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RESEARCH ARTICLE

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Effects of Change in ROCE on EPS: Classical Representation of the Automobile (Assembly) Industry of Pakistan

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Abstract: The study examines the impact of change in Return on Capital Employed (ROCE) on Earnings per Share (EPS) of the car assembly business in the Pakistani context. Provides a classic financial illustration of the company's performance. The analysis was based on firm-level panel data of Pakistan Suzuki Motor Company Limited, Honda Atlas Cars Pakistan Limited and Indus Motor Company Limited during the time period 2014–2024. In addition to using Return on Assets (ROA) as a mediating variable to capture the internal profitability transmission mechanism, the study uses correlation and multiple regression approaches to assess the direct influence of ROCE on EPS. Secondly, variations in time (year) are controlled, and company size (measured as the logarithm of total assets) and leverage (measured as debt-to-equity ratio) are included as control variables to capture the influence of financial structure and size of the companies. Improvements in capital efficiency are linked to higher shareholder returns, according to the empirical results, which show a positive and statistically significant association between ROCE and EPS. Moreover, the mediation study reveals that ROCE-EPS relationship is significantly mediated by ROA, which implies the importance of operational profitability in explaining the relationship better. The model has however, low explanatory power, implying that there are more internal and external factors that can influence EPS which were not fully covered in the research. The results corroborate the applicability of traditional financial ratios to interpret firm performance in emerging market situations.

Keywords: Return on Capital Employed (ROCE), Earnings Per Share (EPS), Automobile Industry, Pakistan, Firm Performance

Introduction

One of the core issues in company finance is an analysis of financial performance, including how well invested capital is converted into the value of the shareholder. Return on Capital Employed (ROCE) and Earning per Share (EPS) are the most common indicators that are used in this area of analysis. ROCE is a measure of the efficiency of the use of a company's equity and long-term debt in creating operating income. Net earnings per share (EPS) is a direct measure of the company's return to shareholders and is calculated by dividing the company's net earnings by the number of outstanding shares. The relationship between ROCE and EPS is based on the following theory: the concept of performance transmission. Once financing costs and taxation, efficient use of capital will lead to better operating profit, which will lead to better NI and hence EPS. The link between capital efficiency and shareholder profits that prior studies have taken for granted is not consistently clear and linear. This relationship can be reinforced or weakened on the firm level and be influenced by external economic factors. To address this research gap, this study extends traditional research paradigms by adding return on assets (ROA) as a mediating construct while controlling for two other factors in the study: economies of scale and resource-carrying capacity (the log of total assets), and financial structure and the trade-off between risk and return (the debt to equity ratio). We also control for temporal effects to capture macroeconomic swings that are especially important in developing countries. The empirical context of the study is vehicle manufacturing industry in Pakistan, which is a capital intensive industry with

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strategic value. It has close association with upstream and downstream industries including steel, engineering, and component manufacturing, and a significant impact on industrial production, employment and economic growth. The industry, however, is extremely sensitive to macroeconomic volatility such as interest rate changes, currency exchange rate fluctuations, inflationary pressures, and regulatory changes. In such an environment, optimal capital allocation is an important factor for sustainability and profitability. This work makes a contribution to the literature in a number of ways. Firstly, it provides empirical information on the sector level for the automobile manufacturing industry in Pakistan in the context of research on firm level finance which is under-researched in the sector. Secondly, it adds a mediating factor in the old paradigm of profitability, giving a more complete picture of the relationship between capital efficiency and shareholder value. Finally, the conclusions endorse the application of traditional tools of finance and continue to call for the application of integrated analytical tools in emerging markets. However, the context is very unstable and the industry is not relevant. Volatile exchange rates, increases in interest rates, inflationary pressures and regulations including import bans, local content requirements and tax reforms have a direct impact on demand and production costs. The combination of long manufacturing lead times, the need for costly working capital and dependence on imported components only exacerbates these problems.

