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Research Article

Exploring The Effects Of Inventory Conversion Duration On Profitability: A Study Of Firms Listed In The BSE DOLLEX 200

Ruchika[1*] and Amit Kumar[2]

[1*] Research Scholar, School of Commerce and Management, Om Sterling Global University, Hisar (Haryana), India. E-Mail: ruchika1991jindal@gmail.com
[2]Head of Department, School of Commerce and Management, Om Sterling Global University, Hisar (Haryana), India. E-Mail: hodscm@osgu.ac.in

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ABSTRACT

This paper examines the relationship between Inventory Conversion Period (ICP) and profitability metrics across a sample of 100 companies from the BSE DOLLEX 200 index in India, representing a broad spectrum of industries. By calculating each company's ICP and correlating these figures with key profitability indicators, including Return on Equity (RoE), Return on Assets (RoA), Net Profit Margin (NPM), Earnings Per Share (EPS), and Market Capitalization (M. Cap), the study aims to discern the impact of inventory management efficiency on financial performance. The analysis employs Pearson correlation coefficients and regression models to evaluate these relationships. Our results indicate a significant negative correlation between ICP and Net Profit Margin, as well as between ICP and Market Capitalization, suggesting that longer periods to convert inventory into sales adversely affect a company's profitability and market valuation. Conversely, the correlations between ICP and other profitability measures, such as RoE, RoCE, RoA, and EPS, are found to be insignificant. These findings underscore the critical role of efficient inventory management in enhancing a company's financial health and market position. This study contributes to the existing literature by providing empirical evidence on the importance of optimizing inventory conversion processes within the diverse economic landscape of India, offering valuable insights for managers and investors alike.

Keywords: Inventory Conversion Period (ICP), Cash Conversion Cycle, Profitability Measures, BSE DOLLEX 200, Financial Performance Analysis.

INTRODUCTION

In the dynamic and competitive landscape of business operations, efficient inventory management emerges as a critical determinant of a company's operational effectiveness and financial health. The Inventory Conversion Period (ICP), a key component of the cash conversion cycle, measures the time it takes for a company to convert its inventory into sales. This metric not only reflects a company's inventory management efficiency but also has profound implications for its liquidity and overall profitability. As businesses strive to optimize their operations and enhance financial performance, understanding the nuances of ICP and its impact on profitability becomes indispensable.

This study delves into the intricacies of the relationship between the Inventory Conversion Period and profitability measures among companies listed in the BSE DOLLEX 200, an index comprising a wide spectrum of industries in India. Given the diverse economic landscape of India, companies across various sectors grapple with unique challenges in managing their inventory effectively. This research aims to shed light on how variations in ICP influence key profitability metrics, such as Net Profit Margin, Return on Equity, and Market Capitalization, among others. By exploring this relationship, the study endeavors to contribute valuable

insights into the strategic significance of inventory management practices in enhancing corporate financial performance.

The relevance of this investigation is underscored by the evolving market dynamics and the increasing complexity of supply chains, which have made inventory management a strategic area of focus for companies aiming to sustain and enhance their competitive edge. The ability to manage inventory efficiently not only reduces holding costs but also enables companies to respond more swiftly to market demands, thereby potentially improving their profitability and shareholder value.

This paper is structured to begin with a comprehensive review of the existing literature, establishing a theoretical framework that highlights the significance of the cash conversion cycle, with a particular focus on the Inventory Conversion Period. Following this, the methodology section outlines the analytical techniques employed to examine the data collected from companies within the BSE DOLLEX 200. The results section presents the findings from the correlation and regression analyses, which are subsequently discussed in the context of their implications for inventory management practices and financial performance optimization. The study concludes by summarizing the key insights derived from the research, emphasizing its contributions to the academic discourse on inventory management and financial performance, and suggesting avenues for future research.

Through this investigation, the paper aims to enhance the understanding of the strategic role of inventory management in driving profitability, offering empirical evidence and practical guidance for businesses striving to optimize their inventory conversion processes and achieve superior financial outcomes.

REVIEW OF LITERATURE

The relationship between inventory management, as encapsulated by the Inventory Conversion Period (ICP), and profitability is a subject of substantial academic and practical interest. This literature review explores the existing body of knowledge on the cash conversion cycle, inventory management practices, and their impact on various measures of company profitability. By examining previous research, this section aims to contextualize the current study within the broader discourse on operational efficiency and financial performance.

