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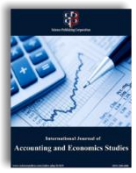

Analysis of The Interrelation between DuPont Model Indicators and The Cost of Fixed Assets in The Context of Real Investment Growth

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Abstract

In this article, the authors set out to test the hypothesis that a high Return on Equity can serve not as an indicator of past performance but also as a factor of growth in real investment.
To this end, a primary sample of 50 enterprises in the Ukrainian electrotechnical industry was generated. The impact of the capital structure and financing policy on investment activity was taken into account using the Debt-to-Equity Ratio and the Debt-to-Assets Ratio as indicators. Fixed Assets growth (residual value) was conditionally accepted as an indicator of real investment as it reflects investments in production capacity. The object of the study was selected enterprises that did not perform asset revaluation.
The authors conclude that the hypothesis of a direct interrelation between the parameters of the DuPont model and the value of Fixed Assets was not confirmed for the studied enterprises. The lack of correlation between Return on Equity (ROE) and Fixed Asset growth suggests that high ROE is not necessarily accompanied by technological development. The increase in this indicator for the sample of enterprises was mainly due to an increase in Financial Leverage rather than to investments in Fixed Assets. ROE, in turn, is not a determining factor of technological development in the electrotechnical industry of Ukraine under conditions of uncertainty. At the same time, the authors concede that there are factors that have not been considered by these researchers. The problem requires additional research and further analysis.

Keywords: *Analysis; Correlation Analysis; Dupont Model; Investment; Fixed Assets.*

1. Introduction

Innovation and investment development are key elements of successful economic transformation. Innovations contribute to the creation of unique products and services, provide a market advantage, and increase labor productivity, resulting in a range of effects – economic, social, environmental, and so on.

The electrotechnical industry is one of the key sectors of Ukraine's economy, characterized by rapid technological development (Amelnytska & Mizina, 2024). Despite the fact that the industry has suffered significant losses due to infrastructure destruction (by the end of 2023, approximately 40% of the energy infrastructure was damaged or destroyed), in 2024, the electrotechnical products market is showing positive dynamics. However, it remains dependent on imports, especially for high-tech components and modern solutions. Exports of electrotechnical products grew by 8% (Sokolovskaj, 2025), reaching USD 1.1 billion, 60% of which were cable and wire products and transformers.

Further development of the industry will depend on investments in modernization, sustained innovation, and stable demand from industrial consumers. The largest amount of investment (up to 2022) was made by enterprises producing wires, cables, electrical wiring devices, and household appliances (Chepizhko, 2021). The crisis conditions of 2022-2025 necessitated the restoration of electricity generation, conversion, and transmission.

In volatile markets, where economic uncertainty and rapid technological change prevail, it is critical to identify the determinants of technological development. Investigating the relationship between financial performance and fixed asset renewal is particularly relevant for capital-intensive industries such as the electrotechnical industry. The issues of evaluation, effectiveness, and the determination of the potential of investment and innovation activities are considered in the works of many Ukrainian and foreign scholars, including: O. Balan, V. Heetsia, O. Dobrovolska, S. Ilyashenko, O. Kuzmina, P. Pererva, V. Stadnyk, L. Sokolova, L. Fedulova, S. Filippova, N. Chukhrai, V. Shamko, A. Yakovlev, O. Yastremska, D. Hackbarth, D. Mauer, G. Trauffler, J. Yih, and others. One of the financial indicators that is

often researched is Return on Equity (ROE). The question then arises whether a high ROE can truly serve not only as an indicator of past performance but also as a driver of real investment growth.

