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Journal homepage: www.publishing.globalcsrc.org/jbsee**Financial & Operating Working Capital: Unraveling Obscured Portion of Balance Sheet****Kashif Saeed¹, Areeba Khan²**¹Ph.D Scholar, Department of Management Sciences, The Islamia University of Bahawalpur, Pakistan,
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areeba.khan@iub.edu.pk**ARTICLE DETAILS****History***Revised format: May 2020
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P35. P45

ABSTRACT**Purpose-** The purpose of this study is to provide a new obscured aspect of financial working capital in working capital management, and investigate the association between financial and operating working capital with business performance. This paper also examines the interacting effect of net cash flow on this relationship. The current study introduces a modification in cash conversion cycle (CCC) by taking concealed trade advance payments.**Design/methodology/approach-** This study employs fixed effect regression model, covering a sample of Automobile sector companies, listed at Pakistan Stock Exchange (PSX) for the period of fourteen years from 2005 to 2018. Secondary data is collected from companies' financial annual reports, PSX website, and Balance sheet analysis of State Bank of Pakistan (SBP). The study is explanatory and deductive in nature. Financial working capital (FWC) and new measure of operating working capital (OWC) i.e. modified cash conversion cycle (mCCC) is introduced & empirically tested with 252 firm-year observations.**Findings-** The regression results shows, a convex association between OWC & FWC, with business performance, in dearth of internal cash. However, after taking interacting effect of internal availability of cash, only FWC relation has become concave. The result also shows that mCCC provides a more realistic view of OWC.**Research limitations/implications-** This study has considered, concealed trade prepayments only, further research could include other components in mCCC. Moreover micro, macro factors and status of the economy such as depression or boom may also affect the results of the research. The findings suggest that managers should separately deal operating & financial working capital. Firms' performance can be enhanced, if Finance Manager Take account internal cash of the firm. In case of deficiency (sufficiency) of it, he should work to decrease (increase) the investment amount in operating working capital (financial working capital). Overall, the results will be helpful to the

financial experts and business practitioner in analyzing, and utilization of their resources.

Originality/value- This study adds a new dimension in working capital by separating it into operating and financial working capital. The study also offers insights into the new knowledge of extension in CCC, role of concealed advance payments and internal cash flow, for class teachers and business practitioners. It will also describe the new avenues for further research in this field.



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1. Introduction

1.1. Background of Study

Global financial crisis divert the attention of the firms towards the lack of cash in order to fulfill the operational expenses and short term debt obligations. Due to these unexpected changes today's business environment has become more dynamic for the survival of the organization even though the companies are earning profits. Godfred Afrifa (2016) describes the financial management as the management of both short & long term investment and financing decisions of a firm. Sharma & Kumar (2011) state that working capital management is an integral segment of financial management and deals with short term financial decisions of a firm.

Working capital relevance on firms' performance has been revisited in latest studies (Aktas et al., 2015; Godfred Afrifa, 2016; Afrifa, Godfred and Tingbani, Ishmael, 2017). Working capital is known as the lifeblood for any economic unit (Aktas et al., 2015). Working capital usually considered as the current building block of firms' balance sheet. Marttonen et al. (2013) classified the WC as operational & financial capital. Net working capital, simply called working capital, consists of current assets less current liabilities. Knauer and Wöhrmann (2013) state that trade payables, inventories and trade receivables collectively constitutes the OWC. Financial working capital has been defined first time by the Fleuriet et al. (1978), according to them it is the difference of financial assets and financial liabilities. Yritystutkimus (2011) state that trade prepayments are part of the WC. Trade Advance payments are of two types Received advance payments and Paid advance payments. Cash conversion cycle (CCC) is one of the most acceptable measuring technique of WCM. Talonpoika et al. (2014) has presented a modification in the CCC by taking into consideration the received advance payments only.

