

Working Capital Analysis Through Y- Score In Selected Textile Industries

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Abstract

The textile industry in India has a vast and distinguished history. Indian textiles now are both a reflection of the country's historic past and a response to current requirements. About 20 percent of India's overall industrial output is devoted to the textile industry, making it one of the largest in the world. It employs almost 20 million people directly. The textile sector in India presents significant prospects for both domestic and international investors, thanks to the country's steady economic expansion, its large pool of inexpensively trained labour, and the rising level of domestic demand. The financial management of Rajasthan's textile industry has been examined in this study. Working capital management, solvency, profitability, and liquidity are all examined as part of the study's scope.

Keywords: - textile industry, financial position, working capital management.

Date of Submission: 18-03-2022

Date of Acceptance: 02-04-2022

I. Introduction

The textile industry in India has a vast and distinguished history. Indian textiles now are both a reflection of the country's historic past and a response to current requirements.

The textile industry in India has historically been the only industry that has produced major jobs for both trained and untrained labor, following agriculture. India's textile industry remains the country's second-largest employer. It directly employs approximately 35 million people in the country. "Textiles accounted for 11.04 percent of overall exports from April to July 2010, according to the Ministry of Textiles. The Indian textile sector was valued at US\$55 billion in 2009–2010, with 64 percent of that going to meet local demand. There were 2,500 textile weaving factories and 4,135 textile processing enterprises in India in 2010. AT Kearney's Retail Apparel Index ranked India as the fourth most attractive market for garment retailers in 2009".

“INDIAN TEXTILE INDUSTRY – SWOT ANALYSIS”

Strength

- India has a plentiful supply of textile raw materials. It is one of the world's top cotton growers, as well as a rich source of other fibers such as polyester, silk, and viscose.
- India is home to a big number of highly trained workers. Due to lower wage rates, the country has a significant edge. Because of low labor costs, textile manufacturing costs are naturally reduced to very low levels.
- India is a strong competitor in the spinning industry, with a presence in practically every step of the value chain.
- “The scale, production facilities, type of garments produced, quantity and quality of output, pricing, and fabric requirements of the Indian garment industry are all quite variable”. It consists of ready-to-wear clothing suppliers for both domestic and international markets.

Weakness

- Knitted clothing production has been a highly dispersed industry. Global players want to get their whole supply chain from two or three vendors, making it difficult for Indian clothing producers to meet demand.
- Historical rules, such as knitted textiles maintaining an SSI domain, continue to plague the industry.
- In contrast to other competitive countries, productivity is low.
- Despite measures like TUFs, technology obsolescence persists.
- Low negotiating power in a market dominated by customers.
- India has a serious lack of trade treaty membership, limiting its access to other important markets.
- India's labor laws are relatively adverse to commerce, and labor reforms are desperately needed.

Opportunity

- The local market is highly susceptible to fashion trends, resulting in the growth of a responsive clothing industry.
- Fashion fads are particularly sensitive in the home market, indicating huge potential growth.
- India's worldwide market share is about 3%, whereas China controls roughly 15%. China is predicted to account for 43% of world textile commerce after 2005.
- Companies must focus more on developing new products.
- Increased usage of computer-aided design (CAD) to improve capabilities and skills and expand alternatives.

Threats

- Post-2005 competitiveness is probable to happen not only in exports, and even within the country of lower-cost imports of higher-quality items.
- Companies are under more pressure to enhance their working procedures as a result of standards like SA-8000 and WARP.
- Alternative competitive advantages would remain an impediment.

RAJASTAN'S STATUS IN INDIA'S TEXTILE INDUSTRY

Textile manufacturing in Rajasthan, which was formerly unorganized, is now one of the fastest-growing in the world, because to the liberalization of India's economy, which began in 1991. One of the world's oldest industries, textiles are seeing growth in the subsector of clothing.

In India, the textile and apparel business is said to as a traditional industry because it employs a wide range of people, including skilled and unskilled workers as well as women. The ferrule global power to the embroidery globe is err arced in Rajasthan's traditional textiles, particularly in the hand loom industry, in certain states such as Gujarat, Punjab, Tamilnadu, Maharashtra, and Uttar Pradesh.