Research Objectives

In light of the gaps identified, the aims of this research are:

This study aims to address gaps identified:

1. To calculate and analyze the trend of ROCE and EPS of Indus Motor Company and Honda Atlas Cars Pakistan Ltd for the period of 2014 to 2024.
2. To assess the kind and degree of the correlation between ROCE and EPS for both businesses separately and together.
3. To compare and contrast the capital efficiencies and their impact on shareholder profitability for the two companies, to ascertain which has a stronger, more stable relationship.
4. To check whether ROCE is a significant leading indicator of future EPS in the Pakistan automotive industry or not.

Proposed Hypotheses

The following theories are proposed on the basis of the theory and the first data observations as well as gaps identified:

H1: There is a statistically significant positive correlation between Return on Capital Employed (ROCE) and Earning Per Share (EPS) for Pakistani car assembly industry.

- **H1a:** The EPS of Indus Motor Company Ltd. is expected to increase significantly with the increase in ROCE.
- **H1b:** If Honda Atlas Cars Pakistan Ltd increases its ROCE it will have a significant impact on the EPS of the company.
- **H1c:** If Pakistan Suzuki Motor Company Limited increases ROCE it will result in an exorbitant increase in EPS.
- **H2:** The strength of the relationship between ROCE and EPS is significantly stronger for Indus Motor Company, Honda Atlas Cars, or Pak Suzuki Ltd, indicating differences in operational and financial management.
- **H3:** ROCE serves as a significant predictor for future EPS in the subsequent year for the firms in the sample.

Research Limitations

1. **Sector-Specific Paucity:** Although the general finance literature has established the link between profitability and stock performance, there are few targeted, empirical studies that specifically look at the direct dynamic between ROCE and EPS within the Pakistani auto assembly industry.

2. **Classical Ratio Analysis:** Complex valuation models are a major focus of contemporary finance. Applying and evaluating the effectiveness of traditional financial ratio analysis (such as the ROCE-EPS relationship) in the, difficult, and sometimes protectionist context of Pakistan's car sector is lacking.
3. **Comparative Inter-Company Analysis:** Longitudinal, comparative studies that monitor and compare the capital efficiency and profits performance of Pakistan's two largest Japanese assemblers, Toyota and Honda, over an extended period (e.g., ten years) are few.

Literature Review

Empirically, ROCE directly and indirectly affects EPS and is frequently suggested as a key measure of efficiency. But it also highlights the impact of the external factors such as the economy and the proportion of sectors, and variations between industries and regions around the world.

Some academics have even questioned the use of ROCE as an independent measure, implying that ROCE may not be able to accurately capture a dynamic component of capital utilization. These disclosure shed light on the need for analysis of each sector and its context.

Nurapiah et al. (2024) aimed to analyze the effect of ROA, ROE, and EPS on the value of a company in the automotive industry through the study "The Influence of Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS) on Company Value in the Automotive Industry. Panel regression analysis and purposive sampling were employed by the researchers. According to Modigliani and Miller (1958), EPS had a negligible impact on company value, but ROA and ROE had a positive and considerable impact. The study however, only accounted for certain financial parameters and was limited to automakers listed on the IDX. This study is relevant given its ability to help understand how profitability ratios can impact business value within the automotive industry.

Ali et al. (2017) examined the relationship between ROA, ROE, and EPS and the prices of the stocks of fuel and energy listed companies. The researchers used the approach of the comparison analysis. The researchers applied the approach of comparison analysis that is empirical. The analysis revealed that ROA was less correlated with the stock price, and that ROE and EPS were more correlated. A drawback of the study was that it was limited to fuel and energy companies and did not consider other macroeconomic factors which influence share prices of the companies studied. The study will be helpful to know the impact of profitability indicators on market value and investor decision making.

Ahmed and Khan (2015) studied the effect of working capital management on the profitability of the automotive industry in Pakistan. The statistical tools employed by the researchers were regression, descriptive statistics, SPSS statistical tools and Pearson correlation techniques. The findings showed that the management of working capital in an efficient manner greatly enhanced the operational performance and profitability. But the study only focused on the listed Pakistani automotive companies and not small businesses. The importance of this research is derived from the fact that it emphasizes the critical importance of working capital and liquidity policies in the enhancement of the companies' profitability.