Figure 1.1: Types and components of Working Capital

Three motives for firm's cash holdings are transactional, speculative and precautionary. Transaction motive for day to day payment of goods and services. Speculative motive for taking

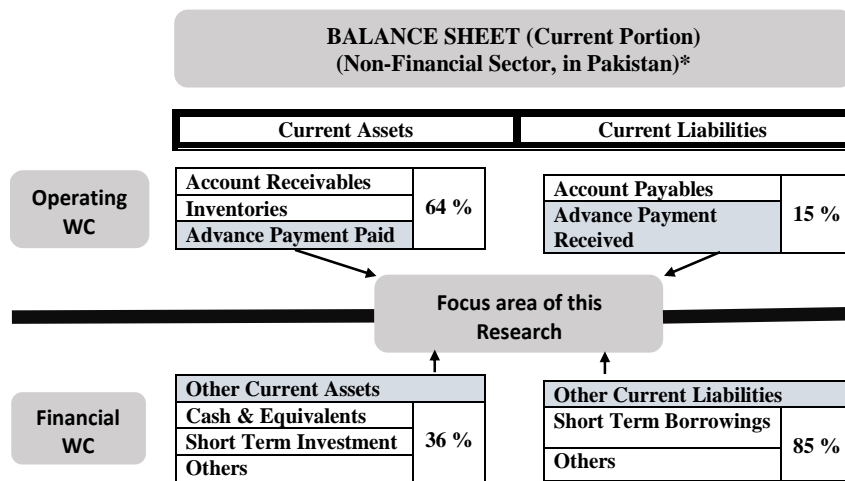


Figure 1.1: Types and components of Working Capital

Three motives for firm's cash holdings are transactional, speculative and precautionary. Transaction motive for day to day payment of goods and services. Speculative motive for taking advantages in any opportunity, while precautionary motive to prevent possible harm in future (Gill and Shah, 2012).

After taking all above considerations, the purpose of this study is to investigate the association between financial and operating working capital with business, in the light of internal cash. Moreover, financial working a new component of working capital and concealed Advanced Payments received and paid are also taken is this study. This research has included some factors as control i.e. dividend payout, financial leverage, size & age of the firm. This study will contribute new dimensions in the existing academic knowledge.

1.2. Problem Statement

In Pakistan, current assets & current liabilities of non- financial companies are 45 % and 42% of their total assets respectively (SBP non-financial sector analysis, 2017). It shows that this sector mainly rely on short term source of financing and investment. Presently Pakistani firms utilize 80 to 70 % of their loans, in operational activities. This indicate the general problem that in Pakistan firms' are not properly managing their cash cycle.

Gill & Biger (2013) believed that inefficiency in WCM have negative effect on firms' profit. Therefore, in today's challenging and dynamic business environment, managers must understand and align WCM accordingly. Finally, a study on WCM (Operating & Financial) and business performance among non-financial sector companies from an emerging market like Pakistan, which contains insufficient evidences and inconsistency in results can be very fruitful empirical work. Which may likely to differ from other developed and developing countries in world wide.

1.3. Rationale of the Study

In prior studies, most of the researchers only checked the direct impact of WC on firm performance. But this study has investigated the interacting effect of internal cash on this relationship. The current study introduces a modification in cash conversion cycle (CCC) by unraveling concealed advance payments. This research adds a new dimension in working capital by separating it into operating & financial working capital. This new obscured aspect is still empirically not tested worldwide which is also a major gap in this area of South Asian emerging market like Pakistan.

1.4. Objectives of the Study

The aim of this study is met by the following three objectives:

- To examine the relationship between FWC and Business Performance.
- To examine the relationship between OWC and Business performance.
- To analyze the interacting effect of internal cash flow on FWC, OWC and Business Performance relationship.

1.5. Limitations of the Study

The empirical findings of this research may not be generalizable to all firms, especially for the financial sector because industry, its' formation, its' structure, size and location could also affect firms' performance. Second, due to absence of reliable data, no. of firms and fourteen-year period seems to be short and may be the time constraint of my study research. Finally, during data collection, some of the variables amount for any year, are not found in financial statement which has reduced my sample size.

2. Literature Review

In this section, we overview & review the prior literature on WCM, Business Performance and Net cash flow in order to explore the avenue for future and present research efforts.

2.1. Concept of Working Capital

Enqvist et al. (2014) defined WC as current block of firms' balance sheet. WC means the operational capital, it is the amount required by a firm to run its daily routine activities. Aktas et al., (2015) suggests its calculation as "current assets less current liabilities". Kesimili and Gunay (2011) divided the working capital into two types that is Net & Gross capital. Net working capital shows the amount of difference between current asset and current liabilities. While the Gross working capital shows the amount invested in current assets.

García-Teruel & Martínez-Solano (2007) described two fundamental approaches i.e. aggressive and conservative approach to manage WC. Conservative policy suggest that a firm must increase the amount in current asset through long term sources. While aggressive policy focus on reducing its amount in current assets (García-Teruel & Martínez-Solano, 2007).

