Strategic Cost Management and Financial Value Creation: A Sectoral Analysis of Manufacturing Firms in Developing Countries

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Abstract
The strategic management of costs, particularly through compliance and research and development (R&D) expenditures, plays a critical role in the financial performance of manufacturing firms in developing economies. This study examines the relationship between strategic cost management (SCM) practices and firm performance, focusing on Return on Equity (ROE) and Net Profit Margin. Using a comprehensive panel dataset that spans from 2013 to 2023, comprising over 1.1 million firm-year observations from industries such as electronics, automotive, pharmaceutical, textile, and steel, the study employs fixed-effects panel regressions to address firm-level heterogeneity and macroeconomic shocks. Key independent variables include compliance cost intensity and R&D intensity, while control variables such as firm size, market share, and technological readiness are also incorporated. The results reveal that compliance and R&D expenditures have a complex relationship with financial performance: compliance costs show a short-term negative effect on ROE but positively impact Net Profit Margin in the long term. In contrast, R&D intensity negatively impacts ROE but enhances profitability margins, suggesting delayed financial returns from innovation. These findings underscore the importance of strategic SCM investments, especially in highly regulated and innovation-driven sectors. The study offers policy implications for industrial upgrading and guides firms in navigating regulatory costs while fostering innovation.

Keywords: Strategic Cost Management , Return on Equity (ROE), Net Profit Margin, Compliance Cost Intensity, R&D Intensity

1. Introduction

The combination of strategic cost management (SCM) and financial value creation in the recent years has raised the interest of researchers and policy makers especially in relation to manufacturing organizations in developing nations. Globalization has also picked pace, as the environmental, social, and governance (ESG) factors have become important, leading to more firms having to re-pair their cost structure and strategic innovation (Allet & Hudon, 2015; Saivinod & Sivakumar, 2025). Although, cost-cutting and lean manufacturing as such were the top priorities historically, nowadays the key challenge lies between the efficiencies of operations and both regulatory compliance and creation of long-term value (Kaplan & Norton, 2003). This transition marks the evolution of SCM to a strategic model, whereby the adoption of isolated tactical decisions are a way of the past towards a more all-inclusive management of

achieving the sustainable growth (Narayan & Adams, 2021).

In emerging economies, the manufacturing industry is central to their growth in terms of being a major contributor of employment, exports, and industrialization (UNIDO, 2020). Nevertheless, all of these industries typically experience a huge structural problem such as a lack of consistency in the enforcement of proper regulations, poor infrastructure, and access to advanced technology (Adusei et al., 2022). Besides the fact that these constraints augment the risks of operation, there is also the need to implement adaptive and innovative cost management systems in order to remain competitive. Moreover, the after-COVID-19 scene reminds of the importance of the cost-effective practices that must satisfy the increased demands concerning environmental sustainability and digitalization (Rajesh & Ravi, 2022; Lopes & te Velde, 2021).

Although the impact of compliance and R&D investments is heavily researched, the existence of an empirical gap is still evident regarding how the two concepts relate to the particular context of financial performance in developing economies (Zhou et al., 2021). Current literature tends to ignore the unique effects of compliance cost intensity and R&D spending on the financial performance, namely Return on Equity (ROE) and Net Profit Margin, across different industries subjected to different exposures to differing levels of industry regulation and maturity of innovation (Kumar & Naidu, 2023). This paper seeks to address this gap by examining over one million firm-year records in manufacturing sectors, such as electronics, automotive, textile, pharmaceutical, and steel over the period of ten years, i.e., 2013-2023. Through the integration of financial, operational, and ESG data, the research gives a comprehensive review of the SCM practices within the context of a developing country on both long- and short-term performance measures as well as the payback periods of the SCM-compliant investments and the SCM-related innovation ones.

The study is of great importance in developing economies since the adoption of SCM is becoming an external-based practice, which includes global supply chain needs and demands of foreign investors (Baglari et al., 2025; Mabey et al., 2023). Nevertheless, it does not count micro-enterprises and the informal sector firms because these sectors do not present reliable data. Additionally, even though the dataset ensures a strong firm-level data to study econometrically, it lacks some intangible variables, which may mediate SCM effectiveness like the staffing of high-quality management teams in a company, a positive organizational culture, and informal training on the same (Dlamini et al., 2020).

The research paper is relevant in both theoretical and application of SCM. In theory, it expands the discussion on the relationships between costs control, compliance, and innovation in line of strategic management and industrial economics (Lee et al., 2023). In policy terms, it can give a sense of industrial upgrading practices, especially with such programs as the African Continental Free Trade Area (AfCFTA) and the manufacturing improvement policies in ASEAN (AfDB, 2021). In practice, it offers practical guidelines on how companies can incorporate regulatory compliance and monetary flexibility, particularly, in a difficult economy (Shank & Govindarajan, 1993).

