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IMPACT OF FINANCIAL DETERMINANTS ON THE COMMERCIAL PERFORMANCE OF BUSINESSES: THE CASE OF ALGERIAN SMEs

A B S T R A C T

The purpose of the research - is to examine the influence of financial determinants - such as liquidity, debt structure, long-term financing, and firm size - on the commercial performance of companies, particularly measured through revenue turnover.

The methodology of the research - in order to analyze our case, we used panel data modeling for 58 companies over a period of five years from 2017 to 2021.

The practical importance of the research - lies in the presentation of a practical model that can serve as a reference for the Algerian economy, as it is based on a significant sample and uses various variables that illustrate the case.

The results of the research - through our study, we found that financial determinants play a key role in determining the commercial performance of companies, and that they have a direct and positive impact on revenue turnover.

The originality and scientific novelty of the research - our study follows a multidisciplinary approach, whereas most research often separates financial management (capital structure, access to credit, cash flow management...) from commercial performance (turnover, growth, market share...). We have attempted to connect the two concepts and present the relationship between them using an original econometric analysis based on panel data.

Keywords: financial determinants, commercial performance, businesses, panel data, return on assets, Algeria.

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INTRODUCTION

Financial theory has long defined business objectives around revenue growth, market share expansion, and cost reduction. However, over the decades, the focus has shifted toward a more fundamental goal: value creation and the maximization of shareholder wealth. This strategic orientation relies on key decisions regarding investment, financing, and profit distribution, all of which directly influence the overall performance of the firm, particularly in its commercial dimension. Indeed, the ability to generate sales, retain customers, and establish a strong market presence is closely tied to internal financial management and the quality of decision-making at this level.

Financial analysis, through indicators such as ROA, ROE, working capital requirements, and debt ratios, serves as a central tool in assessing a firm's commercial health. This topic has been explored in several empirical studies. (4, p.1-12) using a multiple linear regression model, analyzed the impact of various financial ratios (debt, self-financing, working capital) on financial profitability, revealing significant correlations. Similarly (6, p. 89-100), based on a sample of 130 Congolese companies, demonstrated that certain elements of the financial structure, such as short-term debt and asset tangibility, positively influence financial performance. (12), in her study on Romanian companies, highlighted the effect of capital structure components on ROE and ROA. These studies converge on a common conclusion: financial management is not an end in itself, but rather a decisive lever for enhancing both economic and commercial performance.

This raises a central research question: To what extent do financial indicators derived from financial analysis influence a company's commercial performance?

From this perspective, it becomes relevant to examine the links between internal financial decisions and a company's ability to perform commercially. The present study thus aims to empirically analyze the impact of certain financial levers on commercial performance, in order to identify the most decisive financial variables for business competitiveness in an increasingly demanding environment.

Methodology

To design our econometric model, we opted for a panel data model, as it allows us to analyze both the temporal and individual dimensions. To build our database,we collected accounting data from the financial statements (balance sheets and income statements) of 58 companies over a period spanning from 2017 to 2021.

The variable we aim to analyze, also referred to as the dependent variable, is commercial performance. This is measured by capital turnover; an indicator that evaluates how efficiently a company uses its assets to generate sales or revenue. Capital turnover thus provides a clear picture of a company's ability to generate income based on its investments in assets, whether tangible or intangible. It is expressed by the following formula:

Capital Turnover (CT) = Revenue / Invested Capital (Total Assets)

Based on previous research, it is established that several factors have a significant impact on the financial performance of companies. Below, we present some of the variables we have chosen to conduct our study, depending on the data available to us:

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Table 1.

Descriptive Analysis of the Series

Variable	Formula	Signification
ROA	$\dfrac{Net\ income}{Total\ assets}$	It evaluates the company's ability to generate profits from its assets.
Liquidity	$\dfrac{Current\ assets}{Current\ liabilities}$	It assesses the amount of quickly convertible assets that a company holds to meet its short-term obligations.
Size	log (Revenue)	We use the natural logarithm of revenue as a variable to measure the size of the company.
Medium-and Long-Term Debt Ratio	$\dfrac{MTL}{Total\ liabilities}$	It relative to total liabilities. It reveals the extent to which the company is financed through these debts.
Short term debit ratio	$\dfrac{STD}{Total\ d'actif}$	It measures the proportion of a company's total assets that is financed by short-term liabilities.
Operating Cash Flow	OCF = Net Income + Depreciation and Amortization	Cash flow from operations is a company's ability to generate internal resources to finance its operating and development needs on its own.

