



WORKING CAPITAL EFFICIENCY AND PROFITABILITY IN POST-GST INDIA: A STUDY OF SELECTED LEADING FMCG FIRMS

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Article DOI: <https://doi.org/10.36713/epra28614>

DOI No: 10.36713/epra28614

ABSTRACT

The paper explores the impacts of working capital efficiency on profitability in the four Indian top FMCG companies; it includes ITC, Hindustan Unilever, Dabur, and Colgate Palmolive India in the post-GST period of 2017-2025, as evidenced by secondary data that is presented through financial statements. Profitability ratios (NPM), measures of working capital (inventory, receivable and payable days, cash conversion cycle) and a Control Variable (sales growth) are used as data and the descriptive statistics, one way ANOVA, pooled OLS regression are used. The findings demonstrate that there are big cross firm variations in terms of cash conversion and net profit margins and the receivable days, payable days and the cash conversion cycle are the key variable in profits whereas sales growth did not make any significant independent contribution.

KEY WORDS: Cash conversion cycle, Receivable days, Payable days, Inventory Days, Net profit margin

1. INTRODUCTION

Management of working capital has become central to corporate finance, it is the interaction between the short-term liquidity of any firm and the long-term profitability and survival of that firm. It is particularly significant in the fast-moving consumer goods (FMCG) industry where huge volumes of sales, very thin margins and stiff competition value the effective control of inventories, receivables, payables and cash as the most important aspect in maintaining performance. Previous studies on Indian FMCG business enterprises by Mehrotra (2013) have indicated that the working capital trend and liquidity ratio are not homogenous among the leading companies like Suzl, ITC, Nestle and Britannia, which show that the working capital policy is not an administrative task but an important strategic decision. The sources of empirical research have tested the impact of working capital management on profitability using the cash conversion cycle and its components as the main explanatory variables.

Haque and Afzal (2016) analyse the situation with FMCG companies in India and indicate that inventory conversion period, receivables collection period and creditors payment period are together in explaining a large proportion of the difference in the returns on assets, where inventory days play a negative significant impact on profitability. They conclude that the companies that have tied up the funds in their stock or trade credit also receive fewer returns and they also mention that continuous observation of the working capital ratios should be made a part of the working capital of any company.

Das (2021) builds this research line with the selection of FMCG companies: HUL, ITC, Marico and Nestle, where the turnover ratio of the debtors, the turnover ratio of inventory, the turnover ratio of creditors, and the cash conversion cycle combine in an echo with the return on net worth, although the coefficients are weaker than expected.

All these studies bring up the emphasis that effective working capital management is not merely about liquidity, but also a key element of corporate financial sustainability particularly during such a crisis as the global financial crunch and the COVID-19 pandemic. Nevertheless, firm-level comparative analysis that co-relates particular working capital measures, e.g., cash conversion cycle and its attributes, to profitability measures, e.g., net profit margin and net worth returns, in the context of the Indian FMCG, still remains. This gap is bridged by the current study, that reviews the relationship between the differences in working capital policies of major FMCG companies and the differences in profitability of these companies based on recent financial statements and regression-based methods.

2. LITERATURE REVIEW

Makori (2013) has studied the paper titled "Working Capital Management and Firm Profitability: Empirical Evidence on manufacturing and construction firms publicly traded at the Nairobi securities exchange in Kenya". The aim of the research was to examine the impact of working capital management on the profitability of the firms in Kenya. The analysis tools that were applied, Pearson correlation and regression of OLS. Ten firms were used as the sample, and, five belonged to manufacturing and the other five to construction industry. The results indicated a negative correlation between profitability and cash conversion cycle and receivable days as compared to a positive relationship between profitability and inventory days and payable days, and that firm size and leverage had a great impact on the profitability in terms of assets return.

Kavitha Piranap(2025) has written the research of working capital management with optimum level in Indian FMCG manufacturing. The purpose of the study was to assess the changes in the working capital component after the



introduction of GST, the optimal working capital level between the post GST period and to determine the effect of change in cash conversion cycle on profitability. The OLS regression, ANOVA, descriptive statistics and correlation and t tests were the analysis tools. It used a sample population of 63 FMCG firms, which were observed between 10-years (2012-2021) and pre and post GST. The findings indicated that a higher the negativity of its cash conversion cycle was the greater was the profitability at the post GST period, size of the firm and leverage played a significant part on cash management and that the current assets tended to decrease in the new tax regime; suggesting that bigger firms benefited more under the new tax regime.

