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# SECTOR-SPECIFIC DETERMINANTS OF FIRMS' CAPITAL STRUCTURE IN UKRAINE

## ABSTRACT

The study is devoted to the analysis of the influence of sector-specific determinants on firms' capital structure in Ukraine. Particular attention is paid to identifying key determinants of leverage, including profitability, operating cycle, accounts payable, and assets. Using the method of multivariate regression analysis, the relationships between these variables were investigated in seven sectors of the economy: agriculture, mining, manufacturing, energy, transport, information technology, and administrative services.

The results show that the most influential determinants are the volume of assets and the volume of accounts payable. Thus, in agriculture and the mining industry, large firms more often use internal funds, avoiding borrowing. In contrast, in the transport and information industries, accounts payable are the main source of funds, which is consistent with the provisions of the Pecking Order Theory. At the same time, determinants such as profitability and the operating cycle demonstrate a weak correlation with leverage, which indicates their secondary role in the financial decisions of firms.

The practical significance of the work lies in the formulation of recommendations for financial institutions and investors on assessing risks and potential lending opportunities for firms in various sectors. The results obtained indicate the possibility of applying universal methods for assessing the financial condition of companies, which simplifies the process of making financing decisions. The conclusions of the study can also be useful for economic policymakers, as they demonstrate the need for a differentiated approach to regulating the financial environment depending on the specifics of the sector.

**Keywords:** leverage, operating cycle, accounts payable, firms' financial policy, financial decisions

**JEL Classification:** D21, G30, G32

## INTRODUCTION

The development of financial infrastructure is determined by the diverse firms' needs in various economic activities for focused financial services. In this regard, it is important to study the features of capital structure formation in enterprises across different economic sectors.

The status of sectoral capital structure formation is justified by Rehan, Hadi, Hussain, and Hye (2023), who argue that different sectors in the capital market are created for companies that share similar traits and types of operations. Sectoral orientation is one of the success factors for many financial institutions, as it enables them to minimize current expenses and effectively account for risks. As noted by Peng Chow (2019), this can also help banks and non-bank financial institutions align their lending decisions with the choice of capital structure in firms from different sectors.

The study of the industry capital structure plays a key role in financial management, as it allows enterprises to determine the optimal sources of financing, taking into account the specifics of their sector. Differences between industries are manifested in the level of capital intensity, cyclicity of income, risks, and availability of financial resources. That is why a capital management strategy that is effective in one area may be inappropriate for another.

Moreover, understanding the sector-specific nature of capital structure is crucial for developing monetary policy, as it allows for the implementation of appropriate financial policies and instruments to meet the financing needs of various sectors. Understanding the characteristics of capital structure allows companies to adapt to changes in the macroeconomic environment. For example, during financial crises, companies with a high level of debt financing may experience significant difficulties due to increased debt servicing costs. At the same time, companies that are mainly financed with equity have greater flexibility in periods of instability.

Considering sector-specific determinants helps financial managers and investors make effective decisions, as it provides a better understanding of the determinants influencing the capital structure across different sectors. According to Li, Islam (2019), and Ahmed et al. (2024), the goal of firms is to maximize their wealth by understanding the specific determinants that influence their capital structure. One of the most important aspects is the impact of sectoral capital structure on the financial stability of firms. A deep understanding of sectoral differences in capital structure helps investors and lenders assess companies' financial risks.

## LITERATURE REVIEW

To ensure development, a firm must establish an optimal capital structure. Quite often, an optimal capital structure is understood as a combination of a firm's equity and debt that maximizes its value (de Wet, 2007). Establishing an optimal structure is a complex task, as it requires balancing the conflicting interests not only of the company's stakeholders but also between the tax advantages of debt and the various costs associated with leverage (Grigore, Gurău, 2019; Kounouwewa, 2024).

Decision-making regarding capital structure optimization is determined by the nature of a firm's financial behavior (Almazan & Molina, 2005). Forming optimal financial behavior is one of the most contentious issues of financial management. This fact explains the existence of numerous theories and approaches aimed at finding solutions to this problem. Researchers often propose using the effective capital cost model (Kontuš, Šorić, & Šarlija, 2022). However, none of the existing theories provide a definitive answer regarding the firm's optimal capital structure (Jahanzeb A. et al., 2013). Moreover, in most cases, the existence of an optimal capital structure remains largely a theoretical concept that is difficult to achieve in practice.