The Cash Conversion Cycle and Its Components

The cash conversion cycle (CCC) represents the time span between a company's outlay of cash for raw materials and the collection of cash from customers for sales made, effectively measuring the efficiency of a company's management of its working capital. Inventory Conversion Period, Receivables Collection Period, and Payables Deferral Period are its primary components. The ICP, in particular, has been identified as a crucial indicator of inventory management efficiency, reflecting the time it takes for a company to convert its inventory into sales (Richards & Laughlin, 1980). Studies by Shin and Soenen (1998) highlighted the significance of minimizing the CCC to enhance corporate profitability, suggesting a direct correlation between efficient working capital management and the financial health of a company.

Inventory Management and Operational Efficiency

Efficient inventory management is pivotal in optimizing operational efficiency, reducing holding costs, and improving customer satisfaction through timely fulfillment of orders (Jones & Riley, 1985). Research by Schmenner and Vastag (2006) emphasized the strategic role of inventory turnover in assessing operational effectiveness. They posited that higher inventory turnover rates, indicating shorter ICPs, are generally associated with superior operational performance and cost management. Conversely, excess inventory can tie up valuable capital and increase storage costs, potentially eroding profitability.

Inventory Conversion Period and Profitability

The nexus between ICP and profitability has been explored through various lenses, with studies often yielding mixed results. Garcia-Teruel and Martinez-Solano (2007) found a negative relationship between the length of the CCC, including the ICP, and profitability measures such as return on assets (ROA) and net profit margin. Their findings suggest that shorter conversion periods, implying more efficient inventory and cash management, are conducive to higher profitability levels.

In contrast, some studies have highlighted sector-specific nuances that influence the ICP-profitability relationship. For instance, research in the retail sector suggests that while a shorter ICP is generally favorable, the optimal inventory level and turnover rate can vary significantly depending on product types, market demand variability, and supply chain considerations (Cachon & Fisher, 2000).

Methodological Approaches in Inventory and Profitability Studies

Methodologically, prior studies have employed a range of approaches to investigate the relationship between inventory management and profitability. Correlation and regression analyses are commonly used to quantify the strength and direction of relationships between ICP and various profitability metrics. These studies often control for variables such as company size, industry, and market conditions to isolate the effect of inventory

management practices on financial performance (Deloof, 2003).

Gaps in Literature and Research Opportunities

Despite the extensive research on this topic, gaps remain, particularly in the context of emerging markets and specific industry sectors. The dynamic economic environments and unique market challenges faced by companies in these contexts offer fertile ground for further investigation. Additionally, the evolving nature of global supply chains and the advent of new inventory management technologies present opportunities to reassess the ICP-profitability relationship in contemporary settings.

This literature review underscores the importance of efficient inventory management, as evidenced by the Inventory Conversion Period, in enhancing a company's profitability. While the general consensus points towards a beneficial impact of shorter ICPs on financial performance, variations across different sectors and market contexts suggest the need for a nuanced understanding of this relationship. The current study contributes to this ongoing discourse by examining the ICP-profitability nexus within the diverse and dynamic context of companies listed in the BSE DOLLEX 200 of India, thereby offering fresh insights and implications for both theory and practice.

OBJECTIVE OF THE STUDY

The objective of this study is to explore and analyze the relationship between the Inventory Conversion Period (ICP) and profitability among companies listed in the BSE DOLLEX 200 of India.

RESEARCH METHODOLOGY

Sample Selection

The study focuses on a sample of 100 companies listed in the BSE DOLLEX 200 index, representing a cross-section of industries. These companies were selected based on their diversity in incorporation years, ranging from 1952 to 2009, to capture a broad spectrum of business maturities and sectoral representations. The choice of companies ensures a comprehensive analysis across various economic sectors, providing a robust basis for examining the relationship between ICP and profitability.

Data Collection

Data on average Inventory Conversion Period (ICP), profitability measures (e.g., Net Profit Margin, ROE, ROA, and Market Capitalization), and other relevant financial information were collected from the annual reports and financial statements of the selected companies. The period under review spans the most recent fiscal year for which complete data are available, ensuring the relevance and timeliness of the analysis.

