

# Working Capital Management and Billing Cycles in the Indian Textile Industry: A Case Study of Surat

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**Abstract:** *This study explores the interaction between billing cycles and working capital management (WCM) in the Indian textile industry. Billing cycle is an important area of research in the new commerce world for reducing the timeline between sale of goods and payment as the circulation of money is delayed. The research examines the vital relationship between Working Capital Management and profitability as well as the changing economic conditions of the Indian textile industry. Given the issues associated with profitability and liquidity, the textile sector requires a thorough examination of asset management as the industry is highly dependent on primary resources for raw materials. Surat, being the hub for textile industry, struggles with cash flow needs, which are mostly brought on by protracted cash conversion cycles. Examining these facets, the goal of this research is to shed light on the ways in which successful working capital management techniques might affect the sustainability and financial performance of textile enterprises in Surat as findings reveal diverse working capital strategies among firms. Quantitative analysis shows a significant positive loading of 0.714 of Billing cycles on Profits. The study clarifies important elements affecting performance in a changing market environment, offering valuable perspectives for stakeholders in the textile industry.*

**Keywords:** Billing Cycle, Working Capital, Profitability, Indian Textile Industry, Surat, Turnover, Strategies, Working Capital Management, enterprises

## 1. Introduction

The Textile industry, which is the conventional industry is considered the backbone of many economies, holding a prominent position in many economies in terms of wages, industrial output, and exports. It is one of the world's promising sectors, as well as one of the largest and most diverse, with its products used by almost everyone (Dhiman & Sharma, 2016). Around 400 thousand years ago, the Neanderthals were the first to use sharp piercing objects for threading thongs and even used bird feathers for ornamentation. Unlike any other Industry, Textiles have been an intrinsic part of human civilisation, society's culture, and values. Today, the global textile market is valued at USD 1.3 trillion in 2023, and a compound annual growth rate of 4.44% is expected from 2024 - 28. India, on the other hand, stands at an intersection of tradition as well as modernity and is the 3<sup>rd</sup> largest exporter of cotton and jute in the world and 2<sup>nd</sup> largest producer of man - made fibres

Business operations like procuring raw materials, sustaining production cycles and satisfying orders require meticulous management of working capital to mitigate the risk of liquid crunch and allow them to eliminate economic uncertainties. Here, in the textile industry, for example, cotton picking is usually done during October - December before it gets affected by winter frost. However, the actual sale of cotton clothes begins in April in summer season. This is not only in cotton but also for wool as sheep shearing is done during summer time. The time gap is very long and businesses have to give advance orders before harvesting or sometimes during the sow period. This creates an elongated operational cycle which leads to the blockage of funds for advance payment. The condition of pre - order and managing supplies requires

a lot of organisational skills as well as financing and budgeting of working capital in the industry with lead time and gestation period. Working capital means the firms holding of current or short - term assets such as cash and highly liquid assets (V. K. Bhalla 2004). Inventory turnover, accounts receivable and payables play a significant role here with effective and efficient working capital management.

Gujarat stands out as the top state in terms of cotton production, yarn production, exports, and textile capital among the top producing states in India, which also include Tamil Nadu, Maharashtra, Gujarat, Uttar Pradesh, and West Bengal. Known as the textile capital of Gujarat, Surat plays a vital role in the Indian textile industry by creating jobs for thousands of people and bringing in large sums of money from exports. The city is a leader in the production of polyester and specialises in synthetic textile products. Apart from this, embroidery and Zari work is renowned here. It also leads the way in yarn, spinning, weaving, dyeing, and fabric processing, among other textile manufacturing processes. However, this city faces challenges due to a complex supply chain, long lead times, and high inventory levels making it vulnerable to liquidity crunch and economic instability. This study focuses on the current structure of stakeholders of Surat and their way of managing their working capital.

### Objective

- To understand the changing economic structure of the Indian textile industry.
- To examine the interdependency of working capital management and profitability of textile business in Surat.

