

Research Article

The Effect of Asset Structure and Profitability on Capital Structure of Consumer Goods Companies Listed on IDX 2020–2024

Henni Savitri*, Meigia Nidya Sari

Faculty of Social Sciences, Universitas Pembangunan Panca Budi, Medan, Indonesia; Jl. Gatot Subroto No.km, Simpang Tj., Kec. Medan Sunggal, Kota Medan, Sumatera Utara 20122; e-mail : hennisavitri2001@gmail.com

* Corresponding Author : Heni Savitri

Abstract: This study investigates the influence of asset structure and profitability, measured by return on assets (ROA), on the capital structure of consumer goods manufacturing companies listed on the Indonesia Stock Exchange (IDX). The capital structure, indicated by the debt-to-equity ratio (DER), plays a crucial role in determining the financial stability and growth potential of companies. The analysis incorporates both partial and simultaneous effects, highlighting the interrelationship between profitability, asset structure, and financial leverage. The study employs a descriptive quantitative approach, applying multiple linear regression to analyze data from 150 observations across 30 firms within the consumer goods sector. The period under review provides a comprehensive overview of corporate financial strategies, considering factors such as firm size, industry trends, and market conditions. The results demonstrate that both ROA and asset structure significantly influence the DER, both independently and interactively. Specifically, the findings show that higher profitability, reflected in a higher ROA, tends to lower the reliance on debt financing, thereby reducing the DER. Conversely, companies with more substantial and less liquid asset structures, such as property, plant, and equipment, tend to have higher debt levels, as these assets can serve as collateral for borrowing. The interaction between ROA and asset structure further underscores the complexity of capital structure decisions, where companies must balance profitability with asset composition to optimize their financial leverage. These findings provide valuable insights for financial managers and investors in consumer goods manufacturing companies, emphasizing the critical role of profitability and asset composition in shaping corporate capital structure decisions. Understanding the dynamics of these variables is essential for making informed decisions that support long-term business sustainability and competitiveness in the capital markets.

Keywords: asset structure; Capital Structure; DER; Profitability; ROA

Received: 26 July 2025;

Revised: 09 August 2025;

Accepted: 24 August 2025;

Published: 27 August 2025;

Curr. Ver.: 27 August 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

(<https://creativecommons.org/licenses/by-sa/4.0/>)

1. INTRODUCTION

Businesses must adapt to rapidly changing conditions resulting from intense competition in today's era of globalization. To cope with these rapid changes, companies face particular challenges because available funds must be redirected toward more effective and efficient solutions. In addition to producing high-quality products and satisfying customers, businesses must also be able to manage their finances successfully. This implies that the sustainability of an organization's business must be ensured through sound financial management practices (Ullah & Atta, 2020).

Many companies, whether large or small, tend to create an asset structure that can generate effective working capital in the future. This, in turn, enables the establishment of a strong capital structure that can significantly enhance profitability, thereby creating funding

or liquidity to support sustainable operational activities in the long term (Aguade & Aragaw Eshetie, 2022).

Current assets can create a liquid form of financing, which is easy to convert into cash, quick to access, and capable of becoming a strong capital base for financing a company's operations. This solid foundation enables the company to improve and increase liquidity, which drives corporate performance and delivers maximum and significant profitability (Truong & Nguyen, 2024).

Regardless of the type of business a company operates—whether producing goods or providing services—capital is a fundamental component of operations. Both new and growing businesses require capital. Even well-established businesses need funding to continue operating as sustainable enterprises. Capital is needed to finance business operations and growth; therefore, it is crucial for the long-term viability of a business.

Despite contributing 20.47%, the manufacturing sector's growth slowed by 0.38% between the first quarter of 2016 and the first quarter of 2017. Common issues affecting the manufacturing sector include the lack of industrial adaptation, low-cost global competition, relatively low-quality human resources, and inadequate investment in research and development (R&D). This investment issue has driven manufacturing companies to shift their capital structure toward short-term debt to quickly secure funding for production activities (BPS, 2024).