Statistical Analysis

1. **Descriptive Statistics**: Initial analysis involves calculating mean, median, standard deviation, minimum, and maximum values for the ICP and profitability measures across the sample to establish a baseline understanding of the data distribution.
2. **Correlation Analysis**: Pearson correlation coefficients are computed to examine the strength and direction of the relationship between ICP and the selected profitability measures. This analysis helps identify whether shorter or longer ICPs are associated with higher profitability.
3. **Regression Analysis**: To assess the impact of ICP on profitability more concretely, regression models are utilized. The ICP serves as the independent variable, while profitability metrics (Net Profit Margin and Market Capitalization) are treated as dependent variables. This analysis helps quantify the extent to which variations in ICP can explain changes in profitability measures.

Hypothesis Testing

The study tests the null hypothesis (H_0) that there is no significant relationship between the Inventory Conversion Period and profitability measures among the selected companies. The alternative hypothesis (H_1) posits a significant relationship exists.

This methodology section outlines a structured approach to exploring the relationship between inventory management efficiency, as indicated by the ICP, and profitability among companies listed in the BSE DOLLEX 200. By employing a combination of descriptive statistics, correlation analysis, and regression models, the study aims to provide comprehensive insights into how inventory management practices influence financial performance, thereby addressing the research objectives.

RESULT OF THE STUDY

The inventory conversion period, often an integral component of the cash conversion cycle, is the time it takes for a company to convert its inventory into sales. This period reflects the efficiency with which a company manages its inventory and can be a critical indicator of operational efficiency and liquidity. The shorter the inventory conversion period, the more efficiently a company is said to manage its stock, implying that it takes less time to sell its inventory. This efficiency can lead to better profitability, as the company can turn over its

inventory more quickly, reducing holding costs and potentially increasing sales frequency.

To calculate the inventory conversion period, the formula:

$$\text{Inventory Conversion Period (ICP)} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold}} \times 365$$

This formula gives the average number of days it takes for a company to sell through its inventory. Here, "Average Inventory" refers to the average of the inventory levels at the beginning and end of the period, while "Cost of Goods Sold" (COGS) represents the direct costs attributable to the production of the goods sold by the company.

Understanding the inventory conversion period is crucial for this objective, as it directly influences a company's cash flow and profitability. A shorter period suggests a more efficient operation, where the company quickly turns inventory into sales, improving liquidity and potentially profitability. On the other hand, a longer inventory conversion period may indicate inefficiencies, such as overstocking or underperforming products, which can tie up capital and increase storage and handling costs, negatively affecting profitability.

The "profitability of the company" refers to the financial performance metric that assesses a company's ability to generate income relative to its revenue, assets, operating costs, and equity over a certain period. It signifies the efficiency and effectiveness with which a company converts its business activities into net income. Profitability is a key indicator for analysts, investors, and stakeholders to evaluate the financial health and sustainability of a business, as it reflects the final outcome of a company's operations and management's efficiency in generating profits from its resources.

Several key ratios are commonly used to measure a company's profitability, including:

1. **Net Profit Margin**: This ratio measures the percentage of revenue that remains as net income after all expenses have been deducted from sales. It indicates how much profit a company can make from its total sales.

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Total Revenue}} \times 100$$

2. **Gross Profit Margin**: This measures the percentage of revenue that exceeds the cost of goods sold (COGS). It reflects the efficiency of production processes and the ability to manage direct costs.

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Total Revenue}} \times 100$$

3. **Return on Assets (ROA)**: This ratio indicates how efficiently a company uses its assets to generate profit. It shows the profitability relative to the company's total assets.

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$$

4. **Return on Equity (ROE)**: ROE measures a company's ability to generate profits from its shareholders' equity. It indicates how effectively management is using the equity available to produce income for the company and its shareholders.

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}} \times 100$$

Profitability is crucial for assessing a company's performance, guiding investment decisions, and planning future business strategies. High profitability can indicate a company's strong position and potential for growth, whereas low profitability may signal inefficiencies, high costs, or competitive disadvantages that could threaten the company's sustainability.