The significance of Rajasthan's textile industry cannot be overstated. Rajasthan is India's fourth-largest spun-yarn producer.

Bhilwara, Rajasthan, home to 69 of India's 892 spinning mills, has a long history in the textile industry. There are spinning, weaving, dyeing, processing, and printing units in this location. Forty percent of the yarn produced in India comes from Rajasthani factories, which also create synthetic blended yarns. Fabrics are produced in great quantities in Bhilwara, making it the most populous of the three major Indian textile centers. Around 59383 people are employed in this industry in the city. Bhilwara, India's textile capital, also goes by the name of Bhopal. Bhilwara is home to half of the country's polyester textiles and suits.

The largest state in India Rajasthan To encourage textile industry investment, the state government of Rajasthan has created a corridor between Rajasthan's rich northeastern and western regions, which includes sections of the border region, as well as parts of Rajasthan's northern, western, and central regions. The state's gross domestic output grew by 12.38 percent between 2010-11 and 2014-15, reaching US\$ 102.98 billion. Rajasthan's RIICO built industrial land to boost the state's economy. With the help of the Rajasthan government, the textile industry is being promoted.

- Rural development (US \$ 1.88 billion) and power sector development in Rajasthan (US \$ 4.82 billion)
- Creation of a centralized clearinghouse for investment approvals.
- The government of Rajasthan encourages the growth of SEZs, handicrafts, IT, electronics, and textiles.
- Industrial parks and inland container deport were developed in 323 industrial districts by RIICO to encourage business development.
- Jaipur, Jodhpur, Udaipur, Kotta and Alwar have all had information technology debates.

GSDP growth in Rajasthan is heavily dependent on the textile industry, which accounts for 21% of the state's total investment. The textile industry gains jobs as a result of IT. It creates jobs by producing goods and services. Work on VASTRA FAIR and other government initiatives at Rajasthani textile factories.

The exportation of textile fabrics: - These countries include Italy, Germany, Turkey, China, and Africa. The milling industry of Rajasthan exported 247 Years ago. Major Export companies of Rajasthan are as follows;

Table 1.1: Major Export companies

Sr No.	Export Company
1	Nitin Spinner LTD (100% Cotton Yarn and Fabric)
2	RSWM
3	Sudiva Spinner
4	Kanchan India Ltd
5	Sangamindia Ltd
6	BSL
7	Sutlaj Textile and Industries Ltd (STIL)
8	BTMC Export of Zora Fabric

Geographical indicators show that Rajasthan has the most industrial land with a total area of 342,239 kilometers. Rajasthan's textile industry can be predicted based on a plethora of regional data:

- Land for industrial use is readily available.
- river-dam-and-tube-well water availability
- Raw materials can be produced in Rajasthan's wealthier north and more prosperous west regions.

WORKING CAPITAL ANALYSIS

Decisions involving fixed assets and capital decisions on working capital/current assets are critical in financial management, and the firm always analyses their impact on profitability and risk. A company's working capital is akin to its heart. In order to maintain a sufficient level of working capital, the goal of working capital management is to effectively manage the firm's current assets and liabilities. This part analyzes the working capital management of selected textile industries.

This research analyzed “the working capital management of five textile companies in India”. For this purpose, the researcher selected Bhilwara textile, RSWM, Shree, Reliance and Lagnam Textile industries as sample of the study. The study was undertaken for the period of five years spanning from 20016-17 to 2020-21. The researcher used secondary data for analysis. For this purpose, the researcher required accounting data, which were extracted from annual reports of the concerned industries and they were collected from concerned websites of the industries. The researcher applied ratio analysis as financial tool. “In order to analyze overall working capital performance of the selected steel companies, the researcher applied Y-score model for analysis. This model was propounded by Dr. S.S. Srivastava and Dr. R.A. Yadav”. The researchers took 78 sample companies to make research to measure the performance of working capital. The researchers primarily used accounting ratios; the researchers found four major accounting ratios which were relevant and could explain the performance of working capital of the sample companies. “These ratios are (a) Cash flow to total tangible assets; (b) Current ratio; (c) Net sales to total tangible assets; and (d) Defensive assets to total operating expenses. The researcher has applied the above methodology to analyzes working capital management of the selected steel companies in India”.

