from main operating activities. The study has been conducted on seventeen companies related to the food and beverage sector in Indonesia during the period from 2016 till 2019. Their findings revealed that leverage ratio and firm size had no effect on earnings quality, while liquidity and investment opportunity showed a positive impact. According to signaling theory, the study suggested that a high level of leverage indicates a company's preference for debt payment over dividends, providing investors with valuable insight.

Nguyen et al. (2022) investigated the effect of financial crises on the behavior of financing and investment behavior of small and medium-sized enterprises (SMEs). By conducting their research on Vietnam's SMEs from 2008 to 2016, they aimed to shed light on the influence of pecking order theory in this context. This theory suggests that SMEs prioritize internal sources of finance over external ones. The study highlighted the significance of internal finance in influencing SMEs' investment decisions, which aligns with the pecking order theory.

Kalash (2021) examined the relationship between financial leverage and financial performance during the periods of financial distress and currency crisis. The study has been done on two hundred firms listed on the Istanbul Stock Exchange from 2009 to 2019. The results of the study indicated a negative and significant relationship between financial leverage and financial performance, particularly for firms with higher financial distress risk during crisis times. These findings support the trade-off theory, which suggests that increased leverage increases the risk of financial distress and bankruptcy.

In summary, the studies in this field have provided valuable insights into theories surrounding financial sustainability and the impact of financial decisions on a company's financial sustainability. These theories offer a comprehensive framework for understanding financial sustainability and provide guidance for practitioners to enhance business practices for long-term stability and growth.

The following part provides a literature review on financial sustainability and the Sustainable Growth Rate (SGR) along with the derivation of hypotheses for this study, focusing on the role of financial decisions as internal factors and macroeconomic factors as external factors of firms' financial sustainability.

Financial Sustainability

The concept of sustainability has gained significant attention from investors, managers, and researchers in the corporate world. It encompasses various dimensions, including financial sustainability, social participation, and environmental practices. To achieve a sustainable economy, corporations need to prioritize long-term value creation by integrating financial, social, and environmental values. (Blinova et al., 2022; Khaled et al., 2021; Edeigba and Arasanmi, 2021; Purvis et al., 2019; Batista and Francisco, 2018)

Financial sustainability is a pivotal aspect for companies as it is important to identify the influence of firms' financial decisions as well as the effects of macroeconomic factors on firms' financial sustainability. Es-

hov (2020) referred that in global practice, there is no common practice to regulate financial performance and financial sustainability. This poses a challenge in assessing the financial sustainability of companies. Additionally, there is no common record of the factors that affect the value and financial sustainability of the company, so it is important to analyze the indicators that characterize the financial sustainability of companies.

Raza et al. (2020) conducted research that analyzed the non-systematic factors of financial sustainability and financial distress. The study had mentioned that financial sustainability is an integral part of corporate sustainability. It stated that financial sustainability is the long-term compatibility between revenue growth and applicable operational and financial plans. It is necessary that companies should trade-off for the long term between high growth and high financial risk. The study mentioned that sustainable growth rate (SGR) is a very important measure to test the financial sustainability of firms.

Sustainable Growth Rate (SGR)

Duong et al. (2022) studied how the concentration of innovation and ownership affect the financial sustainability of Vietnam energy enterprises. The sample included six hundred observations of 103 energy companies during the period from 2007 to 2020. The study referred to that sustainable gross rate (SGR) stands for financial sustainability, and SGR was represented as comprehensive indicator for financial sustainability.

Osazefua (2020) mentioned that there is a demand from investors to obtain an index or a ratio through which they can be informed of the financial performance and business continuity, in order to avoid making wrong or risky investment decisions. The study suggested that the sustainable growth rate (SGR) serves as a comprehensive measure of financial sustainability.

Mukherjee and Sen (2018) conducted research to find out the determinants of the sustainable growth rate through an empirical study on Indian companies to analyze the relationship between liquidity, profitability, and leverage with the sustainable growth rate of the company. The results of the study revealed that there is a significant positive correlation between liquidity, profitability, and financial leverage as independent variables with the company's sustainable growth rate as a dependent variable for companies in India.

Financial Decisions as an Internal Determinant of Firms' Financial Sustainability

1- Capital Investment Decision "Capital Budgeting"

Poursoleyman et al. (2022) conducted research on investment efficiency as a mediator factor between business sustainability and financial performance of companies. The study was conducted on 3701 companies in developed and emerging countries. The results showed that there is a positive relationship between business sustainability and financial performance through investment efficiency as mediator factor. This relationship is stronger in developed countries than in emerging countries.

Bibiana and Ademijulo (2021) studied the effect of investment decisions on the performance of 20 Nigerian companies listed on Stock Exchange during the period from 2014 to 2019 using least square normal aggregation analysis method. The investment decision is calculated through the amount of new investment to total investment at the beginning of the year. The study revealed a strong positive relationship between investment decision and company sustainable performance.

Meyer and Kiyamaz (2015) examined the impact of sustainability on capital investment decisions and mentioned that there is a need to involve sustainability issues in the capital budgeting process, but many companies pay less attention to sustainability issues in relation to capital investment decisions.

Based on the literature discussed, the first hypothesis in this study is formulated as follows:

H₁: There is a positive significant relationship between the company's capital investment and its sustainable growth rate.

2- Financing Decision “Leverage Decision”

Abdullah and Tursoy (2021) examined the effect of capital structure decision on firms’ performance. The study was conducted on non-financial firms listed in Germany during a period of 23 years from 1993 till 2016. Leverage as independent variable has been measured using total debt to total assets. The results of the study showed a positive relationship between leverage and companies’ performance.

Vukovic et al. (2022) studied the indicators that affected the sustainable growth rate of companies in Eastern Europe during the period from 2016 to 2020. It stated that there is a negative effect of leverage and liquidity on the sustainable growth rate of companies.

Based on the literature discussed, the second hypothesis in this study is formulated as follows:

H₂: There is a negative significant relationship between the company’s financial leverage and its sustainable growth rate.

3- Dividends Decision

Oh and Park (2021) examined the relationship between corporate sustainable management and dividend policy based on the agency and signaling theory. The study focusing on Korea Corporates for the period from 2011 to 2018. The empirical results showed that there is a significantly positive relationship between corporate sustainable management and dividends.

A study on Indonesian capital market during the period from 2010 to 2019 investigated the effect of dividends policy on the profitability-firm value relationship. It was found that there is a positive relationship between firm value and profitability and this relationship becomes stronger with high ratio of dividends. It worthies to be noted that dividends played a moderator role in this relationship in sustainable firms (Akhmadi and Januarsi, 2021).