2.2. Working Capital Components

Van Horne & Wachowicz (2004) describe the main components of WC as inventories, receivables, payables, cash and cash equivalents. According to Aktas et al. (2015) current portion of a firms' balance sheet relate to the main components of WC, which includes Account Payables, Account Receivables and Inventories. Yunos *et al.* (2015) describe the effective WCM as high rate of profits at low liquidity problem. The main goal of working capital management is to balance the short term financing and investment decisions. Godfred Afrifa (2016) describe that the main goal of a firm is to create value and value creation can be achieved successfully if benefit of tied up in working capital components are more than its cost.

2.3. Measures of Working Capital Management

There are several different techniques and versions used in measuring WCM efficiency. The cash conversion cycle is one of them, it is most acceptable and widely used measure. Yazdanfar & Öhman (2014) describe it as the cyclic time of cash. Some of the well-known versions of CCC are Weighted Cash Conversion Cycle (WCCC), Cash Conversion Efficiency (CCE) and Net Trade Cycle (NTC) (Filbeck & Krueger, 2005).

Talonpoika (2016) presented the measurement of WCM efficiency by separating it into financial and operational methods. CCC and Cash-to-Cash are common example of operational method. Yritystutkimus (2011) state that trade prepayments are part of the WC. Talonpoika et al. (2014) presented a modification in CCC by taking into consideration the received advance payments only. The results shows more efficiency in measuring OWC through this new measure. Fleuriet et al. (1978) have

introduced financial working capital in his dynamic working capital model, which is also known as Fleuriet’s model. Talonpoika (2016) presented the detail strategies on financial working capital management, his study was based on Marttonen et al. (2013). There is little empirical research on Advance Payments/reverse trade credit. Mateut (2014) in his study concluded that trade prepayments are just like a financing to weaker suppliers and customers. Such kind of financing and its importance is also noticed by Lekakos and Serrano (2016).

2.4. Working capital management and Business Performance

A curvilinear relationship exists between account payable, account receivable, inventory and firm value (Cumbie & Donnellan, 2017). Kiptoo, I. K., Kariuki, S. & Kimani, E. M. (2017) concluded that inventory management policy has negative while Payable management practices has positive relationship with Business Performance.

In previous literature there is inconsistency in results several research on working capital management concluded its’ negative relation with firms’ profitability (Garcia-Teruel & Martinez-Solano, 2007; Tauringana & Afrifa, 2013; Banos-Caballero et al., 2013; Sultan, Ahsan & Wasim, 2017; Cumbie & Donnellan, 2017). While on the other hand many research have indicated a positive relationship between profitability and working capital (Charitou et al., 2010; Gillet al., 2010; Afeef, 2011; Godfred Afrifa, 2016; Afrifa, Godfred and Tingbani, Ishmael, 2017).

Therefore H₁ states:

H_{1A} There is a significant relationship between Financial Working Capital & Business Performance.

H_{1B} There is a significant relationship between Operating Working Capital & Business Performance.

Conceptual Framework:

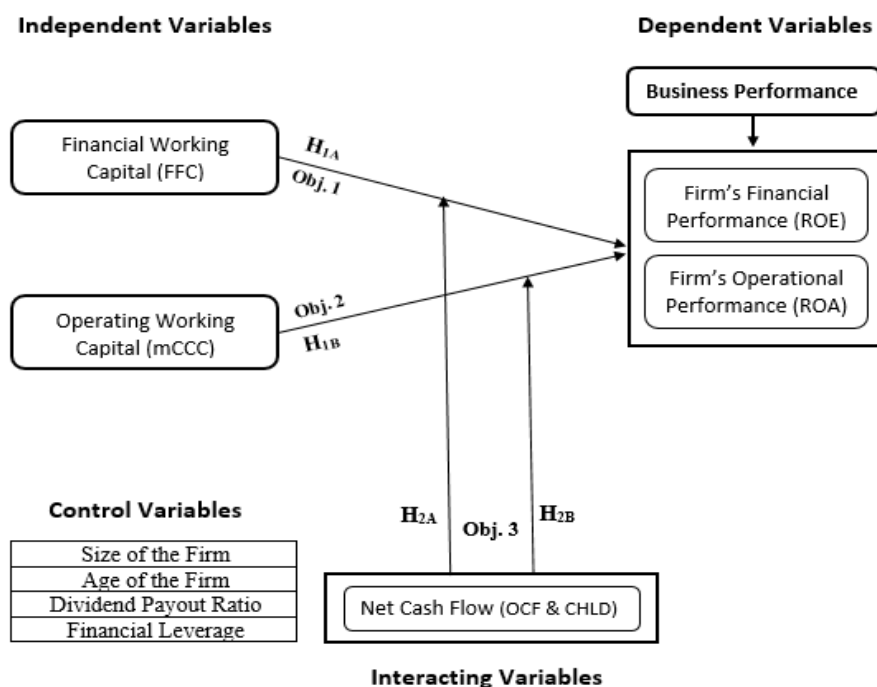


Figure 1.2: Conceptual Framework

2.5. Net Cash flow, Working Capital & Business Performance

Sultan, Ahsan and Wasim (2017) found that Cash conversion cycle i.e Operating working capital has a negative but significant relationship with firms' profitability. Godfred Afrifa (2016) indicate that in the absence of internal cash, a concave association exists between Net WC and firms' profitability, and it becomes convex if we considered the cash flow.

Firms with limited internal availability of cash flow reduce investment in working capital because for higher investment they needed expensive external financing, which may reduce their performance. Therefore improvement in firm performance linked with amount of investment in WC. Firm can enhance its' performance with investment in WC and availability of internal cash (Afrifa, Godfred and Tingbani, Ishmael, (2017).

Therefore H₂ states:

H_{2A} Internal Net Cash moderate the relationship of FWC & Business Performance.

H_{2B} Internal Net Cash moderate the relationship of OWC & Business Performance.

3. Research Methodology

3.1. Research Design, Sample and Data Collection

Research design describes the selection process of specific research methods, which are suitable for the current research. This study is Explanatory and deductive in nature. The population of this research is all the 384 non-financial firms listed at Pakistan Stock exchange. As automobile corporate sector is presently highly profitable and advance payments are also seen as a routine practice. So, in order to accomplish the objectives of the research study a sample size is comprises of automobile corporate sector companies listed at Pakistan Stock Exchange are taken for the period of fourteen years 2005-2018. Substantial missing amounts and anomalies were excluded while covering the sample. Therefore the final sample consists of balanced panel of 18 firms which represents 252 firm-year observations.

3.2. Estimation and Analysis Techniques

After fulfilling the Prerequisites of regression such as normality, multicollinearity, and correlation. The following regression equations (models) are used for estimation by using panel data methodology.

$$ROA_{it} = \beta_0 + \beta_1 (mCCC_{it}) + \beta_2 (FFC_{it}) + \sum_{i=1}^4 \beta (CONTROLS_{it}) + \mu_{it} \quad (\text{eq.1})$$

$$ROA_{it} = \beta_0 + \beta_1 (mCCC_{it} * OCF_{it}) + \beta_2 (FFC_{it} * OCF_{it}) + \sum_{i=1}^4 \beta (CONTROLS_{it}) + \mu_{it} \quad (\text{eq.2})$$

$$ROA_{it} = \beta_0 + \beta_1 (mCCC_{it} * CHLD_{it}) + \beta_2 (FFC_{it} * CHLD_{it}) + \sum_{i=1}^4 \beta (CONTROLS_{it}) + \mu_{it} \quad (\text{eq.3})$$

$$ROE_{it} = \beta_0 + \beta_1 (mCCC_{it}) + \beta_2 (FFC_{it}) + \sum_{i=1}^4 \beta (CONTROLS_{it}) + \mu_{it} \quad (\text{eq.4})$$

$$ROE_{it} = \beta_0 + \beta_1 (mCCC_{it} * OCF_{it}) + \beta_2 (FFC_{it} * OCF_{it}) + \sum_{i=1}^4 \beta (CONTROLS_{it}) + \mu_{it} \quad (\text{eq.5})$$

$$ROE_{it} = \beta_0 + \beta_1 (mCCC_{it} * CHLD_{it}) + \beta_2 (FFC_{it} * CHLD_{it}) + \sum_{i=1}^4 \beta (CONTROLS_{it}) + \mu_{it} \quad (\text{eq.6})$$