This research paper analyzed the working capital through the Y-score method for the selected textiles industries of Bhilwara.

II. Review Of Literature

India's government is launching the highly ambitious Make in India programme, which is aimed at increasing the country's manufacturing industry and raising private stock in several segments. “One of the established donors to this initiative is the textile industry, one of India's largest and most labour intensive manufacturing sectors”. The paper addresses Maker's effect on the textile and allies industries in India. “The spinning market of Indian yarn comprises 24% of the world support and 8% of the world's propellers. India is one of the world's only textile manufacturers to say a maximum efficiency of the supply chain. There are also benefits for the industry, such as the obtainability of raw supplies such as cotton and silk, and the competitive benefit of professional workers”. The development of goods in India contributes to structured shopping, strong trends and increased levels of income (**Gulhane and Turukmane, 2017**).

India's history reveals the garment industry's magnificent accomplishments. “The Indian textile industry currently is not only in terms of production but also in terms of foreign currency sales and the creation of workers, among the most important industries of our economies”. For e.g., it contributes 14% to industrial output, 4% to GDP and 17% to the export earnings of the country. The United States, the European Union and Canada are the main importers in the global apparel industry. Asia was the largest sourcing area to the United States and the European Union for shipments of textiles and clothes. The paper aims to examine the Indian textile industry's patterns and development (**Mohideen and Muthuraju, 2016**).

In their research **Nirmala and Cheriyan (2015)**, analyzed the long-term debt-to-equity ratio of Lakshmi Mills Company Ltd. at financial year 2009-10 as 2,82, although the ratio has declined by the end of the 2013-14 study period to 0.16. The long-term debt level of Lakshmi Mills Corporation Ltd. has increased-56.22% per year. This illustrates the possibility of the company offering to settle its debts.

For Bangladesh, secondary data from the cement industry were analyzed for the period from 3 years 2010 to 2012 by **Hoque, Mia and Anwar (2015)**. During this time, both profitability and liquidity positions were not adequate. They also clearly demonstrated a strong link between working capital management component and profitability.

From the outset, India's textile industry is mainly based on cotton and cotton accounts for 65% of fabric consumption in the region. In Ahmedabad and Bombay, the industry is highly located in the western part of the country, while other centres, including Kanpur, Calcutta, Indore, Coimbatore and Sholapur, have seen steady

growth and played a major role in economic and de-economic growth over the recent years (Ayyappan, Sultana and Sakthivadivel, 2014).

Joshi (2013) studied the financial state of the textile industry in India in his methodological research work. The study used the Z-score model and ANOVA and non-parametric testing for study. For the five-year period from 2007/2008 through 2011-2012, the researcher picked three major textile companies in India. This analysis shows the Zodiac Clothing Co.Ltd and Page Industries Ltd. was much higher performing. On the opposite, financial performance was poor for all other garment and synthetic producers.

OBJECTIVE OF THE STUDY

- To know efficiency of working capital management of selected textile units.

III. Research Methodology

India's textile industry is one of the largest in the world, with a vast supply of raw materials and a well-structured manufacturing process. This sector, despite all the efforts of the past, faces numerous difficulties and problems, including competition from other countries, frequent changes in preferences, fashion and trends, variety factors, regulation of the size of the manufacturing plant, poor and old technologies, poor labour force, shortage of capital, loss from depreciation, and many more. This has a negative effect on industry performance. If a firm is unable to meet its financial obligations to its creditors, it is in financial distress, which can result in significant losses for all parties involved in the business.