Sami and Abdallah (2021) examined the relationship between dividend policy and sustainability for the distressed firms in New York exchange stock during the period from 2000 till 2017. It found a positive relationship between dividend policy during periods of loss and firms’ sustainability. The dividends send a positive signal to investor about the firms’ capital future gains.

Based on the literature discussed, the third hypothesis in this study is as follows:

H₃: There is a negative relationship between the company’s dividends policy and its sustainable growth rate.

4- Working Capital Management

Working capital management is a business financial strategy ensuring the effective use of current assets and current liabilities to maintain sufficient cash flow to allow paying short-term operating costs and short-term obligations. The relationship between conservative working capital policy and sustainable growth taking profitability as mediator factor has been investigated in Indonesia during the period from 2013 and 2018. The study of Sunardi (2021) was conducted on 133 manufacturing firms using panel data regression analysis to find out that there is a positive relationship between conservative working capital policy and sustainable growth rate through profitability.

Turgut (2022) conducted research to examine the impact of cash flow forecasting, liquidity management and cash control on financial sustainability of small and medium enterprises. This study has been conducted on 120 SME using regression analysis. The results indicated that 52.5% of variation in the dependent has been explained through independent variables. It stated that cash for a business is like blood for life so effective management of cash is an important challenge for financial managers to ensure financial sustainability.

Uwonda and Okello (2015) examined the impact of cash flow management on the sustainability of small and medium businesses in northern Uganda. The study indicated that most SMEs have low levels of long-term solvency and growth. The study also showed that cash flow control had a significant impact on the sustainability of Uganda's SMEs.

Based on the literature discussed, the fourth hypothesis in this study is as follows:

H₄: There is a positive significant relationship between the company's working capital management and its sustainable growth rate.

Macroeconomics Factors as an External Determinant of Firms' Financial Sustainability

Pieloch-Babiarz et al. (2021) conducted research to study the impact of macroeconomic stabilization on business sustainable development of manufacturing companies. The study was performed on the Central and Eastern European countries during the period from 2008 till 2018 to find out that there was statistically significant relationship between macroeconomic stabilization and sustainable development of corporations specially in Czechia, Poland, and Hungary.

Ibrahim (2020) carried out a study to identify the relationship between macroeconomics factors and bankruptcy of business in 20 developing countries for the period from 2007 till 2019. The findings of the study revealed that the most important macroeconomics factors affecting business in developing countries were GDP, inflation, interest rate, unemployment rate, and corporate tax rate.

Memon et al. (2022) conducted research to study the effect of macroeconomic factors on the financial sustainability of microfinance sector in South Asia. The study was conducted for the period from 1999 to 2017 and used empirical analysis employing a two-stage least squares model. The study revealed that there is a positive relationship between GDP and financial sustainability for microfinance sector, and a negative relationship between other macroeconomic variables such as inflation, interest rate, and foreign investment and financial sustainability of microfinance sector in South Asia.

Adaramola and Dada (2020) examined the influence of inflation and interest rates on the sustainable growth of the Nigerian economy and its impact on Nigerian firms. The research spanned from 1980 to 2018. The results showed that inflation had a negative significant effect on sustainable economic growth, while interest rates had a positive and significant impact.

According to Ashraf and Shen (2019), fluctuations in interest rates can greatly affect the cost of borrowing for businesses. Higher interest rates make borrowing more expensive, limiting firms' access to capital and hampering their growth and development. Conversely, lower interest rates can stimulate borrowing and investment, leading to increased business economic growth. However, the influence of interest rates on borrowing costs varies across sectors and industries, depending on factors like business nature, risk level, and access to alternative financing.

In a study by Benson et al. (2022), the effect of macroeconomic variables on the financial sustainability of listed companies in South Africa was examined. The study focused on three key macroeconomic variables: Gross Domestic Product (GDP), inflation rate, and interest rate. The findings indicated that these variables had a notable impact on the financial sustainability of listed companies in South Africa. Namely, GDP was found to be positively correlated with profitability, while inflation rate had a negative correlation with profitability, and interest rate was positively correlated with liquidity. The study suggested that South African companies should closely monitor these macroeconomic variables as they can significantly affect their financial performance and sustainability.

Based on the aforementioned argument, the following hypotheses regarding the relationship between macroeconomic factors and Egyptian listed firms' sustainable growth are formulated:

H₅: There is a significant positive relationship between Gross Domestic Product (GDP) growth rate and companies' sustainable growth rate.

H₆: There is a significant negative relationship between inflation and companies' sustainable growth rate.

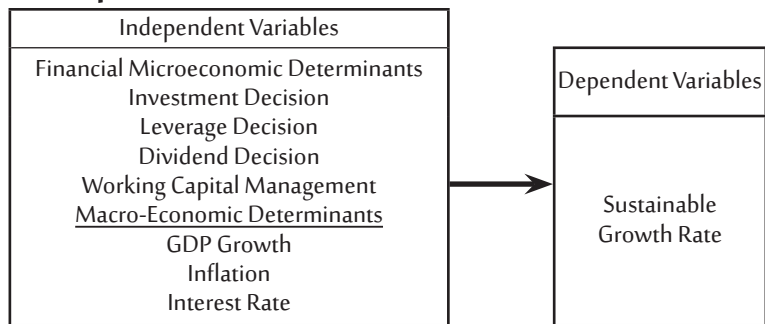
H₇: There is a significant negative relationship between interest rate and companies' sustainable growth rate.

All the theories discussed earlier, along with the extensive and thorough review of existing research and literature conducted led eventually to the development of a conceptual model that illustrates how financial and economic factors affect a company's sustainable growth rate (SGR). By testing the relationship between these variables, the research aims to provide a clearer understanding of how internal financial decisions and macroeconomic conditions work together to support sustainable growth and resilience for companies over time. This framework is intended to guide future studies and help organizations make informed strategic decisions for their long-term success.

Research Justifications

The research problem of the study is centered around the concept of financial sustainability, which has gained significant importance in the modern economy. Traditionally, financial stability was assessed through metrics like capital adequacy, profitability, and liquidity. However, the focus has now shifted towards financial sustainability as a key indicator of a corporation's financial health.

