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Working Capital Management Practices in the Construction Sector

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Abstract: Construction is an essential part of any country's infrastructure and industrial development. The Indian construction sector is an integral part of the economy and a conduit for a substantial part of India's development investment. Forecasting working capital along with cash requirements is essential for all construction contractors during the tendering stage since cash flow at the beginning of the project is a major cause of construction companies' failure. In the contracting business, construction firms are generally more concerned with short-term financial strategies than long-term ones. Working capital management is the central issue of all short-term financial concerns. For a successful working of a business, organization fixed and, current assets play a vital role as an organization generally invests in these options. The management of operating capital is indispensable as it might induce a direct impact on profitability and liquidity. The aim of the study is to articulate the implication of working capital management in the construction sector and its growth rate in both global and Indian perspectives.

Keywords: Inventory, Organization, Payables, Receivables, Working capital management

I. INTRODUCTION

Working Capital Management (WCM) is the management of short-term financial requirements of an organization. This includes maintaining the optimal balance of working capital components such as receivables, inventory and payables and using the cash efficiently for day-to-day operations. Long term funds are required to create production facilities through the purchase of fixed assets such as plant & machinery, solid background, building, furniture, etc. Investments in these assets represent that piece of a firm's capital which is blanked out on permanent or fixed earth and is called fixed capital. Funds are also needed for short-term purposes for the purchase of crude material, payment of wages and other expenses. It is also known as revolving or circulating capital or short-term capital. Efficient working capital management increases firms' free cash flow, which in turn increases the firms' growth opportunities and turn back to shareholders. Even though firms traditionally are focused on long term capital budgeting and capital structure, the recent trend is that many companies across different industries focus on working capital management efficiency.

The management of working capital by managing the proportions of the working capital management components is important to the financial health of businesses from all industries. To reduce accounts receivable, a firm may have strict collections policies and limited sales credits to its customers. This would increase cash inflow. However, the strict collection policies and lesser sales credits would lead to lost sales thus reducing the profits. Maximizing account payables by having longer credits from the suppliers also has the opportunity of taking poor quality fabrics from a provider that would finally bear on the profitability (Kandpal, 2015).

Construction is an essential part of any country's infrastructure and industrial development. The Indian construction sector is an inbuilt component of the economic system and a conduit for a significant portion of India's development investment. Forecasting working capital along with cash requirements is essential for all construction contractors during the tendering stage since cash flow at the beginning of the project is a major cause of construction companies' failure. In the contracting business, construction firms are generally more concerned with short-term financial strategies than longer-term ones.

Working capital management is the central issue of all short-term financial concerns. Every business needs adequate liquid resources in order to maintain day to day cash flows. A Contractor needs enough cash to by wages and salaries as they fall due and to pay creditors if it is to keep its workforce and ensure its supplies. Sufficient liquidity must be preserved in order to ensure the survival of business in the long term as well. Even a profitable business may fail if it does not have adequate cash flows to meet its liabilities as they fall due. Therefore, when a business makes an investment decision, they must not only consider the financial outlay involved with acquiring the new machine or the new building, etc. but must also take account of the additional current assets that are usually involved with any expansion of activity.

In the working capital analysis, the direction of change over a period of time is of crucial importance. Not only that, analysis of working capital trends provides a base to judge whether the practice and prevailing policy of the management with regard to working capital is good enough or improvement is to be made in managing the working capital funds. Hence, in this study, an attempt is made about the trend of working capital management in selected construction companies.

II. LITERATURE REVIEW

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The management of working capital involves managing inventories. Raheman and Nasr (2007) analyzed the relationship between working capital management and Profitability. The result shows that there is a strong negative relationship between the variables of WCM and profitability of the firm. It means that as the cash conversion cycle increases, it will lead to decreasing profitability of the firm and managers can create positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level. There is a significant negative relationship between liquidity and profitability. It was also found that there is a positive relationship between the size of the firm and its profitability as well as a significant relationship between debt used by the firm and its profitability. Reddy and Patkar (2004) studied the size and its components and liquidity management in factoring companies. They also studied the correlation between liquidity and profitability of factoring companies. They concluded that the sundry debtors and amount due to creditors are the major components of current assets and current liabilities respectively in determining the size of the working capital.