To support national economic growth, the government continues to encourage investment in the industrial sector. Therefore, to attract and motivate investors to invest in Indonesia, appropriate policy instruments are required, such as simplified licensing to establish manufacturing industries and efficient services. Without these, investors may be reluctant to invest directly or through other manufacturing companies, resulting in many manufacturing firms struggling to obtain capital from investments and thus relying more heavily on debt, thereby creating a new capital structure based on increased borrowing (Sabani & Nazmie, 2024).

An unhealthy capital structure—particularly one that frequently relies on debt, whether short-term or long-term—has a direct impact on efforts to maximize profitability. However, while borrowing can temporarily boost available capital, it often results in less-than-optimal profitability. This is because the returns generated are insufficient to fully offset the debt burden, which in turn erodes existing current asset structures. As a result, several manufacturing companies tend to maintain their fixed asset structures in order to preserve sufficient liquidity to finance their ongoing operations (Strelnikova, 2022).

Several industrial companies are listed on the Indonesia Stock Exchange (IDX), including those operating in the food and beverage manufacturing sector. The financial performance of these companies—covering aspects such as asset structure, profitability (ROA), and capital structure (Debt-to-Equity Ratio)—is presented in the table below :

Table 1. Financial Ratio Profile of Food and Beverage Manufacturing Companies Listed on the IDX (2020–2024)

Issuer	Year	Profitability (ROA)	Asset Structure	DER
ULTJ	2024	13,64	43,75	13,93
	2023	15,77	49,71	12,52
	2022	13,09	37,38	26,68
	2021	17,24	34,59	44,15
	2020	12,68	36,10	83,07
CEKA	2024	13,62	11,61	25
	2023	8,11	15,47	15
	2022	12,84	19,45	11
	2021	11,02	19,98	22
	2020	11,61	19,15	24
DLTA	2024	17,61	10,84	30,72
	2023	14,37	10,26	29,65
	2022	10,12	9,33	20,24
	2021	22,29	5,91	17,56

	2020	22.19	9,14	18,70
ICBP	2024	4.9	73,05	101
	2023	7.1	71,19	115
	2022	10.4	79,98	104
	2021	14.7	57,05	45
	2020	14.1	58,90	51
INDF	2024	5,1	69,58	93
	2023	6,6	70,03	106
	2022	6,8	76,43	105
	2021	6,1	67,35	77
	2020	5,4	65,53	93

Source: idx.co.id

The existing phenomenon shows that having large total assets does not necessarily guarantee higher profits. This indicates that some companies lack efficiency in producing goods for the market. The table data reveals that corporate profitability levels fluctuated during the observation period of 2018–2022. Certain companies experienced a significant decline in profitability, such as issuer ICBP during 2018–2022. A similar decline occurred with issuer DLTA from 2019–2020.

This situation suggests that a company's total assets, as shown in the table, affect its asset structure, which in turn is influenced by capital structure derived from debt. This debt-driven capital structure causes profitability to decrease because the profits earned are used to reduce debt—debt that had been utilized as capital for company development and operational activities. As a result, current assets decline, and fixed assets are instead utilized to cover liquidity needs for financing company operations.

This study holds considerable significance as it aims to examine and address challenges arising from the growing reliance on debt-based capital structures, which adversely affects the profitability of manufacturing companies listed on the Indonesia Stock Exchange (IDX). The decline in current assets alters the overall asset composition, prompting companies to depend more heavily on fixed assets as a liquidity buffer when current assets are inadequate to sustain future operational activities.

Several previous studies differ from this research. For example, Truong and Nguyen (2024) explain that capital structure strongly affects knowledge absorption capacity (KAC), which enhances business performance, yet profitability does not necessarily improve the ability to maintain healthy liquidity. Another study by Jardon (2024) found that an increase in capital has not been proven to improve a company's ability to expand working capital—especially its capacity to generate profit and utilize assets optimally in daily operations.