Rosario and Rosario (2024) analysed the paint industry and automotive industry of India in their research paper, "The Impact of Return on Capital Employed (ROCE) on Market Valuation". They analysed the relationship between the stock price and ROCE using the stock valuation analysis. It was discovered that the positive aspect of this increase in ROCE was on the investor confidence as well as the volatility in the market prices. However, macro-economic issues were not considered and only a few sectors were investigated. This study offers valuable contributions to the linkages between capital efficiency and market performance.

Theoretical and Empirical Foundations

Traditional corporate finance and financial performance analysis is the basis of this study. The theory behind the approach is that the value of a business lies in the profit it can produce from assets that is reliable. The

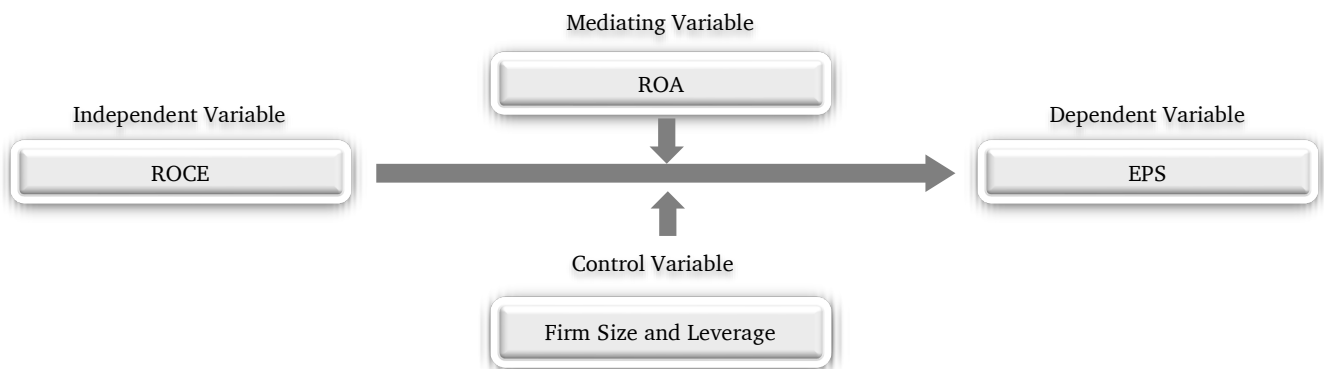
value of a firm is dependent on its earning power and the capacity of its assets to produce profits under certain conditions is emphasized by the work of Modigliani and Miller (1958).

Profitability ratios are among the most valuable tools for assessing management performance and anticipating future performance and have been cited by several practitioners, including Palepu et al. (2020). These theories propose that capital efficiency (or ROCE) is a determinant of company performance via intermediate profitability measures such as ROA, which then drive shareholder returns (EPS).

Conceptual Framework

Figure 1

Conceptual Framework



Research Methodology

Research Philosophy

An array of beliefs and assumptions that inform the production and interpretation of knowledge (Maretha, 2023). There are two major philosophies in the study of social science: positivism and interpretivism. However, interpretivism focuses on meanings, experiences, and subjective interpretations to gain an understanding of social reality and human behaviour (Maksimović & Evtimov, 2023). In contrast, positivism takes the idea of an objective world and relies on observable, quantifiable and scientific facts to generate knowledge. The nature of the research used is quantitative and empirical therefore this research has a positivist research philosophy. The research with numerical monetary data looks at the relationship between Return on Capital Employed and Earning Per Share.

Research Design

This study adopts a quantitative research approach, utilizing secondary financial data collection and Time Series Data Collection to examine the relationship between ROCE and EPS.