Econometric Tests
Descriptive Analysis

Before proceeding with the estimation of our econometric model, it is essential to review some preliminary characteristics of the data, as highlighted by the descriptive analysis. The following table presents a summary of the results obtained (See the appendix 01):

The Capital Turnover indicator (RC) has an average of 1.138, indicating a low risk coverage on average among the companies studied. However, the values vary significantly, ranging from 0 to 72.76, with a high standard deviation (4.58), a pronounced right skewness (skewness = 13.85), and a very flat distribution (kurtosis = 210.52), suggesting the presence of extreme values. Regarding the self-financing capacity (CAF), the average is 17.31, with moderate dispersion (standard deviation = 7.84). The values range from 0 to 24.13, and the distribution is slightly left-skewed (skewness = -1.64), indicating a concentration around high CAF values. For short-term debt, the average is 3.03, but with very high variability (standard deviation = 42.16), ranging from 0 to 718.28. The skewness (skewness = 16.91) and kurtosis (kurtosis = 287.48) show that the data are concentrated around low levels, with some companies heavily indebted. Regarding medium- and long-term debt, the average is low (0.146), with a maximum of 4.31. The standard deviation is moderate (0.31), but there are significant skewness (skewness = 9.04) and extreme values (kurtosis = 118.95). The average liquidity level is 2.15, but it varies considerably between 0 and 18.31, signaling companies in cash flow crises or with excess liquidity. The standard deviation is 3.24, and the right skewness (skewness = 3.40) highlights this heterogeneity. The performance indicator shows an average of 6.52%, with variations from -0.16 to 2.70, indicating loss situations for some companies. The dispersion remains moderate (standard deviation = 0.2158), but the skewness (skewness = 9.59) and kurtosis (kurtosis = 108.45) suggest a concentration around low values, with some cases being highly performant. Finally, the size of the companies, measured by the logarithmic mean of 9.39, indicates that most of the companies are large. The distribution is left-skewed (skewness = -2.05), with a standard deviation of 0.65 and high kurtosis (9.45), reflecting the presence of extreme cases in the sample.

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Correlation Analysis

The Pearson correlation matrix shows the type of relationship between two variables. These bivariate correlations are used to determine the nature, direction, and significance of the bivariate relationship between the variables in this study. The result is as follows (See the appendix 02):

The Capital Turnover indicator (RC) has an average of 1.138, indicating a low- risk coverage on average among the companies studied. However, the values vary significantly, ranging from 0 to 72.76, with a high standard deviation (4.58), a pronounced right skewness (skewness = 13.85), and a very flat distribution (kurtosis = 210.52), suggesting the presence of extreme values. Regarding the self-financing capacity (CAF), the average is 17.31, with moderate dispersion (standard deviation = 7.84). The values range from 0 to 24.13, and the distribution is slightly left-skewed (skewness = -1.64), indicating a concentration around high CAF values. For short-term debt, the average is 3.03, but with very high variability (standard deviation = 42.16), ranging from 0 to 718.28. The skewness (skewness = 16.91) and kurtosis (kurtosis = 287.48) show that the data are concentrated around low levels, with some companies heavily indebted. Regarding medium- and long-term debt, the average is low (0.146), with a maximum of 4.31. The standard deviation is moderate (0.31), but there are significant skewness (skewness = 9.04) and extreme values (kurtosis = 118.95). The average liquidity level is 2.15, but it varies considerably between 0 and 18.31, signaling companies in cash flow crises or with excess liquidity. The standard deviation is 3.24, and the right skewness (skewness = 3.40) highlights this heterogeneity. The performance indicator shows an average of 6.52%, with variations from -0.16 to 2.70, indicating loss situations for some companies. The dispersion remains moderate (standard deviation = 0.2158), but the skewness (skewness = 9.59) and kurtosis (kurtosis = 108.45) suggest a concentration around low values, with some cases being highly performant. Finally, the size of the companies, measured by the logarithmic mean of 9.39, indicates that most of the companies are large. The distribution is left-skewed (skewness = -2.05), with a standard deviation of 0.65 and high kurtosis (9.45), reflecting the presence of extreme cases in the sample.

Specification Test

Next, we performed the model specification test to determine whether our model is a fixed effects model or a random effects model. The result of the Hausman test is as follows (See the appendix 03):

The p-value is significantly lower than 5%, so we retain the fixed effects model, which examines the individual effects for each company in the sample and assumes that they do not change over time. The Breusch-Pagan test will not be conducted because our model is based on fixed effects. Finally, we opted for model validation tests, including the residual autocorrelation test and heteroscedasticity. Based on the results, we found that there is autocorrelation in the residuals. To address this issue, we used the PCSE method to correct it.

