Margin, Turnover or Borrowed Money? A Five-Factor Dupont Reading of Return on Equity in Indian Consumer Durables and Allied Companies

Rakesh N
Assistant Professor, School of Commerce, Jain (Deemed-to-be University), Bengaluru, Karnataka, India

***Abstract*—Return on equity (ROE) is the ratio shareholders watch most closely, but it does not show how a return was earned. This study uses the five-factor DuPont identity to ask which lever separates strong from weak performers among Indian consumer durables and allied companies. The data are standalone ratios from the Capitaline database for 193 companies whose latest accounts are for 2024–25 or 2025–26. Rank correlations, a logarithmic variance decomposition, a four-cell margin and turnover grid and Kruskal–Wallis tests are used because the ratios are heavily skewed. Operating margin has the strongest association with ROE (ρ = .69), followed by asset turnover (ρ = .40); the equity multiplier shows none (ρ = .05). Among profit-making firms, turnover and margin explain 37 and 30 per cent of the variation in ROE, the interest burden 20 per cent and leverage only 11 per cent. Firms that combine above-median margin with above-median turnover earn a median ROE of 25 per cent and none of them reports a loss. Median ROE does not differ across low, moderate and high leverage bands (10, 5.5 and 8 per cent), but median return on assets falls from 8.0 to 2.2 per cent and the spread of ROE widens sharply. Debt in this industry changes the risk of the return far more than its level. Readers of ROE should look at margin first, turnover second and the financing mix last.**

***Index Terms*—DuPont analysis, return on equity, operating margin, asset turnover, financial leverage, consumer durables**

I. INTRODUCTION

Two companies can report the same return on equity and have very little else in common. One sells a premium product at a wide margin and turns its assets slowly. Another works on a thin margin and moves its stock quickly. A third earns little on its assets and reaches the same figure only because most of those assets are financed with other people's money. Return on equity (ROE) is the ratio shareholders, lenders and boards watch most closely, yet on its own it cannot tell these three firms apart. The DuPont identity can, because it rewrites ROE as the product of the ratios that produce it.

The question matters in the Indian consumer durables industry at present. The India Brand Equity Foundation (IBEF, 2025) describes India as the fastest-growing major market for consumer durables and expects it to become the fourth largest by 2026–27, with sector growth of about 11 per cent a year. The production-linked incentive scheme for white goods has drawn new capacity into air conditioners and LED lighting. The industry is also unusually mixed. Subsidiaries of multinational brands, listed Indian manufacturers, contract assemblers and a long tail of small unlisted makers of appliances, electronics, luggage, furniture and decorative stone all compete for the same household budget. When capacity and competition rise together, it is useful to know which firms earn their return from operations and which depend on the financing mix.

1.1. Theoretical Base

The DuPont system was developed at the DuPont company in the early twentieth century as a way of comparing divisions, and it remains the standard frame for profitability analysis (Nissim & Penman, 2001). In its five-factor form it separates the tax burden, the interest burden, the operating margin, asset turnover and the equity multiplier. Three older bodies of theory give these ratios economic meaning, and the hypotheses of this study are drawn from them.

The first is competitive strategy. Porter (1980) argued that a firm earns superior returns through cost

leadership or through differentiation. Selling and Stickney (1989) translated this into ratios: cost leaders show thin margins and fast turnover, differentiators show wide margins and slower turnover, and competition pushes firms in the same industry towards a trade-off between the two. If the trade-off holds, margin and turnover should be negatively related across firms.

The second is the capital structure irrelevance proposition of Modigliani and Miller (1958). In their world, borrowing raises the expected return on equity only as compensation for the added risk borne by shareholders. A higher ROE reached through leverage is therefore not evidence of better performance. The DuPont identity makes the same point in accounting terms: debt raises the equity multiplier but lowers the interest burden ratio, and the net result depends on whether assets earn more than the debt costs.

The third is the pecking order view of Myers and Majluf (1984), in which firms prefer internal funds to debt and debt to new equity. Profitable firms retain more and borrow less. Across firms, operating margin and the equity multiplier should then move in opposite directions, and leverage should be found more often among weaker operators than among stronger ones.

1.2. Earlier Studies

International research has mostly asked whether the DuPont components help to forecast earnings. Fairfield and Yohn (2001) found that splitting the level of return on assets into margin and turnover did not improve one-year-ahead forecasts, but splitting the change did. Soliman (2008) showed that the components carry information beyond other accounting signals and are associated with stock returns and analyst forecast revisions. Later work qualified these results. Chang et al. (2014) reported that the components are less informative in health care and that margin is the more persistent of the two in that industry, which is the reverse of the general finding. Curtis et al. (2015) showed that historical cost measurement distorts asset turnover when assets have appreciated. Jin (2017) found the components useful for predicting ROE in Canada after the adoption of international reporting standards, and Anderson et al. (2024) showed that forecasts improve further when firms are grouped by life-cycle stage. The common message is that the usefulness of each lever depends on the industry and on the kind of firm.