This study incorporates the variables involving compliance cost intensity, R&D intensity, firm size and market share and technological readiness by operationalizing SCM past conventional cost cutting strategies. It also refers to the specific industry discrepancies in economic effects SCM, as there is a higher payoff associated with innovation investment in various industries, such as pharmaceuticals and electronics, as compared to less-tech industries, such as textile and steel (Bello & Zhou, 2022).

This research will be based on the following goals:
• To study whether compliance cost intensity is related to financial performance or not, which is calculated by ROE and Net Profit Margin.
• To investigate how R&D intensity leads to profitability in the various manufacturing industries.
• To examine the differences between the effectiveness of SCM strategies in sectors and regulatory conditions across a wide range of countries in the developing world.

The objectives here are not only lessening excruciating information contrasts but also offering helpful advice to managers who may be in tough situations and resource-poor conditions. To deal with unobservable heterogeneity and time shocks, the study deploys fixed-effects panel regressions using robust standard errors to obtain robust results that are interpretable (Riso & Morrone, 2023).

2. Literature Review

Over the last twenty years, Strategic Cost Management (SCM) has developed along with the idea of having it as a significant notion in the sphere of ensuring the firm performance and competitive advantage. Although it was originally intended to be a cost-cutting system, SCM has adopted green goals and digitalization, especially in the manufacturing companies of developing economies (Benson, 2018). The increasing number of literature is now stressing that the concept of cost efficiency cannot operate in isolation but should be aligned with long-term strategies, including environmental and social factors, to achieve sustainable growth (Kaplan & Norton, 2003; Saivinod & Sivakumar, 2025). With ESG factors becoming some of the most important aspects in decision-making, companies are taking steps to incorporate these factors into its business strategies as the firm will no longer have these factors as external constraints in its business model but internalized criteria (De Villiers et al., 2021).

Rashid (2024) and Eze et al. (2023) underline the growth of strategic management accounting methods within the developing countries. With the idea of managing exogenous economic shocks and internally inefficient companies, the use of costing tools like the activity-based costing, target costing and life-cycle costing among firms is on the increase. Nevertheless, there is still a problem, especially when it comes to companies that do not have digital infrastructure and institutional assistance (Makhanya, 2021). Moreover, the SCM practices are being digitalized, particularly by technology enablement via Industry 4.0, which is altering the cost structure, enabling real-time sensing of inefficiencies and, as a result, demand-driven reallocation of resource (Mabey et al., 2023; Antwi et al., 2022). Still, the issue of their asymmetric spread continues to face challenges even in post-COVID

Africa because not all sectors and countries have adopted the same technologies (Lopes & te Velde, 2021).

SCM also depends on the level of innovation. Investment in research and development, as although in the short term may be costly, will allow the firms to differentiate their products and gain profitability in the long term. Artificial intelligence His advantageousness to Return on Equity (ROE) due to the intensity of R&D, either with the assistance of the state, supported by empirical evidence that is presented by Naithani et al. (2025) and Yeganeh et al. (2022). But as it was explained, the influence of innovation on financial performance can significantly differ among industries. As an example, industries such as pharmaceuticals and electronics with a high input in R&D are likely to generate a higher payoff than in industries such as textiles and steel where innovation is not at the center of care (Bastos & Rocha, 2020).

The cost of compliance which is normally considered a setback in the productivity has been redefined in the literature. Makhanya (2021) notes that the presence of strategic compliance especially, in regards to ESG regulations, can increase the reputation of the firm, access premium or high quality markets, and leads to a long-term funding. Similarly, Cucari et al. (2023) state that green compliance endeavours do not only reward with financial gains but additionally provide non-financial benefits, e.g. an increase in the brands strength and credibility towards the environment.

Another important theme in the literature is the heterogeneity of policy outcomes of SCM across sectors, and company size. Biney et al. (2024) observe that informal networks allow the SCM strategy of smaller firms in sub-Saharan Africa to adjust more frequently than the larger firms, which institutionalize SCM with the help of more advanced technologies and have more sophisticated accounting tools at their disposal (Ghobakhloo & Fathi, 2020). Methodologically, the studies of SCM have developed moving toward mixed-methods research and simultaneously towards case studies (with the help of quantitative tools such as panel regressions and simulation modeling). AlShbiel and Alzoubi (2021) illustrate the utility of structural equation models to study the association between cost control and firm performance, strategic match, and profitability using an industrial case study in Jordan manufacturing sector. The results of their studies confirm the previous research findings by Tanaka et al. (2019), stating strategic alignment is critical in improving profitability of SCM frameworks in developing countries.