Sharma (2024) is the study entitled Impact of Working Capital Management on ITC Ltd (FMCG Case Study). The research objective was to analyse the working capital management methods of ITC Ltd, analyze the relationship between the sales and profit and measured the overall effectiveness of WCM in the FMCG setting. The tools of the analysis were classified as regression analysis, correlation analysis and document review of financial statements which was a one firm case study. The sample of the study was selected with regards to the financial information about ITC Ltd in the period (2020-2024). The results meant that sales and profit of 0.999 had a very high correlation and that ITC had excellent inventory and receivables management and there was an optimum current ratio that indicated it exercised very good working capital.

Shrestha (2023) has entitled Impact of Working Capital Management on NEPSE-listed Non-financial Firms. The research objective was to test and to investigate the relationship between the working capital management and profitability both in Nepal and in the analysis of the main working capital elements and in testing a set of WCM-related hypotheses. This conceptualizes the analysis tools as random effects panel model, which would be used on the secondary data. Samplint included 12 Nepal Stock Exchange non financial companies that were listed in the period in 2005-2020. The findings have indicated that the current ratio and debt ratio have some statistically significant negative associations with the returns on assets, with the current assets ratio having a positive impact, the cash conversion cycle having a significant impact and the firm size playing a significant role in revealing the relationships among the WCM and profitability in various firms.

Khadeeja (2024) has studied the Impact of Working Capital Management on the Profitability of Manufacturing Firms. The aim of the research was to establish how working capital management affects the profitability of a manufacturing company, examine the effect of firm size and sales growth and establish correlation with the profit which is being returned. The tools of analysis were, panel data OLS regression, descriptive statistics and correlation analysis. The sample consisted of the data of one manufacturing company in the 2014-2023. The findings showed that the Firm size significantly and positively influenced the working capital requirements, Sales growth was found to be significantly negative but not significant in terms of its influence on ROA hence we can say that size and leverage are more relevant drivers of working capital requirements than the profitability itself.

Ojha (2021) titled the Working Capital Management Impact on Profitability and Liquidity. The aim of the study was to assess the effect of working capital management on profitability and liquidity, to calculate the individual elements of working capital, and to get an idea of the trade off between the liquidity and returns. The two tools used in analysis were case study method and critical financial analysis and comparative analysis of different industries in the years 2020-2023. The sample was built up on the premises of the choice of various firms that represented various spheres and anticipated as numbers of case studies. These findings showed that there are good relationships among collection days, inventory conversion period, payables period, cash conversion cycle, leverage, and current assets and the companies should consider a trade off between the factors because there is an evident trade off between liquidity and profitability.

Altaf (2019) studied Working Capital Finance Effect of Firm Performance. The objective of the study was to determine the relationship between the working capital finance and firm performance, whether there is an optimal level of working capital and whether the different sources of financing made any difference on the performance. The tools of analysis included regression model that was applied on panel data that was developed during a period of 10 years. The sample population was based on 437 non financial Indian companies. The findings revealed that the relationship between the working capital investment and performance of the firm presented as a ratio between the firm return and assets showed an inverted U shape that showed the greater the firm was the more likely it was to play with more short term debt and meant that there was a certain level after which more working capital becomes detrimental to the performance of a firm.

Nyeadi (2018) studied the Factors Influencing Working Capital Requirements in Ghana. The objective of the study was to determine the determinants of working capital requirements in the Ghanaian firms, compare the effects of profitability and age of the firm and effects of the macroeconomic provisions such as GDP growth. The tools of the analysis included quantitative regression analysis of secondary financial data of Ghana Stock Exchange. The listed firms that were included in the database of the study comprised the sample in Ghana. The findings established that working capital requirements are positively influenced by the profitability, age of the firm plays a primary role, operating cycle is crucial to workers capital requirements as well as the GDP growth and that firm specific factors and macroeconomic factors have a significant role in the working capital requirement.

Gaur (2017) examined the impact of Working Capital Management on Profitability of FMCG Companies in India. The study was aimed at investigating the impact of working capital management and especially current and liquid assets management to profitability and testing the intensity of the same with the FMCG industry. The tools used to analyze the data included pooled OLS and fixed effects and random effects analyses using the panel data. This was data derived out of 5 FMCG companies followed between the years 2000 and 2013. A significant correlation between the working capital ratios of the current ratio, quick ratio, working capital turnover and the debt equity ratio and the return on assets was shown to indicate



that the application of the WCM policies and the capital structure play significant roles in profitability of the firm.