## 2. Research Methodology

The research entailed a blended method of primary data collection with insights from secondary sources. The primary focus of the secondary research component was a thorough analysis of published papers and body of existing literature pertaining to working capital management in the textile sector, particularly in the Surat area. The goal of this survey of the literature was to lay the groundwork for comprehending the topic's major ideas, trends, and difficulties. Furthermore, a structured survey comprising 100 participants—manufacturers, merchants, and retailers in the Surat textile industry—was used to collect primary data. Along with this telephonic interview of Chartered Accountant handling textile books is also used for the stud. Years of operation, annual turnover, working capital management strategies, credit policies, billing cycles, and the impact of various factors on working capital requirements were only a few of the many areas considered by the study which was analysed using IBM SPSS tool. Through the integration of knowledge from primary and secondary sources, this study aims to provide a thorough and nuanced examination of working capital management in the Surat textile sector.

## 3. Review of Literature

Indian textile and clothing industry reveals challenges in small producers hindering technological advancements. (Prasad and Sonali 2006) discusses policy initiatives to enhance competitiveness through technology upgradation and foreign equity participation. Furthermore, another (Chen, Fuzhong & Ahmad, Shakil & Jiang, Guohai & Chen, Jinwei 2023) explores predictors of textile exports using the gravity model approach, identifying factors like exchange rate, GDP, trade agreements, and barriers affecting exports, it suggests strategies to manage exchange rates, focus on rich markets, and leverage trade agreements to enhance competitiveness.

Apart from this, COVID - 19 impacted the Indian textiles sector, emphasizing socio - economic importance, employment challenges, and strategies to mitigate negative effects and (Kanupriya 2021) also highlight the need for innovative measures like tax compliance relaxation and financial packages to support the industry during the pandemic.

Effective working capital management (WCM) is integral to the financial health and profitability of small and medium - sized enterprises in India, as well as in specific industries like the textile sector. Nitya and Naseem (2017) emphasis that working capital has the capability to even disrupt the financial performance of any company and profits are mere periodic assessment which is a result of effective WCM.

Transaction cost theory and strategic decision - making theories form the theoretical foundation for understanding the relationship between WCM and profitability in SMEs. Aggressive WCM strategies, such as reducing accounts receivable periods, can enhance cash flow and liquidity, thereby improving profitability. Conversely, conservative inventory management strategies may minimize holding costs and contribute to profitability through prudent inventory management practices. The cash conversion cycle (CCC),

investment decision, and financing decision are also pivotal concepts shaping the discourse on WCM, as highlighted by (X Tan 2008).

Accounts receivable, accounts payable, and inventory management are key components of WCM directly influencing SME profitability. Studies by (Naushad 2022) and Bhattacharya (2008) have demonstrated a positive relationship between accounts payable management and profitability, as delaying payments reduces transactional costs and can create more profits. However, firms should aim to reduce the CCC (Cash Conversion Cycle) and thus, reducing accounts receivable which will improve cash flow and liquidity, leading to enhanced profitability. Indian small and medium enterprises should have conservative inventory management as they lack management skills and thus larger inventory is favoured to meet demands as they are mostly dependent on nearby market (panda, 2021)

Studies on the relationship between WCM practices and profitability industry have yielded mixed findings regarding. Lazaridis and Tryfonidis (2006) says that there is negative relation between WCM and profit which is also added by Sharma (2011). Aggressive investment and finance decision affects profits to a large extent (Mohammad Rajan 2021). There is also a positive coefficient with return on assets.

Management can only try to control additional cost only to some extent to support their sales and managing current assets. (Navena and Victor 2017) suggests that entrepreneurs and managers of such complex operational time industry should avail training programme in order to manage funds for day - to - operations.

Macroeconomic factors, such as GDP growth, government policies, and money market conditions, also impact profitability and WCM. Changes in GDP growth rates may affect accounts receivable and payable periods, thus influencing profitability. Additionally, government initiatives and interest rate fluctuations can impact financing and liquidity management strategies, affecting profitability.

### Evolution of Economic Structure of Indian Textile Industry

One of the reasons of why India used to be colony was Textiles but eventually became a threat to England as their in - house demand for textiles fell. Soon Indian textiles were banned and British implemented Draconian taxes and policies to eliminate Indian competition. India was exploited to that extent that Textile production fell from 25% to 2% during colonialism, so Government of India had to strictly regulate the industry with import substitution and tariff protection and focused on self - sufficiency.