Indian studies have used the identity differently. Chowdhury and Das (2025) followed nine listed pharmaceutical companies over fifteen years and found ROE closely tied to operating margin in large companies but to other components in smaller ones. Minz et al. (2024) applied the five-factor model to three systemically important banks and found that the driver of ROE differed from bank to bank. Bansal and Singh (2024) used the three-step and five-step models to compare one bank before and after its acquisition. These studies are careful descriptions of a handful of large, listed firms.

1.3. Research Gap

Three gaps follow from this literature. First, Indian DuPont studies rest on small, hand-picked samples of large listed companies, so they describe individual firms but cannot say which lever separates firms across an industry. Second, the financing levers are usually reported but not tested.

The interest burden and the equity multiplier are rarely read together, and so the simple question of whether debt pays are left open. Third, to the best of the author's knowledge, no study has applied the five-factor identity to a broad cross-section of Indian consumer durables and allied companies that includes the smaller and unlisted firms which make up most of the industry.

1.4. Objectives and Hypotheses

The study has three objectives: (1) to measure how much each DuPont component contributes to differences in ROE across firms; (2) to test whether margin and turnover are traded off against each other, and to identify the combination that earns the highest return; and (3) to examine whether financial leverage raises ROE once its interest cost is counted.

Four hypotheses follow from the theory in Section 1.1.

H1: Operating margin is more strongly associated with ROE than asset turnover or the equity multiplier.

H2: Operating margin and asset turnover are negatively associated across firms.

H3: Operating margin and the equity multiplier are negatively associated across firms.

H4: ROE does not differ between firms with low, moderate and high leverage, but return on assets falls as leverage rises.

Figure 1 sets out the framework, and Table 8 traces each gap through its objective, hypothesis and test to the finding.

II. METHODS

2.1 Design and Data

The study is a cross-sectional analysis of secondary data. The source is a Capitaline screener extract of standalone five-factor DuPont ratios for companies in the consumer durables and allied household-goods and electronics group. The extract gives one row per company for its latest available financial year, with each ratio rounded to two decimal places. It contained 488 companies.

2.2 Sample

Figure 2 shows how the sample was built. Eighty-four companies had no ratio data. A further 174 had latest accounts dated before March 2025; most of these are inactive or have stopped filing, and their figures describe a different period, so they were set aside. Of the remaining 230 companies, 26 reported no turnover or had all three income ratios at zero, four had negative net worth, which makes ROE meaningless, and seven had asset turnovers below 0.05 and were treated as non-operating. The final sample is 193 companies: 100 with accounts for 2024–25 and 93 with accounts for 2025–26 (one of these has a December 2025 year end). The sample is therefore the active part of the industry and not a random draw from it.

2.3 Variables

The five components and ROE are defined in Table 1. Their product gives ROE:

ROE = (NP / PBT) × (PBT / EBIT) × (EBIT / Sales) × (Sales / Assets) × (Assets / Equity) (1)

Two derived measures are used. Return on assets (ROA) is the product of the first four ratios. The net leverage effect is the product of the interest burden and the equity multiplier; a value above one means that borrowing added more to ROE through the multiplier than it took away through interest. Because the ratios are rounded, the product does not reproduce the reported ROE exactly. The median absolute difference is 0.004, and it exceeds 0.05 for four companies.

2.4 Analysis

The ratios are heavily skewed. One company reports an ROE above 2,000 per cent on a very small equity base, and two have equity multipliers above 170. Means and least-squares regression would be dominated by such cases, so the analysis relies on medians and rank-based methods. Spearman correlations test H1 to H3. For H1 the correlations are supplemented by a variance decomposition. For the 152 firms in which every component is positive, taking logarithms turns the identity into a sum:

ln ROE = ln TB + ln IB + ln OM + ln AT + ln EM (2)

The share of the variance of ln ROE attributable to component k is then

s(k) = Cov (ln x(k), ln ROE) / Var (ln ROE) (3)

and the five shares add up to one. Three firms with equity multipliers above 10 were excluded from the decomposition because a near-zero equity base swamps the leverage term; results with them included are reported for comparison. Confidence intervals come from 5,000 bootstrap resamples. For the second objective, firms were placed in a four-cell grid according to whether their operating margin and asset turnover were above or below the sample medians, and ROE was compared across cells with the Kruskal–Wallis test. For H4, all firms were placed in three leverage bands (equity multiplier below 1.5, from 1.5 to below 2, and 2 or more) and compared with the Kruskal–Wallis test. Loss-making firms were kept in this comparison, because dropping them would hide the cases in which leverage worked against shareholders. All tests are two-sided at the 5 per cent level. The work was done in Python with the pandas and SciPy libraries.