Conceptual Model



The measurement of a company's performance is very crucial to evaluate its success. Profits have remained the most common measure of companies' performance for a long time. As time passed, the business world became more complex, and criticisms have pointed out that profit alone cannot capture the complete picture of a company's performance. Profit-based measurements are appropriate only for incentivizing short-term thinking. Zhou et al. (2022) mentioned that attention is paid to firms' financial sustainable development especially in the context of frequent financial crises and COVID-19 pandemic. According to Radasanu (2015), sustainable growth rate is a crucial factor in determining a company's long-term financial sustainability. A company that is growing too fast without sufficient financial resources may become financially unstable, and a company that is not growing fast enough may lose expansion opportunities and, thus, shrink. Understanding the factors affecting the sustainable growth rate (SGR) is essential for companies to maintain long-term financial sustainability and make appropriate decisions about their growth strategy.

Research Objective

The main objective of this research is to investigate the role of financial decisions in achieving financial sustainability. The study will specifically analyze the impact of financial decisions on the financial sustainable growth rate of Egyptian listed companies in the Egyptian Exchange Market. By examining the impact of these internal financial decisions, the research aims to determine their influence on the long-term growth of these companies. Additionally, the study will evaluate the effect of macroeconomic factors on the sustainable growth rate of Egyptian companies. This analysis will generate a comprehensive understanding of the internal and external determinants of a company's financial sustainability in Egyptian companies.

Research Design

In this research, the action research strategy is employed as it is the most appropriate research strategy, along with the deductive method. The method of data collection in this research is to review the available data collected from secondary resources, so the best ontology to be followed is realism, and positivism is the best epistemology. The quantitative approach is a powerful tool for exploring research problems and answering research questions. Quantitative continuous data is the best data suitable for this research because quantitative continuous data is a type of data that is used to measure and analyze the relationship between variables over time.

Research Variables

Independent variables will be grouped into two main categories. The first category contains the Financial Microeconomics Determinants which are Investment Decision, Leverage Decision, Dividend Decision, and Working Capital Management. The second category contains External Macroeconomics Determinants which are GDP growth, Inflation, and Interest Rate. The dependent variable (Sustainable Growth) will be measured by sustainable growth rate (SGR) of Egyptian companies listed in Egyptian stock exchange.

Measurement of Variables

1- Dependent Variable

The dependent variable in the research is sustainable growth rate (SGR) of Egyptian companies listed in Egyptian Exchange Market. According to (Higgins, 1977; Mukherjee and Sen, 2018), calculating the sustainable growth rate involves multiplying the return on equity by the retention ratio as follows:

$$SGR = ROE \times PR$$

Where, ROE is return on equity and PR is profit retention ratio (1–Dividend Payout Ratio)

2- Independent Variables

The independent variables in this research are classified into two main categories: Financial Microeconomics Determinants and External Macroeconomics Determinants.

A- Financial Microeconomics Determinants

- **Investment Decision:** The investment decision is calculated through the amount of new investment to total investment at the beginning of the year (Bibiana and Ademijulo, 2021), and calculated as follows: $DLA/A = \text{Change in long term asset} / \text{beginning of year total assets}$
- **Leverage Decision:** According to Akhtar et al. (2022), Oanh et al. (2021), and others leverage is calculated through debt-to-equity ratio, and calculated as follows:
 $\text{Debt-To-Equity (D/E)} = \text{Company's total liabilities} / \text{shareholders' equity}$
- **Dividend Decision:** According to Arora et al. (2018), Rahim and Munir (2018) dividend decision is calculated through dividend payout ratio as follows:
 $\text{Dividend Decision: Dividends Pay Out (DPO)} = \text{Dividend per share} / \text{Earning per share}$
- **Working Capital Management:** According to Ishak et al. (2020), Seth et al. (2021), Rahim (2017), and Ceylan (2021) working capital management is calculated through current ratio as follows:
 $\text{Working Capital Management: Current Ratio (CR)} = CA / CL$

B- External Macroeconomics Determinants

- **GDP growth:** According to Baum and Lake (2003) and Bornmann et al. (2021), one commonly used formula to measure GDP growth rate is the percentage change method, which calculates the growth rate by comparing the current GDP with the previous period's GDP, according to the following formula: $[(GDP_t - GDP_{t-1}) / GDP_{t-1}] \times 100$.

- **Inflation:** According to Rich and Steindel (2007) consumer price indexes (CPI) play a critical role in measuring inflation. The measurement of inflation in this research is through changes in consumer price indexes (CPI)
- **Interest Rate:** According to Akbar et al. (2019), Isiksal et al. (2019), Morina et al. (2020) the nominal interest is the best measure for interest rate. This study uses nominal interest rates as a measurement of interest rates.

Population

The population of study focuses on companies listed in the EGX 30 index, which includes the top thirty companies on the Egyptian Stock Exchange in terms of their market capitalization and liquidity. These companies are considered the key players in the financial market as their performance reflect the overall trend of the Egyptian stock market.

Sample

The researchers used the non-probability sampling approach to select the sample used in the study. The sample excluded the non-financial firms belonging to the EGX30 index at the end of 2021. The exclusion of the financial firms from the sample is due to the increasing leverage in these types of firms making them incompatible with other firms in the nonfinancial sectors (Foerster and Sapp, 2005). The sample under the study includes listed companies that are active throughout the research period from 2009 to 2021. This selection process resulted in sixteen active companies throughout the study period. These companies belong to nine sectors as shown below.

Sectors

- Communications, Media & Information Technology.
- Food, Beverages, & Tobacco.
- Transport & Freight Services.
- Services, Industrial Products & Cars.
- Energy & Support Services Sector.
- Real Estate.
- Contracting & Engineering Constructions.
- Textiles & Durable Goods.
- Essential Resources Sector.

Data Collection Procedures

The secondary data specific to the sample of Egyptian listed firms has been taken from the published annual financial reports and complemented with data extracted from companies' website and checked through the published data on EGX Website. The data related to the macroeconomic factors were collected from the website of Central Bank of Egypt and the website of World Bank.

Sampling Unit

The study covers 13 years from 2009 till 2021, this period provides an extensive timeline for the analysis of the impact of companies' internal and external determinants of financial sustainability of the sample of Egyptian non-financial firms. Over this period, there have been significant shifts in the political climate and macroeconomic environment of Egypt, which may have a major influence on the sustainable growth rate of these companies. Therefore, studying the impact of financial decisions as well as the impact of macroeconomics variables on the sustainable growth rate of companies listed in the Egyptian Stock Exchange during this period enrich the importance and results of the research.

In this case, the panel type of data analysis has been utilized. As discussed by Bell and Jones (2015), panel data analysis allows for the examination of data collected over time on the same subjects. It enables

researchers to study the changes and variations within a sample over time by including both time-series and cross-sectional dimensions of the data. This methodology is particularly useful when dealing with data that have repeated observations on the same entities, such as companies.

