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A Continued Analytical Discussion on Disparity and Growth of Profitability of the Textile Industry

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Abstract - **The operational outcomes and financial stability of business organizations are disclosed in their financial statements. The profitability trend is revealed by the business organization's historical study. Conversely, the mutual study of an industry's businesses identifies the shared tendency that outlines the sector's expansion or development within the economy. The Indian economy's most widely recognized sector, the textile industry, is crucial to its growth and development. The study aimed to determine the differences and growth in the profit-earning capacity of the leading Indian textile companies using secondary data that was gathered from their websites. Ten prominent Indian textile firms have been chosen for the study and interpretation of the profitability growth and discrepancy among the leading 10 Indian textile companies from 2012 to 2024. To determine profitability and differences in financial performance, statistical tools and financial ratios are used. The key findings of the study reveal significant variations in the profitability and growth patterns (rs =-0.006) of the leading Indian textile companies. The smaller Indian textile enterprises are substantially more profitable than the larger (PBDIT of smaller Indian Textile ≥ 17.72), most prominent Indian textile companies. It is common for the leading Indian textile companies' Return on Capital Employed profitability to fluctuate ($ROCE_{max-min}$ = 40.90). The bigger, most well-known textile companies, on the other hand, have more variable norms of profitability regarding total resources and capital utilized ($ROA_{max-min}$ = 22.16). By keeping production costs under control, avoiding abnormal production factors, and making the best use of the company's resources, the anomalies of profitability variability and low profitability rate in the larger Indian textile enterprises can be improved. These findings provide a deeper understanding of the Indian textile industry and offer insights for improving operational efficiency and profitability, especially among large companies in the industry.**

Keywords: **Textile Industry, Profitability, Industry, ANOVA, Profitability Disparity, Operational Efficiency**

I. INTRODUCTION

The profitability and soundness of the company's finances are measured by its financial statements. The ability of the company organization to generate profits is referred to as its profitability. The textile industry is one of the key sectors driving the Indian economy. Recent years have demonstrated the inevitable growth of the Indian textile industry. Every year, the exports from the Indian textile industry rise steadily. The availability of trained labor and raw materials for production is the primary strength of the Indian textile industry. The Indian government's "Make in India" initiative is also raising the volume of textile products produced for the Indian market. The Indian textile industry not only contributes to the economy but also contributes to the generation of employment and holds the second position in employment generation. In addition, it was found that the Indian textile industry also plays a vital role in the enhancement of the Foreign Direct Investment (Chhibber, 2020; Maheswari et al., 2019). It has been seen that the leading Indian textile companies' financial performance or profitability is different. Also, the growth of profitability is different among the smaller and larger leading Indian textile companies. Therefore, it is questionable if the size of the leading Indian textile enterprises influences their profitability or development in profitability, in addition to other factors that play a role. This analytical study comprises the theoretical overview of the growth of the Indian textile industry, research methods to analyze the historical data of pioneer Indian textile companies, analysis and interpretations of data, discussions, and conclusions based on the analysis and interpretations. The study contributes to and explores the disparity of profit-earning capacity among the leading textile companies of India to establish the relationship between profitability and profitability variability in the context of the size of the company. This article's following sections are arranged as follows. In Section II, the available literature on financial performance and the conceptual foundations of the Indian textile industry is synthesized. The analytical framework is established in Section III, which also describes the selection criterion used for the 10 Indian textile firms and the statistical use of financial ratios during the thirteen-year period (2012 to 2024). Section VI applies the PBDIT, ROA, and ROCE ratios to quantify the growth in profitability and determine the performance disparity between large and leading Indian textile companies. The cause of the

profitability variations is addressed in Section V, which closely examines the significant variability in measures of profitability based on the net sales (PBDIT), total assets (ROA), and capital employed (ROCE). Section VI finishes with the study's larger implications for the Indian economy and suggests approaches for cost control in the Indian textile firms.

II. Theoretical Overview

A. Financial Performance Factors

Management of Working Capital: Capital management and the financial success of Indian textile companies are positively correlated (Venugopalan et al., 2018). The working capital and the profit-earning capacity of Indian textile enterprises were positively correlated, and capital structure and profit-earning capacity were negatively correlated (Dave, 2018). The working capital and earnings of a few Indian listed FMCG companies are negatively correlated (Jana, 2018). Also, there is a U-shaped relationship between the firm performance and the working capital management of the business organization in India (Altaf & Shah, 2017).