III. RESULTS

3.1 Profile of the Sample

Table 2 gives the descriptive statistics. The median company earns an ROE of 8 per cent, and the middle half of the sample lies between 1 and 18 per cent. The mean of 20.6 per cent is inflated by a single outlier; with the top and bottom 5 per cent of values winsorised it falls to 8.8 per cent. 152 companies made a profit, 34 made a loss and seven broke even. 64 companies (33 per cent) earned 15 per cent or more.

The medians of the components describe a typical firm that keeps 74 paise of every rupee of pre-tax profit, loses 12 per cent of operating profit to interest, earns an operating margin of 7 per cent, turns its assets 1.51 times a year and holds assets worth 1.31 times its

equity. The tax burden hardly varies: 60 per cent of firms fall between 0.70 and 0.80. Leverage is modest for most. About 63 per cent of firms have an equity multiplier below 1.5, and only 44 exceed 2.

3.2 Which Lever Matters Most

Table 3 reports the rank correlations. Operating margin has the strongest association with ROE (ρ = .69, $p < .001$), asset turnover is second (ρ = .40, $p < .001$), and the equity multiplier is unrelated to ROE (ρ = .05, p = .483). Table 5 shows the same pattern in another way. Moving from the lowest to the highest ROE quartile, the median operating margin rises from −2 to 12 per cent and median turnover from 1.04 to 2.42, while the median equity multiplier is almost the same in the bottom quartile (1.39) as in the top (1.41). On the full sample, H1 is supported.

The variance decomposition in Table 4 and Figure 3 adds a qualification. Among profit-making firms, asset turnover accounts for 37.2 per cent of the variation in ROE and operating margin for 29.6 per cent. The bootstrap intervals overlap, and margin's share exceeded turnover's in only 24 per cent of resamples, so the two cannot be ranked. Both are clearly ahead of leverage: margin's share exceeded that of the equity multiplier in 99 per cent of resamples. The interest burden contributes 19.5 per cent, nearly twice the 11.1 per cent of the equity multiplier, and the tax burden contributes almost nothing. Read together, the two analyses say that margin decides whether a firm makes money at all, and that among firms which do, turnover matters as much as margin. H1 holds for the industry as a whole but not within the profit-making group.

3.3 Margin, Turnover and the Strategy Grid

Operating margin and asset turnover are negatively related (ρ = −.17, p = .018), as H2 predicts, but the relation is weak. When firms are sorted into the four-cell grid of Table 6, the cells are almost evenly filled, and a chi-square test finds no association between being above the median on one lever and below it on the other (χ^2 = 1.51, p = .220). The trade-off described by Selling and Stickney (1989) is a tendency in this industry and not a constraint.

The return to escaping the trade-off is large (Figure 4). The 42 firms with both margin and turnover above the median earn a median ROE of 25 per cent; 36 of them earn 15 per cent or more and none reports a loss. Firms with high margin and low turnover earn 12 per cent, and firms with low margin and high turnover earn 6.5 per cent, with 14 of 54 making losses. The 46 firms below the median on both have a median ROE of zero, and 19 are loss-making. The differences across cells are significant (Kruskal–Wallis H = 104.2, $p < .001$). Two points stand out. Fast turnover does not rescue a thin margin, since one in four firms in that cell loses money. And the firms in the best cell carry the lowest leverage of the four groups (median equity multiplier 1.19).

3.4 Does Debt Pay?

Operating margin and the equity multiplier are negatively related (ρ = −.19, p = .009), in line with H3 and with the pecking order view: firms with stronger margins use less outside finance. The equity multiplier is also strongly and negatively related to the interest burden ratio (ρ = −.39, $p < .001$), which is the cost side of leverage.

Table 7 and Figure 5 compare the three leverage bands. Median ROE is 10 per cent for the 121 firms with low leverage, 5.5 per cent for the 28 with moderate leverage and 8 per cent for the 44 with high leverage, and the differences are not significant (Kruskal–Wallis H = 2.19, p = .335). Return on assets tells a different story. Its median falls from 8.0 per cent to 3.0 and 2.2 per cent as leverage rises (H = 9.07, p = .011), and across all firms the equity multiplier is negatively related to return on assets (ρ = −.20, p = .006). H4 is supported. Firms that borrow more earn less on their assets, and the multiplier does no more than bring their ROE back to the level that lightly levered firms reach without it.

What leverage does change is the spread. In the low-leverage band the middle 80 per cent of firms earn an ROE between −7 and 24 per cent. In the high-leverage band the same range runs from −52 to 56 per cent, and the share of loss-makers rises from 15 to 25 per cent. The upside is real: among firms that made a profit, the highly levered group has a median ROE of 24 per cent against 12 per cent for the low-leverage group (H = 8.82, p = .012), on a return on assets of 3.9 against 10.5 per cent. But that comparison leaves out the firms for which the same leverage produced losses. Taken as a whole, borrowing in this industry widens the range of outcomes without moving the centre.