Financial leverage affects various aspects of a firm's activities. A high debt burden can negatively impact a company's investment activities, leading to a reduction in investments (Tran, Thu, & Thanh, 2023). The adverse effect of leverage on firm investments is exacerbated by the presence of asymmetric information among capital providers (Ahmad, Hunjra, & Taskin, 2023). As a result, firms may face an under-investment problem and significant financial constraints. However, capital growth, including through debt financing, offers more opportunities for expanding operational activities (Mantegna, 2021), as it enables product, technological, and geographical diversification as well as acquisitions.

Firms with high debt are financially less stable. An aggressive capital structure brings additional financial risk. Higher debt capital means greater risk for the firm, and excessive debt can lead to bankruptcy. This holds true across countries, industries, firm sizes, and time periods (Hossain, 2021; Hegde et al., 2023). Excessive debt can also destroy value due to reduced creditworthiness. Compared to firms with low corporate debt, those with high debt levels demonstrate lower performance and higher insolvency risk.

Capital structure decisions are influenced by a significant number of factors from both the internal and external business environment. There is no exhaustive list of such factors, but most scholars agree that tax benefits, profitability, firm size, and interest rates significantly affect corporate financial behavior.

The relationship between firm size and financial leverage is ambiguous. Some researchers argue for a positive correlation between these two indicators (Chatterjee and Eyigungor, 2023), which applies to both public and private firms (Dinlersoz et al., 2019). However, from a macroeconomic perspective, a negative correlation between firm size and leverage is justified due to financial frictions in capital markets (Cooley and Quadrini, 2001).

The impact of profitability on capital structure is also unclear. Scholars note that 40–50 years ago, profitability played a decisive role in debt financing decisions (Frank and Goyal, 2003). However, today, while profitability remains statistically significant, its importance in leverage decisions has diminished (Hossain M. S., 2021).

Financial flexibility, credit ratings, and the tax advantages of debt significantly influence firms' financial behavior (Bancel F., & Mittoo U. R., 2010). Additionally, some factors indirectly affect financial decision-making, including operating leverage, financial costs, corporate culture, tax implications, and others (de Wet J., 2007).

The median industry leverage is one of the most trustworthy factors when it comes to explaining market leverage. When firms make leverage decisions, industry type is an important factor to consider. High leverage is often associated with firms in industries where the median firm has high leverage (Islam & Khandaker, 2015; Hossain, 2021).

Research on the sector dependence of firms' capital structures is not uncommon in academic literature. Most of these studies synthesize an analysis of the determinants of capital structure and the financial decision-making of firms under the influence of sector affiliation.

Raza, Hamid, Shah, and Khan (2021) uncover that the sector-specific determinants played a crucial role in determining the firms' leverage and even in predicting financial distress. According to the researchers, sectors that have a high price-to-earnings (P/E) ratio are more likely to use leverage to finance different projects. At the same time, high leverage is not associated with economically associated sectors, and they are not in favor of obtaining it. Businesses operating in economically relevant sectors tend to be more leveraged. The researchers conclude that sector-specific variables and firm-specific determinants played a significant role in creating corporate capital structures.

According to Rehan, Hadi, Hussain, and Hye (2023), fixed assets, current assets, return on equity, firm size, earnings per share, and total assets are the key determinants of the sector-specific capital structure of Malaysian companies. The researchers attempted to identify the most persistent determinants of capital structure, as studies on the determinants of dynamic capital structure remain limited.

Li and Islam (2019) highlight the importance of taking into account sectoral determinants when making leverage decisions. Their calculations show that certain capital structure determinants differ across sectors. Moreover, the formation of Australian firms' capital structure is influenced by sectoral determinants directly and indirectly, but the impact of some sector-specific determinants is dependent on the use of leverage ratios. The researchers conclude that sectoral determinants play a significant role in shaping corporate capital structures, but their influence differs in terms of characteristics, magnitude, and significance. Muhammad (2003) proves that the capital structure of Japan and Pakistan is determined by sector classification. The researcher asserts that the leverage levels for firms in Japan and Pakistan are very high, while Malaysia has the lowest level. These leverage levels are influenced by the development stage of capital markets in these countries.