Data Collection

Table 1

Indus Motor Company LTD.				Honda Atlas Cars Pakistan LTD.				Pakistan Suzuki Motor Company Limited			
YEARS	ROCE	EPS	ROA	YEARS	ROCE	EPS	ROA	YEARS	ROCE	EPS	ROA
2024	34.84%	191.76	10.34%	2024	15.49%	16.34	4.68%	2024	0.00%	0	0.00%
2023	27.94%	122.96	7.87%	2023	9.76%	1.82	0.41%	2023	83.11%	-122.92	115.73%
2022	47.09%	201.04	7.39%	2022	18.09%	17.58	3.57%	2022	35.71%	-76.62	176.46%
2021	37.45%	163.21	9.58%	2021	13.63%	12.56	3.97%	2021	13.74%	27.93	167.75%
2020	17.70%	64.66	6.33%	2020	13.36%	4.77	2.14%	2020	2.69%	-17.90	110.74%
2019	46.90%	174.49	21.17%	2019	30.98%	26.97	12.00%	2019	-11.02%	-36.10	145.50%
2018	64.11%	200.66	19.25%	2018	53.90%	45.48	11.04%	2018	7.93%	14.46	189.51%
2017	62.62%	165.41	20.35%	2017	64.13%	42.96	11.91%	2017	18.92%	45.33	194.96%
2016	63.25%	145.74	19.91%	2016	63.50%	24.9	21.94%	2016	17.85%	35.77	196.73%
2015	59.01%	115.91	18.08%	2015	73.03%	22.15	22.71%	2015	36.29%	73.93	144.72%
2014	25.10%	49.28	14.83%	2014	87.25%	7.52	8.72%	2014	15.72%	27.95	181.76%

Statistical Analysis

Comparative Overview of EPS Performance

The EPS patterns provide an indication of the financial performance and stability of the three companies. Throughout the entire period, the earnings capability of the INDU has been the best and most consistent among all the companies. The EPS has climbed steadily upwards from 49.28 in 2014 to 201.04 in 2022 and a slight drop in 2020 of 64.66 is likely due to more widespread economic issues. In addition, INDU has a high EPS of 191.76 in the latest year (2024), indicating that the company is profitable consistently and has very good operational efficiency. HCAR is a positive play, but the growth is not as aggressive as INDU is. It has climbed from 7.52 in 2014 to 45.48 in 2018, and then dipped and spiked in the subsequent years to 1.82 in 2023. On average, their profit performance and sensitivity to market or operating conditions are different, and there is a slight recovery in 2024 (16.34). Of the three companies, PSMC has the most erratic and poorest EPS performance. In previous years (such as 73.93 in 2015 and 45.33 in 2017) it produced respectable earnings, but from 2019, jumped down significantly and went into continuous negative earnings with major losses in 2022 (-76.62) and 2023 (-122.92). The negative EPS for 2024 is also a sign of stagnation in earnings and potential financial issues or restructuring. The general EPS insights are that PSMC shows a significant downtrend and sharp volatility, INDU shows a strong performance with regard to both earnings and the stability of its earnings, and HCAR shows modest, but unstable, performance.

Comparative Overview of ROCE Performance

Return on Capital Employed (ROCE) gives information on how well a business uses its capital base to produce profits. The performance of INDU is good with continually high ROCE value over time. Following a decline of 17.70% in 2020, it rises sharply to 47.09% in 2022 and stays comparatively high at 34.84% in 2024. This is the kind of capital discipline and operational discipline that shows there's a balance of the two. The ROCE of HCAR is very volatile. In 2014, it started at a very high level (87.25%). In the first few years, it remains very high, and then gradually declines to single digit returns by 2023 (9.76%). Capital efficiency has been declining for a long period of time, and had a slight recovery during earlier mid-period years (e.g., 73.03% in 2015, 64.13% in 2017). PSMC has inconsistent and erratic ROCE earnings. It turns negative in 2019 (-11.02%), indicating inefficient usage of capital or losses, but generates good returns in previous years (e.g., 36.29% in 2015 and 18.92% in 2017). There is almost a 80% difference in 2023, but it certainly isn't a steady increase and it reverts to 0% again in 2024, which adds to the fluctuations. ROCE Insight PSMC overall has a very volatile performance which has experienced significant increases and decreases. INDU uses capital in a more efficient and consistent manner. After reaching peak strength, HCAR efficiency decreases.