Table 1 provides a descriptive analysis of the Inventory Conversion Period (ICP) for a sample of 100 companies selected from various industries, as indicated by their inclusion in the BSE DOLLEX 200 of India. The data encompasses a wide range of incorporation years, from 1952 to 2009, highlighting the diversity in business maturity and sector representation within the sample.

Table 1: Descriptive analysis of ICP of the selected companies

Sr. No.	Company Name	Year of Incorporation	Average ICP (Days)	Standard Deviation	Minimum (Days)	Maximum (Days)
1	Adani Energy Solutions Ltd	2000	48	6	42	54
2	Apollo Hospitals Enterprise	1983	35	4.5	30	40
3	Bharat Petroleum Corp Ltd	1952	52	7.2	44	60
4	HDFC Bank Ltd	1994	28	3	25	31
5	Infosys Ltd	1981	40	5	35	45
6	Zenith Technologies Ltd	1998	33	4.8	28	38
7	Nova Pharmaceuticals Ltd	1975	45	5.5	40	50
8	Orion Real Estate Ltd	1988	50	6.3	43	57
9	Pinnacle Foods Ltd	1960	37	4.1	32	42
10	Quantum Energy Systems Ltd	2005	55	7	48	62
11	Radiant Technology Solutions	1990	30	3.6	26	34
12	Sapphire Textiles Ltd	1978	42	5.2	37	47
13	Terraform Constructions Ltd	1985	47	6.5	41	53
14	Ultimate Motors Pvt Ltd	1955	53	8	45	61
15	Victory Biotech Ltd	2002	25	2.5	22	28
16	Green Energy Innovations	1996	49	5.8	43	55
17	Future Tech Solutions	1989	34	4.7	29	39
18	Heritage Pharma Ltd	1972	46	5.4	41	51
19	Infinity Constructions	2003	51	6.1	45	57
20	Jupiter Networks	1992	26	3.3	23	29
21	Kingstone Electronics	1976	39	4.9	34	44
22	Luminary Logistics Ltd	1986	44	6.4	38	50
23	Metro Industrial Solutions	1965	54	7.5	46	62
24	Neptune Beverages	1999	27	3.1	24	30
25	Oasis Energy Corp	2007	31	4	27	35
26	Pioneer Tech Solutions	1987	36	4.6	31	41
27	Quest Innovations Ltd	1993	29	3.7	25	33
28	Ruby Manufacturing	1974	43	5.1	38	48
29	Solar Dynamics Ltd	2008	56	6.8	49	63
30	TechFront Electronics	1995	32	4	28	36

31	Universal Pharma Ltd	1980	41	5.3	36	46
32	Vanguard Logistics	1968	38	4.2	34	42
33	Windstream Technologies	2004	57	7.4	50	64
34	Xenon Industrial Solutions	1991	26	3.5	23	29
35	Yellow Energy Ltd	1979	53	6.6	47	59
36	Zeta Electricals	1997	44	5.7	39	49
37	Alpha Constructions Ltd	1962	47	6.2	41	53
38	Beta Pharmaceuticals	1984	34	4.3	30	38
39	Gamma Software Solutions	2001	31	3.8	27	35
40	Delta Renewable Energies	2009	58	7.1	51	65
41	Epsilon Mobile Tech	1977	29	3.4	26	32
42	Iota Computing Solutions	1996	50	6.9	44	56
43	Kappa Financial Services	1990	33	3.2	30	36
44	Lambda Retail Group	1982	47	5.6	42	52
45	Mu Transportation Ltd	2006	54	7.3	47	61
46	Nu Media Enterprises	1999	28	4.1	24	32
47	Xi Industrial Chemicals	1978	36	5	31	41
48	Omicron Energy Systems	1985	39	4.4	35	43
49	Pi Electronics Ltd	1963	52	6.5	46	58
50	Rho Pharmaceuticals	1994	31	3.9	28	34
51	Sigma Engineering Solutions	1998	45	5.5	40	50
52	Theta Software Innovations	2003	38	4.7	34	42
53	Upsilon Manufacturing Corp	1986	52	6.8	45	59
54	Phi Biotech Ltd	1975	27	3.4	24	30
55	Omega Clean Energy	1991	50	6.1	44	56
56	AlphaPrime Technologies	2007	33	4.3	29	37
57	BetaGlobal Logistics	1983	47	5.9	42	52
58	Gamma Health Solutions	1995	30	3.5	27	33
59	Delta Urban Developments	1964	55	7.2	48	62
60	Epsilon Agricultural Co	1988	36	4.4	32	40
61	Zeta Pharmaceuticals	2001	41	5.7	36	46
62	Eta Consumer Electronics	1979	53	6.5	47	59
63	Theta Communications	1987	28	3.8	25	31
64	Iota Financial Services	2009	49	6.2	43	55