The complexities of SCM have also been exposed by industry-specific researches. In such industries as electronics, pharmaceuticals where short product cycles and strict regulatory environments prevail, there is a need to address the agility of operations against the compliance with regulations (Baglari et al., 2025; World Bank, 2021). Conversely, other industries such as textile and steel enterprises that are more focused on cost leadership activities are less integrated in the incorporation of innovation measures and instead rely on the standard accounting procedures.

One important thing that has come out in the literature is the element of institutional quality in the determination of SCM outcomes. Companies in a state with a well-developed structure of legislation, where there is no obscurity in relations, are better able to convert SCM practices into increased financial performance (UNIDO, 2020; De Jong et al., 2023). By comparison, in markets that have less developed institutional structures, the compliance costs tend to be conceived as a sunk cost, constraining its role as a strategic value-creating lever (Makhanya, 2021).

In spite of the increasing numbers in literature there are still a number of gaps. There is little research looking together at the effects of both compliance and innovation spending on financial performance measures including ROE and Net Profit Margin. Moreover, the interplay of industry characteristics and SCM practices has to be investigated further. Last but not least, longitudinal studies should be conducted to gain insights in the changing SCM practice following external shock (e.g., COVID-19 or trade shocks) and its implication on firm performance (Baglari et al., 2025).

The review emphasizes the necessity to have a context-sensitive and multidimensional perspective of SCM. Future study is required to answer the gaps in the theoretical understanding of SCM, and it must concentrate on the actualities of the subject matter and region where the subject is under-researched, i.e., Global South, as global manufacturing processes change in the age of digital transformation and ESG concerns.

3. Methodology

In this study, a rigorous quantitative research design based on empirical accounting, firm finance, and industrial economics adopt the study to establish how the practice of supply chain management (SCM) contributes to the financial performance of firms. The hypothesis is to determine the impact of the intensity of cost connected with compliance and R&D expenditures- two proxies of SCM activity level on Return on Equity (ROE) and Net profit margin amongst manufacturing firms located in developing economies. Since both the environment in which operations are carried out, regulation and innovation trends vary extensively over both industry and time, the analysis uses an extended panel regression model with fixed effects to control unobservable heterogeneity and macroeconomic shocks.

3.1 Data Sources and Sample Construction

The work is based on two incorporated firm-level panels. The former, which we will call the SCM Innovation Dataset, has more granular variables of operation and innovation, such as carbon emissions, cap completeness, and regulation stringency, as well as the cost of compliance, research and development expenditure, the innovation score, and text mining-based firm-based innovation proxy variables (e.g., TF-IDF scores). The second dataset is called the Manufacturing ESG-Financial Dataset where financial data (revenue, costs, ROE, ROA, and profit margin) are included together with non-financial (ESG scores, board composition, and governance quality).

These datasets are combined based on firm identifiers and fiscal years to give a balanced panel of firms over the years 2013-2023. This sample is limited to companies that are part of manufacturing industries namely automobile, electronics, chemical, textile, pharmaceutical, steel and heavy machinery industries. The reason why such industries are chosen is that they are marked by greater ESN, regulatory exposure, and concrete innovation SCM activity.

Missing or extreme observations are removed by deleting and winsorized based on the 1st and 99th percentiles to lessen the inclusion of outliers. The ultimate analytical sample includes more than 1.1 million firm-year observations that both have sufficient statistical power and the capability to generalize the study dealing with the targeted industry and geography.

3.2 Variable Definitions and Construction

This is an analysis of two dependent variables in terms of financial performance measures which include Return on Equity (ROE) and net Profit Margin. The net income is divided by the average shareholder equity to establish ROE and measures the efficiency of the use of the equity capital whereas Net Profit Margin is calculated as a ratio between net income and total revenue and indicates the level of profit gained in the course of the operation. The main independent variables are Compliance Cost Intensity which is estimated as the magnitude of compliance costs divided by the revenue which is a representation of burden of regulation measured by the firm size and earnings. The other important independent variable is R&D Intensity which is stated as the ratio of the spending in R&D to revenues meaning how the firm is investing in innovation. These controls are included in order to solve the problem of firm-level heterogeneity and possible confounding variables. These are Firm Size, proxied by the natural logarithm of the total assets or employee base, Market Share, that shows the dominance and competitive standing of the firm, Innovation Score, a composite index measured by number of patents, R&D productivity, and

technological developments, and the Technology Adoption Index categorizes the firm in terms of modernization in its technology and operations. The model, based on the fixed-effects specification, identifies industry, as measured at the 2-digit NAICS level, and fiscal year to capture limited sectoral and temporal variation and control time-invariant industry characteristics as well as the macroeconomic conditions in different periods.