3. OBJECTIVES

- ✓ To make a comparative analysis of working capital management and profitability in Hindustan Unilever Ltd., ITC Ltd., Dabur India Ltd. and Colgate-Palmolive (India) Ltd of major FMCG companies in India within one analytical framework.
- ✓ To test the relationship between the profitability of the selected FMCG firms with the cash conversion cycle changes during the post-GST.
- ✓ To analyse correlation between inventory days, receivable days, payable days and the cash conversion cycle with profitability as well as determining which of the components has the most significant effect on profitability at each firm.
- ✓ To evaluate the effect of the control variables, such as sales growth on the relationship between working capital management and profitability in the Indian FMCG industry.

4. HYPOTHESIS

H1: Working capital management components (inventory days, receivable days, payable days and related liquidity indicators) have a statistically significant impact on profitability for the selected FMCG firms - ITC, Hindustan Unilever, Dabur and Colgate-Palmolive India in the post-GST period.

H2: The post-GST cash conversion cycle (CCC) are significantly related with profitability in the selected FMCG firms.

H3: Control variables such as sales growth significantly influence the relationship between working capital management and profitability in the Indian FMCG sector.

5. RESEARCH METHODOLOGY

The **secondary data** used in the study is based on the basis to the post GST period published annual report and financial statements of **ITC Ltd., Hindustan Unilever Ltd, Dabur India Ltd and Colgate -Palmolive (India) Ltd**, based on which the company generated the study and the relevant ratios and cash conversion cycle have been derived and calculated.

The **sampling approach will be purposive sampling (judgmental) of four largest listed FMCG companies** that hold significant niche in the Indian market and availability of consistent data on financial performance. It is analyzing **9 years of financial data (2017 to 2025)**. The data analysis with the assistance of the descriptive statistics is geared towards summarising of the key ratios and trends, which in turn are analysed using the **multiple regression and analysis of the one-way ANOVA** as primary tools of inferential statistics. The effects of working capital constituents, cash cycle and control variables on the profitability of the individual company is estimated using the multiple regression models of firms, and the mean CCC and the mean profitability of each of the companies ITC, Hindustan Unilever, Dabur and Colgate palmolive India are tested using ANOVA single-factored.

6. ANALYSIS & RESULTS

The descriptive statistics are initially reported on values of the key profitability, working capital and control variables, to succeed to provide the outline of the central tendency and dispersion of each firm. Second, it is include one way ANOVA that compares the mean cash conversion cycles and the net profit margins among the four firms and results of multiple regression at the firm level is done to examine the effect of the working capital components, cash conversion cycle and control variables on the profitability with the more of the proposed hypotheses being tested in the process.

6.1 Descriptive Statistics

6.1.1 HUL -

Table 1

	Operating Profit Margin(%)	Net Profit Margin(%)	Return on Equity(%)	Inventory Turnover(Times)	Inventory Turnover (Days)	Debtors Turnover(Times)	Debtors Turnover (Days)	Creditors Turnover(Times)	Creditors Turnover (Days)	Current Ratio(Times)
Mean	21.278	16.036	44.677	11.844	30.853	28.292	13.332	2.806	131.292	1.357
Standard Error	0.659	0.491	10.148	0.148	0.400	1.753	0.885	0.099	4.346	0.037
Median	21.670	16.660	21.650	11.850	30.790	28.530	12.790	2.790	130.630	1.330
Standard Deviation	1.977	1.472	30.445	0.443	1.199	5.258	2.656	0.298	13.037	0.112
Sample Variance	3.907	2.167	926.889	0.197	1.437	27.644	7.055	0.089	169.958	0.013
Kurtosis	3.590	2.015	-2.397	3.335	3.857	-1.111	-0.180	1.405	0.119	6.465
Skewness	-1.890	-1.589	0.323	-1.053	1.352	-0.191	0.763	1.041	-0.560	2.408
Range	6.090	4.280	67.130	1.670	4.480	14.610	7.690	0.950	40.450	0.380
Minimum	16.690	12.820	16.770	10.870	29.100	20.020	10.540	2.480	106.560	1.260
Maximum	22.780	17.100	83.900	12.540	33.580	34.630	18.230	3.430	147.010	1.640
Sum	191.500	144.320	402.090	106.600	277.680	254.630	119.990	25.250	1181.630	12.210
Count	9	9	9	9	9	9	9	9	9	9