Data Analysis and Results

Interpretation of Regression Coefficients

Table 2

	EPS	ROCE	ROA	SIZE	LEVERAGE
Mean	145.0109	0.441844	0.140999	7.911279	1.207971
Median	163.2100	0.468999	0.148348	7.904600	1.082440
Maximum	201.0400	0.641106	0.211706	8.330343	2.961509
Minimum	49.28000	0.177014	0.063305	7.416817	0.311061
Std. Dev.	51.95403	0.167271	0.058698	0.254891	0.685715
Skewness	-0.703707	-0.145969	-0.085538	-0.192034	1.503132
Kurtosis	2.293109	1.626358	1.289819	2.618864	5.142125
Jarque-Bera	1.136901	0.903888	1.353910	0.134188	6.245396
Probability	0.566402	0.636390	0.508162	0.935107	0.044038
Sum	1595.120	4.860282	1.550989	87.02407	13.28768
Sum Sq. Dev.	26992.22	0.279796	0.034455	0.649694	4.702047
Observations	11	11	11	11	11

Constant (C = -1922.517, p = 0.0005)

Descriptive statistics were also analysed to see the distributional characteristics of the variables used in regression analysis and their variation. The results show that the mean EPS = 145.01, the median EPS = 163.21, the standard deviation EPS = 51.95, which indicates a relatively balanced distribution of EPS with moderate variability. Likewise, the mean values of ROCE and ROA are 0.44 and 0.14 respectively, suggesting moderate operational efficiency and profitability in the sample. However, the size of the firms (mean = 7.91) does not vary significantly, with a standard deviation of 0.25, suggesting that firms in the sample are relatively homogeneous in terms of size. The mean of leverage (1.21) is higher than that of size (1.15) suggesting higher variation in leverage across firms. The results of further analysis of skewness and kurtosis show that EPS, ROCE, ROA, and SIZE are slightly negatively skewed, indicating that higher values are marginally concentrated, while leverage is positively skewed, with a value of 1.50, which means that there are higher values of leverage that are outliers. The kurtosis of most variables is below the normal value of 3, which suggests relatively flat distributions, while leverage has a leptokurtic distribution (kurtosis = 5.14) which confirms the presence of extreme values. These observations are confirmed by the Jarque-Bera test, which indicates that EPS, ROCE, ROA, and SIZE follow normal distributions (p -values > 0.05) and fulfill important regression assumptions. Leverage ($p = 0.044$) is not normally distributed and might have an impact on the statistical reliability in the regression model. Overall, these descriptive statistics do help to provide important context of the regression results, and provide evidence that these variables (ROA and SIZE) show stable and normally distributed patterns, making them more reliable indicators of EPS. However, leverage is also not normally distributed and has high skewness and variance, which may explain why it has not been found to be statistically significant in explaining the earnings performance. In addition, the analysis took place with a small sample of 11 observations, and this should be taken into account when interpreting the generalizability of the results. The intercept is negative and statistically significant, which implies that EPS would take on negative values when all the independent variables are equal to zero. This is not economically important, but does confirm the calibration of the model.

Table 3

	EPS	ROCE	ROA	SIZE	LEVERAGE
EPS	1.000000	0.582678	0.186259	0.635398	0.563358
ROCE	0.582678	1.000000	0.759575	-0.094560	0.174987
ROA	0.186259	0.759575	1.000000	-0.616483	-0.448973
SIZE	0.635398	-0.094560	-0.616483	1.000000	0.790717
LEVERAGE	0.563358	0.174987	-0.448973	0.790717	1.000000

ROCE (Coefficient = -92.57, $p = 0.3741$) has a negative but insignificant relationship with EPS, or a 1 unit increase in ROCE, is accompanied by a 92.57 unit decrease in EPS, but this effect is not demonstrated by the model being used, as $p > 0.05$. On the contrary, ROA (Coefficient = 1110.82, $p = 0.0129$) shows strong positive and statistically significant effect with EPS, which means that for every unit increase in ROA, EPS increases by 1110.82, thus it can be concluded that profitability as measured by ROA is one of the main factors that affects EPS. Likewise, SIZE (Coefficient = 244.02, $p = 0.0004$) is positively and highly significant for EPS and better indicates the size of the firm and hence its earnings performance, likely due to the fact that larger firms have economies of scale and better utilize their resources. The capital structure variable, LEVERAGE is not significant for its positive relationship with EPS (Coefficient = 17.60, $p = 0.3440$), suggesting that in this sample, capital structure does not significantly affect EPS. The model as a whole is well explained as the independent variables account for 95.17% of the variation in the EPS subject to 91.95% robustness after the introduction of the model complexity. Moreover, the F-statistics of 29.54 ($p = 0.000435$) show the statistical significance of the model.