Capital Structure: The efficient management of the working capital components has an impact on the earning capacity of Indian textile enterprises. Additionally, uncontrolled indirect charges have a negative impact on the earning capacity of Indian textile enterprises. Therefore, raising the amount of production could boost the profitability of Indian textile enterprises (Senthilkumar & Sengottaiyan, 2016). Additionally, the capital structure and the textile companies' financial success are positively correlated. It is advantageous for the textile companies to have their capital structure at the ideal ratio of debt to equity (Asad et al., 2019). There is a positive and significant effect of financial leverage on financial performance, while a negative and significant relationship on the return on assets. Further, the financial performance of the textile companies is positively governed by debts until not exceed equity (Iqbal & Usman, 2018). The capital structure plays a significant role in the enhancement of the financial performance of the business organization (Sarkar, 2017). There is a positive relationship between profitability and equity and long-term debt on profitability, while a negative relationship between the short-term debt and the profitability of the Indian textile companies (Taqi et al., 2016).

Liquidity, Solvency, and other measures of financial performance: Profitability, liquidity, and the firms' financial performance are positively correlated, while solvency has a negative impact on Indonesian textile companies' financial performance. (Maximillian & Septina, 2022).

B. Industry-Specific Factors

Raw Material Prices: There were variations in the prices of raw materials, causing disparities in the profitability of Bangladeshi textile enterprises (Fatema et al., 2018). In the Indian Textile Industry, crude oil, GDP, and inflation affect the financial performance (Akshathraj et al., 2023).

Environmental performance: There is no connection between the Brazilian textile industry's financial and environmental performance (Lucato et al., 2017). The environmental outcomes positively govern the financial performance of the business firms (Mondal et al., 2024). That environmental performance positively influences the financial outcomes of business forms (Wu et al., 2021). The pollution index and the market value of businesses are negatively correlated (Kumar & Shetty, 2018). The consistent supply of energy helps the liquidity and working capital management, and the financial health of the textile business of Pakistan (Asif et al., 2022).

Export Performance: There is a role of exports of textiles in the development of textile SMEs in India (Srivastava, 2016). Indian textile companies that export outperform those that do not in terms of productivity and financial success. The Indian textile sector wastes and underutilizes its resources. By incorporating cutting-edge technologies into the production process and optimizing resource usage through large-scale production, Indian textile companies can improve their performance and efficiency. Efficient use of the limited resources could boost production in Indian textile companies. The productivity and performance improvement of India's textile industry are also greatly influenced by the training and development of human resources, as well as promotional labor welfare programs.

C. Intellectual Capital and Human Resources

Intellectual Capital and Human Capital: In Indian textile enterprises, the performance of companies is positively governed by their Intellectual Capital (IC) (Shaneeb & Sumathy, 2021). There is an impact of Intellectual capital and physical capital on the financial performance of the textile firms in China, and Human capital positively governs the firms' performance, while Structural capital and Innovational capital are negatively associated with the employees' productivity. Also, relational capital is negatively governing the profitability of the textile firms in China (Zhang et al., 2021). Intellectual capital and physical capital efficiency significantly and positively govern the financial performance of the firms. The impact of Intellectual capital on the financial performance of the knowledge-based sector is higher than that of the traditional sector (Maji & Goswami, 2016). There is an impact of the Intellectual capital on the financial performance of the textile and garment firms. The Intellectual Capital affects the Human capital and structural capital to enhance the financial performance (Arif et al., 2022). There is positivity between the human capital and the growth of the value of the firm (Sisodia et al., 2021).

Training and Development: The financial success of Indian textile companies is considerably affected by training and development (Mehmood, 2017). There is a positive impact of the Human Resource practices on the financial performance in Indonesian manufacturing industries. Maintaining ethical practices in the organization enhances financial performance.

There is an insignificant impact of the learning capability on the financial performance of the SMEs (Gomes & Wojahn, 2017)

D. Performance Disparities

Intra-Industry Differences: In Indian steel businesses, the cash conversion cycle and working management have a favorable impact on profitability (Singh & Kaur, 2017). Effective supply chain management affects the profitability of the Automobile sector in India (Tripathi & Talukder, 2023). The capital structure significantly governs the profitability of the cement firms in India. Export, stronger patent administration, and a firm's goodwill in the market affect the profitability in the pharmaceutical sector in India (Tyagi & Nauriyal, 2017). Profitability of the Indian Banking sector is governed by the internal and external factors. Sufficiency of equity share capital, operational efficiency, cost of funds, and NPAs affect the profitability of Indian banks. While GDP and inflation negatively and significantly affect the return on assets of the Indian banks (Brahmaiah & Ranajee, 2018). The poor planning, working inefficiency, poor coordination, and poor site and commercial management affect the profitability of the construction companies in India. It is evident from earlier studies that there aren't many studies that explain the growth and profitability disparity in the Indian textile sector. In addition, there are insufficient longitudinal studies to examine the changes in profitability in the textile industry, particularly among the leading companies. Also, there is a lack of analysis between profitability growth and various financial ratios (e.g., PBDIT, ROCE, ROA) among leading companies in the textile industry. Therefore, this study adds to the body of knowledge by illuminating the Indian textile industry. So, the following theories were developed to investigate the differences in the profitability of the leading Indian textile companies using different methods for calculating profitability.