Mackay & Phillips (2005) found that the financial structure depends on the firm's sectoral position. In competitive sectors, a firm's financial leverage depends on its natural hedging (its proximity to the average sector capital-labor ratio), the actions of other firms in the sector, and its status as a firm from a stable market entity. Financial leverage is higher in sectors where strategic debt interactions are stronger, but the firm's natural hedging is negligible. In addition, scientists argue that the financial structure, technology, and risk are determined by sectors. According to scientists, such results are consistent with most models of the financial structure of the sectoral equilibrium.

## AIMS AND OBJECTIVES

The aims of the study were to identify the most sensitive determinants that affect the firms' capital structure across different sectors of the Ukrainian economy. The research tested the relationship between capital indicators and sector-related characteristics using empirical data.

## METHODS

The methodological basis of the study was regression analysis. Linear regression models to assess the significance of capital structure impact determinants were tested using multivariate analysis. To conduct the analysis, the basic approach of De Jong et al. (2008) to determine the influence of determinants on the capital structure of a firm was chosen. According to this approach, leverage is the dependent variable (Y). To calculate the value of leverage (L), the classical calculation formula is chosen:

$$L = \frac{D}{E}, \quad (1)$$

where  $D$  – firm's debt:  $D = D_L + D_S$ ,  $D_L$  – long-term debt,  $D_S$  – short-term debt;  $E$  – equity capital.

In the scientific literature, there is a tough debate about the set of determinants (independent variables  $X_i$ ) that influence leverage. Analysis of the research on this issue gave grounds to distinguish the following most common determinants of firms' capital structure:

- PROF – profitability (EBITDA/total assets);
- GROWTH – the growth rate of the company's revenues;
- TANG – sensitivity (non-current assets/assets);
- SIZE – logarithm of total assets.

Nevertheless, high correlations between multiple variables create the problem of multicollinearity (Table 1). This forced us to replace such indicators and create two new variables to use as substitutes in the regression analysis. Such new variables are the transformed indicator of the operating cycle duration (OCYC) and the share of accounts payable (APBLE).

**Table 1. Correlation Analysis.**

	PROF									GROWTH									TANG								
	A	B	C	D	E	F	G	H	I	A	B	C	D	E	F	G	H	I	A	B	C	D	E	F	G	H	I
<b>PRO</b>	1																										
<b>GROW</b>	0.73	1								1																	
<b>TAN</b>	-0.52	-0.43	1							-0.19	-0.25	-0.05	-0.25	0.06	-0.28	0.68	0.50	0.31	1	1	1	1	1	1	1	1	1
<b>SIZ</b>	0.20	0.36	0.54	-0.22	0.43	0.08	0.48	0.12	0.49	-0.26	-0.01	-0.04	0.09	-0.05	0.02	0.20	-0.19	-0.04	0.25	-0.29	-0.90	-0.90	-0.96	-0.85	0.51	-0.13	-0.66

The transformed indicator of the operating cycle is calculated by the formula:

$$OCYC = \frac{365}{\text{Operating Cycle}} \tag{2}$$

Operating Cycle = Days Inventory Outstanding + Days Sales Outstanding

A shorter operating cycle means that a company can generate cash faster, make a profit, and reinvest in the business. The operating cycle determines the ability of the company to concentrate its attention on internal funds. Also, a shorter operating cycle indicates the ability of a business to pay off its debts.

Ukrainian firms have appreciable accounts payable. To take into account the impact of this trait on the company's financial decisions, the APBLE indicator was introduced into the calculation:

$$APBLE = \frac{\text{accounts payable}}{\text{total assets}} \tag{3}$$

The check showed the absence of interrelation (autocorrelation) of independent variables, which confirmed the correctness of their choice (Table 2).

**Table 2. Correlation Analysis.**

	PROF									GROWTH									TANG								
	A	B	C	D	E	F	G	H	I	A	B	C	D	E	F	G	H	I	A	B	C	D	E	F	G	H	I
<b>PROF</b>	1																										
<b>APBLE</b>	0.01	-0.12	0.44	-0.42	-0.09	-0.24	-0.36	-0.32	0.46	1	1	1	1	1	1	1	1	1									
<b>OCYC</b>	0.343	-0.49	-0.19	0.143	-0.41	0.46	0.18	-0.21	-0.29	-0.34	0.12	0.27	-0.47	0.17	-0.29	-9E-05	0.08	0.19	1	1	1	1	1	1	1	1	1
<b>SIZE</b>	0.19	0.33	0.44	-0.22	0.42	0.49	0.48	0.28	0.48	-0.45	-0.29	0.45	0.40	0.38	-0.29	-0.423	-0.41	0.418	0.40	-0.48	0.41	-0.47	-0.04	0.41	0.23	-0.06	0.37