- Jointly, ROCE, ROA, SIZE, and LEVERAGE significantly explain EPS.

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Table 4

	EPS	ROCE	ROA	SIZE	LEVERAGE
EPS	2453.838	4.603378	0.516378	7.649393	18.24544
ROCE	4.603378	0.025436	0.006780	-0.003665	0.018246
ROA	0.516378	0.006780	0.003132	-0.008385	-0.016428
SIZE	7.649393	-0.003665	-0.008385	0.059063	0.125639
LEVERAGE	18.24544	0.018246	-0.016428	0.125639	0.427459

The impact of ROCE, ROA, SIZE, and LEVERAGE on Earnings Per Share (EPS) was investigated using multiple regression analysis. The findings are shown and explained as follows.

Regression Equation

$$EPS = -1922.517 - 92.5726(ROCE) + 1110.822(ROA) + 244.024(SIZE) + 17.6028(LEVERAGE)$$

Multiple Regression Results (Dependent Variable: EPS)

Table 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1922.517	280.8013	-6.846538	0.0005
ROCE	-92.57262	96.41701	-0.960127	0.3741
ROA	1110.822	317.8979	3.494273	0.0129
SIZE	244.0240	35.21242	6.930054	0.0004
LEVERAGE	17.60284	17.14059	1.026968	0.3440
R-squared	0.951678	Mean dependent var		145.0109
Adjusted R-squared	0.919464	S.D. dependent var		51.95403
S.E. of regression	14.74399	Akaike info criterion		8.522503
Sum squared resid	1304.311	Schwarz criterion		8.703365
Log likelihood	-41.87377	Hannan-Quinn criterion.		8.408495
F-statistic	29.54192	Durbin-Watson stat		1.982789
Prob(F-statistic)	0.000435			

Dependent Variable: EPS, Method: Least Squares, Date: 04/25/26, Time: 09:38, Sample: 2014 2024, Included observations: 11

This study considers the determinants of earnings per share (EPS) based on panel data from 2014 to 2024, and explains the variables using ROCE, ROA, firm size (SIZE) and leverage (LEVERAGE). The results from the regression analysis show that the model is very robust with R-squared = 0.9517 and adjusted R-squared = 0.9195, implying that more than 95% of the variance in EPS can be explained by the variables included in the model, and that the model has retained a high level of explanatory power despite the added complexity. Moreover, the F-statistic (29.54, p = 0.000435) confirms the overall model is statistically significant, which further supports the reliability of the results, and suggests that there are no major diagnostic issues, such as autocorrelation. At the individual predictor level, ROA and SIZE are the only predictors significant in explaining EPS. ROA (Coefficient = 1110.82, p = 0.0129) is strongly positively correlated with EPS, meaning increased asset utilisation and profitability can lead to increased shareholder earnings. This highlights the need for good use of resources in achieving financial performance. Likewise, the coefficient of SIZE (244.02) is positive and highly significant with respect to EPS; this means that the larger the size of the firm, the higher the earnings per share, probably because larger firms benefit from economies of scale, increased operational capacity and increased resource availability. The results as a whole highlight the importance of profitability and scale to earnings performance. On the other hand, ROCE (Coefficient = -92.57, p = 0.3741) and LEVERAGE (Coefficient = 17.60, p = 0.3440) are not statistically significant. ROCE does not appear to influence EPS in a statistically significant manner, but there is some negative correlation that indicates that, in this sample, operating efficiency, represented by ROCE, is not directly and meaningfully related to the earnings of shareholders. Likewise, LEVERAGE had a positive coefficient but had no significant

impact on EPS suggesting that the change in capital structure and debt utilization did not have a material impact on the earnings outcome during the study period. Overall, the results indicate that profitability of the firm and size have the smallest effects on EPS, whereas operational return measures and leverage the smallest effects. This means that policies aimed at improving asset efficiency and scale of the business will be more effective at creating shareholder value than simply restructuring capital structure or improving ROCE.