Analysis and Discussion of Results

For our sample of 58 companies over the years 2017-2021, totaling 290 observations, the following model is obtained after regression:

$$CR = -0,009 \, OCF + 0,101 \, STD - 3,237 \, MLTD + 0,09 \, Liq + 8,219 \, ROA + 1,395 \, SIZE - 12,367$$

Le The overall significance test of the model is significant with a p-value approaching 0. The R² value is 0.97, indicating that 97% of the variation in the capital turnover is explained by the explanatory variables in our model. Below, we present the interpretation of the results concerning the explanatory variables.

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Operating Cash Flow

The negative coefficient (-0.009) for CAF, although small, reveals an inverse relationship with capital turnover. This underperformance in CAF can be explained by the fact that many Algerian companies do not have sufficiently developed internal financial analysis systems to direct their cash surpluses toward investments directly linked to increasing sales. In an environment characterized by regulatory uncertainty and a low level of strategic entrepreneurial culture, managers may prioritize prudent allocations (such as building reserves or early debt repayment) over commercial or marketing investments with immediate impacts. Additionally, there is a lack of tools for assessing the profitability of projects, limiting the efficient use of funds generated by self-financing.

Short-Term Debt (DCT)

The positive coefficient (+0.101) for DCT indicates that these resources are generally well mobilized to support the activity. This relationship can be justified by the financing structure of Algerian companies, which often rely on supplier credit or overdraft lines to finance operating cycles. In sectors like trade or distribution, this operational debt ensures the rapid renewal of stock, continuous availability of products, and a better ability to respond to demand. However, this positive correlation must be considered with caution, as excessive reliance on short-term debt, if not accompanied by strict management of deadlines, can lead to liquidity tensions. This result aligns with the signaling theory, which suggests that debt is used by managers as an indicator to demonstrate the quality and profitability of the company's future projects. Debt is also a strategy signaling managers' expectations about the company's growth. This attracts investors by reducing information asymmetry between them and management. Furthermore, this result does not align with the study by Vuković, B and collaborators on European agricultural companies in 2021.

Medium and Long-Term Debt (DMLT)

The DMLT variable stands out for its high level of significance (p-value approaching 0). This influence is expressed by a negative relationship between long-term debt and financial performance, indicating a structural problem in the inefficient use of long-term financing. This suggests that the investments made with these resources have not led to a proportional increase in sales. Several factors could explain this phenomenon, including poor project selection, overestimation of future gains, long implementation delays, or even partial diversion of funds. Furthermore, the complexity of Algeria's financing system, combined with heavy bureaucracy, lengthens the time between credit acquisition and project implementation, thus reducing their immediate commercial impact. The inefficiency of long-term debt in a context marked by insufficiently advanced economic reforms shows the lack of an integrated strategic vision between public financing policies and the operational needs of companies. The negative relationship between long-term debt and financial performance was also observed in the study by (5, p. 1-20).

Liquidity

The results from the model suggest that liquidity is positively correlated with capital turnover, with a positive coefficient of (+0.09). This indicates a logical relationship: a more liquid company can more easily respond to the immediate needs of the market (urgent purchases, unexpected orders, etc.). However, this relationship remains moderate, likely due to a ten-

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dency to retain liquidity as a precautionary mechanism. While this behavior makes sense during periods of economic instability, it limits the multiplier effect of liquidity on commercial activity. Therefore, it would be beneficial for companies to adopt a more proactive cash management strategy, transforming liquidity surpluses into commercial expansion levers (customer discounts, supplier payment terms, business development). In the current context, where inflation rapidly erodes the value of money, a strategic reallocation of liquidity is essential to preserve the purchasing power of businesses and their agility in the market. This positive relationship aligns with the findings of empirical studies by (8, p. 1-10) and the study by (1, p, 45-60) which found a significant positive impact of liquidity on financial performance, and the study by (9, p. 45-49) which found a positive but insignificant impact.

Return on Assets (ROA)
The positive relationship between ROA and capital turnover shows that Algerian companies that use their assets profitably also manage to generate higher sales. This confirms the central role of the productivity of both tangible resources (buildings, equipment, technologies) and intangible resources (know-how, reputation, information systems). ROA also reflects efficient and integrated management of operations, inventories, and logistics, which is crucial in a context marked by the scarcity of modern infrastructure. It also shows that there is a strong correlation between profitability and adaptability: companies that innovate, modernize their equipment, and digitize their processes are the ones that achieve the best commercial performance. In light of current public policies promoting digital transition and economic diversification, promoting better asset profitability should be a central focus of national industrial strategy.