Ramana and Rao (2015) analyzed the working capital management practices of two significant players in the industry, namely, Hindustan Construction Company and Simplex Infrastructure Ltd. This analysis becomes very relevant as many of the construction companies are assumed to face the problem of liquidity crunch. When a company suffers from a liquidity crisis, the best response is to revisit the working capital management practices. The results show that there is not much to differentiate between the companies as far as capital to sales and working capital to net worth ratio is concerned. The analysis shows that HCC needs to focus more on inventory and cash management whereas SIL should focus more on receivable management. Nyamao, Patrick, Martin, Odondo, and Simeyo (2012) conducted a study to elucidate the working capital management practices of small and medium enterprises in Kenya. The study concluded that working capital management practices are low amongst small and medium enterprises as the majority had not adopted formal working capital management routines. Agyei-Mensah (2010) conducted research into the working capital management practices of small and medium enterprises in the Ashanti region of Ghana. The study revealed weak working capital management skills within the sector.

Magoutas, Papadogonas, and Sfakianakis (2012) state that employees with specialized knowledge possess particular capabilities such as communication and decision making, problem solving and team working skills, as well as the ability to adapt to continuously changing environments. Bhunia and Roy (2011) attempted to evaluate the relationship between working capital cycle and the firm's profits. The results of the study indicate an inverse association between the working capital cycle and profitability. Hence, in order to create shareholder value creation, working capital cycle days should be kept to a minimum and also profitability should be improved. Sofat (2010) examined the liquidity and profitability relationship and also the association between profitability and risk. The findings of the study were company-specific and it was observed that the liquidity position of India Cements Ltd. was best among the companies under consideration. The study also inferred that the overall relationship between the current ratio and return on investment was significant while affiliation between return on capital employed and the degree of operating leverage was insignificant.

Barad (2010) attempted to analyze the liquidity, profitability, receivables and cash position of JSW Steel Limited, Jindal Steel and Alloy Limited, Steel Authority of India Limited and Tata Steel Limited of Steel Industry of India. The study indicated poor liquidity position of the concerns as depicted by underperforming current ratio, quick ratio and absolute quick ratio. However, the profitability position of the concerns was satisfactory as portrayed by various return ratios. The study concluded a high liquid cash position which was indicative of underutilization of cash. Gill, Biger and Mathur (2010) investigated the relationship between working capital management and profitability. The study established negative affiliation between accounts receivables and profitability of the company. However, contradictory to earlier studies a positive association was observed between cash conversion cycle and the firm's profitability.

III. OBJECTIVE OF THE STUDY

The main objective of the study is to analyse the implication of working capital management in the construction sector and its growth rate in both global and Indian perspectives.

IV. IMPLICATION OF WCM IN THE CONSTRUCTION SECTOR

Working capital management is the cornerstone of the construction industry. The working capital requirements flow from the fact that the contractor has to show considerable progress in project execution before he can bill his client. Once the bill is raised, the client does get some time before he has to pay up. Construction contracts are of two types cost-plus contract and fixed price contract. In a cost-plus contract, the contractor is reimbursed for permitted costs plus a percentage of those costs or a fixed fee. These contracts are typically awarded for projects in which it is very difficult for the owner of the project as well as the contractor to estimate project costs upfront. This is typically the case for one-off projects or projects where the scope of work cannot be defined clearly upfront. In a fixed price contract, the contractor agrees to a fixed contract price and bears the risk of cost overruns.

Typically, these projects are awarded by the owner by inviting a few chosen contractors to bid for constructing the project, after clearly describing the scope of work, the expected performance of the completed project etc. Usually, the owner awards the project for execution to the contractor who bids the lowest price. Needless to say, considering the higher risks to the contractor than from fixed-price contracts, they yield higher margins if the project is executed flawlessly.