The net leverage effect makes the point firm by firm. Among the 55 profit-making firms with an equity multiplier of 1.5 or more it is above one for 37, so for

the other 18, about one in three, interest took away more than the multiplier added. Among the 42 firms with ROE of 20 per cent or more, 37 have above-median margin, 33 have above-median turnover and 17 have an equity multiplier above 2. Of the 34 loss-making firms, 27 lose money at the operating level; the rest earn a small or zero operating profit and lose it to interest and other charges. Their turnover is lower than that of profitable firms (1.32 against 1.64, $p = .035$).

3.5 Robustness

The sample combines two reporting years, and firms with 2025–26 accounts have lower asset turnover than those whose latest accounts are for 2024–25 (median 1.20 against 1.81, $p < .001$). The other components and ROE do not differ significantly between the groups. The main results were therefore re-run within each year. The ordering of the levers is unchanged: the rank correlation of ROE with operating margin is .70 and .71, with turnover .31 and .47, and with the equity multiplier .06 and .03. The two operating terms together outweigh the two financing terms in the variance decomposition in both years. The negative relations in H2 and H3 keep their sign in both years. H2 is significant only in the pooled sample, and H3 in the pooled sample and the 2024–25 group but not the 2025–26 group, so both should be read as weak tendencies. Including the three firms with very thin equity raises the leverage share in Table 4 to 23 per cent, which shows how sensitive the multiplier is to a few cases. Among profit-making firms alone, the equity multiplier has a small positive rank correlation with ROE ($\rho = .17$, $p = .031$), which is the upside noted in Section 3.4; it disappears once loss-making firms are included.

IV. DISCUSSION

The results give a consistent account of where return on equity comes from in this industry. It is earned in operations. Margin separates firms that make money from those that do not, and turnover separates the good from the ordinary among those that do. The financing mix changes who bears the risk but explains little of who earns the return.

This agrees with Chowdhury and Das (2025), who found operating margin to be the main correlate of ROE in large Indian pharmaceutical companies, and extends their result to a much wider and smaller-firm sample in a different industry. The equal weight of turnover among profitable firms is closer to the international evidence. Fairfield and Yohn (2001) and Soliman (2008) both found changes in turnover to be informative about future profitability, and the present cross-section suggests one reason: in a manufacturing and trading industry, the ability to generate sales from a given asset base differs across firms nearly as much as pricing power does.

The weak margin and turnover trade-off deserve attention. Selling and Stickney (1989) described the trade-off across industries, where technology and capital intensity fix the mix. Within one industry there is more room to move, and about one firm in five here has both levers above the median. That group earns roughly twice the return of the next best group and does so with the least debt. In Porter's (1980) terms these firms are not stuck in the middle. They combine a product that commands a price with an operation that uses assets well, and the data do not show this to be rare.

The leverage findings fit the classical theories closely. Modigliani and Miller (1958) held that borrowing raises the risk of equity and that any higher expected return is payment for that risk. The sample shows the risk plainly and the higher return hardly at all: the centre of the ROE distribution is the same at every level of leverage, while its range more than triples. The pecking order of Myers and Majluf (1984) explains who the levered firms are. They have lower margins and lower returns on assets, which suggests that they borrow because internal funds are short and not because borrowing is cheap. A further observation is that financing shows up in ROE more through its cost than through its multiplier. The interest burden explains almost twice as much of the variation in ROE as the equity multiplier, a point that three-factor DuPont studies cannot see because they fold interest into the net margin.

4.1 Implications

For managers, the order of priorities is clear. A firm with a thin margin should not expect faster turnover or more debt to repair its ROE; a quarter of the high-turnover, low-margin firms in the sample lose money. Once the margin is sound, asset productivity is the lever with the most room. For investors and lenders, the equity multiplier and the interest burden should be read as a pair. An ROE of 15 per cent built on a return

on assets of 4 per cent is a different proposition from the same ROE built on 10 per cent. A high ROE in a highly levered firm is as likely to be the lucky end of a wide range as a sign of a strong business, and for one profitable levered firm in three the debt already costs more than it contributes. For teachers of financial analysis, the industry offers a compact, current illustration that the DuPont identity is a diagnostic tool and that the five-factor form shows something the three-factor form hides.

V. CONCLUSION

This study set out to find which DuPont lever separates strong from weak performers among Indian consumer durables and allied companies. Using 193 active companies, it reaches four conclusions. Operating margin is the lever most closely tied to ROE across the industry. Among profitable firms, asset turnover is as important as margin. The trade-off between the two is weak, and firms that achieve both earn a median ROE of 25 per cent with no loss-makers among them. Leverage does not raise the typical ROE: median ROE is the same at low, moderate and high leverage, return on assets falls as leverage rises, and what borrowing adds is a wider spread between the best and worst outcomes. Each conclusion answers one of the gaps identified at the outset, as Table 8 shows.