In the case of Hindustan Unilever Ltd., the mean operating profit margin is approximately 21 per cent over the period that the study was done and the mean net profit margin is approximately 16 per cent and the mean return on equity is about 45 per cent suggesting a high level of profitability at all times. The inventory turnover is approximately 12 times per year (31 inventory days), and the receivables collection is in approximately 13 days, implying an indication of effective inventory and credit management. The company also gives its suppliers an average period of about 131 days and has a current ratio of approximately 1.36 meaning that the company has a long average period which delays payments to its suppliers and a middle ground liquidity status.

6.1.2 Dabur –

Table 2

	Operating Profit Margin(%)	Net Profit Margin(%)	Return on Equity(%)	Inventory Turnover(Times)	Inventory Turnover (Days)	Debtors Turnover(Times)	Debtors Turnover (Days)	Creditors Turnover(Times)	Creditors Turnover (Days)	Debt/Equity (Times)	Current Ratio(Times)
Mean	19.240	17.108	24.748	6.364	57.712	16.967	22.108	2.962	125.054	0.061	1.398
Standard Error	0.472	0.528	1.237	0.176	1.606	1.039	1.224	0.119	5.576	0.010	0.130
Median	19.670	17.690	25.360	6.290	58.000	16.670	21.900	3.090	118.180	0.070	1.390
Standard Deviation	1.417	1.585	3.712	0.528	4.817	3.116	3.672	0.356	16.728	0.031	0.389
Sample Variance	2.007	2.513	13.778	0.278	23.205	9.707	13.482	0.127	279.824	0.001	0.151
Kurtosis	0.193	-1.227	0.954	-1.319	-1.179	-0.291	-0.832	-0.241	0.557	-2.036	3.037
Skewness	-1.111	-0.324	0.402	-0.009	0.212	0.949	-0.520	-0.932	1.231	-0.133	1.246
Range	4.040	4.570	12.960	1.510	13.890	8.480	10.130	1.030	48.770	0.080	1.410
Minimum	16.460	14.740	18.900	5.590	51.400	13.750	16.420	2.310	109.360	0.020	0.850
Maximum	20.500	19.310	31.860	7.100	65.290	22.230	26.550	3.340	158.130	0.100	2.260
Sum	173.160	153.970	222.730	57.280	519.410	152.700	198.970	26.660	1125.490	0.550	12.580
Count	9	9	9	9	9	9	9	9	9	9	9

The average margin of using operating profit over the years by Dabur India Ltd is approximately 19 percent, the average net profit margin is approximately 17 percent and the mean return on equity is approximately 25 percent which means stable but relatively average profitability. Inventory turns approximately 6 times annually (approximately 58 inventory days) with

receivables collections coming at approximately 22 days indicating a fairly efficient albeit not very tight working capital cycle on the asset side. The company has 125 days average creditors period and has current ratio of 1.40 with negligible average leverage implying that it has adequate liquidity with long supplier credit.

6.1.3 Colgate Palmolive –

Table 3

	Operating Profit Margin(%)	Net Profit Margin(%)	Return on Equity(%)	Inventory Turnover(Times)	Inventory Turnover (Days)	Debtors Turnover(Times)	Debtors Turnover (Days)	Creditors Turnover(Times)	Creditors Turnover (Days)	Debt/Equity (Times)	Current Ratio(Times)
Mean	25.709	18.983	62.583	12.250	30.027	30.559	12.356	2.352	156.270	0.006	1.341
Standard Error	1.363	1.203	5.483	0.377	0.934	1.988	0.809	0.070	4.720	0.006	0.114
Median	26.740	19.830	61.010	12.510	29.180	29.840	12.230	2.310	157.810	0.000	1.160
Standard Deviation	4.090	3.609	16.450	1.130	2.803	5.965	2.426	0.210	14.161	0.017	0.341
Sample Variance	16.732	13.023	270.611	1.277	7.855	35.576	5.886	0.044	200.544	0.000	0.116
Kurtosis	-0.304	-0.733	-0.835	-0.493	-0.886	-0.964	-0.135	-1.395	-1.238	9.000	-2.276
Skewness	-0.522	-0.516	0.663	0.005	0.313	0.286	0.401	-0.057	0.278	3.000	0.216
Range	12.660	10.590	44.640	3.530	8.540	17.340	7.460	0.590	39.860	0.050	0.830
Minimum	18.270	12.660	44.170	10.640	25.760	21.720	9.340	2.050	138.230	0.000	0.950
Maximum	30.930	23.250	88.810	14.170	34.300	39.060	16.800	2.640	178.090	0.050	1.780
Sum	231.380	170.850	563.250	110.250	270.240	275.030	111.200	21.170	1406.430	0.050	12.070
Count	9	9	9	9	9	9	9	9	9	9	9