In a fixed price contract, once the contract is awarded, the contract price becomes sacrosanct and few escalations are allowed. The contractor agrees to pay liquidated damages to the owner for any delay in project execution. These damages could be structured as penalty per day's delay, with or without an upper cap on the extent of damages. Damages would also have to be paid should the delivered project fall short on performance grounds. Even at the bidding stage for a project, the bidders would have to post bid bonds in the form of bank guarantees in favour of the project owner. This is to assure the owner that the bidder is serious in his bid. If a contractor is awarded the project but tries to back out of entering into a firm contract, the project owner can cash in the bid bond. Once a project is completed, before the contractor gets his final payment, he has to post a performance guarantee bond in favour of the owner, which the owner can cash in if the project does not perform to requisite specifications. As a part of their business, contractors have to factor in bank guarantee expenses for bid bonds and performance bonds. Liquidated damages and performance bonds create contingent liabilities for construction contractors.

The moment a project owner awards a project to a contractor, he pays the contractor a certain amount as customer advance. This is recognized as a current liability under the head customer advances. As the contractor starts executing the project and recognizing revenue, he writes down the customer advance. This can be an excellent source of financing for the contractors at the early stage of a project. The various factors requiring consideration while estimating working capital in construction projects are:

1. The average credit period expected to be allowed by suppliers.
2. Total costs incurred on material, wages.
3. The length of time for which raw material are to remain in stores before they are issued for production.
4. The length of the production cycle (or) work in process.
5. The length of the sales cycle during which finished goods are to be kept waiting for sales.
6. The average period of credit allowed to customers.
7. The amount of cash required to make an advance payment.

V. GLOBAL PERSPECTIVE OF WCM IN THE CONSTRUCTION SECTOR

Working Capital management determines the growth and credibility of any firm. It involves managing both the short term and long-term liabilities continuously in order to carry out the day to day operations effectively. These operations, in turn, will give rise to cash flow comprising of short-term obligations and operational expenses. Construction Industry, in particular, does not have an efficient WCM, which would take the specific nature of the project due to various unforeseen characters which would come into play during the course of the project (Meszek & Polewski, 2010). Singh, Jain & Yadav (2013) enunciated that the need for companies to explore the feasibility of concepts like zero working capital which help in reducing financial costs and Companies with Negative NWC Cycle registered higher profitability.

Despite the challenges of the current economic climate, the Indian construction industry has managed to maintain marginally positive results in the port, civil engineering, and airport and transport infrastructure sectors. Construction is an integral part of the country's infrastructure and industrial development. The market size of the global construction industry is USD 7.2 trillion and India accounts for 7 per cent of market size, raking third in the world. As per the Global Construction 2020 report, most of the growth in the world will come from Asia (mainly from China and India) and the US in the next 10 years. The global Construction sector is likely to reach USD 12 trillion by 2020 (GC, 2020). The figure-1 shows the growth rate of the Global Construction Sector.