Taking into account the above-described data on independent variables, we obtain the following estimation model:

$$Y = a_0 + a_1 \times PROF + a_2 \times APBLE + a_3 \times OCYC + a_4 \times SIZE + \varepsilon \quad (4)$$

The Fisher criterion is used as the method of maximum likelihood estimation:

$$F = \frac{R^2}{1-R^2} \times \frac{n-m-1}{m} \quad (5)$$

where  $n$  - the number of observations;  $m$  - the number of independent variables,  $R^2$  - the coefficient of determination:

$$R^2 = \frac{\sum_{i=1}^n (Y_a - Y_f)^2}{\sum_{i=1}^n (Y_a - Y_c)^2} \quad (6)$$

Calculations were performed with a significance level  $\alpha=0.05$ .

The statistical significance of the regression coefficients was assessed using the Student's t-test (P-Value). In all cases where the P-Value is less than the significance level, the null hypothesis was rejected.

The Durbin-Watson test and von Neumann's mean square successive difference test (MSSD) are used to verify the reliability of the obtained data. The Durbin-Watson (DW) statistic is a measure used to identify the presence of autocorrelation in the residuals obtained from a regression analysis:

$$DW = \frac{\sum_{t=1}^T (e_t - e_{t-1})^2}{\sum_{t=1}^T e_t^2} \quad (7)$$

where  $e_t$  - the regression residual in time  $t$ ,  $e_t = Y_f - Y_c$

The test statistic DW is compared to lower and upper critical values.

The von Neumann mean square successive difference (MSSD) test is used for determining whether there is a systematic dependence (autocorrelation) between the residuals of a regression model:

$$N = DW \frac{n}{n-1} \quad (8)$$

To eliminate inaccuracies in the obtained models, an autoregressive component ( $\rho$ ) was added:

$$\rho = \frac{\sum_{t=2}^T e_t \times e_{t-1}}{\sum_{t=2}^T e_t^2} \quad (9)$$

For models with autocorrelation of residuals, Aitken's Generalized Least Squares (GLS) method was used. Calculations were performed using Python.

The research area was data from firms in 9 sectors of the Ukrainian economy:

- A Agriculture, forestry, and fishing
- B Mining and quarrying
- C Manufacturing
- D Electricity, gas, steam, and air conditioning supply
- E Construction
- F Wholesale and retail trade
- G Transportation and storage
- H Information and communication
- I Administrative and support service activities

The research period is 2013-2023 ( $n=11$ ). Data were obtained from the official website of the State Statistics Service of Ukraine.

## RESULTS

The assessment of the dependence of the capital structure on the four determinants was carried out using a multivariate regression model for each sector of the economy separately. As a result, nine regression models were obtained. The evaluation of models' adequacy was carried out using the Fisher criterion with a reliability level of 0.95. This approach allows us to state that seven of the nine obtained models are adequate. Regression models built using data from firms belonging to the construction (sector E) and wholesale and retail trade (sector F) do not meet the requirements and are classified as inadequate (Table 3).

For firms in these sectors, the set of determinants we have identified: profitability, operating cycle length, accounts payable, and enterprise size, is not decisive in choosing a capital structure. It is possible to assume the influence of other determinants and motives on financial decision-making in these sectors. The search and justification of such determinants require a deep sectoral analysis and are beyond the scope of our study.

**Table 3. Indicators of models' adequacy.**

Sector categories	Multiple R	R2	Significance F
A	0.91	0.83	0.02
B	0.93	0.87	0.01
C	0.78	0.62	0.02
D	0.92	0.86	0.01
E	0.50	0.25	0.74
F	0.62	0.38	0.51
G	0.94	0.89	0.01
H	0.92	0.86	0.01
I	0.88	0.77	0.04

Further analysis of sector-specific features of financial decisions was conducted using data from firms in only seven sectors: A, B, C, D, G, H, I, since their models are adequate; in all cases, the condition Significance F < 0.05 is met. The significance of the influence of each of the determinants ( $X_1, X_2, X_3, X_4$ ) on the dependent variable (Y) is evidenced by the regression coefficients  $a_1, a_2, a_3,$  and  $a_4$ , the values of which are presented in Table 4.