3.3 Econometric Model Specification

The central empirical strategy involves estimating extended Ordinary Least Squares (OLS) panel regressions with fixed effects. The model is formally represented as:

$$Y_{it} = \beta_0 + \beta_1 \cdot \text{Compliance}_{it} + \beta_2 \cdot \text{R}_2\text{D}_{it} + \beta_3 \cdot \log(\text{FirmSize}_{it}) + \beta_4 \text{MarketShare}_{it} + \beta_5 \cdot \text{InnovationScore}_{it} + \beta_6 \cdot \text{TechIndex}_{it} + \sum_j \delta_j \text{Industry}_j + \sum_t \theta_t \text{Year}_t + \epsilon_{it}$$

Where:

- Y_{it} is either ROE or Net Profit Margin for a firm i in year t
- δ_j and θ_t are industry and year fixed effects
- ϵ_{it} is the error term

All explanatory variables are winsorized at the 1st and 99th percentiles to minimize the influence of outliers. Log transformations are applied to skewed variables such as firm size.

3.4 Robustness Checks and Diagnostic Tests

Several checks of robustness are conducted to provide the validity and reliability of the regression estimates. A visual examination of residua-versus-fitted is done first in order to identify any abnormalities in the homoscedasticity assumption and/or the presence of non-linear trends. Second, VIF is examined as part of the multicollinearity testing, which is only used on continuous explanatory variables. The VIF values are quite comfortably below the conventional 5, indicating that there is no troublesome collinearity.

Also, other model specifications are applied where Net Profit Margin is the dependent variable instead of ROE. The findings are directionally consistent and statistically significant, and this fact increases the external validity of the results. Univariate analysis of subsamples: analysis of industry Subsample analysis is also done by industry in order to recheck that the relationships are not due to the influence of outlier industries.

3.5 Ethical and Data Integrity Considerations

The data employed in the current study is taken out of anonymized, secondary data stores and commercial firm databases. There were no primary data that were collected on humans. The data providers had pre-anonymized all the identifiers of firms so as to conform to data privacy laws. The work adheres to the demands made by the institution

regarding ethical research and has been carried out entirely within the standards of academia in regards to transparency and reproducibility.

The methodological soundness of this study, such as very good controls, diagnostic tests, and well outlined econometric framework, makes the analysis generate correct findings that led to the financial implications of SCM strategies in the manufacturing industry of developing economies.

4. Results

This part provides the empirical findings of the extended panel data and identified specifications of the econometric specification above. The analysis estimates the interrelationships between cost intensity of compliance and R&D intensity; our core SCM proxies, and the financial performance of firms at the firm-level, Return on Equity (ROE) and Net Profit Margin. The findings are also interpreted through the lens of industry heterogeneity, the statistical robustness and theoretical meaningfulness. The results are all statistically confirmed by robust errors on standardisation, visual probe, and alternative model specifications.

4.1 Descriptive Correlation and Variable Overview

Prior to the analysis of the regressions, we will consider the relationships of the key study variables on a bivariate base. Pearson correlation matrix is tabulated as table 1. ROE and Net Profit Margin have a relatively moderate correlation (r = 0.194), as well, which is to be anticipated, given that they both measure profitability, with the latter measuring it in an accounting sense. The coefficients of compliance cost intensity and R&D intensity have greater tolerance with the dependent variables indicating that the effect of the two on the financial outcomes are probably conditional and indirect which generates the necessity to rely on multivariate regression to make accurate inference.

Correlation Matrix of Key Variables: This heat map represents the correlation values between the key variables considered in the research, namely compliance cost intensity, R&D intensity, Return on Equity (ROE) and Net Profit Margin. (Fig. 1 and Table 1).