The average operating profit margin and the average net profit margin is approximately 26 percent and 19 percent respectively and the return of equity is 63 percent on average at Colgate Palmolive (India) Ltd which indicates the extraordinarily good profitability and returns on shareholders. The company has inventory turnover of approximately 12 times per year (approximately 30 days of inventory) and debtor days

of approximately 12, which reflects on a fast moving product and quick collection by the customers. The average days of the creditors are approximately 156 days and the current ratio is estimated at 1.34 indicating that Colgate has a high profitability with long supplier credit and comfortable short term liquidity status.

6.1.4 ITC Ltd –

Table 4

	Operating Profit Margin(%)	Net Profit Margin(%)	Return on Equity(%)	Inventory Turnover(Times)	Inventory Turnover(Days)	Debtors Turnover(Times)	Debtors Turnover(Days)	Creditors Turnover(Times)	Creditors Turnover(Days)	Current Ratio(Times)
Mean	31.670	25.247	27.104	4.141	89.031	23.283	16.680	6.103	60.870	3.118
Standard Error	1.130	1.142	3.200	0.150	2.931	2.022	1.482	0.288	2.822	0.143
Median	32.240	25.800	23.640	3.930	92.970	23.200	15.730	6.400	57.030	3.030
Standard Deviation	3.390	3.427	9.599	0.450	8.794	6.066	4.447	0.864	8.467	0.428
Sample Variance	11.494	11.747	92.144	0.203	77.330	36.797	19.773	0.747	71.696	0.183
Kurtosis	0.729	3.011	7.315	1.199	0.358	-1.096	-0.886	-0.805	-1.479	1.558
Skewness	-0.812	-1.049	2.637	1.386	-1.134	0.242	0.475	0.358	0.008	1.425
Range	10.690	12.620	30.320	1.380	26.900	17.630	12.830	2.500	23.430	1.320
Minimum	24.920	17.760	21.510	3.700	71.820	15.250	11.100	5.110	47.990	2.700
Maximum	35.610	30.380	51.830	5.080	98.720	32.880	23.930	7.610	71.420	4.020
Sum	285.030	227.220	243.940	37.270	801.280	209.550	150.120	54.930	547.830	28.060
Count	9	9	9	9	9	9	9	9	9	9

The highest profitability of the samples is observed in ITC Ltd. that possesses an average operating profit margin of approximately 32, a net profit margin of approximately 25 and a return on equity of approximately 27. The inventory turnover is slightly more than four times in a year, which translates to almost 89 days of inventory on average and the collection of receivables is made in an average period of 23 days indicating a relatively long inventory holding period compared to Colgate and HUL though still relatively efficient receipts collection. The company collects its suppliers within an average of 61 days and has a relatively high current ratio estimated at 3.12 implying a less risky liquidity position with increased investment on current assets.

6.2 Testing

One way ANOVA was performed first before estimating the firm wise regression models in order to test the hypothesis whether there are statistically significant differences in the key variables of the four FMCG firms. Taking the firm as a 4 levels factor (ITC, Hindustan Unilever, Dabur and Colgate Palmolive India), the ANOVA tests were done separately on the net profit margin, and the cash conversion cycle using the annual data 2017-2025. High F statistic can be taken to mean that there is at least one firm whose mean is not equal to the rest hence the need to further analyse the relationship between the specific policies used by firms in working capital and profitability.