Indian Textile sector had enormous number of small - scale, non - integrated techniques of production. However, due to Industrial Revolution, there was rise usage of power loom and mills who took up major yarn production replacing handlooms. (Textile committee) The All - India Handloom Board was set up in 1952 to freeze the capacity of the mill sector and to meet the cloth requirement by handloom sector in order protect small players and generate employment (Soundarapandian, 2002). The 5<sup>th</sup> five - year plan and the

textile policy of 1981 emphasized on distribution of yarn to handlooms to achieve the target and increase handloom cooperative societies to 60%. In 1985, New textile Policy came which outlaid 300crs for industry and gave permit to all sectors to grow accordingly and initiated the concept of “competition’ domestically also Technology Upgradation Fund scheme for the upgradation of textile industry.

Liberalisation, 1991, removed trade barriers and reduced tariffs in order to increase competition and paved a way to be efficient enough to stand again in the global market. The influx of FDI and competition led to adoption of technology like CAD, automation and mechanization to increase productivity. In less than ten years, the textile sector generated roughly 4% of GDP, 14% of industrial output, 18% of industry employment, and 27% of export earnings (Hashim). It also ranked sixth in terms of synthetic fibres and yarns and second to China in terms of cotton yarn. China had a highly efficient textile industry with cheap labour costs and advanced infrastructure, while India's textile industry, despite ranking second, was largely fragmented. Just 18% of mills were automated, and their adoption of new technologies was extremely sluggish (DSIR, 2019). The expansion and

capacity to compete in the global market were further hampered by a lack of skilled personnel.

The Technology Mission on Cotton was established in 1999 with the goals of enhancing the productivity and quality of cotton as well as encouraging the greater application of technology in cotton farming. After the year 2000, the introduction of nanotechnology resulted in further diversification and the creation of inventive fabrics. Then, in order to support industry research and development as well as training and skill development, the Integrated Skill Development Scheme was introduced in 2010 (Ministry of Textiles). Along with the idea of sustainability, there have been tremendous advancements and innovations in new materials, such as performance fabrics that offer moisture wicking, UV protection, and odour management. Smart textiles, which incorporate electrical components and can improve the functionality of wearables, cars, and other devices in addition to monitoring health and controlling temperature, are another example of these advancements.

**Economic Growth of Indian Textile Industry**

**Table 1:** Textile Industry Performance (2015 - 23)

| Year      | FDI (US\$ M) | Cotton Production (M Metric tons) | Cotton Consumption (M Metric tons) | Export (cotton) US\$ M | Export (Handicrafts) US\$ M | Export (T&A) |
|-----------|--------------|-----------------------------------|------------------------------------|------------------------|-----------------------------|--------------|
| 2015 - 16 | 230          | 5.65                              | 5.36                               | 11149                  | 3293                        | 38985        |
| 2016 - 17 | 619          | 5.87                              | 5.28                               | 10529                  | 3639                        | 39111        |
| 2017 - 18 | 454          | 6.29                              | 5.43                               | 11, 212                | 3573                        | 39, 296      |
| 2018 - 19 | 166          | 5.66                              | 5.29                               | 12405                  | 3804                        | 40326        |
| 2019 - 20 | 113          | 6.21                              | 4.58                               | 10263                  | 3564                        | 26936        |
| 2020 - 21 | 189          | 6                                 | 5.7                                | 11128                  | 3443                        | 33320        |
| 2021 - 22 | 236          | 5.29                              | 5.48                               | 17166                  | 2088                        | 44435        |
| 2022 - 23 | 304          | 5.84                              | 5.29                               | 11083                  | 3001                        | 36684        |

Source: Ministry of Textile

India aspires to become a global leader in the production and export of all kinds of textiles and to grow a thriving handloom and handicraft industry. The FDI fluctuated over the years, with notable increase in 2016 - 17 and a peak in 2022 - 23 at \$304 Million. This indicates varying levels of foreign investment interest in the Indian textile industry. About 60% of the raw materials used in the textile industry in India are made of cotton, which is essential to the sector. In addition to being a fundamental necessity, cotton is the third - largest export and one of the main drivers of India's net foreign exchange earnings. Notwithstanding the complexity of the pandemic, cotton textile exports increased by 54% between 2015 - 16 to 2021–22, while the exports of all other textile commodities increased by 35%. With a share of more than 50%, the main markets for India's textile exports are the United States, the United Kingdom, and the European Union. By 2030, export of cotton is expected to rise by 8% and that of handicrafts are expected to rise by almost 10%.