Data Analysis

The main regression model is:

$$SGR = \alpha + \beta_1 \left(\frac{DLA}{A}\right) + \beta_2 \left(\frac{D}{E}\right) + \beta_3 (DPR) + \beta_4 (CR) + \beta_5 GDP\ Growth + \beta_6 INT + \beta_7 INF + Et$$

Where α is the regression constant and $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ are regression coefficients.

In this research, the relationship that will be investigated is the relation between numerous independent variables and one dependent variable (target variable) and the collected panel data in the form of ratios. Therefore, it will be interpreted through the multiple regression analysis method and descriptive statistics. The same analytical tools have been used in numerous research studies (Suriyankietkaew, 2022; Ramzan and Qureshi, 2022; Rinanda, 2022; Turgut, 2022; Manullang and Hutabarat, 2020; Romus et al., 2020).

Results & Discussion

Descriptive Analysis

Table 1 presents the descriptive analysis of research variables, including the mean, minimum, maximum, and standard deviation. The Sustainable Growth Rate has a mean value of 8.40% with a standard deviation of 19.49%. The minimum and maximum values are -64% and 136.5%, respectively. The negative value suggests a decline in growth for some companies, while the maximum value indicates exceptional growth rates achieved by certain companies. The significant range between these values raises questions about the factors influencing sustainable growth. One possible factor is the observed differences across various sectors.

In addition, the mean value of Capital Investment is 4.09% with a standard deviation of 13.83% and minimum and maximum values of -42.3% and 145.9% respectively sheds light on the range of potential outcomes and the level of volatility within the capital investment landscape, illustrating the potential for both negative and positive returns.

The text discusses the findings of a study on financial leverage in companies. The mean financial leverage ratio is reported as 164.56%, indicating a relatively high reliance on debt for financing. The standard deviation of 152.94% suggests significant variation in leverage ratios among the companies. The range between the minimum (8.56%) and maximum (839.74%) suggests that there are companies with an extremely high level of financial leverage. The wide range between the minimum and maximum values highlights the diversity of leverage practices.

The average dividend payout ratio for companies is 60.31%, indicating that they distribute this percentage of their earnings to shareholders. The standard deviation of 43.19% shows the variability in dividend payout ratios among different companies. Some companies may have negative dividend payout ratios, indicating they do not distribute dividends or return capital to shareholders. On the other hand, some companies are exceptionally generous, with a maximum payout ratio of 376.6%.

The average Working Capital Management value is 197.45%, indicating that the company has a relatively high proportion of current assets tied up in working capital. There is significant variability in working capital management, with a standard deviation of 160.53%. This suggests that some companies are more efficient in managing their working capital, while others struggle to optimize their asset and liability levels. The wide range of values highlights significant differences in how companies manage their working capital, which can impact their financial health and operational efficiency.

Moreover, the mean value of GDP Growth Rate is 3.81% with a standard deviation of 1.21% with minimum and maximum values of 1.8 and 5.6%, respectively. Unlike the previously mentioned variables, GDP does not have such fluctuations, which means that it might not be correlated with sustainable growth rates.

Furthermore, the mean value of Inflation in Egypt is recorded at 11.284% with a standard deviation of 5.66%. This means that the average rate of price increase in the country over a given period of time is 11.284%. However, it is important to note that there is significant variability in these inflation rates, as indicated by the standard deviation of 5.66%. This suggests that the actual inflation rates experienced in Egypt can deviate quite significantly from the mean value. The minimum and maximum values of inflation are recorded at 4.66% and 29.76% respectively, highlighting the wide range of inflation rates observed in the country. These high variations in inflation can be attributed to the economic and political instability that Egypt has experienced in research period. Such instability can lead to fluctuations in prices, making it difficult to predict and stabilize inflation rates.

Similarly, the mean value of Interest Rate in Egypt is calculated to be 12.89% with a standard deviation of 2.75%. This indicates that the average rate of interest charged on loans and credit in the country is 12.89%. However, as with inflation, there is considerable variability in these interest rates, as evidenced by the standard deviation of 2.75%. The minimum and maximum values of interest rates are reported to be 9.4% and 19.2% respectively, illustrating the wide range of interest rates prevailing in Egypt. The fluctuations in interest rates can be attributed to the economic and political instability that the country has experienced in the research period. Such instability can impact on the cost of borrowing, leading to fluctuations in interest rates.

Table 1 - Descriptive Analysis for Research Variables:

	Minimum	Maximum	Mean	Std. Deviation
Sustainable Growth Rate	-64%	136.5%	8.4%	19.4%
Capital Investment	-42.3%	145.9%	4%	13.8%
Financial Leverage	8.5%	839.7%	164.5%	152.9%
Dividends Policy	-0.9%	376.6%	60.3%	43.1%
Working Capital Management	45.7%	1000%	197.4%	160.5%
GDP Growth Rate	1.8%	5.6%	3.81%	1.2%
Inflation	4.6%	29.7%	11.2%	5.6%
Interest Rate	9.4%	19.2%	12.8%	2.7%

Regression Analysis

Testing the research hypotheses and results discussion will be done first at the level of all firms in the sample, then will be done at the sectoral levels.

1- Results Discussion at the Level of All Firms in the Sample

In this section, focusing on the application of regression analysis and the comparison between fixed effects and random effects models using the Hausman test.

Through the analysis, the Hausman test shows a significant effect of the random model rather than the fixed model for the overall sample under study. However, using the Hausman test on the sectoral level, it was observed that the fixed model shows a significant effect.

Table 2 presents the regression results for the research hypotheses. The findings indicate that there is an insignificant effect of capital investment on the sustainable growth rate, with a p-value of 0.2409 (p-value > 0.05). This result challenges the commonly held belief that capital investment directly leads to firms' sustainable growth. However, it aligns with the study conducted by Bibiana and Ademijulo (2021), which suggests that the relationship between capital investment and growth is not straightforward and depends on several factors, such as the efficiency of allocated investment and the quality of institutions. In countries with weak governance structures and inefficient allocation of investment, capital investment may not necessarily result in significant growth.

On the other hand, the regression analysis reveals a significant negative effect of Financial Leverage on Sustainable Growth Rate, with a p-value of 0.0077 (p-value < 0.05) and a coefficient of -0.0261259. These results are consistent with previous studies conducted by Mamilla (2019), Samo and Murad (2019), Nor et al. (2020), Akhtar et al. (2022), and Vukovic et al. (2022). They suggest that higher financial leverage is

associated with a lower sustainable growth rate. In other words, companies with high levels of debt may face challenges in sustaining their growth.