5.1 Limitations

The findings should be read with five limits in mind. The data are a single cross-section, so they show association and not cause, and they cannot say whether today's strong firms will stay strong. The sample mixes two reporting years, and the composition of each group may differ. The ratios are rounded to two decimals, which adds noise for firms with very small margins. The extract carries no information on firm size, age, ownership, listing status or product segment, so these could not be controlled for. Finally, the industry grouping follows the database screen and combines segments, from air conditioners to decorative stone, whose economics are not identical.

5.2 Scope for Further Research

Four extensions follow directly. A panel of the same firms over eight to ten years would allow tests of persistence, in particular whether margin or turnover is the more durable source of ROE in India, on which the international evidence is divided (Chang et al., 2014; Soliman, 2008). Adding size, listing status and segment would show whether the high-margin, high-turnover group is made up of large brands, niche makers or contract manufacturers. The effect of the production-linked incentive scheme could be examined by comparing the asset turnover of beneficiary firms before and after new capacity comes on stream. And the finding that one profitable levered firm in three gains nothing from its debt invites a closer study of borrowing costs and credit access among smaller manufacturers.

DECLARATIONS

Use of generative AI: A generative AI tool (Claude, Anthropic) was used in editing of this manuscript. The author checked the data, the statistical results and every reference against its source, revised the text and takes full responsibility for the content. Data availability: The ratios were taken from the Capitaline database under an institutional licence and cannot be shared publicly. The list of sample companies and the analysis code are available from the author on request. Ethical approval: The study uses published company data and involves no human participants or animals.

REFERENCES

[1] M. Anderson, S. Hyun, V. Muslu, and D. Yu, “Earnings prediction with DuPont components and calibration by life cycle,” *Review of Accounting Studies*, vol. 29, no. 2, pp. 1456–1490, 2024, doi: 10.1007/s11142-022-09748-3.

[2] R. R. Bansal and N. P. Singh, “Pre & post-acquisition effects on financial performance of a bank: Case of IDBI Bank Ltd.,” *International Journal of Innovative Research in Technology*, vol. 11, no. 7, pp. 3148–3172, 2024.

[3] K. J. Chang, D. C. Chichernea, and H. R. HassabElnaby, “On the DuPont analysis in the health care industry,” *Journal of Accounting and Public Policy*, vol. 33, no. 1, pp. 83–103, 2014, doi: 10.1016/j.jaccpubpol.2013.10.002.

[4] B. Chowdhury and S. Das, “Financial performance of the selected Indian pharmaceutical companies: An empirical analysis,” *Accounting*, vol. 11, pp. 91–102, 2025, doi: 10.5267/j.ac.2025.3.002.

[5] A. Curtis, M. F. Lewis-Western, and S. Toynbee, "Historical cost measurement and the use of DuPont analysis by market participants," *Review of Accounting Studies*, vol. 20, no. 3, pp. 1210–1245, 2015, doi: 10.1007/s11142-015-9334-y.

[6] P. M. Fairfield and T. L. Yohn, "Using asset turnover and profit margin to forecast changes in profitability," *Review of Accounting Studies*, vol. 6, no. 4, pp. 371–385, 2001, doi: 10.1023/A:1012430513430.

[7] India Brand Equity Foundation, *Indian Consumer Durables Industry Report*, 2025. [Online]. Available: https://www.ibef.org/industry/consumer-durables-presentation

[8] Y. Jin, "DuPont analysis, earnings persistence, and return on equity: Evidence from mandatory IFRS adoption in Canada," *Accounting Perspectives*, vol. 16, no. 3, pp. 205–235, 2017.

[9] W. P. Minz, S. Ahamed, and G. Bhowmik, "A comparative study on the financial performance of domestic systematically important banks (D-SIBs) in India using extended DuPont analysis," *Vidyasagar University Journal of Commerce*, vol. 28, 2024, doi: 10.62424/vujc.2023.28.00.03.

[10] F. Modigliani and M. H. Miller, "The cost of capital, corporation finance and the theory of investment," *American Economic Review*, vol. 48, no. 3, pp. 261–297, 1958.

[11] S. C. Myers and N. S. Majluf, "Corporate financing and investment decisions when firms have information that investors do not have," *Journal of Financial Economics*, vol. 13, no. 2, pp. 187–221, 1984, doi: 10.1016/0304-405X(84)90023-0.

[12] D. Nissim and S. H. Penman, "Ratio analysis and equity valuation: From research to practice," *Review of Accounting Studies*, vol. 6, no. 1, pp. 109–154, 2001, doi: 10.1023/A:1011338221623.

[13] M. E. Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press, 1980.

[14] T. I. Selling and C. P. Stickney, "The effects of business environment and strategy on a firm's rate of return on assets," *Financial Analysts Journal*, vol. 45, no. 1, pp. 43–52, 1989, doi: 10.2469/faj.v45.n1.43.

[15] M. T. Soliman, "The use of DuPont analysis by market participants," *The Accounting Review*, vol. 83, no. 3, pp. 823–853, 2008, doi: 10.2308/accr.2008.83.3.823.