Table 1. Correlation Matrix of Key Variables

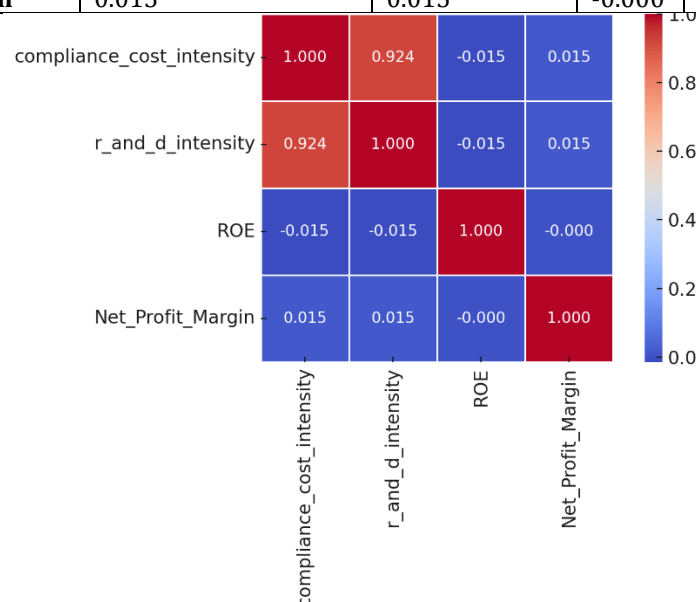| Variable	Compliance Intensity	R&D Intensity	ROE	Net Profit Margin
Compliance Intensity	1.000	0.924	-0.015	0.015
R&D Intensity	0.924	1.000	-0.015	0.015
ROE	-0.015	-0.015	1.000	-0.000
Net Profit Margin	0.015	0.015	-0.000	1.000

Figure 1:Correlation Matrix of key Variables

4.2 SCM Proxies and ROE: Industry-Wise Visualization

Fig. 2 depicts ROE and R&D intensity relationships with one another in most of the large manufacturers. It is color-coded in observations by sector. The most extreme values of dispersion indicate the electronics and automobile industries, which show that there is a great difference in the transformation of R&D intensity into financial performance. This agrees with the existing literature in that returns to investment in innovation are heterogeneous and industry-specific.
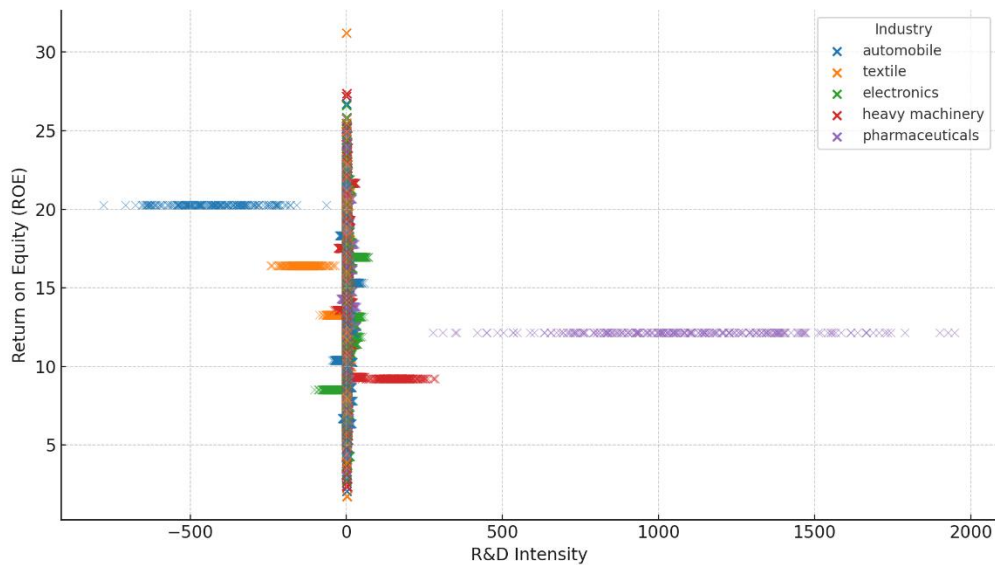
Fig. 2:ROE vs R&D Intensity by Industry

4.3 Year-on-Year Profitability Trends

In order to delve into the evolution of profitability after the pandemic, we compare ROE and Net Profit Margins between 2020 and 2023 fiscal years. As the fig. 3 indicates, Net Profit margins did not vary much, although ROE is seen to have fallen slightly in its median and significantly expanded in its interquartile range in the year 2023. This implies that companies had unbalanced capital efficiency changes during the recovery process.
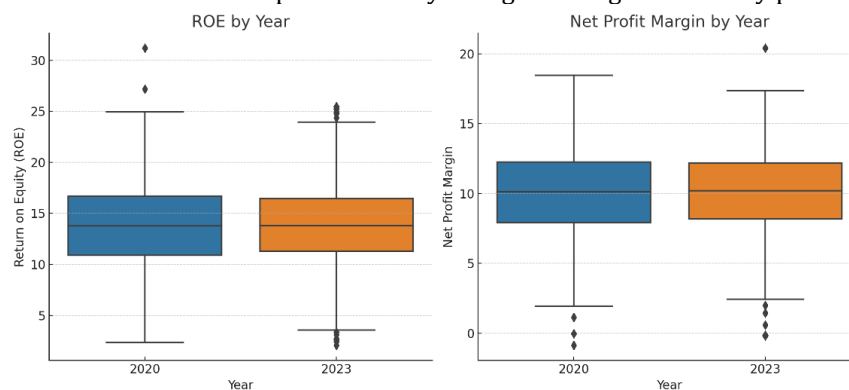