$H_0$1.1: Leading Indian textile companies' PBDITs do not differ significantly from one another.

$H_0$1.2: The ROCE of the leading Indian textile companies does not significantly differ from one another.

$H_0$1.3: The ROA of the leading Indian textile companies does not significantly differ from one another.

III. Research Methods

The study's secondary data of the leading Indian textile companies from 2012 to 2024 was extracted from the websites MONEYCONTROL.COM, unaffected by the Global Economic Recession. The research applied a longitudinal dataset that includes observations of 10 Indian Textile firms over a 13-year span (2012–2024) (Table I). This provides a sufficient foundation for panel data analysis, yielding a maximum of 130 firm-year observations. The selected Indian textile companies' financial accounts are the source of the financial data. Several factors were used to determine the final sample. To provide a solid longitudinal analysis, we first only included companies with continuous financial data accessible between 2012 and 2024. Second, calculating our three main ratios (PBDIT, ROA, and ROCE) of the selected firms requires complete data. Third, because this study focuses on the Indian textile industry, we did not include companies in the utilities or finance sectors. The financial information, i.e., financial soundness and profitability, is to be utilized to evaluate the business entity's financial growth and development. Total assets or total resources of the business concern reflect the size. Relational positivity in size reflects the growth and development of the business entity. According to average investments in the total resources, Vardhman, Arvind, Welspun, Trident, and Raymond can be considered the bigger leading Indian textile companies. While KPR, Page, Nitin, Rupa, and Himastingka can be considered smaller Indian textile companies (Top 10 Textile Companies in India - Textile Learner). The data summary of the of the leading textile companies are given as below (Table I):

TABLE I DATA SUMMARY

Company's Name	Years Covered	Source Document	Valid Records per Company
Himastingka	2012-2024	https://www.moneycontrol.com/financials/himatsingkaseide/ratiosVI/HS	13
Arvind	2012-2024	https://www.moneycontrol.com/financials/arvind/ratiosVI/a18	13
Rupa	2012-2024	https://www.moneycontrol.com/financials/rupacompany/ratiosVI/RC14	13
Vardhman	2012-2024	https://www.moneycontrol.com/financials/vardhmantextiles/ratiosVI/vt10	13
Nitin	2012-2024	https://www.moneycontrol.com/financials/nitinspinners/ratiosVI/ns12	13
Welspun	2012-2024	https://www.moneycontrol.com/financials/welspunliving/ratiosVI/wi03#wi03	13
Page	2012-2024	https://www.moneycontrol.com/financials/pageindustries/ratiosVI/PI35	13
Raymond	2012-2024	https://www.moneycontrol.com/financials/raymond/ratiosVI/R	13
KPR	2012-2024	https://www.moneycontrol.com/financials/kprmill/ratiosVI/m15	13
Trident	2012-2024	https://www.moneycontrol.com/financials/trident/ratiosVI/ai01	13

Note:

- Total panel size: 130 firm-year observations.
- All companies fulfill the inclusion criteria of continuous data availability, sector relevance, and complete ratio components for PBDIT, ROA, and ROCE.

In relation to net sales, total assets, and capital employed (total assets- current liabilities), the relational profitability is reflected in profit before depreciation, interest, and tax (PBDIT), return on capital employed (ROCE), and return on assets (ROA) (Anis, 2020).

PBDIT measures operational efficiency and gross profitability from key operational activities before non-cash expenses and non-operating expenses (Equation 1).

$$\text{PBDIT}=\frac{PBDIT*100}{Net\ Sales} \quad (1)$$

ROA measures the efficiency of utilization of total assets or total resources of the business in the context of net income (Equation 2).

$$\text{ROA}=\frac{Net\ Income}{Total\ Assets} \quad (2)$$

ROCE measures the efficiency of utilization of its equity and long-term debts (Equation 3).

$$\text{ROCE}=\frac{Net\ operating\ profit*100}{(Total\ Assets-Current\ Liabilites)} \quad (3)$$

Where,

PBDIT = Net sales or net revenue - all operating expenses (excluding interest, depreciation/amortization, and taxes),

Net Operating profit = PBDIT - depreciation/amortization,

Net Income = Net operating profit –Interest and Taxes.