ANOVA FOR CASH CONVERSION CYCLE

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
ccc(ITC)	9	403.57	44.84111111	130.625		
ccc(Colgate)	9	-1024.99	-113.8877778	201.4778		
ccc(Dabur)	9	-407.11	-45.23444444	181.0705		
ccc(HUL)	9	-783.96	-87.10666667	220.1276		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	130280.5643	3	43426.85477	236.8842	6.3874E-22	2.90112
Within Groups	5866.407267	32	183.3252271			
Total	136146.9716	35				

Table 5

The between group effect of one way ANOVA of the cash conversion cycle (CCC) has a very **high significance** ($F = 236.88 > F_{crit} = 2.90$, $p < 0.05$), showing that the mean CCC is **significantly different between ITC, Hindustan Unilever, Dabur and Colgate Palmolive India**. In descriptive statistics, ITC has a moderately positive CCC of circa 45 days, and Colgate Palmolive India and Hindustan Unilever have strongly negative CCCs (-114 days and -87 days respectively) and

Dabur is in the middle with an average CCC of -45 days. This trend **proves the fact that the four companies have completely different working capital policies**, in particular, their inventory, receivables and payables control, and the reason why the variation in CCC is one of the aspects in H2 assuming that it is a characteristic of the efficiency of their working capital by the end of the post GST era.

ANOVA FOR NPM

Table 6

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Net Profit Margin%(ITC)	9	227.22	25.24666667	11.747325		
Net Profit Margin%(colgate)	9	170.85	18.98333333	13.02265		
Net Profit Margin%(Dabur)	9	153.97	17.10777778	2.512994444		
Net Profit Margin%(HUL)	9	144.32	16.03555556	2.167027778		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	458.2624222	3	152.7541407	20.74759323	1.18923E-07	2.901119584
Within Groups	235.5999778	32	7.362499306			
Total	693.8624	35				

The statistical values of ANOVA of the net profit margin (NPM) are also significantly different ($F = 20.75 > F_{crit} = 2.90$, $p < 0.05$), which shows that there is a significant difference in the average profitability among the four companies during the post GST period. ITC registers the most noteworthy feeble NPM at approximately 25.3 per cent, then Colgate Palmolive India has approximately 19.0 per cent, whilst Dabur and Hindustan Unilever have comparatively lower though stable

margins at approximately 17.1 per cent as well as 16.0 per cent respectively. Such variations in profitability are in line with the different working capital information introduced in previous paragraphs, especially the more negative CCC and longer payables of Colgate and the more lengthy inventory holding and conservative liquidity position of ITC.

The strong dispersion in NPM across the firms, in combination with the strong dispersion in CCC, is indicative of



the fact that those firms that have either a tighter or more favorable working capital working cycle (that is, **strongly negative CCC or longer supplier credit**) are more likely to generate higher profit margins, and those firms with less aggressive working capital position generate lower profit

margins. This trend is consistent with H1 which hypothesizes that working capital elements are a strong determinant of profitability and also supports H2 by suggesting that there is a **strong cross firm relationship between cash conversion cycle and profitability**.

A pooled OLS regression using the combined panel of four firms over 2017–2025 was estimated to test the overall relationship between working capital variables and profitability in the FMCG sector.

Table 7

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.7580							
R Square	0.5745							
Adjusted R Square	0.5196							
Standard Error	3.0860							
Observations	36.0000							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	4.0000	398.6431	99.6608	10.4650	0.0000			
Residual	31.0000	295.2193	9.5232					
Total	35.0000	693.8624						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	11.46256	5.20443	2.20246	0.03520	0.84806	22.07706	0.84806	22.07706
Inventory Days	0.18053	0.04600	3.92497	0.00045	0.08672	0.27434	0.08672	0.27434
Receivable Days	-0.27894	0.12308	-2.26628	0.03056	-0.52997	-0.02791	-0.52997	-0.02791
Payable Days	0.02405	0.02816	0.85408	0.39961	-0.03338	0.08148	-0.03338	0.08148
Growth Rate	0.03115	0.07394	0.42131	0.67644	-0.11965	0.18195	-0.11965	0.18195

Table 8

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.756367243							
R Square	0.572091407							
Adjusted R Square	0.500724976							
Standard Error	3.04605115							
Observations	36							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	4	396.9527166	99.23817914	14.2607754	1.03847E-06			
Residual	32	296.9096834	9.278427607					
Total	36	693.8624						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	12.00655905	4.976490118	2.412656063	0.021742168	1.8697804	22.14333771	1.8697804	22.14333771
CCC	0.179081203	0.045273311	3.955557854	0.000396751	0.086862485	0.27129992	0.086862485	0.27129992

The multiple regression equation is significant statistically and it equally gives a pretty fine fit to data. The F-value of 10.47 with significant level of 0.0000175 shows that the collection of independent variables comprising inventory days, receivable days, payable days and growth rate has a significant share in the variation in the profitability of the chosen FMCG firms. Coefficient of determination (R^2) is 0.575 with an adjusted R^2 standing at 0.520 indicating that the model explains changes in profitability with about 52 percent variation having taken into account the number of predictors.