Drawing from the preceding background, this study seeks to answer the following question: Do asset structure and profitability (ROA) exert significant partial and joint effects on capital structure (DER)?

The primary aim of this research is to assess the impact of asset structure and profitability (ROA) on capital structure (DER), both separately and in combination. What distinguishes this study is its focus on three variables—asset structure and profitability (ROA) as independent variables, and capital structure (DER) as the dependent variable—which, to the best of the researcher's knowledge, have not been examined together in a single investigation.

The research involved a sample of 30 food and beverage manufacturing firms listed on the Indonesia Stock Exchange (IDX), with the data analyzed through multiple linear regression. This approach differs from the study conducted by Aguade and Aragaw Eshetie (2022), which examined the influence of information system utilization on employee performance using descriptive quantitative methods and panel data regression. Their research employed data from the Ethiopian Central Statistics Agency's annual industry survey (1996–2016), in which profitability (ROA) was the primary dependent variable, while company age, size, labor productivity, and capital intensity were treated as independent variables.

2. LITERATURE REVIEW

2.1. Asset Structure

Asset structure denotes the allocation or arrangement of a company's assets, typically expressed as the proportion of current assets and fixed assets relative to total assets (Vokovic, 2023).

2.2. Profitability (Return on Assets)

Profitability, expressed through the Return on Assets (ROA) ratio, reflects a company's ability to generate profit from the total assets it owns. ROA demonstrates how effectively a firm utilizes its assets to produce income (Tejedo-Romero, 2023).

2.3. Capital Structure (Debt-to-Equity Ratio)

Capital structure denotes the proportion of a company's financing derived from debt compared to equity. One of the most commonly used indicators to assess this proportion is the Debt-to-Equity Ratio (DER) (Kiymaz, 2024).

2.4. Conceptual Framework

2.4.1. The Effect of Asset Structure on Capital Structure (DER)

Gagnon (2024) states that a well-structured asset composition can lead to the formation of a capital structure that is less reliant on debt, thereby reducing the Debt-to-Equity Ratio (DER) and shifting toward a non-debt-based funding model.

2.4.2. The Effect of Profitability (ROA) on Capital Structure (DER)

Profitability (ROA) has a significant impact on capital structure. Kashkinbayev (2023) found that higher profitability enables a company to develop a healthier capital structure, minimizing dependence on debt-based financing. While such debt may temporarily improve liquidity, it can also diminish returns on assets.

2.4.3. The Effect of Asset Structure and Profitability (ROA) on Capital Structure (DER)

Both asset structure and profitability (ROA) exert a significant influence on capital structure. Touil and Mamoghli (2020) argue that reliance on debt-based capital can undermine a company's capacity to generate returns on assets and maintain liquidity, which may consequently reduce current assets and pose a risk of fixed asset depletion.

The conceptual framework of this study is depicted in the following diagram:

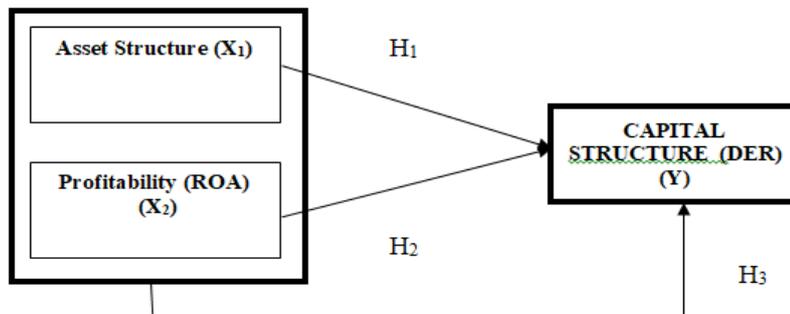


Figure 1. Conceptual Framework

2.4.4. Hypotheses

Based on the conceptual framework developed, this study proposes the following hypotheses:

- H1: The structure of assets significantly influences the capital structure (DER) of consumer goods manufacturing firms listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period.
- H2: Profitability (ROA) has a significant impact on the capital structure (DER) of consumer goods manufacturing companies listed on the IDX for the 2020–2024 period.
- H3: Asset structure and profitability (ROA) jointly have a significant effect on the capital structure (DER) of consumer goods manufacturing firms listed on the IDX during the 2020–2024 period.