Analysis of Variance (ANOVA) is used to quantify the differences in financial factors among Indian textile enterprises. The sum of squares between samples divided by their respective degrees of freedom is represented by Bss/df1, the sum of squares within samples divided by their respective degrees of freedom by Wss/df2, and F is Fisher's ratio (Equation 4).

$$F=\frac{Bss/df1}{Wss/df2}\text{ ; While } F\geq F\propto \text{ , Reject } H_0 \quad (4)$$

The mutual relationship is calculated by applying Spearman's rank correlation (Equation 5).

$$\text{Rank Correlation } (r_s) = 1-\frac{6\sum(D*D)}{n(n*n-1)} \quad (5)$$

Where '*D'* is the difference between the ranks of the variables, and 'n' is the number of variables.

The coefficient of variation (CV) is applied to identify the level of variation of individual companies (Equation 6).

$$\text{Coefficient of Variation (CV)} =\frac{S.D.}{A.M.}100 \quad (6)$$

CV is the coefficient of Variation, S.D., and A.M. is the standard deviation of samples, and A.M. is the arithmetic mean of samples. Interpretations of the Coefficient of variation are as follows (Table II):

TABLE II COEFFICIENT OF VARIATION INTERPRETATIONS

CV	Interpretation of CV
<10%	Very good, growth and movements of the variables are linear
10%-20%	Good growth and movement of the variables are normal
20%-30%	Acceptable, growth and movement of the variables with normal variability
>30%	Not acceptable, the growth and the movement of the variables with abnormal variability or affected by abnormal factors

To get the simplest variability of the variables, the range is calculated. Range measures the variability and indicates the boundaries of a dataset (Equation 7).

$$\textbf{\textit{Range = Var}}_{max-\min} \quad (7)$$

Where Var = Variable.

SPSS (version 20) was used to calculate ANOVA, SD (standard Deviation), and A.M. (arithmetic mean), Range, Rank correlation and Coefficient of Variation (CV). The SPSS 20 statistical functionalities are as given below (Table III):

TABLE III SPSS 20 STATISTICAL FUNCTIONALITIES

Statistical Tools	Analysis Type	Menu Path	Primary Functionality
1. Arithmetic Mean (A.M)	Descriptive	Analyze > Descriptive Statistics > Descriptives	Calculates the average value of scale variables.
2. Standard Deviation (S.D.)	Descriptive	Analyze > Descriptive Statistics > Descriptives	Measures the amount of variation or dispersion of values from the mean.
3. Range	Descriptive	Analyze > Descriptive Statistics > Descriptives	provides the difference between the maximum and minimum values.
4. ANOVA (One - Way)	Inferential	Analyze > Compare Means > One-way ANOVA	Compare the means of three or more independent groups to see if at least one group significantly differs from the others.
5. Rank Correlation	Correlational	Analyze > Correlate > Bivariate	Measures the strength and direction of the monotonic relationship between two ordinal or non-normal variables.
6. Coefficient of Variation (CV)	Custom/ Descriptive	Analyze > Descriptive Statistics > Explore	Measures the relative variability of data.

Therefore, there are two groups into which the disparity study of the expansion and development of Indian textile enterprises can be divided:

- Disparity of profitability analysis (ANOVA)
- Disparity of profitability growth analysis (CV)

Based on the above data availability and the objectives of the study following conceptual research framework is applied to establish the relationship between the disparity of profitability and the disparity of growth of relational measures of profitability of Indian textile companies (Fig. 1).

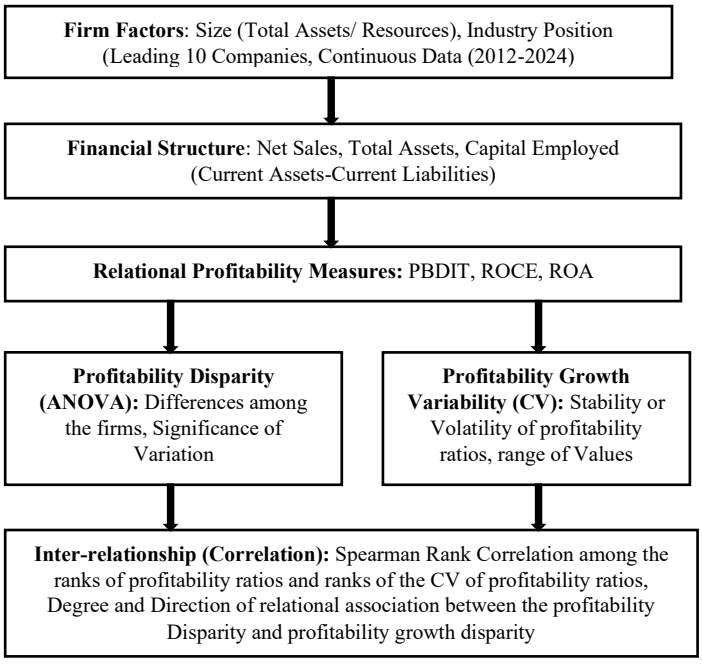

Fig. 1 Conceptual Research Framework

IV. Analysis And Interpretations

Two categories are used to analyze and understand the differences in the growth and development of Indian textile businesses:

A. Disparity of Profitability

Profitability differences highlight the differences over time between businesses in the same industry. Only significant variances are considered by inter-firm disparities, which show that some financial variables are the cause of the inequalities. The difference in profitability across firms indicates the difference in the business concern's revenue capacity. The business concern's profitability is a relative measurement, and the disparity of profitability quantifies the comparative profitability variations between related business concern categories.

TABLE IV DISPARITY AMONG THE PROFITABILITY OF THE LEADING INDIAN TEXTILES COMPANIES (2012 to 2024)

$H_0$1	Hypothesis	F*	Fα**	Decision: H0 (If F≥ F, Reject H0)
$H_0$1.1	Leading Indian textile companies' PBDITs do not differ significantly from one another.	7.408675	1.958763	Reject
$H_0$1.2	The ROCE of the leading Indian textile companies does not significantly differ from one another.	32.22471	1.958763	Reject
$H_0$1.3	The ROA of the leading Indian textile companies does not significantly differ from one another.	40.72622	1.958763	Reject

Source: * F values (ANOVA) computed using the ratios calculated from the financial statements of the leading Textile Companies from 2012 to 2024 available at moneycontrol.com.

Note:

- F ** obtained at the 5% significant level using the t-table.
- Fisher's ratio values, or F* values, are computed using SPSS.

The PBDIT, ROCE, and ROA of Indian textile companies differ considerably from each other, according to the analysis of variance (ANOVA) (Table IV). Similarities amongst the leading Indian textile enterprises are revealed by the relational mutual analysis of the averages of PBDIT, ROCE, and ROA.

TABLE V MEAN OF PBDIT, ROCE, AND ROA OF LEADING INDIAN TEXTILES COMPANIES (2012 to 2024)

Mean	Himastingka	Arvind	Rupa	Vardhman	Nitin	Welspun	Page	Raymond	KPR	Trident	Average
PBDIT	21.46	13.91	14.53	20.29	15.74	19.30	20.76	13.87	20.12	18.21	17.81
R1	1	9	8	3	7	5	2	10	4	6	
ROCE	9.90	11.99	21.53	12.91	12.27	11.56	50.07	9.17	20.67	10.42	17.05
R2	9	6	2	4	5	7	1	10	3	8	
ROA	4.20	3.98	9.55	7.72	6.15	5.94	23.60	1.44	11.82	5.00	7.94
R3	8	9	3	4	5	6	1	10	2	7	

Source: Mean calculations based on the ratios of selected leading Textile Companies for the period 2012 to 2024 available at moneycontrol.com.

Vardhman, Welspun, KPR, Page, and Himastingka have PBDITs of 20.29%, 19.30%, 20.12%, 20.76%, and 21.46%, whereas Arvind, Raymond, Nitin, and Rupa have PBDITs of 13.91%, 13.87%, 15.74%, and 14.53%, respectively (Table V). The ROCE of the Indian textile industries vary noticeably. The ROCEs of Raymond, Trident, and Nitin firms are 9.17%, 10.42%, and 12.27%, respectively, whereas those of KPR, Page, and Rupa are 20.67%, 50.07%, and 21.53%. Page, Rupa, and KPR have ROAs of 23.60%, 9.55%, and 11.82%, respectively ***($ROCE_{max-min}$ = 40.90), ($ROA_{max-min}$ = 22.16)***, but Raymond, Trident, and Arvind have ROAs of 1.44%, 5%, and 3.98%. PBDIT and ROCE had a very weak and positive association (rs =0.25), in contrast, the mutual rank research of all pertinent big Indian textile companies revealed a substantial and positive association (rs =0.92) between ROCE and ROA. The PBDIT and ROA of leading Indian textile companies have a somewhat favorable connection (rs=0.48) (Based on ranks given in table V). This indicates that the profitability of investments is not determined by the business activity profitability of the leading Indian textile companies. However, this suggests that the investments in the total amount of capital and resources used are adequate. Since there is a strong and positive correlation between PBDIT and ROCE, the leading Indian textile enterprises can increase their profitability by either lowering the total cost of the products or increasing their level of operational activities.