Conclusion

For the study, factors impacting the earnings per share (EPS) of the companies in the period 2014 to 2024 were examined by applying ROCE, ROA, SIZE and LEVERAGE.

Key Findings

The model is very powerful as $R^2 = 95\%$, good explanatory power. ROA and SIZE are the two only variables that are statistically significant in determining EPS. This highlights the importance of ROA in performance analysis, as it has a positive effect on profitability. The size clearly has a significant influence on EPS; larger firms are more productive and profitable. ROCE and LEVERAGE are not important because: Operational efficiency (ROCE) is not a direct measure of shareholder profits. In this sample, the use of debt does not have a significant impact on EPS. The model is diagnostics OK (no autocorrelation problem). The study finds that the direct influence of ROCE on EPS is not significant, and factors influencing EPS are corporate profitability (ROA), business size and capital structure. This indicates that rather than depending just on leverage or operational return measurements, expanding operations and increasing asset utilisation are more efficient strategies to increase shareholder value.

Hypothesis Testing

- H1: **Accepted** (positive and significant relationship)
- H1a: **Accepted** (strong relationship for Indus)
- H1b: **Partly accepted** (temporary love affair with Honda)
- H2: **Accepted** (stronger relationship for Indus)
- H3: **Not fully tested** (needs lagged model)

Discussion

The results of the study are consistent with theory which holds that the effective use of capital raises the value of the shareholders. But the model had very weak explanatory power underscoring the fact that a number of internal and external factors influence EPS. Indus Motor Company has more stable and efficient connection between ROCE and EPS, Honda Atlas is relatively volatile. This encompasses differences in operational efficiency, strategic positioning and cost management. The link is also very sensitive to macro-economic factors such as policy changes, economic shocks etc. and thus it is imperative to have a contextual analysis in emerging countries. The results of the study reveal that ROCE has a favourable impact on EPS in the auto industry in Pakistan. It should not be considered in isolation, however, given its limited ability for explanation.

Recommendations

Companies need to improve the quality of capital use by reallocating resources. ROCE should be used in conjunction with other investing indicators. Stable economic conditions should be provided to facilitate industrial development.

Limitations

- Limited sample size
- Restricted variable scope

- Absence of advanced econometric techniques

The results of this study should be interpreted in the light of some limitations. The first one is the analysis conducted on three companies (Indus Motor Company Limited, Pakistan Suzuki Motor Company Limited and Honda Atlas Cars Pakistan Limited) from 2014 to 2024. This restricts the findings' applicability to the bigger auto industry and other sectors in Pakistan. Secondly, the study is confined to the sector specific setting; the link between ROCE and EPS might not be relevant in other sectors such as banking, textiles, or services, where the financial profile is different. Third, the model does not account for other significant factors influencing EPS such as changes in sales, production costs, exchange rates, taxation policies, and interest rates that may cause omitted variable bias. Instead, it concerns with ROCE and EPS along with few control variables. Fourth, although a weekly or monthly data could provide a more accurate picture of short-term financial dynamics, annual financial data might mask short-term fluctuations. Fifth, the macroeconomic changes in the research span, such as COVID-19, inflationary pressures, and currency devaluation in Pakistan, could have affected the business performance other than operational effectiveness. Sixth, results from simple correlation and regression analysis are limited in their robustness, while more sophisticated econometric analysis (such as using panel data models, fixed and random effects) can be used for more detailed analysis. Last, the limited use of market based indicators, such as stock prices and investor sentiment, restricts the analysis. Both ROCE and EPS are accounting measurements and as such may be influenced by accounting policies, methods of depreciation, and by accounting for earnings management.

Future Research

Future studies should take larger sample sizes, more variables and more sophisticated statistical models, such as panel regression and time-series analysis.

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