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## Profitability and consistency analysis of Textile Sector in India

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### ABSTRACT

*In India, Textile sector is one the most promising & growing industry. But form the point of view of profitability & consistency these are the not as good as it is for overall industry & it differs form one company to other.*

*Under the study we have taken the four major players working in the steel sector in India & taken the financial data of all the companies for three financial years. For the research purpose, there are various ratios which are calculated & further taken into consideration for the different tests.*

*In the study secondary data are used which are collected from internet.*

*Objective of study is to analyze the performance of each company by profitability & consistency under the study & give them various ranks according to their performance. Thus, it is useful for the measurement of overall performance of various companies under textile industry in India.*

### Keywords : Textile sector in India, Profitability & Consistency

#### 1. Introduction

India is the world's second largest producer of textiles and garments after China. It is the world's third largest producer of cotton—after China and the USA—and the second largest cotton consumer after China. The textile and garment industry in India is one of the oldest manufacturing sectors in the country and is currently its largest. The textile and garment industry fulfils a pivotal role in the Indian economy. It is a major foreign exchange earner and, after Agriculture, it is the largest employer with a total workforce of 35 mn. In 2009 textiles and garments accounted for about 16per cent of industrial production and 18 per cent of export earnings. The industry covers a wide range of activities. These include the production of natural raw materials such as cotton, jute, silk and wool, as well as synthetic filament and spun yarn. In addition an extensive range of finished products are made. The Indian textile industry accounts for about 24percent of the world's spindle capacity, making it the second highest after China, and around eight per cent of global rotor capacity. Also, it has the highest loom capacity—including hand looms—with a 63per cent share. India accounts for about 14per cent of the world's production of textile fibres and yarns. This includes jute, of which it is the largest producer. The country is the second largest producer of silk and cellulose fibre and yarn, and the fifth largest producer of synthetic fibre and yarn. The Indian textile industry is as diverse and complex as country itself and it combines with equal equanimity this immense diversity into a cohesive whole. Endowed with largest loom age in the world, the second highest spindle age, next only to China, a strong multi-fibre raw material base, a vast pool of skilled workers, flexible production systems, a dynamic entrepreneurship together with vibrant design creativity, have all contributed to creating a vibrant textile industry that has long been the mainstay of the Indian economy. The Indian textile garment industry is an enormous complex entity. There is organized sector, decentralized sector and down the line weavers, the artisans as well as the farmers. The spectrum of technology is wide spread right from handmade to semi mechanical, mechanical and highly sophisticated information based technology and microprocessor based technology.

The fundamental strength of this industry flows from its strong

production base of wide range of fibres / yarns from natural fibers like cotton, jute, silk and wool to synthetic /man-made fibres like polyester, viscose, nylon and acrylic. In fact, apart from China, no other country can boast of such strong and diverse base in textile fibres / yarns. The complex and varied structure of coupled with its close linkage with culture and multifibre raw material base enables it to produce variety of products for varying consumer needs and preferences.

#### India is:

- The largest producer of jute in the world
- The second largest producer of silk
- The third largest in cotton and second largest in cellulose fibres
- The fifth largest in synthetic fibres / yarn

The growth pattern of the Indian textile industry in the last decade has been considerably more than the previous decades, primarily on account of liberalization of trade and economic policies initiated by the Government in the 1990s. Fiscal duty structure of the textile industry has also influenced to a great extent the growth and the structure of the industry. Historically the fiscal policies concerning textile industry have always considered 'small is beautiful' and consequence is reflected in structural anomalies and concentration of downstream segments of the industry in the decentralized sector and decimation of the organized sector.

#### 2. Previous Research

There is no previous research taken into consideration for the review purpose.

#### 3. Hypotheses

For studying the profitability & consistency of each company, we test the following hypotheses:

H1: H0: There is no significant difference between gross profit margin ratios of companies.

Ha: There is a significant difference between gross profit margin ratio of Companies.

H2: H0: There is no significant difference between net profit margin ratios of companies.

Ha: There is a significant difference between net profit margin ratio of companies.

H3: H0: There is no significant difference between operating expenses ratio of companies.

Ha: There is a significant difference between operating ratio of companies.

#### 4. Research Method

Type of research used here is an Analytical Research, the researcher have used the facts already available and have analyze them to make a critical evaluation of the material. The sampling used here is convenient sampling. In the study, data collected from four companies consisting three financial years. Dependent variables: Profitability and Consistency. Independent variables: gross profit margin, net profit margin, operating expenses ratio. The data used to calculate the ratios are derived from balance sheet and profit and loss account of sample companies from the internet. Here data is preliminarily analyzed using a test called one-way ANOVA. ANOVA means analysis of variance. On the basis of ANOVA performed on each of the ratios some points are allocated to companies and on the basis of that conclusion is derived.