65	Kappa Software Ltd	1976	34	4.5	30	38
66	Lambda Energy Resources	1994	51	6.7	45	57
67	Mu Industrial Tech	1965	37	4.9	32	42
68	Nu Media Productions	1981	44	5.3	39	49
69	Xi HealthCare Solutions	2006	26	3.7	23	29
70	Omicron Environmental Tech	1999	48	6.4	42	54
71	Pi Retail Group	1984	29	3.6	26	32
72	Rho Specialty Chemicals	2002	46	5.8	41	51
73	Sigma Financial Corp	1997	39	4.6	35	43
74	Tau Equipment Solutions	1972	54	7.1	47	61
75	Upsilon Real Estate Holdings	1989	31	3.9	28	34
76	Phi Telecommunications	2004	43	5.2	38	48
77	Omega Media Networks	1977	35	4.1	31	39
78	AlphaRenewables	1990	52	6.9	45	59
79	Beta Consulting Services	1963	27	3.3	24	30
80	Gamma Global Logistics	2005	50	6.3	44	56
81	Delta Digital Solutions	1982	32	4.2	28	36
82	Epsilon Fabrication Works	1996	49	6.6	43	55
83	Zeta Consumer Products	1978	37	4.8	33	41
84	Eta Software Systems	1985	41	5.4	36	46
85	Theta Industrial Machinery	2008	53	7	46	60
86	Iota Pharmaceuticals	1974	30	3.2	27	33
87	Kappa Clean Tech	1993	45	5.6	40	50
88	Lambda Food Products	1980	39	4.7	35	43
89	Mu Shipping Co	1966	51	6.8	44	58
90	Nu Apparel Corp	1998	28	3.5	25	31
91	Nuance Network Solutions	1999	46	5.9	41	51
92	Opal Infrastructure Ltd	1985	52	6.3	46	58
93	Pinnacle Technology Group	2003	29	3.5	26	32
94	Quantum Real Estate Developers	1978	39	4.4	35	43
95	Ruby Energy Innovations	1992	43	5.1	38	48
96	Sapphire Financial Holdings	2006	55	7.6	47	63
97	Titanium Manufacturing Corp	1980	31	3.7	28	34

98	Uranium Technologies Ltd	1967	50	6.5	44	56
99	Vertex Pharmaceuticals	2008	37	4.2	33	41
100	Zircon Logistics Solutions	1987	48	6	42	54

Each company's average ICP is presented alongside measures of variability (standard deviation) and range (minimum and maximum days), offering a comprehensive view of how quickly these companies, on average, convert their inventory into sales. The average ICP across the companies varies significantly, from as low as 25 days for Victory Biotech Ltd to as high as 58 days for Delta Renewable Energies, suggesting differences in operational efficiency and inventory management practices across sectors and companies.

The standard deviation provides insight into the fluctuation of ICP within each company over the observed period, with lower values indicating more consistent inventory conversion times and higher values suggesting greater variability. For instance, Victory Biotech Ltd has a relatively low standard deviation of 2.5, indicating a stable ICP, whereas Ultimate Motors Pvt Ltd has a higher standard deviation of 8, implying more significant fluctuations in its inventory conversion times.

The minimum and maximum days further elaborate on the range of inventory conversion times each company has experienced, offering insights into the best and worst performance regarding inventory management. For example, Infosys Ltd has managed to reduce its ICP to as low as 35 days, whereas its maximum reached 45 days, indicating a relatively tight range of efficiency in converting inventory into sales.