3. PROPOSED METHOD

This study used a descriptive quantitative design with multiple linear regression to examine the impact of asset structure and profitability (ROA) on capital structure (DER). The population included 54 IDX-listed food and beverage manufacturers, with 30 selected via purposive sampling based on listing period (2020–2024), complete financial statements, and non-foreign ownership, resulting in 150 observations from secondary data. Analysis included descriptive statistics, classical assumption tests (normality, multicollinearity, heteroskedasticity), regression analysis, and hypothesis testing using R², t-test, and F-test.

4. RESULTS

4.1. Descriptive Statistical Analysis

The results of the descriptive statistical analysis are presented in the following table:

Table 2. Descriptive Statistical Analysis.

	N	Minimu m	Maximu m	Mean	Std. Error	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Asset structure (X1)	150	.05	87.00	4.4444	1.04992	12.85881
Profitability (ROA) (X2)	150	.01	67.94	11.4128	.81759	10.01341
CAPITAL STRUCTURE (DER) (Y)	150	.11	646.60	62.2479	10.87210	133.15543
Valid N (listwise)	150					

Source: SPSS Data Processing Results, 2025

The descriptive statistics indicate that the asset structure variable ranges from 0.05 to 87.00, with a mean of 4.4444 and a standard deviation of 12.86. The wide variation reflects substantial differences in capital structures among companies, suggesting an inconsistent impact of asset structure on capital structure across the sample.

Profitability (ROA) ranges from 0.01 to 67.94, with a mean of 11.413 and a standard deviation of 10.0134. This dispersion indicates notable variations in financing patterns, implying that ROA may not exert a uniform influence on capital structure for all firms studied.

Capital structure (DER) ranges from 0.11 to 646.60, with a mean of 62.248 and a standard deviation of 133.1554. These results suggest that capital structure is shaped by both profitability and asset composition, with the sampled companies generally categorized as having a well-established resource base.

4.2. Classical Assumption Test

4.2.1. Kolmogorov–Smirnov Normality Test

The table below shows the results of the Kolmogorov–Smirnov normality test:

Table 3. Kolmogorov–Smirnov Test Results.

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		150
Normal Parameters ^{a,b}	Mean	.000000
	Std. Deviation	128.81182683
Most Extreme Differences	Absolute	.323
	Positive	.323
	Negative	-.214
Test Statistic		.323
Asymp. Sig. (2-tailed)		.071 ^c

a. Test distribution is Normal.

- b. Calculated from data.
 - c. Lilliefors Significance Correction.
- Source: SPSS Data Processing Results, 2025

The Asymp. Sig. (2-tailed) value of 0.071 exceeds the 0.05 significance threshold, indicating that the independent variable data satisfy the normality assumption. This result confirms that the residuals are normally distributed, making them appropriate for subsequent regression analysis.

4.2.2. Multicollinearity Test

The table below presents the results of the multicollinearity test:

Table 4. Multicollinearity Test Results.

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error
Asset structure (X1)	150	.05	87.00	4.4444	1.04992
Profitability (ROA) (X2)	150	.01	67.94	11.4128	.81759
Capital Structure (DER) (Y)	150	.11	646.60	62.2479	10.87210
Valid N (listwise)	150				

Source: SPSS Data Processing Results, 2025

The table indicates that the independent variables X1 and X2 do not show multicollinearity, as evidenced by tolerance values above 0.1 and VIF values below 10.