Table No. 1 shows the measurement of all variables, with past studies which use these proxies. In equations (1) to (6), two proxies are used, namely return on equity (ROE) and return on assets (ROA), for the Business Performance (dependent variable) measurement. Modified cash conversion cycle (mCCC) and financial flow cycle (FFC) are used as the two proxies for the independent variables, Operating working capital and financial working capital, respectively. Moreover, mCCC and CCC are pictorially presented in Figure 3.1. Operating cash flow (OCF) and Cash holdings (CHLD) are used for availability of internal finance. Control variables, firm age (AGE), firm size (SIZE), dividend payout ratio (DPOR) and financial leverage (LEV) are included (García-Teruel, P.J. and Martínez-Solano, P. 2007; Deloof, M. 2003; Al Masum, 2014). The subscripts i and t , in above equations 1 to 6, shows the n th firm and n th year respectively, while μ_{it} is the error term. Fixed effect panel regression model is used after performing the Hausman test. This test accept the alternative hypothesis that the observed heterogeneity is correlated with the regressors and reject the H_0 (p-value < 0.05). Random effect model is rejected on the basis of this findings. Moreover, FE model is more effective and coherent method in use. EViews statistical software is used for the analysis.

Table 1. Summary of Variables Calculation

Proxy	Abv	Measurements	Author(s) Year
<i>Business Performance (DV)</i>			
Return on Assets	ROA	Earnings before interest and tax (EBIT) / Total Assets	(Butler, Martin, Perryman, & Upson, 2012; Banos- Caballero et al., 2012).
Return on Equity	ROE	Earnings before interest and tax (EBIT) / Total Shareholders' Equity	(Abor, 2005; Mwangi et al., 2014).
<i>Financial & Operating Working Capital (IV)</i>			
Cash Conversion Cycle	CCC	AAI + ACP - APP	Richards & Laughlin (1980), Ding et al. (2013)
modified Cash Conversion Cycle	mCCC	CCC - AdPR + AdPP	Mott (2008), Talonpoika (2014)
Average Age of Inventory	AAI	(Average Inventories / Cost of Goods Sold) x 365	Richards & Laughlin (1980), Ding et al. (2013)
Average Collection Period	ACP	(Average Accounts Receivables / Sales) x 365	Richards & Laughlin (1980), Ding et al. (2013)
Average Payment Period	APP	(Ave. Accounts Payables / Cost of goods sold) x 365	Richards & Laughlin (1980), Ding et al. (2013)
Advance Payment Received Period	AdPR	Advance Payment Received / Sales x 365	Mott (2008), Talonpoika (2014)
Advance Payment Paid Period	AdPP	Advance Payment Paid / Cost of goods sold x 365	Mott (2008), Talonpoika (2014)
Financial Flow Cycle	FFC	OCA - OCL	Marttonen et al. (2013), Fleuriet et al. (1978)
Other Current Assets	OCA	(Current Assets - Inventories - A/R) / Sales x 365	Marttonen et al. (2013), Fleuriet et al. (1978)
Other Current Liabilities	OCL	(Current Liabilities - A/P) / Sales x 365	(Marttonen et al. (2013), Fleuriet et al. (1978)
<i>Availability of Internal Finance (Moderating Variable)</i>			
Operating Cash Flow	OCF	Operating income before Depre. & Amortization - Interest Exp. & Income Tax / Total Assets - Current Liabilities	Martinez-Sola et al. (2014), Garcia-Teruel et al. (2014)
Cash Holdings	CH	Cash + Cash Equivalents / Net Assets (Total Assets - Current	Martinez-Sola et al. (2014), Garcia-Teruel et al. (2014)

		Liabilities)	
<i>Control Variables</i>			
Size of the Firm	SIZE	Log of Sales	García-Teruel, P.J. and Martínez-Solano, P. (2007); Deloof, M. (2003)
Age of the Firm	AGE	Log of No. of years	García-Teruel, P.J. and Martínez-Solano, P. (2007); Deloof, M. (2003)
Dividend Payout Ratio	DPR	Dividend Per Share / Earning Per Share	Al Masum, (2014); Hashemijoo, Ardekani, & Younesi, (2012)
Financial leverage	LEV	Long term Liabilities as a % age of Average total assets	García-Teruel, P.J. and Martínez-Solano, P. (2007); Deloof, M. (2003)
Proxy	Abv	Measurements	Author(s) Year
<i>Business Performance (DV)</i>			
Return on Assets	ROA	Earnings before interest and tax (EBIT) /Total Assets	(Butler, Martin, Perryman, &Upson, 2012; Banos- Caballero et al., 2012).
Return on Equity	ROE	Earnings before interest and tax (EBIT) /Total Shareholders' Equity	(Abor, 2005; Mwangi et al., 2014).
<i>Financial & Operating Working Capital (IV)</i>			
Cash Conversion Cycle	CCC	AAI +ACP - APP	Richards & Laughlin (1980), Ding et al. (2013)
modified Cash Conversion Cycle	mCCC	CCC - AdPR +AdPP	Mott (2008), Talonpoika (2014)
Average Age of Inventory	AAI	(Average Inventories/Cost of Goods Sold) x 365	Richards & Laughlin (1980), Ding et al. (2013)
Average Collection Period	ACP	(Average Accounts Receivables/Sales) x 365	Richards & Laughlin (1980), Ding et al. (2013)
Average Payment Period	APP	(Ave. Accounts Payables/Cost of goods sold) x 365	Richards & Laughlin (1980), Ding et al. (2013)