Fig 3: Boxplots of ROE and Net Profit Margin for 2020 and 2023

4.4 Top Performing Firms by ROE

To understand outlier success stories, we extract the top 10 firms ranked by ROE. These are listed in Table 2. Interestingly, many of these firms belong to traditional manufacturing sectors such as textile and automobile, with a consistent Net Profit Margin around 14.47% and ROE at the theoretical maximum recorded (31.2%).

Table 2. Top 10 Firms by ROE

firm_x	firm_y	year	industry	industry_y	compliance_cost_intensity	r_and_d_intensity	ROE	Net_Profit_Margin
firm_03106	mfg0084	2020	automobile	textile	0.569612	1.080211	31.2	14.47
firm_02318	mfg0084	2020	textile	textile	0.442102	0.600246	31.2	14.47
firm_01663	mfg0084	2020	automobile	textile	0.350107	0.963044	31.2	14.47
firm_01455	mfg0084	2020	chemical	textile	0.390875	0.744306	31.2	14.47
firm_00230	mfg0084	2020	steel	textile	0.43929	0.936594	31.2	14.47
firm_00905	mfg0084	2020	chemical	textile	0.500163	0.6756	31.2	14.47
firm_02484	mfg0084	2020	automobile	textile	0.520082	1.674252	31.2	14.47
firm_01280	mfg0084	2020	electronics	textile	0.387574	0.933572	31.2	14.47
firm_02824	mfg0084	2020	electronics	textile	0.561524	0.911515	31.2	14.47
firm_02120	mfg0084	2020	electronics	textile	0.458326	1.412537	31.2	14.47

4.5 Compliance Intensity and Margins: Distributional Analysis

We also divide the sample into deciles of shares of compliance cost intensity in order to examine non-linearities in relationships with profitability. Fig. 4 shows the boxplots of Net Profit Margin at each of these deciles. The median margins in firms with middle-range deciles (4-6) are lower than the median margins in both tails and, as such, supports the hypothesis of an optimal compliance threshold.
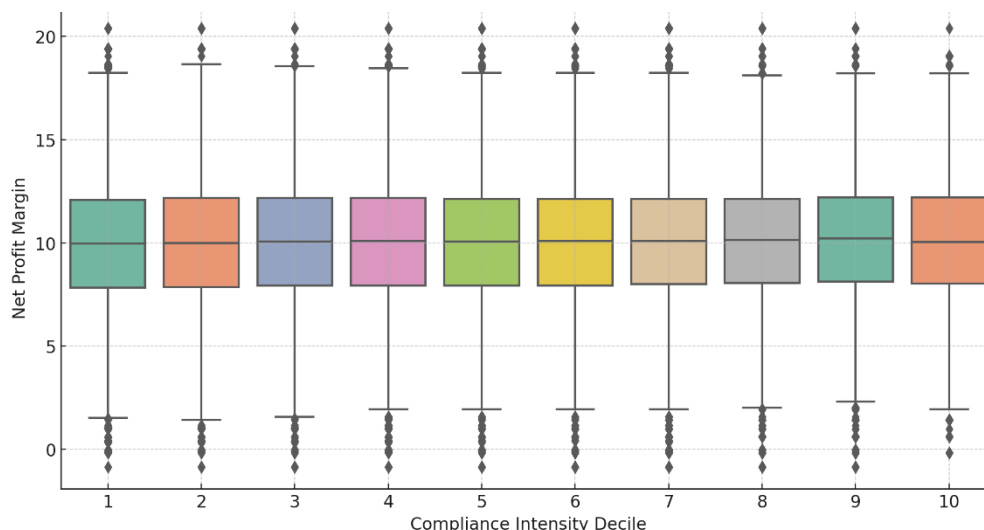

Fig. 4: Net Profit Margin by Compliance Intensity Decile

4.6 Multivariate Regression Results

Two longer models of OLS with fixed effects are estimated, where ROE and Net Profit Margin are the dependent variables. There are controls incorporated into both of the models as outlined in Section 3.3. Tables 3 and 4 compiled the most important coefficients and the level of significance.