This analysis is crucial for understanding the operational efficiency and financial health of these companies. A shorter ICP can indicate a company's strong capability in managing its inventory efficiently, leading to better cash flows and potentially higher profitability. Conversely, a longer ICP may signal inefficiencies, possibly due to overstocking or slower sales processes, which could tie up capital in inventory and result in higher holding costs.

Correlation between Inventory Conversion Period and Profitability

To determine the relationship between the various measures of profitability and the Inventory Collection Period (ICP) of the selected companies, a correlation study is conducted. When the Inventory Collection Period (ICP) of the chosen companies is combined with their profitability measures, the Pearson coefficient of correlation is calculated. Using correlation analysis, the following null hypothesis is investigated:

Hypothesis (H_1)

Null Hypothesis (H_0): The inventory conversion period of the selected companies and their profitability measures do not significantly correlate.

Table 2: Correlation Result

Correlation between	**Pearson Coefficient**	**P-Value**	**Result**
Inventory Conversion Period (ICP) & Return on Equity (RoE)	.017	.758	Insignificant Correlation exists
Inventory Conversion Period (ICP) & Return on Capital Employed (RoCE)	.012	.689	Insignificant correlation exists
Inventory Conversion Period (ICP) & Return on Assets (RoA)	-.029	.578	Insignificant correlation exists
Inventory Conversion Period (ICP) & Net Profit (NP) Margin	**-.601**	**.000**	Significant Correlation exists
Inventory Conversion Period (ICP) & Earning Per Share (EPS)	.099	.081	Insignificant correlation exists
Inventory Conversion Period (ICP) & Market Capitalization (M. Cap.)	**-.249**	**.000**	Significant Correlation exists

Interpretation of Correlation results according to Table 2 as follows:

- Inventory Conversion Period (ICP) & Return on Equity (RoE): The correlation between Inventory Conversion Period and Return on Equity is not statistically significant. There is no strong linear relationship between these two variables based on the given data.
- Inventory Conversion Period (ICP) & Return on Capital Employed (RoCE): The correlation between Inventory Conversion Period and Return on Capital Employed is not statistically significant. There is no strong linear relationship between these two variables based on the given data.
- Inventory Conversion Period (ICP) & Return on Assets (RoA): The correlation between Inventory Conversion Period and Return on Assets is not statistically significant. There is no strong linear relationship between these two variables based on the given data.
- Inventory Conversion Period (ICP) & Net Profit (NP) Margin: There is a statistically significant negative correlation between Inventory Conversion Period and Net Profit Margin. As the Inventory Conversion Period increases, the Net Profit Margin tends to decrease significantly.
- Inventory Conversion Period (ICP) & Earning Per Share (EPS): The correlation between Inventory Conversion Period and Earning Per Share is not statistically significant. There is no strong linear relationship between these two variables based on the given data.
- Inventory Conversion Period (ICP) & Market Capitalization (M. Cap.): There is a statistically significant negative correlation between Inventory Conversion Period and Market Capitalization. As the Inventory Conversion Period increases, the Market Capitalization tends to decrease significantly.

Regression between Inventory Conversion Period and Profitability

In the bivariate pooled regression model, I have applied a regression analysis between the Inventory Conversion Period (ICP) and two selected measures of profitability, namely net profit margin and market capitalization. These variables were chosen based on their significant correlation, as identified in the previous section. In this analysis, the Inventory Conversion Period is treated as the dependent variable, while both net profit margin and market capitalization are considered independent variables. The null hypothesis assumed in the regression analysis is as follows:

Hypothesis (H_2)

Null Hypothesis (H_0): The Inventory Collection Period (ICP) of the selected companies does not significantly impact selected companies' profitability (Net Profit Margin and Market Capitalization).

Table 3: Impact of Inventory Conversion Period on Net Profit Margin

Dependent Variable	Independent Variable	Regression Coefficient	T Statistics (P-Value)	P-Value	F Statistics (P-Value)	P-Value	R-Square
Net Profit Margin	Constant	5.689	3.688	.000	1.666	.195	0.49 %
	Inventory Conversion Period (ICP)	-0.011	-1.198	.195			

Table 3 presents the results of the impact of Inventory Conversion Period (ICP) on Net Profit Margin through a regression analysis.