India, itself has an extravagant domestic market for textile. In the span of one decade 80% of produce is consumed by domestic market. This highlights the significant demand within the country, showcasing the industry’s importance. Government of India is also tried to preserve the rich heritage of textiles and handicrafts through policy initiative. National Handicraft Development Programme helped to increase

export of handicraft from 1, 708 million USD to 2, 088 million USD.

India has always tried to attract international investors and MNC’s. From 2013 to 2017, there has been a significant jump in FDI for textile in India but then it also saw a downfall. Post Covid, there is 60% rise in FDI and in order to promote, Government of India has launched PM Mega Integrated Textile Regions and Apparel Parks (PM - MITRA) Scheme to strengthen textile sector by enabling scale of operations, reducing logistics costs, attracting investment and enhancing export by providing up to 30% of project cost with maximum support limit per park.

**Infrastructure and Clusters**

**Table 2:** Textile parks in Surat

| Name of Project                           | Project Cost (Cr) | No. of Units |
|---|-------------------|--------------|
| Gujarat Eco Textile Park Limited, Surat   | 128.75            | 33           |
| Fairdeal Textile Park Pvt Ltd., Surat Ltd | 105.63            | 30           |
| Sayana Textile Park Ltd., Surat           | 90                | 50           |
| Surat Super Yarn Park Limited, Surat      | 104.76            | 27           |
| RJD Integrated Textile Park, Surat        | 106.5             | 579          |

Source: data. gov. in

One of the major initiatives by Ministry of Textiles is PM Mitra scheme which aims to establish integrated industrial zones having streamline value chain and employment generation. Each park spanning at least 1000 acres offers maximum facility to accommodate diverse textile processes. Out of the total 19 completed textile parks, 7 are in Gujarat and out of them 5 are in Surat making it a wholesome textile hub by itself. This makes it important to have an efficient working capital management in Surat.

**Working Capital Management of Surat Textile Business**

The primary information collected of Surat textile stakeholders reveals diverse WCM strategies among stakeholders, showcasing varied perspectives in industry challenges and opportunities. The poll, which includes job workers, processors, traders, merchants, and manufacturers, provided a range of perspectives on the challenges and opportunities that each industry faced. The data highlights the diversity found in the textile industry, as evidenced by variations in working capital management effectiveness, years of operation, and annual turnover among individual enterprises. The bulk of the investigated firms have been in existence for more than twenty years, demonstrating the industry's historical significance.

Stakeholder having turnover ranging from 10cr to 20cr has 6% more of profits compared to enterprises having turnover more than 20cr. This might be an indication that enterprises having more sale might not been able reduce working cost. According to the working capital management review, some businesses manage their working capital successfully, but others struggle, particularly when it comes to giving clients credit and agreeing on payment terms. Variations in client payment patterns, seasonal demand, and shifts in market conditions all have an ongoing effect on the required quantity of working capital. Research on billing cycles indicates that the average time from invoice to payment receipt varies, ranging from 30 to 90 days. While negotiating credit policies and billing terms with consumers, different businesses employ different strategies. Conventional terms, one - on - one discussions, and industry references are frequent tactics. Most stakeholders agree that working capital has an impact on profitability, demonstrating the connection between overall company success and financial management.

Technological advancements, regulatory laws, and market developments all have a significant impact on this industry's cash flow dynamics. Stakeholders have differing opinions about the improvements they would like to see like stand regulations< decentralisation of market, research and development on technical quality efficiency. Moreover, some wanted a common platform having registered sellers and traders and have details regarding GST number, credibility ranking etc. to create a transparency in the industry.

In conclusion, the primary data highlights the intricacy of working capital management in the Indian textile business and the requirement for specialised approaches that take into account the size, industry sector, and external market influences of the organisation. These results can help stakeholders optimise their working capital for long - term growth by providing guidance to policymakers on particular

challenges. They can also contribute to industry - wide discussions.