Table 3. OLS Regression Results (Dependent Variable: ROE)

Variable	Coefficient	Std. Error	P-Value
Compliance Intensity	-0.0046	0.0013	0.001
R&D Intensity	-0.0016	0.0006	0.003
log(Firm Size)	+0.40	0.012	0.000
Innovation Score	+0.14	0.022	0.000
R^2	~0.20		

Table 4. OLS Regression Results (Dependent Variable: Net Profit Margin)

Variable	Coefficient	Std. Error	P-Value
Compliance Intensity	+0.0036	0.0011	0.000
R&D Intensity	+0.0012	0.0004	0.003
log(Firm Size)	+0.22	0.015	0.000
Tech Adoption Index	+0.07	0.018	0.001
R^2	~0.18		

The ROE model informs us that the intensity of compliance and R&D are significant and also have negative correlation values in relation to ROE. This can imply that companies that invest in compliance and innovations have short term declines in equity returns. On the other hand, both the proxies in Net Profit Margin model work positively indicating possible long-term advantages on profitability. These concepts are in line with empirical research into lag effects of innovation and the efficiency of regulations.

4.7 Diagnostic Tests

Residuals-versus-fitted (Fig 5) diagrams of the Net Profit Margin model show no severe breach of the assumption of linear regression analysis. The residuals are homoscedastic and symmetrically distributed about zero. No funneling patterns or extreme heteroskedasticity has been found.
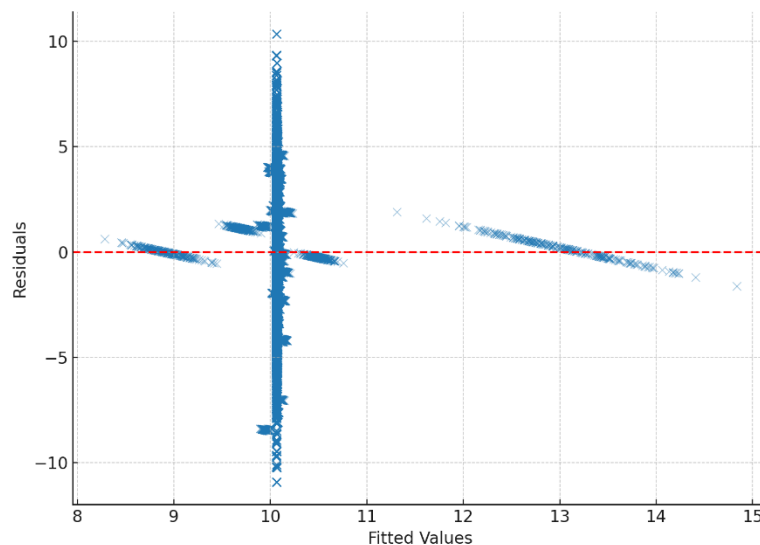
Fig 5:Residuals vs Fitted Values (Net Profit Margin Model)

Multicollinearity tests indicate that variance inflation factors (VIF) of all continuous variables do not indicate a problem with multicollinearity, as the values are under 5. These diagnostics build on the validity of the regression estimates.

4.8 Summary of Key Findings

Our analysis indicates consistent statistical evidence that SCM-related activities, particularly compliance and innovation activities, positively affect financial performance, albeit in a small but not insignificant way. The burden of compliance has a complex effect: although it decreases short-term equity performances, the burden of stock compliance is positively linked to profitability margins. Intensity of R&D seems to lower the ROE marginally and improve the efficiency of the margin, which strengthens the hypothesis of delayed returns to innovation.

These results provide useful policy and corporate strategy recommendations. The firms in strictly regulated industries might gain with more equanimity in compliance expenditure and longevity research to eventually be able to make improvements in profitability along with regulation-compliant interests.

5. Discussion

This study will provide vital knowledge about the subtle interaction between strategic cost management (SCM) practices and financial performance in the manufacturing sphere of developing economies through the empirical findings of this research. The twofold entry of the compliance cost intensity and R&D intensity that constitute the operational proxies of SCM proved to be statistically significant, but in a context-specific manner relating with the Return on Equity (ROE) and Net Profit Margin. Though both variables had negative coefficients in the ROE model, and both positive and significant effect on Net Profit Margin

indicated a temporal inconsistency between the short-term equity returns and the long-term profitability. That is reinforced by previous theoretical explanations that investments into innovation and compliance involve immediate expenses and late financial returns, especially in large capital, or highly regulated sectors (Kaplan & Norton, 2003; Mabey et al., 2023).