**Table 4. Regression's coefficients.**

Independent variables	Sector categories						
	A	B	C	D	G	H	I
PROF	-0.058	-0.331	-2.999	-19.961	0.211	-4.592	2.587
APBLE	0.207	0.389443	42.836	11.051	1.208	26.260	4.209
OCYC	0.042	-0.027	1.515	0.33768	-0.163	3.511	0.149
SIZE	-0.437	-0.755	-6.767	1.499248	-0.271	1.883	-0.832

However, before proceeding to the analysis of the values of the obtained regression coefficients, we will check the statistical significance of these coefficients using the Student's t-test (Table 5). Statistically significant are coefficients for which the condition is met: P-value < 0.05.

**Table 5. P-values for regression models.**

Independent variables	Sector categories						
	A	B	C	D	G	H	I
PROF	0.672	0.119	0.447	0.029	0.629	0.199	0.313
APBLE	0.819	0.269	0.049	0.485	0.036	0.028	0.023
OCYC	0.347	0.138	0.494	0.767	0.280	0.553	0.708
SIZE	0.005	0.019	0.145	0.877	0.034	0.565	0.446

According to the data in Table 5, for 4 out of 7 sectors, the factor APBLE is statistically significant. This applies to firms belonging to sectors C, G, H, and I. For sectors A and B, the factor SIZE is statistically significant. This factor also affects the financial decisions of firms in sector G. It should be noted that sector G is the only one for which two determinants are significant. The factor PROF is statistically significant only for firms in sector D. The factor OCYC is not statistically significant for any of the models. This suggests that, overall, this factor influences financial decisions, but is not decisive for capital structure decisions.

The obtained models are adequate, which indicates that, in general, the chosen determinants affect leverage. However, the low significance of each individual factor necessitates the study of the presence of autocorrelation of residuals. After all, one of the main assumptions of regression analysis is that the residuals (model errors) are uncorrelated with each other. If there is autocorrelation between the residuals, this may indicate that the model does not take into account important variables or dependencies in the data.

The results of the calculations of the DW using formula (7) for each of the regression models are presented in Table 6.

Table 6. Tests for autocorrelation of residuals.							
	Sector categories						
	A	B	C	D	G	H	I
DW	2.320	1.951	1.904	2.106	3.101	2.285	1.526
New	-	2.146	2.09	2.317	-	-	1.678
$\rho$	-	0.018	-0.005	0.189	-	-	0.231
$\rho'$		0.020	-0.005	0.207	-	-	0.255
DW'	-	2.380			-	-	

The critical values DW for  $n=11$ ,  $m=4$ , and  $\alpha = 0,05$  are: lower  $d_L = 0.444$ , the upper  $d_U = 2.283$ .

According to the data presented in Table 6, in the regression models for sectors A, G, and H, there is no residual autocorrelation  $f$ , since for them the calculated value of DW does not fall into the interval  $[d_L; d_U]$ , i.e.:

$$\begin{cases} DW > d_L \\ DW < d_U \end{cases}$$

For firms in these sectors, one of the key assumptions of classical linear regression is fulfilled. Therefore, it can be concluded that the obtained models explain the relationship between variables well, and the residuals do not show systematic dependencies, and the standard errors of the regression coefficients are calculated correctly. This means that statistical criteria such as t-tests and F-tests give correct results, and conclusions about the significance of the variables can be considered reliable. In addition, the predicted variables do not have systematic deviations due to residual dependencies.

For models of sectors B, C, D, I, there is autocorrelation of residuals, since the condition for the calculated DW values is as follows:

$$d_L < DW < d_U$$

This suggests that the regression coefficients for these models may be biased. This could lead to incorrect conclusions about the significance of the variables. To test the assumptions made, the values of the von Neumann statistic ( $\rho$ ) were calculated, which allowed us to calculate the magnitude of the bias  $\rho'$  (Table 6).

The parameters of the regression models estimated using Aitken's Generalized Least Squares (GLS) are presented in Table 7.