2. Methods

The object of the study was the performance of manufacturing enterprises in the electrotechnical industry in 2022-2024. Specifically, the primary sample was formed of 50 enterprises in Ukraine within the selected industry, including those engaged in the production of electronic components; assembled electronic boards; communication equipment; electric motors; electrical distribution and control equipment; household appliances; and electrical and electronic equipment for motor vehicles. The financial reporting data of the studied companies were obtained from open sources: Ukrainian information and analytical platforms: Clarity Project, YouControl, Opendatabot.
Sharing the opinion of P. Dourtmes, we believe that multivariate factor analysis is the main method for identifying overt and latent trends (Dourtmes, 2018, p.161). Within the framework of the DuPont model, the authors determined the following indicators: Return on sales (ROS); Asset Turnover (AT); Financial Leverage (FL); Return on Assets (ROA); Return on Equity (ROE). To determine the impact of the capital structure and financing policy on investment activity, we calculated the Debt-to-Equity Ratio (D/E) and Debt-to-Assets Ratio (D/A). Fixed Assets (residual value) growth was conditionally accepted as an indicator of real investment as it reflects investments in production capacity. The object of the study was selected enterprises that did not perform asset revaluation.
Correlation analysis was used to determine the interrelation between the indicator and target variables; to identify the factors that affect business operations. In particular, to analyse the links between the indicators Revenue, Asset, Net Profit, Equity, Debt, ROS, AT, FL, ROA, ROE, D/E, D/A and the growth of Fixed Assets (as an indicator of technological development) of enterprises in the electrotechnical industry by years, the correlation calculated by the Pearson and Spearman methods was chosen. Pearson's coefficient is calculated using a parametric test that requires continuous variables to be approximately normally distributed and to have a linear dependence. It is also the most commonly used correlation coefficient. For non-normal distributions (especially for data with extreme values or outliers), correlation coefficients should be calculated from the ranks of the data, rather than their actual values, using Spearman's coefficient (Haldun, 2018). Spearman's rank correlation coefficient is a non-parametric measure of the strength and direction of association between two ranked variables. It assesses how well the link between two variables can be described by a monotonic function (GitHub).
Pearson's correlation coefficient is calculated by the formula:

$$R_{xy} = \frac{\sum_{i=1}^{N} (x_i - M_x) \times (y_i - M_y)}{(N-1)\sigma_x \sigma_y}.$$

Where: Rxy - Pearson correlation coefficient;
xi and yi are the two variables being compared;
M_x, M_γ - Mean values of x and y respectively;
N - Number of observations;
σx, σy - Standard Deviation x and y.
The Spearman's rank correlation coefficient is defined by the formula:

$$r_s = 1 - \frac{6 \sum_{i=1}^{n} d_i^2}{N(N^2-1)}.$$

Where: rs - Spearman's rank correlation coefficient;
di - Difference between the otw ranks of each observation;
N - Number of observations.
The Pearson correlation coefficient as well as the Spearman correlation coefficient have a value range of [-1, 1]. The closer the absolute value is to 1, the stronger the correlation; the closer it is to 0, the weaker the correlation.

3. Results

The dynamics of the ROE indicator of the primary sample of 50 enterprises of the electrotechnical industry of Ukraine in 2022-2024 is shown in Figure 1. The results of the calculation of the above financial indicators of the selected enterprises showed that in order to further study the dependence between individual indicators, we need to "clean up" the data, as there are statistical "outliers". In other words, we are faced with a situation in which there is a significant gap between the minimum and maximum values of the indicators of the sample companies. Removing such outliers is necessary to improve the quality of the analysis and build more accurate correlation models.