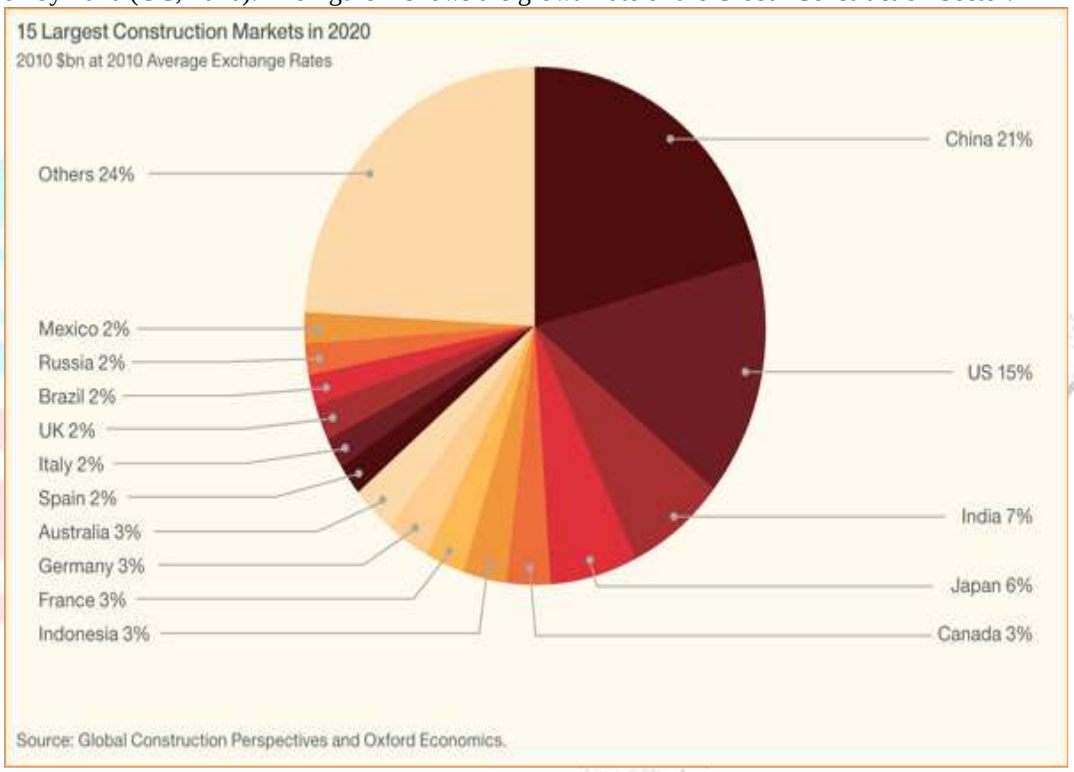

Figure-1. Global Construction Sector Growth Rate

VI. INDIAN PERSPECTIVE OF WCM IN THE CONSTRUCTION SECTOR

The construction industry is rapidly growing as new advances in technology, and consumer demand continues to shape the market. Renters, homeowners and businesses alike are displaying an interest in new and innovative trends that will affect how the construction industry is conducted and progresses. The construction industry remains to be a significant part of our economy as it continues to grow with influences from new trends like modular buildings, drones, Building Information Modeling (BIM), Internet of Things (loT), and staying green just to name a few. These are all essential elements needed to thrive and stay ahead of the game in the construction industry. When it comes to the construction industry, having sufficient working capital to keep projects going, or to cover your costs during downtime and between projects is crucial to keeping your suppliers and employees happy (Gudcapital, 2019).

The construction sector in India is the second largest after agriculture in terms of employment and accounting 11 per cent total GDP. Infrastructure segments involve construction projects in different sectors like roads, rails, ports, irrigation, power etc. The construction industry is primarily driven by Government of India (GOI) investments on core infrastructure projects and creation of urban infrastructure; industrial capital expenditure (Capex) by the corporate sector and development activities of real estate/housing sector. The sector plays a pivotal role in developing the country's infrastructure, a pre-requisite for high levels of economic growth and an area of focus for the GOI.

The construction sector accounts for nearly 45 per cent of the total investment in infrastructure and is expected to be the prime beneficiary of the surge in infrastructure investment in the near to medium term. The importance that the GOI places on bridging the country's acute infrastructure deficit is evident from the two-fold increase in the planned outlay for the infrastructure sector in the 12th five-year plan. Significant infrastructure investments, along with a revival in industrial Capex (Capital Expenditure) and improvement in real estate scenario, are likely to catalyse growth for construction companies in India, going forward. In construction projects, on average, raw material cost accounts for 30-50 per cent of the total cost major and subcontracting cost accounts for about 20-40 per cent. Other

costs include labour cost, administrative expenses and other operating expenses. Since these costs are different for projects in different segments, the cost structure of a particular construction company depends upon its order mix. Major raw materials consumed by the construction industry mainly include cement and steel. So, any variation in the prices of these two basic raw materials has a direct impact on the cost of the project and in turn margins of the companies.