Company Size
The results of the study show a positive coefficient of +1.395, suggesting that there is a positive and significant relationship between company size and company value. Larger companies benefit from increased bargaining power with suppliers and financial institutions, access to qualified human resources, and greater visibility with customers. Moreover, they have the ability to diversify their revenue sources, exploit economies of scale, and better absorb economic shocks. In contrast, small and medium-sized enterprises (SMEs), often informal or poorly structured, suffer from a lack of professionalism, which limits their commercial performance. This result supports a national policy of supporting the scaling up of Algerian SMEs, through access to credit, administrative simplification, and technical support. In a post-COVID context and facing economic recovery challenges, strengthening SME resilience appears as an essential lever for development. Our study thus supports the previous research by (11, p. 47-58), (2, p. 441–457), (7, p.925–937), and (13, p. 574–581).

CONCLUSIONS

Financial analysis, through indicators such as self-financing capacity, return on assets, and company size, plays a key role in the commercial performance of Algerian companies. The study conducted from 2017 to 2021 shows that these variables have a direct impact on the ability of companies to improve their capital turnover. However, some challenges persist, notably a prudent management of internal resources and a lack of tools for accurately assessing investment profitability.

The results reveal a positive relationship between return on assets (ROA) and company

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size, but a negative relationship between self-financing capacity (CAF) and commercial performance. This latter point can be explained by an overly conservative management of cash surpluses in an uncertain economic context.

Companies that better manage the profitability of their assets and innovate, modernize their infrastructure, and digitize their processes achieve superior performance. Additionally, larger companies benefit from a competitive advantage due to their size, bargaining power, and easier access to financing.

To improve the commercial performance of Algerian companies, several measures need to be taken, such as optimizing cash surplus management, improving the use of long-term financing, enhancing financial management skills, and supporting digitalization. Increased support for SMEs and encouragement to invest in research and development (R&D) are also essential for strengthening competitiveness.

Thus, financial analysis is a crucial lever to optimize commercial performance, and collaboration between the public and private sectors is necessary to improve the economic environment for businesses in Algeria.

APPENDICES

Appendix 1.

	RC	CAF	DCT	DLMT	LIQ	PERF	SIZE
Mean	1.138095	17.30698	3.039392	0.146084	2.155129	0.065238	9.388577
Median	0.588362	20.47297	0.496669	0.048989	1.235642	0.024896	9.482683
Maximum	72.76309	24.13307	718.2756	4.310603	18.31361	2.703892	11.21061
Minimum	0.000000	0.000000	0.000000	0.000000	0.000000	-0.161917	6.469895
Std. Dev.	4.581860	7.848325	42.16458	0.306582	3.236198	0.215845	0.647624
Skewness	13.85474	-1.640124	16.91834	9.038373	3.402001	9.599017	-2.057015
Kurtosis	210.5292	3.946859	287.4812	118.9499	14.96641	108.4533	9.452761
Jarque-Bera	529687.2	140.8502	991733.2	166401.5	2289.663	138825.0	707.6406
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	330.0475	5019.026	881.4237	42.36422	624.9874	18.91889	2722.687
Sum Sq. Dev.	6067.106	17801.30	513799.1	27.16381	3026.690	13.46428	121.2114
Observations	290	290	290	290	290	290	290

Appendix 2.

Correlation							
	RC	CAF	DCT	DLMT	LIQ	PERF	SIZE
RC	1.000000	0.051951	0.930215	0.005372	-0.036249	0.268455	0.087890
CAF	0.051951	1.000000	0.040510	0.045632	0.273245	0.078029	0.060702
DCT	0.930215	0.040510	1.000000	-0.011286	-0.024262	0.023698	0.048721
DLMT	0.005372	0.045632	-0.011286	1.000000	0.142271	0.430274	0.120627
LIQ	-0.036249	0.273245	-0.024262	0.142271	1.000000	-0.003042	-0.114955
PERF	0.268455	0.078029	0.023698	0.430274	-0.003042	1.000000	0.023549
SIZE	0.087890	0.060702	0.048721	0.120627	-0.114955	0.023549	1.000000

Appendix 3.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	56.844021	6	0.0000

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