Furthermore, the analysis demonstrates a significant negative effect of Dividends Policy on Sustainable Growth Rate, with a p-value of 0.0004 (p-value < 0.05) and a coefficient of -0.1168732. This implies that higher dividends can hinder a company's ability to sustain its growth rate. These findings support the results of previous studies conducted by Kanakriyah (2020), Akhmadi and Januarsi (2021), Sami and Abdallah (2021), and Islam et al. (2022).

In contrast, the regression results indicate an insignificant positive effect of Working Capital Management on Sustainable Growth Rate, with a p-value of 0.2577 (p-value > 0.05) and a coefficient of 0.0103985. This finding is consistent with previous studies conducted by Mamilla (2019) and Nastiti et al. (2019), which also found no significant relationship between working capital management and sustainable growth rate.

Moreover, the analysis reveals an insignificant effect of GDP Growth Rate on Sustainable Growth Rate, with a p-value of 0.3557 (p-value > 0.05). This lack of significance may be attributed to the high political and economic fluctuations that occurred in Egypt during the period under study. Similarly, the analysis shows an insignificant effect of Inflation on Sustainable Growth Rate, with a p-value of 0.5408 (p-value > 0.05). Again, the high political and economic fluctuations in Egypt during the study period could explain this result. Lastly, the analysis indicates an insignificant effect of Interest Rate on Sustainable Growth Rate, with a p-value of 0.3079 (p-value > 0.05). Like the previous variables, the high political and economic fluctuations in Egypt during the study period may have contributed to this lack of significance.

Also, the R Square is 0.107, which means that 10.7 % of the variation of the Firms' Sustainable Growth Rate can be explained by this model. This means that there are other factors that might affect Firms' Sustainable Growth Rate, which are not included in the model. Such as firms' profitability, governance, firms' ability to adapt to economic changes, and ownership structure. Such factors could be more important for Egypt in the period under study.

The regression equation is estimated as follows:

$$\text{Sustainable Growth Rate} = 0.032736 + 0.116241 * \text{Capital Investment} - 0.026125 * \text{Financial Leverage} - 0.116873 * \text{Dividends Policy} + 0.010398 * \text{Working Capital Management} + 1.143551 * \text{GDP Growth Rate} + 0.1648198 * \text{Inflation} + 0.5991587 * \text{Interest Rate}$$

Table 3 presents the fixed versus random effect analysis that was conducted using the Hausman test. The results indicated that the P-value for the Hausman test was 0.1578 (P-value > 0.05), suggesting that the random effect model is the more suitable choice for the effect of Financial Decisions and Macroeconomic Factors on Firms' Sustainable Growth Rate. Regarding working capital management, the fixed effect model is the more suitable option. It could also be observed that there is a significant negative effect of Financial Leverage, Dividends Policy, and working capital management on Sustainable Growth Rate, as the corresponding P-value is less than 0.05, while there is an insignificant effect of Capital Investment, GDP Growth Rate, Inflation, and Interest Rate. It is recommended to carefully consider and manage the financial

Table 2: Regression of Internal Financial Determinants and External Macroeconomic Determinants on Sustainable Growth Rate

Dependent Variable: Sustainable Growth Rate				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032736	0.071190	0.459846	0.6461
Capital Investment	0.116241	0.098816	1.176338	0.2409
Financial Leverage	-0.026125	0.009697	-2.694171	0.0077
Dividends Policy	-0.116873	0.032619	-3.582928	0.0004
Working Capital Management	0.010398	0.009160	1.135114	0.2577
GDP Growth Rate	1.143551	1.235318	0.925714	0.3557
Inflation	0.164819	0.269045	0.612609	0.5408
Interest Rate	0.599158	0.586103	1.022275	0.3079
R-squared			0.107709	
Adjusted R-squared			0.076478	
F-statistic			3.448875	
Prob(F-statistic)			0.001654	

leverage, dividends policy, and working capital management of a company to promote sustainable growth. The negative effect suggests that excessive financial leverage and dividends can hinder the ability of a firm to sustain its growth rate. This implies that companies should balance leveraging their finances and distributing dividends to shareholders, with efficient working capital management, while considering the impact on their long-term growth prospects.

Table 3: Hausman Test for Fixed versus Random Effect of Internal Financial Determinants and External Macroeconomic Determinants on Sustainable Growth Rate

Variable	Fixed Effect		Random Effect		Hausman Test
	Coefficient	Prob.	Coefficient	Prob.	
C	0.124749	0.0739	0.079774	0.2522	0.1578
Capital Investment	0.082486	0.3879	0.093678	0.318	
Financial Leverage	-0.049243	0.0021	-0.037094	0.0018	
Dividends Policy	-0.108088	0.033624	-0.113247	0.0005	
Working Capital Management	-0.01972	0.011547	-0.005108	0.6122	
GDP Growth Rate	1.44686	1.137836	1.305389	0.2523	
Inflation	0.156317	0.248491	0.165623	0.505	
Interest Rate	0.529201	0.546099	0.553449	0.3078	

The results at the level of all firms indicate that financial leverage, dividend policy, and working capital management each have a significant negative effect on the sustainable growth rate of Egyptian firms listed on the Egyptian Stock Exchange and belonging to the EGX30 Index. Additionally, investment decision, GDP growth rate, inflation, and interest rate have insignificant effects on the sustainable growth rate of Egyptian listed firms belonging to the EGX30 Index. The research variables explain approximately 10.7% of the variation in the sustainable growth rate of Egyptian listed firms.

Table 4 provides a summary of the main results obtained as response to the research hypotheses.

Table 4: Summary of Research Hypotheses Results

Description	Result
H ₁ "There is a positive significant relationship between the company's capital investment and its sustainable growth rate"	Not Supported
H ₂ "There is a negative significant relationship between the company's financial leverage and its sustainable growth rate"	Supported
H ₃ "There is a negative significant relationship between the company's dividends policy and its sustainable growth rate"	Supported
H ₄ "There is a positive significant relationship between the company's working capital management and its sustainable growth rate"	Not Supported
H ₅ "There is a positive significant relationship between GDP growth rate and companies' sustainable growth rate"	Not Supported
H ₆ "There is a negative significant relationship between inflation and companies' sustainable growth rate"	Not Supported
H ₇ "There is a negative significant relationship between Interest Rate and companies' sustainable growth rate"	Not Supported

The results showed that there is no significant relationship between capital investment and firms' sustainable growth rate. Previous studies have produced contrasting results on this topic. Poursoleyman et al. (2022) and Karagu and Okibo (2014) found a positive significant relationship. However, Bibiana and Ademijulo (2021) and Mamilla (2019) found a negative significant relationship. The relationship between capital investment and firms' sustainable growth rate is not straightforward and depends on factors such as the efficiency of allocated investment. In countries with weak governance structures and inefficient allocation of investment, capital investment may not necessarily lead to significant growth.