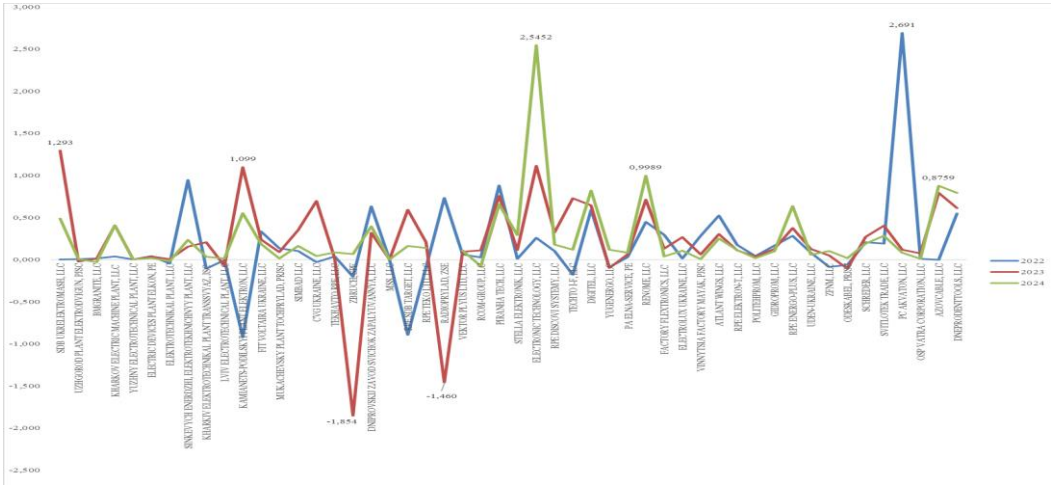

Fig. 1: ROE of Electrotechnical Industry Enterprises (Sample Data).

Thus, We Did Not Use The Data Of 14 Companies In Our Further Research: SDB Ukrelektromash, LLC; Uzhgorod Plant Elektrodvigun, Pjsc; Bmgranite, LLC; Kharkov Electric Machine Plant, LLC; Lviv Electrotechnical Plant, Llc; Kamianets-Podilskyi Plant Elektron, LLC; RPE SDB Target, LLC; Radioprylad, Zse; Renome, LLC; Factory Flextronics, LLC; Atlant Wings, LLC; Rpe Energo-Plus, Llc; Azovcable, LLC; Dneprodenttools, LLC.

For the sample of 36 enterprises, the next step was to determine the main statistical parameters (Table 1).

Table 1: Main Statistical Indicators of the Sample of Enterprises - Descriptive Statistics

Indicator	ROS			AT			FL			ROA			ROE			D/E			D/A		
	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Smallest	-0.37	-2.35	-0.05	0.04	0.02	0.06	0.18	1.03	1.00	-0.17	-0.72	-0.04	-0.20	-1.85	-0.08	0.02	0.03	0.00	0.05	0.03	0.00
Means	0.04	0.02	0.09	1.24	1.25	1.30	2.99	2.77	3.70	0.09	0.08	0.09	0.20	0.16	0.20	2.08	1.78	2.66	0.49	0.43	0.38
Largest	0.61	0.50	0.78	4.33	3.90	4.64	14.71	18.92	59.61	1.45	0.36	0.45	2.69	1.11	2.55	14.73	17.92	57.17	1.00	0.95	0.96
Standard Deviation	0.15	0.42	0.15	0.98	0.89	1.10	2.81	3.17	9.69	0.25	0.18	0.12	0.50	0.44	0.44	2.89	3.17	9.45	0.29	0.27	0.29
Median	0.02	0.06	0.04	1.09	1.07	1.03	1.70	1.70	1.45	0.03	0.06	0.04	0.04	0.12	0.10	0.70	0.70	0.45	0.44	0.41	0.31
Skewness	0.91	-5.25	3.20	1.56	1.41	1.78	2.33	4.08	5.80	4.95	-2.28	1.85	3.84	-2.44	4.67	2.67	4.09	5.79	0.07	0.16	0.44
Length of the distribution intervaly	0.163	0.474	0.138	0.716	0.647	0.763	2.423	2.982	9.768	0.270	0.180	0.082	0.482	0.495	0.437	2.451	2.982	9.5	0.1580	0.153	0.160

The ROE analysis for the studied group of enterprises based on the DuPont model in 2022-2024 and descriptive statistics in Table 1 demonstrate:

- the largest score of ROS in 2024 was observed for the DNIPROVSKIJ ZAVOD SVICHOK ZAPALYUVANNYA, LLC (0.78), smallest score – the ELEKTROTECHNIKAL PLANT, LLC (-0.05):
- by the AT indicator in 2024 the leading position was taken by the ZBRUCH, SPE (4.64), is the smallest score in the MSS, LLC (0.06);
- the largest score of ROE indicator in 2024 was observed for the ELECTRONIC TECHNOLOGY, LLC (2,55), which indicates high efficiency of the use of equity capital of the enterprise, but at the same time, a high FL level (5.,61) indicates a significant use of borrowed funds and high riskiness of activities;
- the smallest score of ROE indicator in 2024 recorded for the RCOM-GROUP, LLC enterprise (-0,08) with FL (1.68 with a trend towards growth), the company is thus taking on increased financial risk by increasing its debt obligations and using the funds raised inefficiently;
- the best situation in 2024 by the ROA indicator was at PIRANHA TECH, LLC (0.45), which is extremely positive given the upward trend in the value of the company's assets, and the worst situation was at RCOM-GROUP, LLC (-0.04);
- STELLA ELEKTRONIK, LLC (growth from 0,01 in 2022 to 0.29 in 2024) and ELECTRONIC TECHNOLOGY, LLC (growth from 0.26 in 2022 to 2.55 in 2024) showed a significant increase in ROE and, accordingly, the potential for investment in innovation;
- the reduction of ROE (from 0.03 to - 0,08 at RCOM-GROUP, LLC and from 0.28 to 0.01 at VINNYTSIA FACTORY MAYAK, PJSC) indicates a situation of potential loss of investment opportunities for the companies;
- companies with ROE < 0 (such as RCOM-GROUP, LLC, ELEKTROTECHNIKAL PLANT, LLC) have low investment potential due to financial difficulties of these companies. Investments in innovations are not possible for them at the current stage, and their activities require restructuring;
- the average ROS value ranged from 2-9%, which indicates profitable operating efficiency on average;
- the Asset Turnover ratio did not change significantly and was in the range of 1.24-1.3, indicating a slight increase in the efficiency of asset utilization for generating corporate income, as the intensity of asset utilization is growing;
- we observe an increase in Financial Leverage (from 2.99 in 2022 to 3.7 in 2024, with a slight decrease in 2023 to 2.77), which indicates a rise in debt on average across enterprises, sometimes due to the need to cover cash gaps and optimize the capital structure. The growth of Financial Leverage indicates additional opportunities for business development and investment in innovation, while at the same time leading to increased vulnerability to economic crises and market fluctuations. The simultaneous growth of ROS, AT, and FL indicators demonstrates a comprehensive improvement in the financial activity of enterprises, but also an increase in financial risks for them.

The resulting indicator of the DuPont model changed insignificantly during 2022-2024 (fluctuations in the range of 0.16-0.2), while the rest of the indicators had an upward trend. The main reason for the increase in ROE for the study group was the growth of FL. This means that companies face rising costs and risks that offset possible operational improvements. There is also a compensating effect from other factors not considered in this study that reduce net profit (e.g., tax burden, changes in profit structure). This also indicates more complex dynamics and dependence between financial indicators that require additional analysis.

For further analysis, we divided the enterprises into groups. Information on the number of enterprises per distribution group is presented in Table 2. The number of distribution groups was determined using the Sturgis formula:

$$k = 1 + 3.332 \times \mathrm{Log}(n) = 1 + 3.332 \times \mathrm{Log}\,(36) = 6.$$

Table 2: Allocation of Enterprises to Groups According to the Criteria of the Dupont Model.