Following textile industries are selected for study purpose;

- RSWM
- RELIANCE CHEMOTEX
- SHREE RAJASTHAN SYNTEX LIMITED
- LAGNAM SPINTEX
- BHILWARA TECHNICAL TEXTILES LIMITED

The financial management of Rajasthan's textile industry has been examined in this study. Working capital management, solvency, profitability, and liquidity are all examined as part of the study's scope.

IV. Data Analysis

ANALYSIS OF WORKING CAPITAL MANAGEMENT

Prof. Yadav Shrivastava Model:

$$Y = 14.5166V_2 + 0.0015V_{25} + 0.8715V_{31} + 0.7914V_{35}$$

- V2 = cash flow / total tangible assets
- V25 = current Assets / current liabilities
- V31 = net sales / total tangible assets
- V35 = defensive assets / total operating expenses

According to this model if some companies Y value is more than 1.7 then it can be said that companies working capital management is good and vice versa. If the calculated Y-Score of a company is higher than the cut off, the working capital efficiency is good otherwise it is not good.

A. Y- SCORE ANALYSIS FOR RSWM

Table 1: Y-Score table of RSWM

Year	V2	V25	V31	V35	Y-Score
					$Y = 14.5166 V_2 + 0.0015 V_{25} + 0.8715 V_{31} + 0.7914 V_{35}$
Mar '21	0.00326 214	1.641768 47	2.580882 11	0.003455 09	2.301790891
Mar '20	0.00199 673	2.032947 44	2.780399 95	0.002617 32	2.457225035
Mar '19	0.00921 107	1.750520 97	2.647582 77	0.005083 09	2.447730306
Mar '18	0.00997 506	2.366488 73	2.735474 75	0.004906 26	2.536202779
Mar '17	0.00244 499	1.772949 35	2.589458 81	0.002992 1	2.297233632

V2 = cash flow / total tangible assets

V25 = current Assets / current liabilities

V31 = net sales / total tangible assets

V35 = defensive assets / total operating expenses

According to this model if some companies Y value is more than 1.7 then it can be said that companies working capital management is good and vice versa.

It can be seen from the data given above that the Y value for RSWM for all years starting from Mar'17 to Mar'21 is greater than 1.7. From this it can be stated that the working capital for RSWM is good. From the graph above it can also be observed that there is a sudden jump in the Y score from Mar 17 to Mar 18. After which the value decline till Mar' 21 to reach equivalent to the score of Mar' 17. Highest Y score is observed in the year Mar' 18.

B. Y- SCORE ANALYSIS FOR RELIANCE CHEMOTEX

Table 2: Y-Score table of Reliance Chem=otex

Year	V2	V25	V31	V35	Y-Score
					Y = 14.5166 V2 + 0.0015 V25 + 0.8715 V31 + 0.7914 V35
Mar '21	0.30234483	1.03452648	2.35052874	0.14141327	6.550970971
Mar '20	0.04721311	0.941257	2.80833724	0.01856969	3.148947743
Mar '19	0.04983551	0.93980143	3.93797977	0.01373959	4.167674693
Mar '18	0.0660506	0.8602719	4.3107105	0.01643051	4.729907829
Mar '17	0.07286962	0.87730583	4.01430292	0.01799926	4.571844656

It can be seen from the data given above that the Y value for Reliance Chemotex for all years starting from Mar'17 to Mar'21 is greater than 1.7. From this it can be stated that the working capital for Reliance Chemotex is good. Also, the graph shows that from Mar' 17 to Mar' 18 the Y score remains almost same and declined very little in Mar' 19 till Mar' 20. After Mar 20 there is a sharp increase in the Y score value to reach highest Y score in Mar' 21.