The results stated that there is a negative significant relationship between financial leverage and firms' sustainable growth rate, as supported by (Akhtar et al., 2022; Vukovic et al., 2022; Nor et al., 2020; Mamilla, 2019; Samo and Murad, 2019). High financial leverage can hinder a firm's long-term growth prospects. However, Radasanu (2015) and Abdullah and Tursoy (2021) have found a positive significant relationship, indicating the need for further investigation. The negative relationship between financial leverage and sustainable growth can be attributed to factors such as increased interest costs, higher financial risk, reduced attractiveness to investors, limited flexibility, and the presence of interest obligations. The trade-off between debt financing and long-term growth potential is highlighted, emphasizing the importance of managing debt levels for sustainable growth.

The analysis of the results revealed negative significant relationship between the dividend payout ratio and Egyptian listed firms' sustainable growth rate during the period from 2009 till 2021. This outcome is in line with the findings of (Islam et al., 2022; Akhmadi and Januarsi, 2021; Sami and Abdallah, 2021; Kana-kriyah, 2020), whereas (Isnurhadi et al., 2022; Ramli et al., 2022; Li et al., 2022; Abdi et al., 2022; Mamilla, 2019) discovered a positive significant relationship between dividend payout ratio and firms' sustainable growth rate. The results of this study concluded that when a company pays out a significant portion of its profit as dividends, it may have limited funds available for research and development, capital investment necessary for expansion, innovation, and market expansion, which are critical for long-term growth. This finding suggests that companies in Egypt face a trade-off between paying dividends to shareholders and having retained earnings to invest in growth opportunities. The negative relationship between the dividend payout ratio and sustainable growth rate highlights the importance of carefully managing dividend policies to ensure long-term growth and financial sustainability for Egyptian listed firms.

The findings of this study revealed a significant negative relationship between working capital management, specifically in the form of current ratio, and the Egyptian listed firms' sustainable growth rate. This outcome is consistent with research conducted by (Vukovic et al., 2022; Seth et al., 2021; Mathuva, 2015). However, it is worth noting that contrasting results were obtained by (Alvarez et al., 2021; Meyer and Kiy-maz, 2015; Uwonda and Okello, 2015; Sharma and Kumar, 2011) These studies reported a positive significant relationship between working capital management and firms' sustainable growth rate. In contrast (Mamilla, 2019; Nastiti et al., 2019) found no significant relationship between the two variables.

Working capital is an essential component of a firm's financial health and liquidity. However, an excessive or inefficient allocation of working capital can have adverse effects on a company's growth prospects. The negative significant relationship between working capital and Egyptian listed firms' sustainable growth rate may be attributed to various factors, like the firm's inefficiency in accounts receivable collection, a significant portion of funds is tied up in current assets such as inventory or accounts receivable so limits the availability of capital for investment in long-term projects. This reduction of liquidity can restrict the firm's ability to expand its operations or investments in new projects. Furthermore, a surplus of working capital may indicate that the firm is not efficiently managing its resources. Therefore, it becomes crucial for Egyptian listed firms to streamline their working capital management strategies, improve accounts receivable collection processes, and ensure optimal allocation of funds to drive sustainable growth in the long run.

This study examined the relationship between certain economic indicators and the sustainable growth rate of firms listed in Egyptian Stocks Exchange during the period from 2009 to 2021 and revealing an interesting finding. The analysis has indicated that there exists an insignificant positive correlation between the GDP growth rate, inflation, and interest rate, and the sustainable growth rate of these firms. This implies that while there may be some level of association between these factors, the strength of the relationship is weak and does not hold much statistical significance. These findings challenge the commonly held belief that these economic indicators directly influence the growth and performance of businesses. During this period, Egypt witnessed political and economic fluctuations, including high inflation and substantial changes in interest rates, which affected the stability and effectiveness of economic policies and its effect on firms' sustainable growth. Other factors such as firms' profitability, governance, ownership structure, and firms' ability to adapt to economic and political changes may have a more significant influence on the growth of Egyptian listed firms.

2- Results Discussion at the Sectoral Level

In this section, focusing on the application of regression analysis for the sectors under study. Table 5 shows the regression analysis for the nine sectors under study, these nine sectors as follows:

- First Sector: Communications, Media, and Information Technology

- Second Sector: Food, Beverages, and Tobacco
- Third Sector: Transport and Freight Services
- Fourth Sector: Services, Industrial Products and Cars
- Fifth Sector: Energy and Support Services Sector
- Sixth Sector: Real Estate
- Seventh Sector: Contracting and Engineering Constructions
- Eighth Sector: Textiles and Durable Goods
- Ninth Sector: Essential Resources Sector

The following results have been extracted according to the regression analysis for each sector, as shown in table 5:

The regression analysis of the first sector, namely Communications, Media, and Information Technology revealed a significant negative effect of Dividends Policy on Sustainable Growth Rate. Other variables did not have a significant effect. The R Square value of 0.989 suggests that 98% of the variation in sustainable growth rate can be explained by the model, indicating its effectiveness in explaining growth patterns. In analyzing the results for the sector, this finding highlights the importance of considering the impact of dividend policies on the long-term growth prospects of companies within this sector. Furthermore, it is crucial to acknowledge the context in which these results were obtained. The sector under study experienced substantial development prior to the period under investigation. This noteworthy growth can be attributed to the dominance of the main company in this sector, namely Telecom Egypt, which played a pivotal role in shaping the sector's dynamics because of its robust and well-established infrastructure.

The regression analysis of the second sector, namely Food, Beverages, and Tobacco indicated that there is no significant effect for all variables on Sustainable Growth Rate. Also, R Square is 0.489, which means that almost 49% of the variation of sustainable growth rate can be explained by this model. The types of companies operating in this sector, as major suppliers of food and tobacco, can shed light on the competitive dynamics within the sector as explanatory of that. Furthermore, there are other factors that might affect firms' sustainable growth rate, which are not included in the model. Such factors might be firms' profitability, governance, firms' ability to adapt to economic changes, and ownership structure.

The regression analysis of the third sector, namely Transport and Freight Services indicated that there is a significant positive effect of financial leverage, working capital management, and inflation on sustainable growth rate. There is a significant negative effect of dividends policy on sustainable growth rate, and other variables have no significant effect. The Transport and Freight Services Sector stands out with an impressive R Square value of 0.988. This means that a staggering 98% of the variation in the sustainable growth rate within this sector can be accounted for by the model. The reason behind this clear interpretation lies in the unique circumstances surrounding this sector, where it represents a basic commodity with a remarkably favorable competitive position. This finding underscores the importance of considering sector-specific factors when analyzing and modeling growth rates within different industries.