4.2.3. Heteroscedasticity Test

The figure below presents the results of the heteroscedasticity test using a scatterplot diagram:

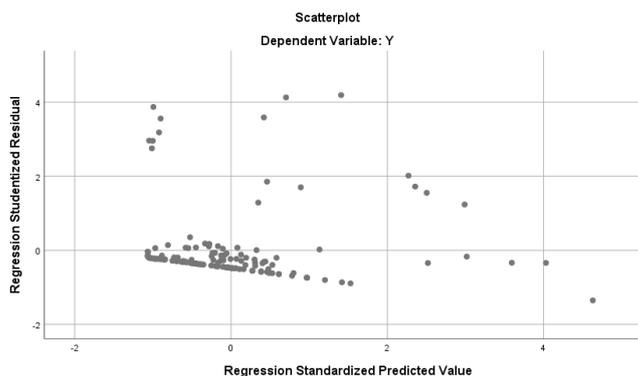


Figure 2. Scatterplot Diagram of Heteroscedasticity Test Results.

Source: SPSS Data Processing Results, 2025

The random scatter of residuals around zero indicates that the regression model is free from heteroscedasticity.

4.2.4. Multiple Linear Regression Test

The results of the multiple linear regression analysis are shown in the table below:

Table 5. Multiple Linear Regression Test Results

	N	Minimu m	Maximu m	Mean	Std. Error	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Asset structure (X1)	150	.05	87.00	4.4444	1.04992	12.85881
Profitability (ROA) (X2)	150	.01	67.94	11.4128	.81759	10.01341
Capital Structure (DER) (Y)	150	.11	646.60	62.2479	10.87210	133.15543
Valid N (listwise)	150					

Source: SPSS Data Processing Results, 2025

The table shows that the results of the multiple linear regression test can be expressed in the following equation:

$$Y = 25,905 + 0,906X_1 + 2,832X_2$$

Explanation:

1. The constant value of 25.905 means that the capital structure (DER) will be 25.905% if both asset structure (X₁) and profitability (X₂/ROA) are zero. This reflects the base level of DER independent of the two variables.
2. The coefficient for X₁ (asset structure) is 0.906, meaning that an increase of 1 unit in asset structure (particularly fixed assets) will increase DER by 0.906%.
3. The coefficient for X₂ (profitability/ROA) is 2.832, meaning that an increase of 1 unit in ROA will increase DER by 2.832%.

4.2.5. Coefficient of Determination Test

The following table shows the results of the determination coefficient test:

Table 6. Determination Coefficient Test Results.

Model Summary^b

Mod el	R	Adjus ted R Squa re	Std. Error of the Estimate	R Square Chang e	Change Statistics		Sig. F Change	Durbin- Watson	
					F Chang e	df1 df2			
1	.753 ^a	.764	.751	129.68514	.764	5.040	2 147	.008	.509

a. Predictors: (Constant), X₂, X₁

b. Dependent Variable: Y

Source: SPSS Data Processing Results, 2025

The Adjusted R Square value of 0.751 indicates that 75.1% of the variation in capital structure (DER) is explained by asset structure (X₁) and profitability (ROA/X₂), while the remaining 24.9% is attributable to other factors not examined in this study.

4.2.6. Partial Test (t-Test)

The following table presents the data processing results for the partial (t-test):

Table 7. Partial Test (t-Test) Results.

	N	Minimu	Maximu	Mean		Std.
		m	m	Statistic	Std. Error	Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Asset structure (X1)	150	.05	87.00	4.4444	1.04992	12.85881
Profitability (ROA) (X2)	150	.01	67.94	11.4128	.81759	10.01341
Capital Structure (DER) (Y)	150	.11	646.60	62.2479	10.87210	133.15543
Valid N (listwise)	150					

Source: SPSS Data Processing Results, 2025

The partial (t-test) results show that:

- Asset Structure (X₁) → Capital Structure (DER) (Y): Asset structure has a significant effect on capital structure (t = 3.046, p = 0.002 < 0.05).
- Profitability (ROA) (X₂) → Capital Structure (DER) (Y): Profitability also significantly affects capital structure (t = 5.546, p = 0.012 < 0.05).