**Table 7. Regression coefficients after adjustment.**

Independent variables	Sector categories						
	A	B	C	D	G	H	I
PROF	-0.065	-0.331	-2.999	-19.961	0.188	-4.038	2.587
APBLE	0.188	0.389	42.836	11.051	1.356	26.260	4.209
OCYC	0.042	-0.027	1.515	0.337	-0.088	4.551	0.149
SIZE	-0.437	-0.755	-6.767	1.499	-0.256	2.186	-0.832

Verification of the adjusted regression models using the Durbin-Watson test (Table 8) proves the absence of autocorrelation of the residuals, which justifies the feasibility of the adjustments made. Therefore, it can be stated that the regression coefficients presented in Table 7 are highly reliable and adequately reflect the influence of the studied determinants on the firms' financial policy in the relevant sectors.

**Table 8. P-value after adjustment.**

Independent variables	Sector categories						
	A	B	C	D	G	H	I
PROF	0.320	0.119	0.045	0.029	0.581	0.049	0.313
APBLE	0.532	0.269	0.049	0.048	0.036	0.032	0.023
OCYC	0.182	0.138	0.494	0.767	0.279	0.050	0.708
SIZE	0.012	0.019	0.145	0.877	0.025	0.215	0.446

According to the calculations, the greatest influence on the firms' financial policy in the sectors is exerted by:

1. Agriculture, forestry and fishing (sector A), as well as the Mining and quarrying (sector B) - the size of the enterprise (SIZE). Moreover, the larger the volume of firms' assets, the less such firms resort to borrowing (negative regression coefficient  $a_4$  for models in both sectors).
2. Manufacturing (sector C), as well as Electricity, Gas, Steam and Air Conditioning Supply (sector D) – profitability (PROF) and accounts payable (APBLE). Profitability increasing refers to borrowing decreasing (negative regression coefficient  $a_1$  for models in both sectors), but an increase in accounts payable causes an increase in borrowing (positive regression coefficient  $a_2$ ).
3. Transportation and storage (sector G) – accounts payable (APBLE) and the size of assets (SIZE). With increasing profitability and the size of assets, the volume of borrowing decreases (negative regression coefficients  $a_2$  and  $a_4$ ).
4. Information and communication (sector H) - profitability (PROF), accounts payable (APBLE), and operating cycle (OCYC). Positive correlation coefficients  $a_1$ ,  $a_2$ ,  $a_3$  indicate that the growth of each of these determinants causes the growth of debts.
5. Administrative and support service activities (sector I) – accounts payable (APBLE). As accounts payable increase, borrowing increases.

## DISCUSSION

The results of the analysis prove the existence of some sector-based differences in firms' capital structure, which coincides in general with the scientists' opinions about sector-specific features of the firms' financial policy (Ducnha, B. et al, 2016; Marconi, D., and Upper, C., 2017). This conclusion also corresponds to the trade-off theory of significant sectoral differentiation of debt.

However, a significant difference between the studies is the assessment of the weight of the determinants that determine such a policy. In particular, Titman, S. and Wessels, R. (1988) suggest that firms that own significant amounts of assets should be financed with relatively less debt. In general, the Pecking Order theory concludes that there is a negative relationship between the total assets of a firm and the leverage. In contrast, the Trade-off theory describes those total assets are considered by creditors as the main measure of security; there is a significant positive relationship between

total assets and the capital structure of a firm. The results obtained are more consistent with the Pecking Order assumptions, since in 5/7 cases (71%) the existence of an inverse relationship between the total firms' assets and the leverage is proven. At the same time, such results are somewhat contradictory to the findings of Muhammad M. (2003) that asset-related variables are more important than sales-related variables in determining capital structure.

There is no clear answer in the scientific literature regarding the impact of asset turnover on the capital structure of a firm. For example, Arilyn E. J. (2019) argues that the impact of asset turnover on capital structure is not substantial. This position is inconsistent with the views of Serghiescu et al. (2014), who determined that asset turnover and the level of debt are positively correlated.

The existence of large accounts payable in the firms' capital in various sectors in Ukraine is generally consistent with the main conclusions of the Pecking Order theory, according to which firms initially emphasize more on internal funds, then move to debt, and then equity. This state of affairs also corresponds to the conclusions of Rehan R. (2023) regarding the peculiarities of capital formation of Malaysian firms. Firms prefer to form assets at the expense of accounts payable in order to avoid interest associated with debt financing. Firms with such a capital structure are called "Sharia" by scientists.