B. Disparity of Profitability Growth

Disparity of profitability growth reveals the dissimilarities in profitability growth of business organizations over the period. Intra-firm disparities consider only the significant variability differences of each company's performance and reveal the financial variations. Intra-firm disparity of profitability reveals the disparity in the movement or growth of the profit-earning capacity of a business concern over a period. The normality of variability is acceptable, while the abnormal variability of total resources indicates the abnormal factor responsible for abnormal movement in profitability. The following demonstrates the disparities in the PBDIT movement of the leading Indian textile firms.

TABLE VI DISPARITY OF GROWTH VARIABILITY OF PBDIT OF LEADING INDIAN TEXTILE COMPANIES

Statistical tools	Himastingka	Arvind	Rupa	Vardhman	Nitin	Welspun	Page	Raymond	KPR	Trident	Average
Mean	21.46	13.91	14.53	20.29	15.74	19.30	20.76	13.87	20.12	18.21	17.82
R1	1	9	8	3	7	5	2	10	4	6	
SD	5.79	3.46	3.07	5.51	3.80	5.29	1.39	3.45	3.04	2.89	3.77
CV (%)	26.99	24.87	21.12	27.17	24.15	27.42	6.70	24.85	15.13	15.85	21.42
R2	3	4	7	2	6	1	10	5	9	8	

Source: Calculations of PBDIT are based on the ratios of selected leading Textile Companies for the period 2012 to 2024 available at moneycontrol.com.

Table VI makes it clear that the size of the leading Indian textile companies has little bearing on their PBDIT. There is a hybrid profit-earning capacity by the Indian textile companies. Arvind and Raymond are the bigger Indian textile companies with lower profitability, while Hamstring and Page are smaller Indian textile companies whose profitability is high. On the other hand, Vardhman and Welspun are bigger Indian textile companies with higher profitability ratios, and Nitin and Rupa are smaller companies with lower profitability. The mean of the PBDIT and the variability of the PBDIT of leading Indian textile enterprises have a negative but negligible association (rs = **-0.006**) (Based on the ranks given in Table VI). Overall, all the leading Indian textile businesses' PBDIT variability is acceptable (cv<30%) (Table VI). The mutual relational analysis reveals the hybrid relationship between the gross profitability (PBDIT) and the normality of the growth of the gross profitability. While return on capital employed assesses the profitability of funds invested in operational activities, PBDIT measures the return on sales and represents the operational and cost effectiveness of the company organization. The following lists the leading Indian textile firms' return on capital employed (ROCE).

The PBDIT, ROCE, and ROA of Indian textile companies differ considerably from each other, according to the analysis of variance (ANOVA) (Table IV). Similarities amongst the leading Indian textile enterprises are revealed by the relational mutual analysis of the averages of PBDIT, ROCE, and ROA.

TABLE VII DISPARITY OF GROWTH VARIABILITY OF ROCE OF LEADING INDIAN TEXTILE COMPANIES

Statistical tools	Himastingka	Arvind	Rupa	Vardhman	Nitin	Welspun	Page	Raymond	KPR	Trident	Average
Mean	9.9	11.99	21.53	12.91	12.27	13.32	50.07	9.17	20.67	10.42	17.05
R1	9	7	3	5	6	4	1	10	2	8	
SD	4.26	3.46	6.82	7.39	9.26	6.04	11.63	8.82	10.07	7	7.48
CV (%)	43	28.86	31.68	57.24	75.47	45.35	23.23	96.18	48.72	67.18	51.78
R2	7	9	8	4	2	6	10	1	5	3	

Source: Calculations of ROCE are based on the ratios of selected leading Textile Companies for the period 2012 to 2024 available at moneycontrol.com.

From table VII, it can be explained that the return on capital employed is lower in the bigger Indian textile companies, while higher in the smaller companies. The average return of the Page textile company is extraordinarily very high (50.07%), while very low in the Raymond textile company (9.17%). The Indian textile firms' ROCE and variability have a significantly negative association (rs = -0.56) from 2012 to 2024 (Based on the ranks given in table VII). This suggests that while the ROCE of modest Indian textile companies is high, the ROCE of larger businesses is highly varied. The only ROCEs that have increased to a satisfactory level are Page (CV=23.23%), Arvind (CV=28.86%), and Rupa (31.68%). Except for Page, Rupa, and Arvind, the growth variability of ROCE for all of the leading textile firms is unacceptable (CV>30%). All things considered, a company's profitability can be evaluated in relation to its overall resource investments. The leading Indian textile firms' return on assets (ROA) is listed below.