4.2.7. Simultaneous Test (F-Test)

The following table presents the F-test (simultaneous test) results:

Table 8. F-Test Results.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	169544.266	2	84772.133	5.040	.008 ^b
	Residual	2472280.523	147	16818.235		
	Total	2641824.789	149			

a. Dependent Variable:

b. Predictors: (Constant), X₂, X₁

Source: SPSS Data Processing Results, 2025

The results indicate that capital structure (DER) is simultaneously and significantly affected by asset structure (X₁) and profitability (ROA/X₂). This is evidenced by an F-statistic of 5.040, exceeding the F-table value of 3.06, and a significance value of 0.008, which is below the 0.05 threshold.

5. DISCUSSION

5.1. Effect of Asset Structure on Capital Structure (DER)

The findings show that asset structure significantly affects the capital structure of IDX-listed consumer goods manufacturers ($t = 3.046$, $p = 0.002$). This aligns with Adam (2018), who noted that firms with more fixed assets tend to use more debt, whereas Ghia (2014) observed that lower asset proportions often lead to reduced debt levels.

5.2. Effect of Profitability (ROA) on Capital Structure (DER)

Profitability (ROA) significantly affects capital structure, with $t = 5.546$ and $p = 0.012$. This supports Devi (2016), who noted that firms may retain high debt despite rising ROA for expansion or future financing, while Abraham (2016) found that reducing debt and improving capital management can lower ROA.

5.3. Effect of Asset Structure and Profitability (ROA) on Capital Structure (DER)

The F-test results (significance value = 0.008; F-statistic = 5.040 > F-table = 3.06) demonstrate that asset structure and profitability jointly have a significant effect on capital structure. This aligns with Abraham (2016), who noted that industries with a greater proportion of fixed assets tend to exhibit a positive association with debt levels, whereas more profitable firms often depend less on debt due to the availability of sufficient internal funds. Conversely, Leni (2017) suggested that reducing fixed assets can enhance liquidity and improve ROA by lowering debt levels.

6. CONCLUSION

This study concludes that both asset structure and profitability (ROA) significantly influence capital structure (DER), both individually and in combination. One notable limitation of the research is the relatively small sample size—limited to 30 food and beverage manufacturing companies—due to time constraints, which may affect the generalizability and robustness of the results.

RECOMMENDATIONS

Food and beverage manufacturing companies listed on the IDX are advised to maintain a low debt-to-equity ratio, as excessive debt, while potentially boosting ROE in the short term, also increases financial risk. To enhance operational efficiency, companies should ensure optimal utilization of fixed assets, such as production facilities and machinery.

SUGGESTIONS FOR FUTURE RESEARCH

Future studies should consider additional variables—such as sales growth, firm size, operational efficiency, cash flow management, and liquidity ratios—to strengthen the predictive accuracy of models examining the relationship between ROA and capital structure.