TABLES

Table 1 *Definition of Variables*

Variable	Ratio	What it captures
Tax burden (TB)	Net profit / Profit before tax	Share of pre-tax profit kept after tax
Interest burden (IB)	Profit before tax / EBIT	Share of operating profit kept after interest; the cost side of leverage
Operating margin (OM)	EBIT / Sales	Pricing power and cost control
Asset turnover (AT)	Sales / Total assets	Productivity of the asset base
Equity multiplier (EM)	Total assets / Equity	Financial leverage
Return on equity (ROE)	Net profit / Equity	Return to shareholders; product of the five ratios
Return on assets (ROA)	TB × IB × OM × AT	Net return on assets before the effect of the multiplier
Net leverage effect	IB × EM	Above 1: borrowing added to ROE; below 1: it reduced ROE

Note. Ratios are standalone figures as computed by Capitaline. EBIT = earnings before interest and tax.

Table 2 *Descriptive Statistics of the DuPont Components (N = 193)*

Variable	Mean	SD	Minimum	Q1	Median	Q3	Maximum
Tax burden (NP/PBT)	0.74	0.63	−6.00	0.71	0.74	0.79	5.41
Interest burden (PBT/EBIT)	1.52	9.05	−6.87	0.67	0.88	0.99	125.78
Operating margin (EBIT/Sales)	0.07	0.14	−0.46	0.03	0.07	0.12	1.28
Asset turnover (Sales/Assets)	2.00	2.14	0.06	0.92	1.51	2.36	22.05
Equity multiplier (Assets/Equity)	3.62	18.43	0.52	1.10	1.31	1.85	187.00
Return on equity	0.21	1.56	−0.94	0.01	0.08	0.18	21.33

Note. All ratios are in times; ROE of 0.08 is 8 per cent. Means and standard deviations are affected by a few extreme values, so medians and quartiles are used in the text. Q1 and Q3 are the first and third quartiles. Source: computed from Capitaline data.

Table 3 *Spearman Rank Correlations among the DuPont Components and ROE (N = 193)*

	TB	IB	OM	AT	EM	ROE
TB	1					
IB	.07	1				
OM	−.26**	−.10	1			
AT	.07	.06	−.17*	1		
EM	.17*	−.39**	−.19**	.08	1	
ROE	−.14	−.11	.69**	.40**	.05	1

Note. TB = tax burden; IB = interest burden; OM = operating margin; AT = asset turnover; EM = equity multiplier. * p < .05. ** p < .01 (two-sided).

Table 4 *Share of the Cross-Firm Variance of ln ROE Explained by Each Component (Profit-Making Firms)*

Component	Main sample (n = 149)	95% bootstrap interval	All positive firms (n = 152)	2024–25 (n = 77)	2025–26 (n = 72)
Asset turnover	37.2	25.0 to 47.9	34.1	32.7	37.1
Operating margin	29.6	20.0 to 41.8	25.1	25.2	38.4
Interest burden	19.5	12.2 to 28.7	15.8	26.6	15.1
Equity multiplier	11.1	1.4 to 18.7	22.8	13.1	7.2
Tax burden	2.6	−0.7 to 5.4	2.2	2.4	2.2
Total	100.0		100.0	100.0	100.0

Note. Figures are percentages. The main sample excludes three firms with equity multipliers above 10. Shares are covariances of each log component with ln ROE divided by the variance of ln ROE; intervals are from 5,000 bootstrap resamples.

Table 5 *Median DuPont Components by ROE Quartile*

ROE quartile	n	ROE	TB	IB	OM	AT	EM	ROA
Q1 (lowest)	49	−0.07	0.78	1.03	−0.02	1.04	1.39	−0.05
Q2	48	0.05	0.74	0.68	0.06	1.27	1.26	0.03
Q3	48	0.13	0.74	0.88	0.10	1.68	1.27	0.10
Q4 (highest)	48	0.28	0.74	0.94	0.12	2.42	1.41	0.18
Kruskal–Wallis H			6.0	29.3**	91.7**	35.8**	5.4	

Note. Cell entries are medians. The interest burden exceeds 1 in the lowest quartile because both operating profit and pre-tax profit are negative for most of these firms. ** p < .01.

Table 6 *ROE by Margin and Turnover Position*

Strategy cell	n	Median ROE (%)	Median OM (%)	Median AT	Median EM	Loss-making	ROE ≥ 15%
High margin / high turnover	42	25.0	11	2.42	1.19	0	36
High margin / low turnover	51	12.0	14	0.90	1.29	1	19
Low margin / high turnover	54	6.5	3	2.36	1.47	14	8
Low margin / low turnover	46	0.0	4	0.97	1.39	19	1

Note. Firms are classed as high or low relative to the sample medians of operating margin (7 per cent) and asset turnover (1.51). Kruskal–Wallis H for ROE across the four cells = 104.2, p < .001.