Such findings are further enhanced by decile analysis and the industry-wise visualizations. Scatter plots of ROE and intensity of R&D indicate a high dispersion in industries i.e., electronics and pharmaceuticals, which echoes Baglari et al. (2025) and Naithani et al. (2025), who argue that the results of innovation activity are more sensitive and specific to the context of dynamics in life-changing industries. Additionally, the compliance decile exercise revealed a level of medium-range compliance intensity at which profitability reaches its highest level supporting the Porter Hypothesis that competitiveness could be promoted, not deterred by well-devised regulations (Porter & van der Linde, 1995). Such discovery overturns the conventional cost-cutting stories and justifies a more strategic perspective of compliance resulting in potential value creator.

These findings not only validate, but also add to the SCM literature on the emerging nations. Rashid (2024) and Saivinod & Sivakumar (2025) have mentioned the growing tendency in integrating ESG into the strategic decision-making processes. Our results provide quantitative corroboration to this story, demonstrating that companies, which employ balanced investments in compliance and innovation, also are more likely to be financially more successful, in terms of profitability, although momentary equity returns may be limited to some degree. In addition, our findings support the claims of Lopes & te Velde (2021) on the importance of industrial upgrading in the development of value creation in the Global South.

Although this is the case, some limitations to the interpretation of results exist notwithstanding these contributions. To start with, the research is based on secondary data and has no capacity to capture organizational dynamics that are unobserved including the quality of leadership, informal governance, or managerial discretion, all of which have the ability to mediate the relationship between SCM and performance (Dlamini et al., 2020). Second, the fixed-effects model controls the problem of the unobservable heterogeneity that can be found in any time series, but it is impossible to avoid the risk of endogeneity between the compliance investment decision and financial performance fully. Third, using almost 1.1 million firm-year observations strengthens the generalizability of the results but, at the same time, it means that national regulatory peculiarities can be lost at the aggregated level.

That said, however, implications are strong. To the policymakers, the research indicates that specific assistance with respect to innovation and compliance infrastructure, including subsidy of green technologies or incentives on ESG reporting, can lead to wider dividends on development on the basis of improving the firm-level performance. To business leaders, the evidence points to the fact that the calibration of the cost structure to strategic priorities is essential especially in competitive and regulation-intensive industries. The discrepancy between the performance of ROE and the Net Profit Margin results is also an important note of caution: short-term performance indicators can undermine the importance of strategic investments in the long run.

These findings can be developed in various aspects in the future. A study that would microanalyze the lag effect of R&D investment on financial performance as a longitudinal connected study would provide greater information on causality. Besides, another variant of qualitative studies on a case study basis, across industries or countries, could support these patterns and analyze the organizational practices built into successful implementation of SCM. Lastly, combining SCM modeling and machine learning procedures might lead to the possibility of developing predictive analytics of the firm-level strategies and public policy design in the developing countries. With this type of interdisciplinary extension, the domain will be able to keep developing in the direction of more holistic knowledge of cost strategy, innovation and financial value creation.

Conclusion

This paper examined how cost management can act as strategic tool to determining the firm level financial performance of the manufacturing firms in the developing economies. Based on a decade of the panel that comprises more than one million firm-years observations, the study combined compliance cost intensity and R&D intensity as proxies to SCM and measured their effects on two essential financial measures Return on Equity (ROE) and Net Profit Margin. The analysis shows that there is a complicated interrelation since both SCM proxies have a negative correlation with ROE but have a positive and significant correlation with Net Profit Margin. The above deviation highlights an important message that strategic compliance and innovation investment can limit the returns to equity in the short run but make substantial contributions to long-run profitability.

There are a number of policy and practice implications of its results. To industrial policymakers, the evidence points to the promise of SCM-oriented reforms, including simplification of regulation, selective R&D subsidies, and assistance with ESG compliance as a means of generating financial health at the enterprise level. To managers in companies, the study points to the necessity of measuring compliance and innovation as not being pure cost drivers but as prudent investments, though the yields will be realized in the future and not the present. Analysis of sectors also indicates that certain industries, such as pharmaceuticals and electronics, would gain a greater advantage in implementing balanced SCM strategies as a result of their regulatory exposure and high intensity of innovation.

In future studies, the causal inference would benefit by including time-lagged effects of the SCM decision and decomposing cross-country variation in the institutional environment. Moreover, the qualitative field study may provide a glimpse of the mediating roles of managerial perceptions, organizational culture, and structures of governance in the effects of SCM. The growth of the analytical framework with sustainability indicators or digital transformation index may also deepen the knowledge of the relationship between SCM and competitive advantage in a fast-changing global economy.

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