C. Y- SCORE ANALYSIS FOR SHREE RAJASTHAN SYNTEX LIMITED

Table 3: Y-Score table of Shree Rajasthan Syntex Limited

Year	V2	V25	V31	V35	Y-Score
					Y = 14.5166 V2 + 0.0015 V25 + 0.8715 V31 + 0.7914 V35
Mar '21	0.01055409	0.0644852	0.53693931	5.765	5.183669839
Mar '20	0.19870291	0.49089722	0.95667173	0.12489159	3.817805643
Mar '19	0.18342197	0.74963729	2.23115839	0.10513011	4.691442392
Mar '18	0.0135233	0.89571574	2.73062062	0.00889595	2.584432089
Mar '17	0.01025641	0.85627246	2.90757835	0.00829493	2.690691752

It can be seen from the data given above that the Y value for Shree Rajasthan Syntex Limited for all the years starting from Mar'17 to Mar'21 is greater than 1.7. From this it can be stated that the working capital for Shree Rajasthan Syntex Limited is good. The graph display that the value of Y score remains the same for Mar 17 and Mar'18. After Mar 18 the Y score increased till Mar'19 and then again declined in Mar' 20. After Mar'20 the Y score again increased to reach its maximum value in Mar' 21.

D. Y- SCORE ANALYSIS FOR LAGNAM SPINTEX

Table 4: Y-Score table of Lagnam Spintex

Year	V2	V25	V31	V35	Y-Score
					$Y = 14.5166 V2 + 0.0015 V25 + 0.8715 V31 + 0.7914 V35$
Mar '21	0.0030502	1.68313953	1.36403422	0.00250641	1.237542811
Mar '20	0.00310205	1.13150387	1.11914409	0.0030448	1.024472468
Mar '19	0.13609707	1.65561066	1.62426694	0.09726839	3.470687837
Mar '18	0.00173444	1.20128051	1.61707458	0.00122683	1.437231613
Mar '17	0.05023874	1.51959459	1.55760847	3.1343E-05	2.089059659

It can be seen from the data given above that the Y value for Lagnam Spintex for all the years starting from Mar'17 to Mar'21 is greater than 1.7 except for Mar'20. From this it can be stated that the working capital for Lagnam Spintex is good for all the years except Mar'20. The Y score is minimum in Mar'20 and highest in Mar'19. The Y score is observed to follow a fluctuating trend through all these years.

E. Y- SCORE ANALYSIS FOR BHILWARA TECHNICAL TEXTILES LIMITED

Table 5: Y-Score table of Bhilwara Technical Textiles Limited

Year	V2	V25	V31	V35	Y-Score
					$Y = 14.5166 V2 + 0.0015 V25 + 0.8715 V31 + 0.7914 V35$
Mar '21	0.0025627 9	28.038461 5	0.3341876	0.1643625 2	0.500581653
Mar '20	0.0097244 7	109.16666 7	0.1058887 1	0.2076271 2	0.5615144
Mar '19	0.0015625	6.4829932	0.0411458 3	6.9537037	5.571426382
Mar '18	0.5399655	964	0	40.826087	41.59422836
Mar '17	0.5946104 3	523	0	20.714285 7	25.80950745

It can be seen from the data given above that the Y value for Bhilwara Technical Textiles Limited for the years starting from Mar'17 to Mar'19 is greater than 1.7 after which it is observed to decline and reach less than 1.7. From this it can be stated that the working capital for Bhilwara Technical Textiles Limited is good for first three years under study. The Y score is minimum in Mar 20 and Mar 21 and is less than 1.7. Thus it can be stated that working capital for Mar 17, Mar 18 and Mar 19 is good and for Mar 20 and Mar 21 is not good. Highest Y score is observed in Mar 18.

Further in the analysis for there is significant efficiency of working capital management in selected textiles industries or not following hypotheses is framed;

H₀₁: "There is no significant efficiency of working capital management in selected textile industries".

H_{A1}: "There is a significant efficiency of working capital management in selected textile industries".

Table 6: One-Sample Statistics of Y-score

One-Sample Statistics					
	N	Mean	Std. Deviation	Std. Error Mean	
RSWM	5	2.4080	.10487	.04690	
RELIANCE CHEMOTEX	5	4.6339	1.23599	.5275	
SHREE RAJASTHAN SYNTEX LIMITED	5	3.7936	1.16378	.52046	
LAGNAM SPINTEX	5	1.8518	.98878	.44220	
BHILWARA TECHNICAL TEXTILES LIMITED	5	14.8075	18.24496	8.15939	

Above table shows the one sample statistics data for Y score of all the textile industries under consideration. Table shows that number of textile mills are 5 and highest mean value of Y score is for BHILWARA TECHNICAL TEXTILES LIMITED (14.8).