Groups of distribution	2022 Final limit of the interval	Frequency	2023 Final limit of the interval	Frequency	2024 Final limit of the interval	Frequency	2022 Final limit of the interval	Frequency	2023 Final limit of the interval	Frequency	2024 Final limit of the interval	Frequency
ROS							AT					
1	-0.203	2	-1.871	1	0.087	25	0.756	13	0.668	10	0.820	16
2	-0.040	3	-1.397	0	0.225	7	1.471	14	1.315	15	1.584	14
3	0.123	25	-0.922	0	0.363	2	2.187	3	1.962	7	2.347	3
4	0.286	5	-0.448	0	0.501	1	2.903	4	2.609	3	3.110	2
5	0.449	0	0.027	34	0.639	0	3.618	0	3.256	0	3.874	1
6	0.612	1	0.501	3	0.777	1	4.334	2	3.903	3	4.637	2
FL							ROA					
1	2.598	1	4.011	31	10.768	35	0.097	27	-0.537	1	0.041	19
2	5.021	0	6.993	3	20.537	0	0.367	8	-0.357	0	0.123	9
3	7.444	24	9.975	1	30.305	0	0.638	0	-0.177	0	0.205	3
4	9.866	12	12.958	0	40.073	0	0.908	0	0.004	5	0.288	2
5	12.289	0	15.940	0	49.842	0	1.178	0	0.184	22	0.370	0
6	14.712	1	18.922	1	59.610	1	1.448	1	0.364	8	0.453	2
ROE							D/Equity					
1	0.278	29	-1.359	1	0.359	32	2.474	25	3.011	31	9.529	35
2	0.761	4	-0.865	0	0.796	2	4.925	6	5.993	3	19.058	0
3	1.243	2	-0.370	0	1.234	1	7.376	4	8.975	1	28.587	0
4	1.726	0	0.125	19	1.671	0	9.827	0	11.958	0	38.116	0
5	2.208	0	0.619	11	2.108	0	12.278	0	14.940	0	47.645	0
6	2.691	0	1.114	5	2.545	1	14.729	0	17.922	1	57.174	0
D/A							Fixed Assets					
1	0.211	10	0.182	8	0.160	12	110142.667	32	122821.917	31	106819.833	31
2	0.369	5	0.335	5	0.320	7	220282.733	1	245642.333	2	213639.667	1
3	0.527	5	0.488	9	0.480	4	330422.800	1	368462.750	1	320459.500	2
4	0.685	4	0.641	4	0.639	3	440562.867	0	491283.167	1	427279.333	0
5	0.843	8	0.794	6	0.799	6	550702.933	1	614103.583	0	534099.167	1
6	1.001	3	0.947	4	0.959	4	660843.000	1	736924.000	1	640919.000	1

As we can see, the distribution of enterprises is uneven. Also, at first glance, there does not seem to be a common tendency to group enterprises.

Considering that one of the main indicators of technological development of enterprises in the electrotechnical industry is the growth of the cost of Fixed Assets, it is necessary to examine the degree of connection between the cost of Fixed Assets of enterprises and the main parameters of the DuPont model. The cost of Fixed Assets of an enterprise provides an understanding not only of the scope and quality of its material and technical base, the efficiency of its use, but also characterizes the level of investment in new technologies, and is an indirect indicator of the readiness of enterprises for technological innovation, modernization and development. At the same time, changes in ROE may affect a company's decision to invest in Fixed Assets, and indirectly, their value through financial policy and financing opportunities.

To study the nature of the correlation between the main parameters ROS, AT, FL, ROA, ROE, D/E, D/A and to pre-test the hypothesis about the existence of a correspondence between the parameters of the DuPont model and the growth of Fixed Assets (as an indicator of technological development) of electrotechnical enterprises by years, we chose a mathematical and statistical method - correlation analysis. The main quantitative indicator that allows assessing the correlation (its existence/strength and type/direction) between individual variables within the framework of correlation analysis is the correlation coefficient (the value of the coefficient is in the range of -1 to +1).

As noted, Pearson's correlation coefficient works in the case of linear monotonic dependencies of factors, and Spearman's correlation coefficient is better used in the case of non-linear dependencies. Spearman's rank correlation coefficient is the second choice when assessing the dependence of factors is problematic because the distribution of values on one of the scales is not consistent with the normal one and when the parametric method of correlation analysis did not give the desired result, but the significance level-P (p-value) is within the permitted range (up to 0.05).

Therefore, to preliminarily assess the existence of a correlation between the factors, we determined the pairwise Pearson correlation coefficients between the main indicators of the DuPont model and the cost of Fixed Assets using the built-in Microsoft Excel service function (Tables 3-5).