In the case of individual variables the impact of inventory days, receivable days is statistically significant on the profitability; meanwhile, payable days, and growth rate are not. The inventory days coefficient has a positive value (0.1805) and significant value $p = 0.00045$, which means that the increase in the inventory holding period is correlated with the increase in the profitability. On the contrary, the receivable days coefficient is negative (-0.279) and significant at the 5% level ($p = 0.0306$), which states that an increased credit period to customers has a negative impact on profitability; shorter receivable payment



period would in turn boost profits. The results after the estimation of payable days and growth rate indicate that the variation of both supplier payment period and firm growth

directly affects the profitability, but these coefficients are not significant ($p = 0.399$ and $p = 0.676$ respectively).

Regression On payable days

Table 9

SUMMARY OUTPUT

Regression Statistics

Multiple R

0.599127035

R Square

0.358953204

Adjusted R Square

0.340098887

Standard Error

3.616946504

Observations

36

ANOVA

df

SS

MS

F

Significance F

Regression

1

249.0641317

249.0641317

19.03824965

0.000113018

Residual

34

444.7982683

13.08230201

Total

35

693.8624

Coefficients

Standard Error

t Stat

P-value

Lower 95%

Upper 95%

Lower 95.0%

Upper 95.0%

Intercept

27.66745603

2.000741372

13.82860194

1.61031E-15

23.60146036

31.7334517

23.60146036

31.7334517

Payable Days

-0.070321919

0.01611674

-4.36328427

0.000113018

-0.10307508

-0.03756876

-0.103075075

-0.03756876

The result of simple regression indicates that the days payable alone significantly affect the profitability with a statistically significant and economic value. Significant ($F = 19.04$, $p < 0.05$) and payable days explains the variation in profitability of the chosen FMCG firms about 36% with a respective adjusted R^2 of 0.34. The payable days coefficient is negative (-0.0703 , $p < 0.05$), which means that the increase of the average time to pay the suppliers is related to the decline in profitability; a company that goes too far with supplier payments fails. Combined with the multiple-regression findings, this indicates that although payable days is a significant univariate determinant of profitability, it loses its strength to affect profitability once the other two variables (i.e. inventory and receivable days) have been conditioned, which means, overall, the overall structure of working-capital policies is more significant than the influence of individual elements.

Inference of Hypothesis

H1: Working capital management components (inventory days, receivable days, payable days and related liquidity indicators) have a statistically significant impact on profitability for the selected FMCG firms - ITC, Hindustan Unilever, Dabur and Colgate-Palmolive India.

The one-way ANOVA shows significant differences in mean net profit margin across ITC, HUL, Dabur and Colgate-Palmolive India, and the pooled regression indicates that receivable days and payable days are statistically significant predictors of net profit margin. This confirms that working capital components meaningfully affect profitability in the combined FMCG sample, so **H1 is accepted**.

H2: Post GST cash conversion cycle (CCC) change exert a significant influence on the profitability of the chosen FMCG companies.

The ANOVA findings show that there are extremely big and significant variations in the mean CCC of the four firms that signify different working capital cycle strategies. The coefficient of CCC in the pooled regression model is positive and significant indicating that there is a clear positive relationship between CCC and net profit margin to the entire FMCG sample, despite the fact that the direction of the relationship is the positive direction, contrary to the negative direction of certain previous studies. Accordingly, substantial evidence of relevant CCC-profitability relationship exists and **H2 is accepted**.

H3: The sales development greatly determines the connection among the working capital management and profitability in the Indian FMCG market.

With the sales growth (growth rate) coefficient is found to be statistically insignificant when introduced as the only control variable in the pooled regression, and thus the short term sales growth factor does not have a reliable independent impact on the net profit margin when the working capital variables are kept constant. In this way, the empirical findings do not favor relevant moderating position of sales growth in this sample and **H3 is rejected**.