VII. IMPACT OF WORKING CAPITAL ON THE CONSTRUCTION SECTOR

According to the Census Bureau's Business Dynamics Statistics, nearly two out of three construction businesses fail within a period of 5 years, which is worse than retail, mining, agriculture, manufacturing, and wholesale. There's really only one reason a construction business fails, that is it runs out of cash. When working capital is mismanaged and accounts receivable stacks up due to slow payment, short term debt can become long term debt putting the construction company in a poor capital position to grow (Levelset, 2019).

The construction sector has some unique challenges when it comes to managing cash flow and working capital. Despite dealing in huge dollar amounts, the margins in construction are incredibly thin. Typical small business and medium-sized contractors have margins of 5% or less. A one crore project may sound like a lot, but if the margin is 5%, that represents very less in short-term profit to the construction business. And that doesn't take into account when the construction companies get paid. Even established construction companies with a balance sheet of well managed current assets and current liabilities can easily end up needing an increased line of credit, working capital loans or some type of business loan to keep their team working through periods of slow payment that affect working capital.

The contractor only has two options to consider:

- Slow down growth by spreading out when they take on new jobs so they can collect cash from their current projects first.
- Speed up the time it takes to get paid on their projects so they can grow their business.

No construction company wants to slow down to grow, so your best bet is to shorten the payment cycle for your projects. Speeding up the time it takes to collect your accounts receivable allows your current construction projects to more quickly fund your future projects. Small business contractors in the construction industry are constantly looking to expand or launch new projects which require adequate working capital. Financing the business for construction companies is difficult when compared to other businesses as there are not many funding options available on the market. Banks are still reluctant to offer loans for the new projects whether it is small or big and hence many construction companies are turning to alternative financing options. The funds availed from alternative finance options are used for purchasing new tools, equipment and hiring people for temporary jobs.

The fastest and the most efficient way to avail working capital for construction companies is alternative financing. Availing traditional bank loans is not as easy as qualifying for the loan need a high credit score and should not have filed bankruptcy. The bank requires the business to be established in the industry for at least five years and should have a healthy profit and loss statement to approve the loan. Unfortunately, not all businesses can qualify for traditional bank loans either due to bad credit or due to the unhealthy profit and loss statement. With the alternative financing options, the small construction companies can apply to one location to find the best lender that suits their funding requirements.

There is a network of lenders on the market that are into small business funding which will speed up the process of availing working capital for construction companies. Applying for these loans and cash advances are simple and easy and are approved in as little as 24 hours of receiving the application. These non-bank lenders advance loans at a competitive fee and interest rates, and the terms can negotiate to suit the company requirements. The application for these loans can be made online and needs very less documentation which includes six months bank statements and four months of card sales statement to initiate the process.

VIII. CONCLUSION

The study concludes that effective working capital management is essential for a better financial performance of the construction sector. The ability to efficiently collect payments in a timely manner is important for construction firms in generating earnings before any contractual obligations must be paid and contribute to a higher return on equity shareholders have invested. Within this context, improved short-term liquidity measured by net working capital does not provide shareholders with a higher return on the amount they invested in the construction companies. The power to hold inventory, time takes to pay off credit purchases and long-term borrowings do not exhibit significant impact for construction businesses.

In addition, working capital management for construction firms does not affect significantly to operating cash flow and firm value measured by the share price. Working capital is an important liquidity indicator and historically it has been a major benchmark for the profitability of construction contractors in infrastructure projects. A high return on capital employed is an illusion if it is accompanied by inefficient or fraudulent working capital management. If receivables or inventory keep going up disproportionately with growth in sales, an ever-increasing amount of capital would have to be deployed for financing this working capital requirement.

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