The regression analysis of the fourth sector, namely Services, Industrial Products and Cars indicated that there is no significant effect for all variables on Sustainable Growth Rate. R Square is 0.172, which means that 17.2% of the variation of the Sustainable Growth Rate can be explained by this model. The types of companies operating in this sector, as major suppliers of industrial products and providers of cars, can shed light on the competitive dynamics within the sector. Overall, while the initial study did not find a significant effect on firms' sustainable growth rate, further investigation is needed to uncover the full range of factors that influence growth in this sector.

The regression analysis of the fifth sector, namely Energy and Support Services indicated that there is no significant effect for all variables on Sustainable Growth Rate. R Square is 0.489, which means that 48.9% of the variation of the Sustainable Growth Rate can be explained by this model. The fluctuation in energy prices during the period under analysis and its potential impact on the sustainable growth of firms

in this sector can shed light on other factors not included in the model that might affect firms' sustainable growth rate, such as company-specific strategies and market conditions.

The regression analysis of the sixth sector, namely Real Estate indicated that there is a significant positive effect of Capital Investment on Sustainable Growth Rate, there is a significant positive effect of financial leverage on Sustainable Growth Rate, there is a significant negative effect of Dividends Policy on Sustainable Growth Rate, there is a significant positive effect of Working Capital Management on Sustainable Growth Rate, and other variables has no significant effect. R Square and the significant relationship between independent variables and dependent variable provide valuable insights into the predictive power and effectiveness of the model in explaining the Sustainable Growth Rate in the Real Estate sector in Egypt. In this case, R Square of 0.522 indicates that approximately 52.2% of the variation in the Sustainable Growth Rate can be accounted for by the model. This suggests that the model captures a significant portion of the factors influencing the Sustainable Growth Rate in the Real Estate sector in Egypt. The results indicated that investing more capital into the real estate sector's operations can expand their resources, enhance productivity, and be ready for new opportunities, all of which contribute to sustainable growth. On the other hand, prioritizing dividend payments over reinvesting profit in the company's expansion and development can hinder the firm's ability to achieve sustainable growth. Therefore, it is crucial for real estate firms in Egypt to balance between dividend payments and reinvestment to maximize their sustainable growth potential.

The regression analysis of the seventh sector, namely Contracting and Engineering Constructions indicated that there is a significant negative effect of Capital Investment on Sustainable Growth Rate, and other variables have no significant effect. R Square is 0.841, which means that 84.1% of the variation of the Sustainable Growth Rate can be explained by this model. It is crucial to stress the importance of efficiency when it comes to choosing capital investments. Simply pouring large sums of money into various projects without careful consideration and evaluation can lead to wasteful spending and hinder sustainable growth. Therefore, striking a balance between capital investment and other key factors of sustainable growth, while ensuring efficient allocation of resources, is crucial for achieving long-term economic development and prosperity.

The regression analysis of the eighth sector, namely Textiles and Durable Goods indicated that there is a significant negative effect of Dividends Policy on Sustainable Growth Rate, and other variables have no significant effect. R Square is 0.949, which means that 94.9% of the variation of the Sustainable Growth Rate can be explained by this model. The effect is shown in only one variable which is dividend policy, and such policy is dominant for this sector of textiles. This interpretation suggests that the dividend policy has a substantial impact on the sustainable growth of textile businesses, and it is crucial for stakeholders in the industry to consider this factor when making strategic decisions.

The regression analysis of the ninth sector, namely Essential Resources indicated that there is a significant negative effect of Financial Leverage on Sustainable Growth Rate, and other variables have no significant effect. R Square value of 0.358 provides insight into the explanatory power of the model utilized in analyzing the Sustainable Growth Rate. It highlights the influence of financial leverage as the dominant variable and underscores its significance within the Essential Resources sector, which encompasses capital-intensive industries such as fertilizing, steel, and petrochemicals. Also, highlight that there are other factors that may affect the sustainable growth rate in this sector.

When examining the level of sectors, the R-square value increased significantly as shown above indicating a higher explanatory power of the selected variables for the sectors' sustainable growth. The dividend payout ratio consistently demonstrated a significant negative effect on the level of all firms and on the level of different sectors. This means that when companies allocate a higher proportion of their earnings to dividends, it has a detrimental effect on the sectors' sustainable growth. However, it is important to note that the significance of other factors and their direction varied between the level of all non-financial firms and sectors

level, as well as across different sectors. This suggests that the impact of financial decisions and macroeconomics factors on Egyptian listed firms' sustainable growth is not uniform and can differ depending on the specific context and industry. Overall, these results highlight the complexity and variability of factors influencing sustainable growth in different sectors, emphasizing the need for careful consideration and tailored approaches when assessing and promoting sustainable growth across different sectors of business in Egypt.

Conclusion

The entire study investigated the impact of internal financial determinants and the effect of external macroeconomic determinants on the sustainable growth of a sample of non-financial Egyptian firms listed on the Stock Exchange Market. The analysis considered various variables, including capital investment, financial leverage, dividends policy, working capital management, GDP growth rate, inflation, and interest rate. This study conducted a **two-level analysis** for the determinants of the **sustainable growth rate**. First, it analyzed all firms in the sample to identify the overall trends and patterns. Second, it analyzed different sectors within the sample to understand how these trends and patterns vary across industries. The empirical results indicate that there is an insignificant effect of capital investment on the sustainable growth rate of Egyptian listed firms at the level of all firms. There is an insignificant effect of capital investment on the sustainable growth rate of firms in all sectors, except for the Real Estate sector where there is a positive significant relationship.