#### 4.1. Hypotheses Testing

##### 4.1.1. Gross Profit Margin Ratio Analysis (H1)

Here we have taken the gross profit margin ratio for the analysis purpose of measurement of profitability & consistency & taken the financial data of sample companies listed in BSE & NSE stock exchanges of India from internet which is as follows :

**Table 1: Gross Profit Margin Ratio of sample companies.**

	Grasim Ltd	Alok Industries	Century Textile	Aditya Birla Nuvo Ltd.
2011	28.08	20.51	9.83	11.05
2010	28.28	20.57	15.2	12.01
2009	19.34	19.41	11.79	8.32
2008	26.66	17.26	15.42	11.28

##### 4.1.2. Net Profit Margin Ratio Analysis (H2)

Here we have taken the net profit margin ratio for the analysis purpose of measurement of profitability & consistency & taken the financial data of sample companies listed in BSE & NSE stock exchanges of India from internet which is as follows :

**Table 2: Net Profit Margin Ratio of sample companies.**

	Grasim Ltd	Alok Industries	Century Textile	Aditya Birla Nuvo Ltd.
2011	24.25	6.29	5.05	5.84
2010	24.58	5.72	7.83	5.79
2009	14.85	6.16	6.75	2.83
2008	19.57	8.68	8.58	6.12

##### 4.1.3 Operating Expense Ratio Analysis (H3)

Here we have taken the operating expense ratio for the analysis purpose of measurement of profitability & consistency & taken the financial data of sample companies listed in BSE & NSE stock exchanges of India from internet which is as follows :

**Table 3: Operating Expense Ratio of sample companies.**

	Grasim Ltd	Alok Industries	Century Textile	Aditya Birla Nuvo Ltd.
2011	31.93	28.64	14.92	14.07
2010	32.54	28.99	20.41	15.75
2009	23.54	27.26	17.08	11.79
2008	30.11	24.74	20.24	14.86

#### 5.3. Scope of the research

In this research, we investigate companies listed in BSE & NSE Stock Exchange of India. We study the companies listed in BSE & NSE because of, ease of access to the data of these companies, as well as, regulations of the SEBI cause the more harmonious financial statements information. And, we study state companies because of ease of access to their data. In the research we have measured each of the sample companies & give them ranking according to their overall performance i.e. profitability as well consistency of the company. Thus the reveals the overall performance of the sample company for the purpose of measurement & of ranking.

#### 5.4. Sample

In the study we have taken the financial data of last three years of four major textile companies of this sector in India. Sample design here used is convenient sampling.

#### 5.5. Source of Data

We have collected the financial data of selected companies from the balance sheet & profit & loss accounts form the internet. Because all the companies are listed in the BSE & NSE stock exchanges of India it is easy to get accurate financial data which is shown in table 2, 3, & 4 above.

#### 5. The Results of Hypotheses Testing

In this section of paper we present analysis the results of research hypotheses. The following subsections provide analysis of results of hypotheses testing on all the three ratios which are taken into consideration for purpose of research study.

##### 5.1. Results of Testing H1

Table 4: Results Summary of H1 (Anova: Single Factor )

Groups	Count	Sum	Average	Variance
Grasim Ltd	4	102.36	25.59	17.8812
Alok Industries	4	77.75	19.4375	2.391692
Century Textile	4	52.24	13.06	7.398333
Aditya Birla Nuvo Ltd	4	42.66	10.665	2.6115

**Table 5: ANOVA Results of H1**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	540.9751	3	180.325	23.81886	2.426586	3.490295
Within Groups	90.84818	12	7.570681			
Total	631.8232	15				

The test gives F-ratio value which is greater than the critical value for given degree of freedom. So the difference between Gross Profit Margin of sample companies is not because of sampling error or any other reason. This difference can be considered as a significant difference. So we can rank the companies for its profitability and consistency. We can allocate points to it ranging from 4-1 as per the performance indicated by Average and Variance, given in the Summary section. They are shown in the following table.

**Table 6: Ranking of companies form ANOVA results**

	Profitability	Consistency
Grasim Ltd	4	1
Alok Industries	3	4
Century Textile	2	2
Aditya Birla Nuvo Ltd	1	3

##### 5.2. The Results of Testing H2

Table 7: Results Summary of H2 (Anova: Single Factor )

Groups	Count	Sum	Average	Variance
Grasim Ltd	4	83.25	20.8125	21.03522
Alok Industries	4	26.85	6.7125	1.779958

Century Textile	4	28.21	7.0525	2.346425
Aditya Birla Nuvo Ltd	4	20.58	5.145	2.402967

**Table 8: ANOVA Results of H2**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	639.8294	3	213.2765	30.94936	6.259591	3.490295
Within Groups	82.69373	12	6.891144			
Total	722.5231	15				

The test gives F-ratio value which is greater than the critical value for given degree of freedom. So the difference between Gross Profit Margin of sample companies is not because of sampling error or any other reason. This difference can be considered as a significant difference. So we can rank the companies for its profitability and consistency. We can allocate points to it ranging from 4-1as per the performance indicated by Average and Variance, given in the Summary section. They are shown in the following table.