TABLE VIII DISPARITY OF GROWTH VARIABILITY OF ROA OF LEADING INDIAN TEXTILE COMPANIES

Statistical tools	Himastingka	Arvind	Rupa	Vardhman	Nitin	Welspun	Page	Raymond	KPR	Trident	Average
Mean	4.2	3.98	9.55	7.72	6.15	5.94	23.6	1.44	11.82	5	7.94
R1	8	9	3	4	5	6	1	10	2	7	
SD	3.05	2.48	3.02	3.9	4.34	3.34	2.28	3.48	5.19	3.22	3.43
CV (%)	72.62	62.31	31.62	50.52	70.57	56.23	9.66	241.67	43.91	64.40	70.58
R2	2	5	9	7	3	6	10	1	8	4	

Source: Calculations of ROA are based on the ratios of selected leading Textile Companies for the period 2012 to 2024.

From table VIII, it can be explained that the return on assets is lower in the bigger Indian textile companies, while higher in the smaller companies. The average ROA of the Page textile company is extraordinarily very high (23.60%), while very low in the Raymond textile company (1.44%). The Indian textile businesses' ROA and variability have a significantly negative association (rs = -0.87) from 2012 to 2024 (Based on the ranks given in table VIII). This indicates that, in comparison, the ROA of larger enterprises is highly variable, whereas the ROA of smaller Indian textile companies is high. Only the ROA of Page (cv=9.66%) has grown to an acceptable level. Except for Page, none of the leading textile firms' growing variability of ROA (cv>30%) is acceptable.

V. DISCUSSIONS

It is clear from the analysis and interpretations that Indian textile companies' PBDIT, ROCE, and ROA differ significantly from one another. The leading Indian textile enterprises differ greatly in terms of profitability based on sales and investment in capital employed or total resources (Fig. 2). According to average investments in the total resources, Vardhman, Arvind, Welspun, Trident, and Raymond can be considered the bigger leading Indian textile companies. While KPR, Page, Nitin, Rupa, and Himastingka can be considered smaller Indian textile companies (Top 10 Textile Companies in India - Textile Learner).

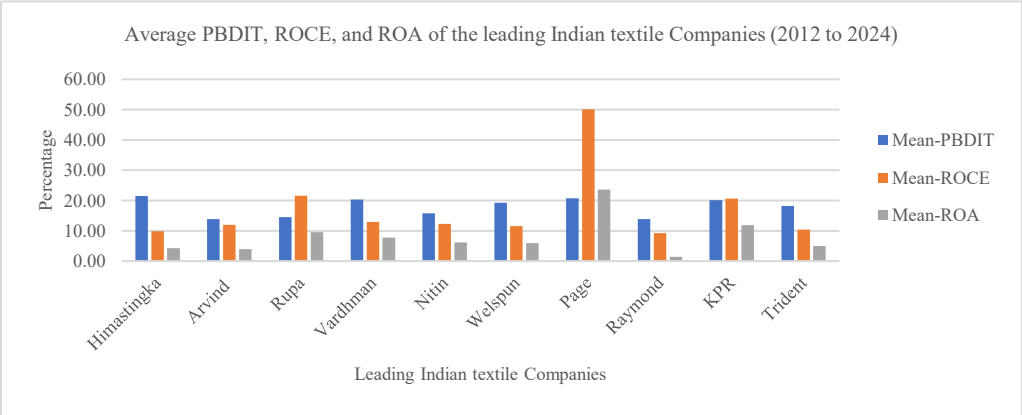

Fig. 2 Average Profitability of the Leading Indian Textile Companies (2012 to 2024)

Source: Based on the mean values of PBDIT, ROCE, and ROA given in table II.

It shows that the profitability of investments in the Indian textile sector is not determined by the profit-earning capacity of the business operations of leading Indian textile businesses. On the other hand, this indicates that the investments in the total resources and capital employed are sufficient. The ROCE and ROA of the larger, most prominent Indian textile enterprises are atypical (Fig. 2).