Table 7: One-Sample Test of Y-score

One-Sample Test						
	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
RSWM	51.347	4	.000	2.40804	2.2778	2.5382
RELIANCE CHEMOTEX	8.383	4	.001	4.63387	3.0992	6.1686
SHREE RAJASTHAN SYNTEX LIMITED	7.289	4	.002	3.79361	2.3486	5.2386
LAGNAM SPINTEX	4.188	4	.014	1.85180	.6241	3.0795
BHILWARA TECHNICAL TEXTILES LIMITED	1.815	4	.014	14.80745	-7.8467	37.4616

Table given above shows the one sample test of Y score for the selected textile mills. From the data it can be observed that the sig (2-tailed) value for Y score for all the textile mills is less than .05 and thus it can be stated that “There is a significant efficiency of working capital management in selected textiles industries”.

V. Findings & Suggestions

1. Results shows that the Y value for RSWM for all years starting from Mar’17 to Mar’21 is greater than 1.7. From this it can be stated that the working capital for RSWM is good. Highest Y score is observed in the year Mar 18.
2. From results it can be stated that the Y value for Reliance Chemotex for all years starting from Mar’17 to Mar’21 is greater than 1.7. From this it can be stated that the working capital for Reliance Chemotex is also good.
3. The Y value for Shree Rajasthan Syntex Limited for all the years starting from Mar’17 to Mar’21 is greater than 1.7. From this it can be stated that the working capital for Shree Rajasthan Syntex Limited is good.
4. The Y value for Lagnam Spintex for all the years starting from Mar’17 to Mar’21 is greater than 1.7 except for Mar’20. From this it can be stated that the working capital for Lagnam Spintex is good for all the years except Mar 20.
5. The Y value for Bhilwara Technical Textiles Limited for the years starting from Mar’17 to Mar’19 is greater than 1.7 after which it is observed to decline and reach less than 1.7. From this it can be stated that the working capital for Bhilwara Technical Textiles Limited is good for first three years under study.

VI. Suggestions

1. To increase profits, the textile industry must put money into a variety of ventures.
2. The textile sector has to raise production in order to boost sales.
3. Profit after tax fluctuations are a good indicator of the level of competitiveness in a certain business. So that intermediary costs are minimized and profitability is maintained, government should intervene to control unwanted competition.
4. When external funds are available at a lower interest rate, steps will be taken to gradually modernize the plant and machinery in order to meet the significant growth in the demand for fixed assets.
5. The Textile Industry needs to take the proper steps to enhance its reserves and surplus, which will lead to a better position in the future.
6. For investing purposes, cash and bank balances must be appropriately preserved and handled.

VII. Conclusion

About 20 percent of India's overall industrial output is devoted to the textile industry, making it one of the largest in the world. It employs almost 20 million people directly. The textile sector in India presents significant prospects for both domestic and international investors, thanks to the country's steady economic expansion, its large pool of inexpensively trained labour, and the rising level of domestic demand. Since 1991, the textile industry in Rajasthan has been one of the fastest-growing in the world, despite the fact that it was formerly an unorganised industry. State and federal governments should make changes to legislation based on textile industry monitory funding, improve the technology, according to the findings of the researcher's study All in all, the larger corporations with automated plants and new innovation items are faring better than their smaller counterparts, which are struggling to produce owing to a variety of problems, including the above. According to textile industry study, India's government should make changes in accordance with these findings, as well as providing low-cost materials, manage imports and exports in a way that benefits the domestic market.

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Surabhi Darak, et. al. "Working Capital Management Through Y- Score In Selected Textile Industries." *IOSR Journal of Business and Management (IOSR-JBM)*, 24(03), 2022, pp. 59-66.