Table 3: Results of the Correlation Analysis of the Dupont Model Indicators and the Cost of Fixed Assets Based on the Pearson Correlation Coefficient (2022)

Indicators	ROS	AT	FL	ROA	ROE	D/E	D/A	Fixed Assets
ROS		0.283	-0.091	0.813	0.325	-0.076	-0.305	-0.079
AT	0.283		0.274	0.309	0.373	0.270	0.269	0.017
FL	-0.091	0.274		-0.086	0.694	0.996	0.804	0.112
ROA	0.813	0.309	-0.086		0.339	-0.053	-0.247	-0.118
ROE	0.325	0.373	0.694	0.339		0.724	0.325	-0.146
D/E	-0.076	0.270	0.996	-0.053	0.724		0.792	0.099
D/A	-0.305	0.269	0.804	-0.247	0.325	0.792		0.216
Fixed Assets	-0.079	0.017	0.112	-0.118	-0.146	0.099	0.216	

Table 4: Results of the Correlation Analysis of the Dupont Model Indicators and the Cost of Fixed Assets Based on the Pearson Correlation Coefficient (2023)

Indicators	ROS	AT	FL	ROA	ROE	D/E	D/A	Fixed Assets
ROS		0.143	0.010	0.350	0.258	0.010	-0.063	0.010
AT	0143		0.037	-0.102	-0.152	0.037	0.217	0.206
FL	0.010	0.037		-0.109	0.325	1.000	0.688	0.154
ROA	0.350	-0.102	-0.109		0.868	-0.109	-0.219	-0.053
ROE	0.258	-0.152	0.325	0.868		0.326	0.106	-0.057
D/E	0.010	0.037	1.000	-0.109	0.326		0.687	0.153
D/A	-0.063	0.217	0.688	-0.219	0.106	0.687		0.282
Fixed Assets	0.010	0.206	0.154	-0.053	-0.057	0.153	0.282	

Table 5: Results of the Correlation Analysis of the Dupont Model Indicators and the Cost of Fixed Assets Based on the Pearson Correlation Coefficient (2024)

Indicators	ROS	AT	FL	ROA	ROE	D/E	D/A	Fixed Assets
ROS		-0.177	-0.061	0.653	0.168	-0.062	-0.431	-0.177
AT	-0.177		-0.112	0.333	0.082	-0.112	0.068	0.185
FL	-0.061	-0.112		-0.110	0.897	1.000	0.468	-0.011
ROA	0.653	0.333	-0.110		0.320	-0.111	-0.313	-0.164
ROE	0.168	0.082	0.897	0.320		0.897	0.293	-0.108
D/E	-0.062	-0.112	1.000	-0.111	0.897		0.471	-0.010
D/A	-0.431	0.068	0.468	-0.313	0.293	0.471		0.324
Fixed Assets	-0.177	0.185	-0.011	-0.164	-0.108	-0.010	0.324	

The data presented in Tables 3-5 indicate a strong direct relationship between the Financial Leverage (FL) indicators, which is evidence of multicollinearity. Consequently, these indicators should be excluded from further consideration and the assessment of other dependency. A strong direct relationship is also observed with other indicator pairs. such as ROA and ROE, ROE and FL, and ROE and the D/E; however, a consistent general trend across all three periods is absent.

4. Discussion

According to the hypothesis previously put forward, there should be a positive correlation between the parameters of the DuPont model and Fixed Asset growth (as an indicator of technological development). The analysis revealed that for all three periods under study, there was no significant dependency between the parameters of the DuPont model and the value of Fixed Assets (the correlation coefficient was extremely low – the maximum value being 0.324). This does not allow us to draw an unambiguous conclusion about the existence of such an association. The additional introduction of variables that are a combination of factors into the model also failed to yield the desired result; the dependance between the parameters of the DuPont model and the value of Fixed Assets remained unobserved.

The multiple correlation coefficient (R) and the coefficient of determination (R^2) were also examined. The coefficient of determination between the set of factors and the resulting indicator – the value of Fixed Assets – also showed a low interdependence (the calculation was carried out using Microsoft Excel's built-in 'Analysis ToolPak' module, specifically the 'Regression' tool).