However, in the Contracting and Engineering Constructions sector, there is a negative significant relationship. There is a significant negative impact of financial leverage on the sustainable growth rate of Egyptian listed firms at the level of all firms. Additionally, a significant negative impact relationship was found in the Essential Resources sector. In contrast, there is a significant positive impact relationship in the transportation and freight services sector. Moreover, there is a significant negative impact of the dividends payout ratio on the sustainable growth rate of Egyptian listed firms at the level of all firms. Furthermore, there is also a significant negative impact relationship in the following sectors:

- Communications, Media, and Information Technology
- Transport and Freight Services
- Real Estate sector
- Textiles and Durable Goods Sectors

Table 5: The Regression Analysis for the Nine Sectors Under Study:

Dependent Variable Sustainable Growth Rate										
Sector	First		Second		Third		Fourth		Fifth	
Variable	Coeff	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.
C	0.078	0.0557	-0.142	0.4666	-0.050	0.7757	0.052	0.8966	0.402	0.5353
Capital Investment	-0.009	0.8618	0.161	0.5377	-0.009	0.9757	-0.071	0.9500	-2.500	0.8314
Financial Leverage	0.032	0.1300	0.101	0.2049	0.850	0.0123	-0.120	0.1653	-0.689	0.2434
Dividends Policy	-0.109	0.0009	-0.058	0.0838	-0.543	0.0001	-0.101	0.6177	0.221	0.2143
Working Capital	0.009	0.3894	0.029	0.7248	0.051	0.0183	-0.054	0.6375	-0.110	0.1969
GDP Growth Rate	0.304	0.2785	1.716	0.3472	-2.347	0.2977	0.809	0.8894	0.029	0.9949
Inflation	0.036	0.6790	-0.862	0.0586	1.240	0.0249	0.053	0.9655	0.153	0.9059
Interest Rate	-0.083	0.5151	1.161	0.1952	1.135	0.2634	2.668	0.3261	0.344	0.9216
R-squared	0.989		0.489		0.988		0.172		0.489	
Adjusted R-squared	0.974		0.291		0.970		-0.150		-0.227	
F-statistic	66.01		2.463		57.176		0.534		0.683	
Prob (F-statistic)	0.000		0.058		0.000		0.797		0.689	
Sector	Sixth		Seventh		Eighth		Ninth			
Variable	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.		
C	-0.145	0.0678	-0.298	0.8374	0.053	0.5184	-0.011	0.7807		
Capital Investment	0.162	0.0267	-3.339	0.0166	0.035	0.6648	0.105	0.5668		
Financial Leverage	0.035	0.0125	-0.037	0.7445	0.024	0.5191	-0.036	0.0104		
Dividends Policy	-0.139	0.0027	0.866	0.0818	-0.096	0.0126	0.032	0.6660		
Working Capital	0.071	0.0054	-0.159	0.8583	0.019	0.5750	-0.005	0.7570		
GDP Growth Rate	1.605	0.2250	-1.142	0.9208	0.164	0.6828	0.473	0.7646		
Inflation	0.414	0.1793	-2.593	0.2547	-0.032	0.7809	0.099	0.7738		
Interest Rate	-0.028	0.9633	4.875	0.2495	-0.008	0.9818	0.588	0.4418		
R-squared	0.522		0.841		0.950		0.358			
Adjusted R-squared	0.446		0.619		0.879		0.211			
F-statistic	6.865		3.782		13.47		2.473			
Prob (F-statistic)	0.000		0.081		0.006		0.039			

Further there is a significant negative effect of working capital management on sustainable growth rate at the level of all firms of sample. However, in the Transport and Freight Services sector there is a significant positive relationship between working capital management and sustainable growth rate.

In addition, there are insignificant effects of each of GDP Growth Rate, Inflation, and Interest Rate on firms' Sustainable Growth Rate on the level of all firms. There are insignificant effects of each of GDP Growth Rate, Inflation, and Interest Rate on firms' Sustainable Growth Rate across all sectors, except in Real Estate sector there is a significant positive effect for GDP growth rate on its firms' sustainable growth rate, and in Transport and Freight Services sector there is a significant positive effect for Inflation on its firms' sustainable growth rate.

This study provides valuable insights into the factors influencing the sustainable growth rate of non-financial Egyptian listed firms. By conducting empirical research, the study has shed light on the impacts of various factors on the sustainable growth rate of these firms. The findings reveal that several factors, including capital investment, financial leverage, dividend payout ratio, and working capital management, all play a crucial role in shaping the growth prospects of Egyptian listed firms. However, it is important to highlight the significance of considering sector-specific relationships when analyzing the impacts of these factors, as the effects may vary across different sectors. The overall trend observed in the study indicates a positive but insignificant relationship between capital investment and sustainable growth in Egyptian listed firms. On the other hand, the study reveals that each of the dividend payout ratio, financial leverage, and working capital management has a significant negative impact on firms' sustainable growth. This suggests that a higher dividend payout ratio, increased financial leverage, or ineffective working capital management practices can hinder the long-term growth prospects of Egyptian listed firms. It is crucial for these firms to carefully manage these factors to ensure sustainable growth and financial stability. Furthermore, the study also examined the effects of macroeconomic factors on firms' sustainable growth. The results indicate that GDP growth, inflation, and interest rates have an insignificant effect on the sustainable growth of Egyptian listed firms. This suggests that these macroeconomic factors may not be the primary drivers of growth for these firms, and internal factors have a more prominent role in shaping their growth prospects.

Recommendations

The research recommends that capital investment opportunities should be accompanied by careful evaluation. Firms should reconsider their dividend policies and focus on retaining earnings for reinvestment in the business. Firms need to manage their financial leverage carefully to avoid taking on too much debt which can lead to financial distress. On one hand, it is recommended that Egyptian non-financial firms diversify their sources of funding and explore alternative financing options, such as venture capital, additional equity, or strategic partnerships, which can provide them with the necessary resources to foster sustainable growth. On the other hand, it is important for firms to optimize and improve their working capital management practices, such as inventory management, accounts receivable, and accounts payable, to enhance their overall efficiency and promote sustainable growth.

These recommendations can serve as valuable insights for both academic researchers and practitioners in the field of financial management and can contribute to the development of effective strategies for sustainable growth in Egyptian listed firms.

Limitations and Future Research

The findings revealed that more variables need to be incorporated into the study in order to be able to find out more factors that may have an impact on a firm's sustainable growth rate, yet they were not included in the model. This highlights the need for further research to identify and encompass these additional

factors in future research. Some of the potential factors that might affect a firm's sustainable growth rate include its profitability, governance practices, ability to adapt to economic changes, and ownership structure. Firms' profitability can play a significant role in their ability to sustain growth over time. Similarly, effective governance practices and a clear ownership structure can contribute to a firm's long-term success. Considering both the internal financial determinants and other internal non-financial factors related to governance and ownership would help researchers and executives to have a more informed and comprehensive view and assist them in making more enlightened decisions to foster sustainable growth.

This study, conducted in Egypt between 2009 and 2021, holds great significance as it coincided with a period of exceptional political and economic turbulences and transitions in the country. These events may have impacts on companies operating in Egypt. Therefore, it is recommended for future research to study the effect of these events on firms' financial sustainability and examine firms' ability to adapt to political and economic changes. By doing so, a more comprehensive assessment of the factors influencing financial sustainability can be conducted.

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