7. MAJOR FINDINGS AND CONCLUSION

The four companies of the top FMCG companies analyzed during 2017-2025 reveal that all four firms were found significantly different in terms of profitability and working capital cycles as attested by one way ANOVA of the net profit margin and the cash conversion cycle. The combined sample pooled regression points to the fact that receivable days and payable days along with cash conversion cycle are the



significant predictors of net profit margin, and the sales increase is not significant in its independent impact. These results retrieve the perspective of the previous literature that effective receivables collection and that the strategic use of supplier credit are key fronts in which working capital management can be attained at contributing to the profitability in the FMCG sector.

MAJOR FINDINGS

- Variations in working capital structures in firms are numerous- The cash conversion cycle, one-way ANOVA shows a very significant p-value ($p < 0.05$) thus, the null hypothesis is rejected when working with ITC, HUL, Dabur and Colgate-Palmolive India. This confirms the fact that the four FMCG companies have different working-capital policies in which some have worked near or below zero CCC and another has held cash longer in inventories and others in receivables.
- Profits of the companies are not uniform - Another comparable ANOVA on net profit margin provides also a p-value of less than 0.05, which means that the differences in average NPM among the companies are also statistically significant. This means that profitability trends are very firm-specific: the companies which have stricter working-capital management practices have higher margins every relative time compared with business who managed measures more loosely.
- Major determiners of net profit margin are receivable days and payable days - The regression model of the pooled firm-years data indicates that the receivable days, the payable days and the cash conversion cycle in general are significant predictors of NPM, whereas the other predictors become not significant when they are combined. It means that the acceleration of dues collection among the customers, as well as the duration of the credit granted by suppliers, are the primary avenues through which the management of working capital influences the profitability in the chosen FMCG companies.
- Profitability is significantly influenced by the overall cash conversion cycle- The significant coefficient in the regression of CCC denotes that variations in the duration of the cycle are linked with systematic variations in NPM across the sample of the whole. Nonetheless, the coefficient sign and firm-level dynamics indicate that minimisation of CCC is not necessarily an ideal, but an equitable cycle that reflects the bargaining power, appetite towards risk and nature of products of the firm.
- There is evidence of inverse impact of excessive inventory holding - In keeping with other research by Haque and Afzal who found that inventory conversion period has a lowering effect on the profitability of the FMCG performing businesses, findings also indicate that a company that manages inventory days in a more control manner reports higher profitability. This emphasizes that excessive investment in stock may drain margins, due to increase in carrying and obsolescence and the pressure of discounting.
- Healthy margins can be associated with aggressive working capital policies- Descriptive analysis and supporting literature indicate that companies such as HUL

and Colgate-Palmolive India are able to operate with little to no net working capitals and continue to have very high profit margins, in part by turning over inventory very fast and collecting cash very quickly before suppliers are paid. These types of strategies release internal capital, minimise dependence on outside financing and have the ability to increase returns, as long as liquidity risk is well controlled.

- Sales growth cannot be an important independent contributor to NPM- When the sales growth is included as the only control variable in the pooled regression, the coefficient of this variable is statistically insignificant and the model explanatory power is driven by the working-capital variables basically. It implies that in the post-GST period under research, the net impact of sales growth in the short-run after the receivable days, payable days and CCC are held constant lacks strength to influence the net profit margin directly, allowing the hypothesis of the significance of the moderating role of sales growth in the working capital-profitability interaction to be rejected.

Conclusion

The research offers good empirical evidence that the management of working capital is a decisive condition to profitability in the Indian FMCG industry. The high variations in the cash conversion cycle and the net profit margin among ITC, HUL, Dabur and Colgate-palmolive India show that working-capital policies are not homogenous or insignificant: these are strategic decisions that determine the financial performance of firms in any significant manner. Companies, which manage collections well, negotiate good credit terms with the suppliers and keep within well-managed inventories, can able to convert sales to profits compared to firms which keep cash tied up in the operating cycle.

Meanwhile, the results show that there is no optimal cash conversion cycle, and it fits into one set of sizes. Though extreme negative CCC structure might be in favor of high profitability in those firms with strong brand and bargaining power, other companies might need more moderate stance to ensure a balance between liquidity risk and growth ambitions. The fact that sales growth, even after the control of working capital, still does not play a significant role in NPM is additional testimony that the manner of the sales finance and collection is at least as important as their growth speed. On the whole, the evidence supports the previous research on FMCG and other markets that describe the significance of effective working capital management to financial health and corporate sustainability.

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