REFERENCES

- Abraham, K. S. W. (2016). Influence of liquidity, activity, asset structure, and profitability ratios on the capital structure of consumer goods firms listed on the Indonesia Stock Exchange. Sam Ratulangi University.
- Adam, F. B. (2018). Impact of profitability, liquidity, and asset composition on the capital structure of manufacturing companies traded on the IDX. Syarif Hidayatullah State Islamic University.
- Aguade, A. E., et al. (2022). Panel data investigation into profitability and employment expansion in Ethiopia's medium- and large-scale industries. *Heliyon*, 8, e10859. <https://doi.org/10.1016/j.heliyon.2022.e10859>
- Azamat, K., et al. (2023). Effects of intangible assets on the valuation of global FMCG corporations. *Journal of Innovation and Knowledge*, 8, 100330. <https://doi.org/10.1016/j.jik.2023.100330>
- Bagna, E., et al. (2021). Patents and intangible assets as drivers of growth and profitability in European enterprises. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(4), 220. <https://doi.org/10.3390/joitmc7040220>
- BPS. (2024). BPS in figures 2024. <https://www.bps.go.id>
- Devi, E. P. (2016). Relationship between asset structure, profitability, and capital structure. Muhammadiyah University of Surakarta.
- Gagnon, J., et al. (2024). Relay race or ironman? A systematic literature review on innovation within the mining industry. *Resources Policy*, 98, 105363. <https://doi.org/10.1016/j.resourpol.2024.105363>
- Ghia, G. K. (2014). Impact of asset composition and profitability on the capital structure of food and beverage companies. *Trigonomika*, 13(2).
- Jardon, C. M., et al. (2024). Human capital and cross-border effects: Evidence from the Minho River region. *Papers in Regional Science*, 103, 100035. <https://doi.org/10.1016/j.pirs.2024.100035>
- Kiyamaz, H., et al. (2024). Comparative study on working capital management and firm performance in developed versus emerging markets. *Borsa Istanbul Review*, 24, 634–642. <https://doi.org/10.1016/j.bir.2024.03.004>
- Leni, K. (2017). Effects of asset composition, profitability, sales expansion, and business risk on the capital structure of real estate firms listed on the IDX. University of North Sumatra.
- Nienaber, A. M. I., et al. (2023). Organizational trust's trickle-down influence on co-worker trust: Moderating roles of cultural diversity and relationship tenure. *European Management Review*, 20(1), 97–112. <https://doi.org/10.1111/emre.12523>
- Polonio, D., et al. (2024). Profitability assessment of olive mill by-product gasification within the circular bioeconomy of the olive oil industry. *Biomass and Bioenergy*, 189, 107350. <https://doi.org/10.1016/j.biombioe.2024.107350>
- Sabani, N., et al. (2024). Differentiating the impact of local and national policy uncertainty on sectoral stock volatility. *Research in International Business and Finance*, 72, 102539. <https://doi.org/10.1016/j.ribaf.2024.102539>
- Strelnikova, L. (2022). Intellectual capital development as a driver of innovation in Russia's transport sector enterprises. *Transportation Research Procedia*, 63, 2053–2063. <https://doi.org/10.1016/j.trpro.2022.06.229>
- Tejedo-Romero, F., et al. (2023). Board leadership, independence, and human capital disclosure. *European Research on Management and Business Economics*, 29, 100224. <https://doi.org/10.1016/j.iedeen.2023.100224>
- Touil, K., & Mamoghli, C. (2020). Institutional context and factors influencing the adjustment speed toward target capital structure in MENA countries. *Borsa Istanbul Review*, 20(2), 121–143. <https://doi.org/10.1016/j.bir.2019.12.003>
- Truong, T. H., & Nguyen, T. T. (2024). Enhancing business performance via intellectual capital, absorptive capacity, and innovation: The mediating roles of environmental compliance and innovation. *Asia Pacific Management Review*, 29, 64–75. <https://doi.org/10.1016/j.apmr.2023.06.004>
- Ullah, A., et al. (2020). Linkages between capital structure, firm-specific and macroeconomic factors, and financial performance: Evidence from Pakistan's textile industry. *Heliyon*, 6, e04741. <https://doi.org/10.1016/j.heliyon.2020.e04741>
- Vokovic, D. B., et al. (2023). Interplay between working capital and platform economy in shaping firm profitability: Evidence from e-business models in a transitional economy. *Journal of Open Innovation: Technology, Market, and Complexity*, 9, 100060.
- Xu, J., et al. (2022). Energy crises, profitability, and productivity in emerging economies. *Energy Strategy Reviews*, 41, 100849. <https://doi.org/10.1016/j.esr.2022.100849>