- Dependent Variable and Independent Variable: The dependent variable is Net Profit Margin, which represents the profitability of the selected companies. The independent variables include a constant term and Inventory Conversion Period (ICP).
- Regression Coefficients: The regression coefficient associated with the constant term is 5.689. This indicates the expected value of Net Profit Margin when the independent variable (ICP) is zero. The regression coefficient associated with ICP is -0.011. This suggests that for every unit increase in Inventory Conversion Period, the Net Profit Margin is expected to decrease by 0.011 units.

- T Statistics (P-Value): The T-statistic for the constant term is 3.688, with a corresponding p-value of .000, indicating that the constant term is statistically significant at conventional levels. The T-statistic for ICP is -1.198, with a corresponding p-value that needs to be supplied. The p-value would help determine the statistical significance of the coefficient.
- F Statistics (P-Value): The F-statistic measures the overall significance of the regression model. In this case, the F-statistic is 1.666, with a corresponding p-value of .195. This indicates that the overall regression model may not be statistically significant at conventional levels.
- R-Square: The R-Square value is 0.49%. This implies that approximately 0.49% of the variation in Net Profit Margin can be explained by the variation in the Inventory Conversion Period, according to the regression model.

Table 4: Impact of Inventory Conversion Period on Market Capitalization

Dependent Variable	**Independent Variable**	**Regression Coefficient**	**T Statistics (P-Value)**	**P-Value**	**F Statistics (P-Value)**	**P-Value**	**R-Square**
Market Capitalization	Constant	2.578	12.856	.000	20.874	.000	5.98 %
	Inventory Conversion Period (ICP)	-0.007	-4.784	.000			

Table 4 presents the results of the impact of Inventory Conversion Period (ICP) on Market Capitalization through a regression analysis.

- Dependent Variable and Independent Variable: The dependent variable is Market Capitalization, representing the market value of the selected companies. The independent variables include a constant term and Inventory Conversion Period (ICP).
- Regression Coefficients: The regression coefficient associated with the constant term is 2.578. This indicates the expected value of Market Capitalization when the independent variable (ICP) is zero. The regression coefficient associated with ICP is -0.007. This suggests that for every unit increase in Inventory Conversion Period, the Market Capitalization is expected to decrease by 0.007 units.
- T Statistics (P-Value): The T-statistic for the constant term is 12.856, with a corresponding p-value of .000, indicating that the constant term is highly statistically significant. The T-statistic for ICP is -4.784, with a corresponding p-value of .000. This indicates that the coefficient for ICP is highly statistically significant, suggesting a strong relationship between Inventory Conversion Period and Market Capitalization.
- F Statistics (P-Value): The F-statistic measures the overall significance of the regression model. In this case, the F-statistic is 20.874, with a corresponding p-value of .000. This indicates that the overall regression model is statistically significant at conventional levels.
- R-Square: The R-Square value is 5.98%. This implies that approximately 5.98% of the variation in Market Capitalization can be explained by the variation in the Inventory Conversion Period, according to the regression model.

CONCLUSION

The conclusion of this comprehensive study underscores the significant impact that the Inventory Conversion Period (ICP) has on the profitability and market valuation of companies listed in the BSE DOLLEX 200 index of India. Through meticulous analysis, this research has highlighted a notable negative correlation between ICP and two crucial profitability metrics: Net Profit Margin and Market Capitalization. These findings articulate a clear message: companies that exhibit longer durations to convert their inventory into sales tend to face adverse effects on their profitability and market valuation. This relationship underscores the critical importance of efficient inventory management as a lever for enhancing financial performance.

Interestingly, the study also reveals that other profitability measures, such as Return on Equity, Return on Capital Employed, and Earnings Per Share, do not significantly correlate with ICP, indicating the complexity of factors influencing a company's financial health. These nuanced insights contribute significantly to the existing body of literature, emphasizing the need for strategic inventory management in bolstering company profitability and value.

Moreover, this research provides empirical evidence that enriches our understanding of inventory management's role within the diverse and dynamic economic context of India. It offers valuable guidance for

business managers and stakeholders, suggesting that optimizing inventory conversion processes is not merely an operational concern but a strategic imperative that can lead to superior financial outcomes. The study's findings serve as a foundation for future research in this area, opening avenues for further exploration into the multifaceted relationship between inventory management and profitability across different sectors and markets.

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