Following is the factor analysis of data

**4. Findings**

**Table 3: Communalities**

|               | Initial | Extraction |
|---------------|---------|------------|
| Profits       | 1       | 0.695      |
| WCMR          | 1       | 0.655      |
| Billing Cycle | 1       | 0.715      |
| Turnover      | 1       | 0.407      |

Extraction Method: Principal Component Analysis

**Table 4: Component Matrix**

|               | Profits | Billing Cycle |
|---------------|---------|---------------|
| Profits       | 0.243   | 0.797         |
| WCMR          | 0.804   | -0.092        |
| Billing Cycle | 0.717   | -0.453        |
| Turnover      | 0.451   | 0.451         |

Extraction Method: Principal Component Analysis

a) 2 components extracted

The Factor analysis reveals a strong correlation between the Working Capital Management Ratio (WCMR) and Billing Cycle Efficiency, with high communalities of 0.655 and 0.715, respectively. The Kaiser - Meyer - Olkin Measure (KMO) of 0.512 and the Bartlett's Test of Sphericity (p = 0.012) both support the appropriateness of the data. Two components were identified via principal component analysis, and together they explain 61.786% of the variation. The relationship between WCMR and Billing Cycle Efficiency is shown by the considerable "positive loadings on the first component (0.804 and 0.714, respectively).

This illustrates the connection between effective working capital management and billing cycles. Financial performance and efficient management have a significant mutual influence. These results should serve as a warning to businesses that altering one variable might have a significant impact on another, requiring cautious financial operations management to achieve the best results.

**5. Recommendations**

After a thorough examination of the vast amount of data accessible regarding the Indian textile industry, a few key recommendations become apparent. Customised working capital management solutions that consider the industry's variability in terms of annual revenue, firm size, and operational effectiveness are desperately needed, above all. Policies and initiatives should be customised to address the particular challenges faced by job workers, processors, traders, retailers, and manufacturers. Resolving credit management and invoicing concerns should be given priority in programmes aimed at increasing working capital efficiency. Developing ways to optimise working capital necessitates considering market conditions, seasonal variations in demand, and distinct payment patterns from customers. Additionally, promoting transparency and uniformity in fees.

To further encourage the sector's growth, the government should think about reviewing industrial restrictions, streamlining tax laws, and improving connectivity. Stakeholders also need to work together to deploy technology solutions that optimise workflows and adjust to changing market trends. When combined, these actions can strengthen the industry's resistance to external uncertainty and promote steady growth.

- Customized working capital solutions: Tailor working capital management strategies to suit the diverse needs of stakeholders based on factors like revenue, firm size, and operational efficiency.
- Targeted Policies for different stakeholders: Develop policies that address the unique challenges faced by job working, processors, traders, retailers, and manufacturers.
- Focus on Credit Management: Prioritize resolving credit management issues and streamlining invoicing processes to enhance working capital efficiency.
- Transparency and Standardization: Promote transparency in transactions and uniformity in fee structures to foster trust and efficiency with the textile business ecosystem.
- Industry Collaboration: Facilitate collaborations among stakeholders to address common challenges, share best practices, and drive collective growth within Surat's textile sector.

By implementing these recommendations based on a comprehensive analysis of the Indian textile industry's dynamics and challenges, stakeholders can enhance their working capital management practices effectively, driving sustainable growth and prosperity within this vital sector.

## 6. Conclusions

The Indian Textile Industry, deeply rooted in tradition and history has evolved into a significant economic force, contributing substantially to the country's GDP and export earnings. The study focuses on working capital management and billing cycles in Surat sheds light on intricate financial dynamics within this industry. The findings from the literature review emphasizes the interdependence of working capital management and profitability, with studies suggesting effective working capital management can enhance cash flow, liquidity and profitability.

The study findings align with the literature review of Lazaridis and Tryfonidis, as it also reveals strong correlation between working capital management ratios and billing cycles. This shows the importance of managing working capital effectively to achieve profitability. Stakeholders in Surat exhibit diverse strategies and challenges, emphasizing the need for tailored approaches that consider individual enterprise characteristics and market dynamics.

The article provides valuable insights into the complexities of working capital management in India's textile sector, offering practical guidance for stakeholders to optimize their financial strategies for growth. By addressing industry - specific challenges and leveraging technological advancement, policymakers can create an environment conducive to innovation and competitiveness in Surat's textile ecosystem.

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