## CONCLUSIONS

The study revealed that the firms' financial policy in Ukraine has certain sector-specific characteristics. The approaches to forming the capital structure in the construction and trade sectors are radically different from those in other sectors. The impact of determinants such as profitability, accounts payable, operating cycle, and assets on the financial policy of such firms is insignificant.

The determinants of profitability, accounts payable, operating cycle length, and asset size determine the choice of firms in the transportation and mining industries to the greatest extent, and to the least extent in the manufacturing industry.

In most sectors (71%), there is a significant positive relationship between accounts payable and leverage. The impact of this factor on the capital structure is the most noticeable. Also, for 71% of sectors, the total assets have a noticeable inverse impact on financial policy. However, some determinants remain insignificant. The obtained dependencies showed a slight impact of profitability on the decision to borrow, as well as the operating cycle.

In general, firms in Ukraine adhere to similar approaches to the capital structure, and sectoral determinants are not decisive in their financial behaviors. This indicates that the assumption made about the different determinants of leverage in different industries is not fulfilled. Under such conditions, there is no reason to argue about the need for a strict sector orientation of financial institutions. The similarity of approaches to the formation of firms' financial policy allows financial institutions to use certain universal methods of assessing the terms and nature of customer loans.

The results of the study not only help firms improve their financial planning but also serve as an important tool for investors and regulators. Taking into account sector specifics allows for more informed financial decisions, minimizes risks, and increases the competitiveness of firms in the long term.

### *Research Limitations*

Despite the results obtained, the study has certain limitations. First, the analysis covers a limited time sample, which may not fully reflect long-term trends in the dynamics of enterprises' capital structure. Second, the indicators used do not account for all possible industry-specific characteristics, particularly differences in the regulatory environment and access to financial resources. In addition, the study focuses on the national level, so its results cannot be directly generalized to other countries with different institutional conditions.

Future studies could extend the analysis by incorporating a longer time horizon and a broader set of sectors to capture structural shifts in firms' financing behavior. It is also promising to examine the role of institutional quality, ownership structure, and macroeconomic volatility in shaping capital structure decisions. In addition, comparative analysis across countries with different levels of financial development could provide a deeper understanding of the impact of sectoral and institutional factors on firms' financial leverage.

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## ADDITIONAL INFORMATION

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### AUTHOR CONTRIBUTIONS

*All authors have contributed equally.*

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## CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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## СЕКТОРАЛЬНІ ДЕТЕРМІНАНТИ СТРУКТУРИ КАПІТАЛУ ПІДПРИЄМСТВ В УКРАЇНІ

Дослідження присвячене аналізу впливу галузевих факторів на формування структури капіталу підприємств різних секторів економіки України. Особливу увагу приділено визначенню ключових чинників, що впливають на рівень левериджу, включаючи прибутковість, тривалість операційного циклу, обсяг кредиторської заборгованості та розмір активів. Застосовуючи метод багатофакторного регресійного аналізу, автори дослідили залежності між цими змінними в семи секторах економіки: сільському господарстві, добувній промисловості, переробній промисловості, енергетиці, транспорті, інформаційних технологіях та адміністративному обслуговуванні.

Результати показують, що найбільш впливовими факторами є обсяг активів та обсяг кредиторської заборгованості. Так, у сільському господарстві та добувній промисловості великі підприємства частіше використовують внутрішні фінансові ресурси, уникаючи залучення позикових коштів. Натомість у транспортній та інформаційній галузях кредиторська заборгованість є основним джерелом фінансування, що узгоджується з положеннями теорії ієрархії фінансування. Водночас такі чинники, як прибутковість і тривалість операційного циклу, демонструють слабку кореляцію з рівнем левериджу, що вказує на їхню другорядну роль у фінансових рішеннях підприємств.

Практичне значення роботи полягає у формулюванні рекомендацій для фінансових установ та інвесторів щодо оцінки ризиків і потенційних можливостей кредитування фірм у різних секторах. Отримані результати свідчать про можливість застосування універсальних методів оцінки фінансового стану компаній, що спрощує процес ухвалення рішень щодо фінансування. Висновки дослідження також можуть бути корисними для розробників економічної політики, оскільки демонструють необхідність диференційованого підходу до регулювання фінансового середовища залежно від специфіки сектора.

**Ключові слова:** леверидж, операційний цикл, кредиторська заборгованість, фінансова політика фірм, фінансові рішення

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