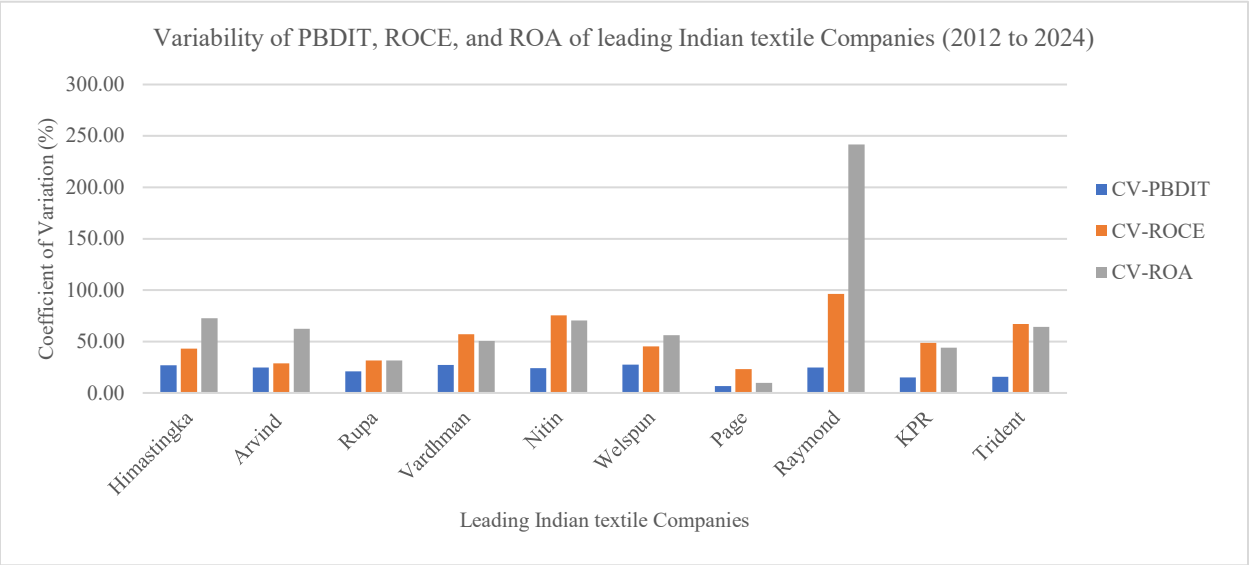

Fig. 3 Average Profitability of the Leading Indian Textile Companies (2012 to 2024)

Source: Based on the values of CV of PBDIT, ROCE, and ROA given in table III, IV, and V.

The variability of the PBDIT is normal, while ROCE and ROA are fluctuating in the leading Indian textile companies from 2012 to 2024 (Fig. 3). There is a positive but weak correlation between the mean of the PBDIT and the variability of the PBDIT of the leading Indian textile enterprises (Fig. 2 and Fig. 3). This suggests that the PBDIT is rising for all the leading Indian textile companies, but it is larger for smaller businesses. While the ROCE of larger enterprises varies significantly, the ROCE of smaller Indian textile companies is high. It indicates that smaller businesses make better use of their operating capital than larger Indian textile firms. The operational inefficiency of larger enterprises is reflected in their relatively variable return on capital employed. While the ROA of larger enterprises varies significantly, the ROA of smaller Indian textile companies is high. This suggests that the larger, most prominent Indian textile enterprises are either overcapitalized or underutilizing their resources. Larger Indian textile enterprises' low return on assets (ROA) also suggests operational inefficiencies and generally poorer policymaking compared to smaller Indian textile companies. The anomalous factor influencing profitability in relation to total resources is seen in the significantly increasing variability of ROA in larger Indian textile enterprises. By managing the controllable anomalous elements, the larger, more prominent Indian textile enterprises can increase the profitability of their investments.

VI. Conclusions

The analysis of the leading Indian textile businesses reveals significant variations in their profitability and growth patterns (rs =**-0.006**). All the leading Indian textile enterprises are profitable, yet they differ greatly from one another. Compared to the larger leading Indian textile firms, the smaller leading Indian textile companies have a higher rate of profitability ***(PBDIT of smaller Indian Textile ≥ 17.72)***. However, the larger, more prominent Indian textile enterprises have greater growth variability in profitability when considering capital employed and overall resources compared to the smaller ones ***($ROCE_{max\text{-}min}$ = 40.90)***. Overall, the profit-earning capacity in context total assets or total resources, the smaller leading Indian textile companies is relatively higher than that of the bigger leading textile companies. This reflects the operational efficiency of the smaller companies ***($ROA_{max\text{-}min}$ = 22.16)***. The bigger leading Indian textile companies can enhance their profitability by controlling production costs and accelerating their level of operation wherever possible. Making the best use of resources and minimizing cash blockage in non-economic or non-operational activities can increase the return on capital used in operational activities, as well as the return on total resources. It is important to consider that the results of this study and the conclusions are based on a small sample size, which may not represent the entire industry. The study period (2012-2024) may not capture the impact of global events such as the COVID-19 pandemic. Thus, future research may consider investigating a larger sample size and a more recent period to provide a greater understanding of the Indian textile industry. There are various factors that might be considered for future research in investigating profitability in the Indian textile industry. This may include examining the relationship between corporate social responsibility (CSR) activities and corporate financial efficiency [e.g., profitability] in the textile industry. Future studies can investigate the impact of technology on productivity enhancement and efficiency levels [i.e., cost reduction] among Indian textile companies.

Considering other factors that affect companies' performance will enrich our understanding of the Indian textile industry.

DATA AVAILABILITY STATEMENT

The authors declare that the data supporting the findings of this study are available on the source document link given in the research methods section and from the corresponding author upon reasonable request.

COMPETING INTEREST

The Authors declare no competing interests.

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