**Table 9: Ranking of companies form ANOVA results**

	Profitability	Consistency
Grasim Ltd	4	1
Alok Industries	2	4
Century Textile	3	3
Aditya Birla Nuvo Ltd	1	2

### 5.3. The Results of Testing H3

Table 10: Results Summary of H3 (Anova: Single Factor )

Groups	Count	Sum	Average	Variance
Grasim Ltd	4	118.12	29.53	17.0122
Alok Industries	4	109.63	27.4075	3.720225
Century Textile	4	72.65	18.1625	7.017625
Aditya Birla Nuvo Ltd	4	56.47	14.1175	2.878625

**Table 11: ANOVA Results of H3**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	649.7264	3	216.5755	28.28401	1.002985	3.490295
Within Groups	91.88603	12	7.657169			
Total	741.6124	15				

The test gives F-ratio value which is greater than the critical value for given degree of freedom. So the difference between Gross Profit Margin of sample companies is not because of sampling error or any other reason. This difference can be considered as a significant difference. So we can rank the companies for its profitability and consistency. We can allocate points to it ranging from 4-1as per the performance indicated by Average and Variance, given in the Summary section. They are shown in the following table.

**Table 12: Ranking of companies form ANOVA results**

	Profitability	Consistency
Grasim Ltd	4	1
Alok Industries	3	3
Century Textile	2	2
Aditya Birla Nuvo Ltd	1	4

### 6. Summary and Concluding Remarks

In detailed analysis of each ratio, we have seen interpretation of the test performed on the ratio values of different companies. On the basis of that we can conclude which ratios can help ranking the companies on the basis of their performance.

The ratios which are considered for ranking are:

- 1) Gross profit margin

- 2) Net profit margin
- 3) Operating expenses ratio

On the basis of overall performance on ratios which are considered for ranking the following result and interpretation can be seen. We can decide the profitability and consistency of the companies and rank them for that.

Profitability: The following table shows points that the sample companies have got for their performance on each of the ratios.

**Table 13: Summary of ranking according profitability.**

	Grasim Ltd	Alok Industries	Century Textile	Aditya Birla Nuvo Ltd.
Gross Profit Margin	4	3	2	1
Net Profit Margin	4	2	3	1
Operating Expenses Ratio	4	3	2	1

The average of all values for each company shows the performance of the company for profitability. We can compare companies on the basis of their average values.

**Table 14: Summary result f ANOVA test on above data**

Groups	Count	Sum	Average	Variance
Grasim Ltd	3	12	4	0
Alok Industries	3	8	2.666667	0.333333
Century Textile	3	7	2.333333	0.333333
Aditya Birla Nuvo Ltd	3	3	1	0

The higher the average value, the higher the profitability of that company. According to this we get following result for profitability.

**Table 15: Final raking of companies as per profitability**

Company	Rank
Grasim Ltd	4
Alok Industries	3
Century Textile	2
Aditya Birla Nuvo Ltd	1

Consistency: The following table shows points that the sample companies have got for their performance on each of the ratios.

**Table 16: Summary of ranking according consistency.**

	Grasim Ltd	Alok Industries	Century Textile	Aditya Birla Nuvo Ltd.
Gross Profit Margin	1	4	2	3
Net Profit Margin	1	4	3	2
Operating Expenses Ratio	1	3	2	4

The average of all values for each company shows the performance of the company for consistency. We can compare companies on the basis of their average values.

**Table 17: Summary result f ANOVA test on above data**

Groups	Count	Sum	Average	Variance
Grasim Ltd	3	3	1	0
Alok Industries	3	11	3.666667	0.333333
Century Textile	3	7	2.333333	0.333333
Aditya Birla Nuvo Ltd	3	9	3	1

The higher the average value, the higher the consistency of

that company. According to this we get following result for consistency.

**Table 18: Final raking of companies as per profitability**

Company	Rank
Grasim Ltd	4
Alok Industries	3
Century Textile	2
Aditya Birla Nuvo Ltd	1

#### Findings

- Average of Aditya Birla Nuvo Ltd was the highest among all the companies showing the highest profitability which was followed by Century Textile & Alok Industries, the lowest average Gross Profit was of Grasim Ltd.
- From the analysis and its interpretation we can find out which ratios are more important and which are less important in this particular case.
- Gross Profit Margin, Net profit margin and Operating expenses ratio are more useful in allocating points to the companies for their performance.
- Return on total assets, return on net assets, return on equity and Dividend pay-out ratio are less important in this case so we can't use them for allocating points to the companies as their performance is almost similar on these criteria, because in that cases the F-Ratio is less than the F-crit value.

#### Conclusion

- The major players of Steel sector shows upwards trend in case of profitability. We can study the performance and rank the companies for its profitability; Aditya Birla Nuvo Ltd secured the first rank & Century Textile, Alok Industries, GrasimLtd followed by rest of companies.
- We can study the performance and rank the companies for its consistency; Aditya Birla Nuvo Ltd secured the first rank & Century Textile, Alok Industries, GrasimLtd followed by rest of companies.

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