The maximum Multiple R for the studied group is 0.49, with an R^2 of 0.24 (both observed in 2024). Thus, for the studied enterprises, the hypothesis of a direct dependency between the parameters of the DuPont model and the value of Fixed Assets is not confirmed. Consequently, no direct impact of these factors on technological development is observed. In addition, the p-values for the linkage model indicate that any observed association between the factors of the DuPont model and the value of Fixed Assets is highly likely to be due to random chance, suggesting no statistically significant link. Admittedly, such results are due to imperfect sampling, insufficient sample size, or indeed the fact that there is no direct, monotonic dependence between the parameters of the DuPont model and the value of Fixed Assets as a sign of technological development.

Given these results, we consider it necessary to check for a nonlinear dependency between the parameters of the DuPont model and the value of Fixed Assets. In this case, Spearman's rank correlation coefficient is used to estimate this link (see Table 6).

Table 6: Results of the Correlation Analysis of the Dependence between Financial Position and the Value of Fixed Assets Using the Spearman Correlation Coefficient (2022-2024)

Indicators	Years		
	2022	2023	2024
ROS – Fixed Assets	-0.147	-0.021	-0.240
AT – Fixed Assets	0.009	0.134	0.244
FL – Fixed Assets	0.316	0.165	0.336
ROA – Fixed Assets	-0.150	0.036	-0.133
ROE – Fixed Assets	-0.173	-0.024	-0.123
D/E – Fixed Assets	0.316	0.172	0.336
Debt Ratio/Assets Ratio – Fixed Assets	0.284	0.174	0.336

Based on the above calculation results, we can note that the Spearman correlation coefficient between individual criteria and the value of Fixed Assets in the study period does not exceed 0.336. Thus, we were once again able to verify with the help of another indicator - the Spearman's criterion – that there is no statistically significant monotonic correlation between the variables in our sample.

According to the calculations of Pearson and Spearman criteria, no significant correspondence between the factors of the DuPont model and the value of Fixed Assets was found, but this does not mean that there is no connection between the variables and the resulting factor (for us, this is the value of Fixed Assets, which is a measure of technological development). In this case, we may be talking about insufficiently high-quality initial data, as mentioned above, or there may be no correlation due to other (unaccounted for) factors that mask the interrelation between the parameters we are studying. Of course, this requires the use of more complicated analysis tools, or vice versa, a simplified sample of factors.

5. Conclusion

For the studied enterprises, the hypothesis of a direct relationship between the parameters of the DuPont Model and the value of Fixed Assets is not confirmed. Consequently, no direct impact of these factors on technological development is observed. Return on sales (ROS) demonstrates a weak correlation with the value of fixed assets. This means that an increase in sales profitability is not accompanied by an investment in production capacity. Asset turnover (AT) has a weak and unstable correlation with the cost of fixed assets, indicating that there is no effect of increased return on assets even when assets are growing. Financial leverage (FL) had a weak correlation. This confirms that borrowed capital was not directed towards real investments, but was used mainly to finance working capital. Return on assets (ROA) has no significant correlation with the value of fixed assets, which indicates the absence of interdependence between financial results and investment activity of enterprises. The Debt-to-Equity Ratio and Debt-to-Assets Ratio do not show a clear correlation with the value of fixed assets. This indicates that changes in the financing structure do not translate into an increase in real investments, and that the financial policy of enterprises is not focused on the technological renewal of production resources.

Return on equity (ROE) is not a determining factor in technological development in the Ukrainian Electrotechnical industry. The growth of ROE for the studied group of companies during the 2022-2024 period was mainly attributable to an increase in Financial Leverage, rather than investments in Fixed Assets. Companies with high ROE were less likely to invest in Fixed Assets, while those that did demonstrated an average level of profitability. The correlation coefficient, which does not exceed - 0.05, indicates a very weak, inverse interrelation between ROE and Fixed Asset growth. This confirms that high ROE is not necessarily accompanied by technological development. Admittedly, the authors attribute these analytical results to sampling imperfections, insufficient data, and the influence of unaccounted factors. Therefore, the problem requires additional research to formulate more advanced conclusions that will be of practical importance. Further research by the authors will involve analyzing the distribution of enterprises across groups based on the main indicators characterizing their activities and property status.

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