Table 7 *ROE and Its Drivers by Leverage Band (N = 193)*

	Low leverage (EM < 1.5)	Moderate (1.5 ≤ EM < 2)	High (EM ≥ 2)	Kruskal–Wallis p
Number of firms	121	28	44	—
Median equity multiplier	1.15	1.69	2.67	—
Median ROE (%)	10.0	5.5	8.0	.335
Median ROA (%)	8.0	3.0	2.2	.011
Median operating margin (%)	8.0	5.5	4.0	.036
Median interest burden	0.94	0.73	0.69	< .001
Median asset turnover	1.42	1.42	1.81	.096
ROE, 10th to 90th percentile (%)	−7 to 24	−7 to 22	−52 to 56	—
Loss-making firms	18 (15%)	5 (18%)	11 (25%)	—
Firms with ROE ≥ 15%	39 (32%)	6 (21%)	19 (43%)	—
Profit-making firms only: n	97	22	33	—
Profit-making firms only: median ROE (%)	12.0	7.0	24.0	.012
Profit-making firms only: net leverage effect > 1	57 of 97	14 of 22	23 of 33	—

Note. EM = equity multiplier. ROA is the product of tax burden, interest burden, operating margin and asset turnover. The net leverage effect is interest burden × equity multiplier and is reported for profit-making firms only, because the interest burden ratio is not meaningful when operating profit is negative.

Table 8 *From Research Gap to Finding*

Research gap	Objective	Hypothesis and test	Finding	What follows
Indian DuPont studies use small samples of large listed firms and cannot rank the levers across an industry	1. Measure the contribution of each component to cross-firm differences in ROE	H1; Spearman correlation and log variance decomposition	Supported for the whole sample (OM ρ = .69; AT .40; EM .05). Among profitable firms AT (37%) and OM (30%) cannot be ranked	Read margin first, turnover second
Same gap: the mix of margin and turnover that earns the best return is not known for this industry	2. Test the margin and turnover trade-off and find the best combination	H2; Spearman correlation, chi-square and Kruskal–Wallis on a four-cell grid	Weakly supported (ρ = −.17). 42 firms are high on both and earn a median ROE of 25% with no losses	The trade-off can be escaped; panel data needed to test whether the position lasts
The financing levers are reported but not tested; interest burden and multiplier are not read together	3. Examine whether leverage raises ROE after interest cost	H3 and H4; Spearman correlation and Kruskal–Wallis across leverage bands	Supported. OM and EM negatively related (ρ = −.19). Median ROE is the same across leverage bands; median ROA falls from 8.0% to 2.2% and the spread of ROE widens	Debt changes the risk of ROE, not its level; study borrowing costs of smaller firms
No broad cross-section of consumer durables and allied firms that includes small and unlisted companies	All three objectives	Sample of 193 active companies from the Capitaline screen	34 loss-makers and 64 firms with ROE ≥ 15% show a wide spread that large-firm samples miss	Add size, listing status and segment in future work

Note. OM = operating margin; AT = asset turnover; EM = equity multiplier; ROA = return on assets.

FIGURES

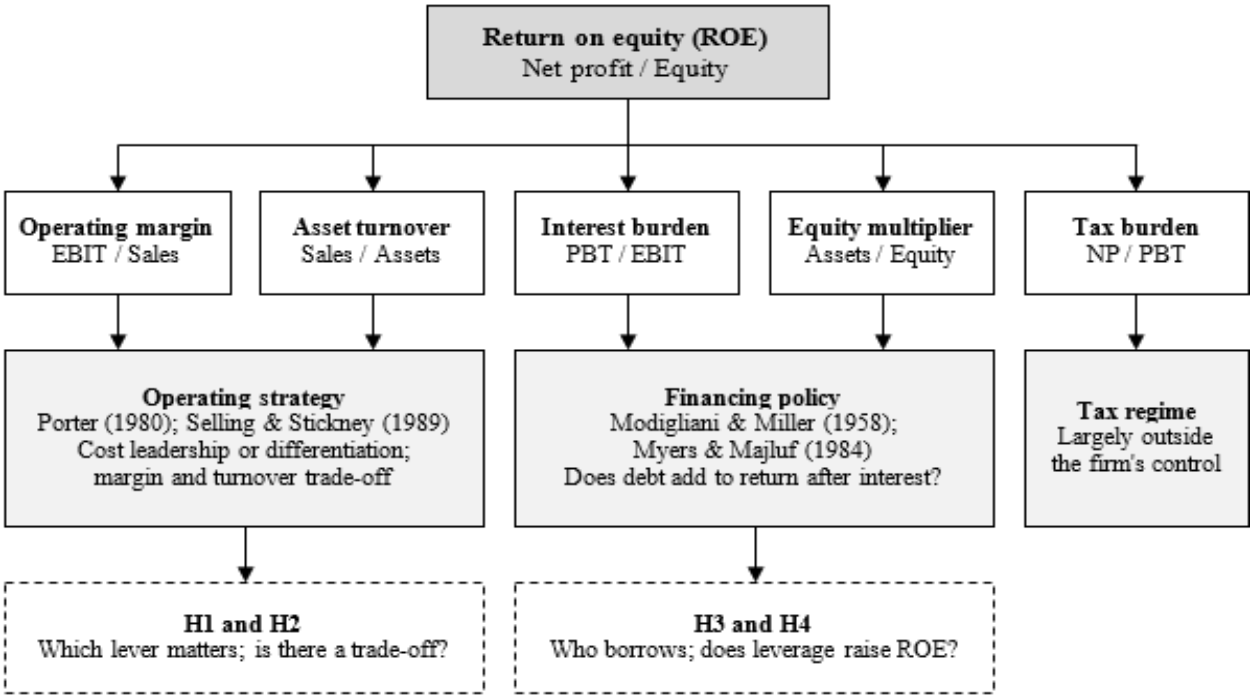

Figure 1 *Conceptual Framework: The Five-Factor DuPont Identity and Its Theoretical Base*

Note. EBIT = earnings before interest and tax; PBT = profit before tax; NP = net profit. Shaded boxes give the theory from which the hypotheses in the dashed boxes are drawn. Source: author.

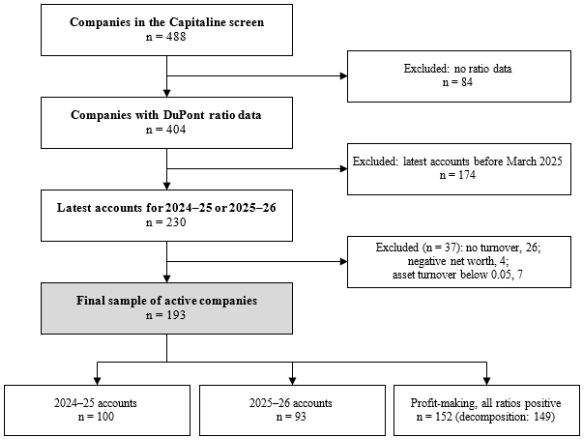

Figure 2 *Construction of the Sample*

Note. The two-year groups add up to the final sample. The profit-making group is a subset used for the variance decomposition; three firms with equity multipliers above 10 are left out of the main decomposition. Source: author.

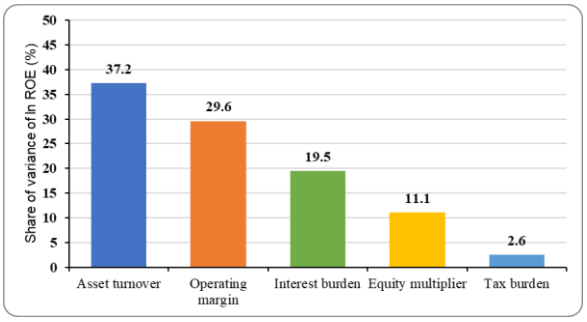

Figure 3 *Share of Cross-Firm Variation in ROE Explained by Each DuPont Component (n = 149)*

Note. Profit-making firms with equity multipliers of 10 or less. The chart is editable: right-click and choose Edit Data. Source: Table 4.

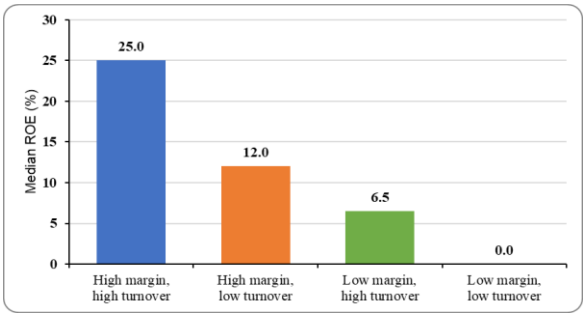

Figure 4 *Median ROE by Margin and Turnover Position*

Note. N = 193. Cells are defined by the sample medians of operating margin and asset turnover. Source: Table 6.

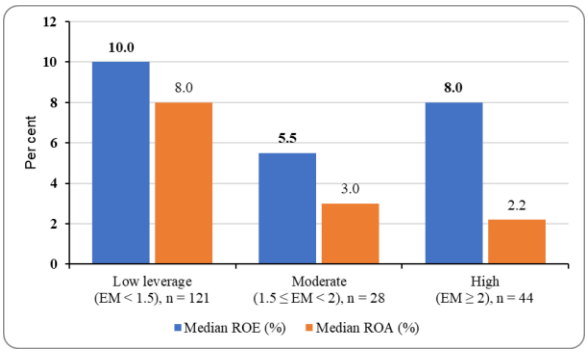

Figure 5 *Median ROE and Median ROA by Leverage Band*

Note. N = 193, loss-making firms included. EM = equity multiplier. Differences in ROE across bands are not significant; differences in ROA are significant at the 5 per cent level (Kruskal–Wallis). Source: Table 7.