modified Cash Conversion Cycle (mCCC)

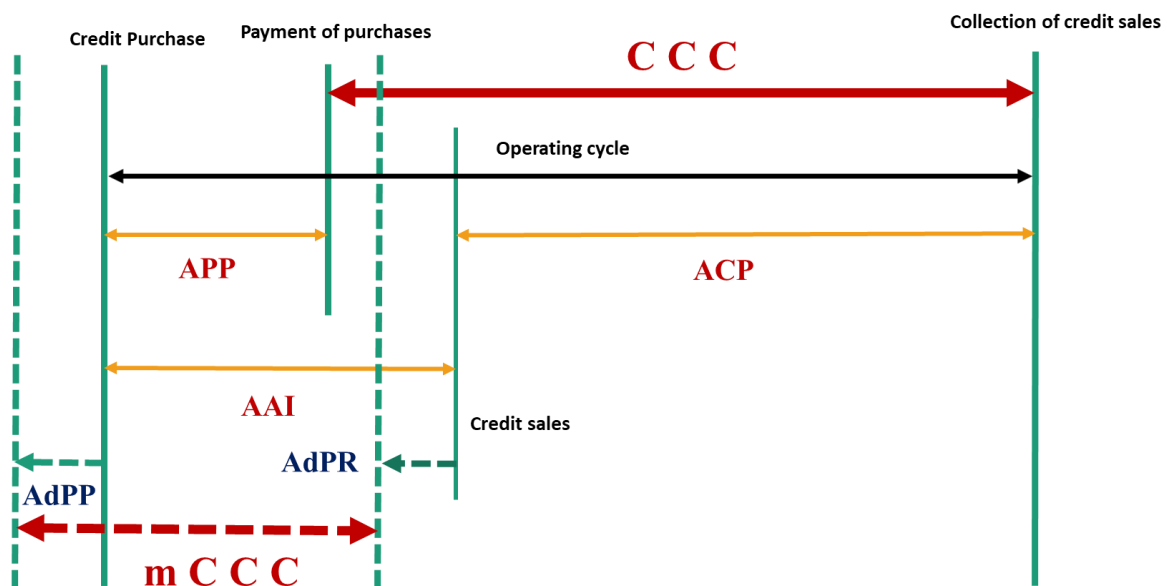


Figure 1.3: Shows the CCC and the Modified Cash Conversion Cycle

4. Results and Discussion

4.1. Descriptive Analysis

Table II shows the descriptive statistics of the variables as a whole. Average ROA is 15.11%, while the median is 15.22%. The mean value of ROE is 30.11% with median of 31.49%, which shows that the automobile sector is one of the most profitably industry in Pakistan. CCC average is 28.29 days, while for the mCCC it is 12.96 days. The median value of CCC is 36.94 days and 30.16 days for mCCC only. The variance between the values of CCC & mCCC is seem to be large, these values varies from -187 to 186 days and -221 to 230 days respectively. The largest values of mean & median for CCC can be seen as compare to mCCC. It shows the more WCM efficiency, when the mCCC is observed. If a company received advance before delivery and paid some amount of cash before receiving order then their role is usually remarkable. The mean & median values of AdPP are 5.7 & 1.5 days respectively, which shows it is not very common. While the mean & median value of AdPR are 7.2 and 21.1 days respectively, indicating advance payment received are common. The average FFC is 17.12 days and median is 18.97 days. The mean & median DPOR is about 3.699 & 2.84 respectively, showing the healthy payout in the industry. The mean and median values are same at 1.49, showing the maturity of the industry as well. The average value of SIZE is 6.79 and for LEV it is 0.045, while the median values are 6.86 & 0.024, respectively. Finally, the Values of Skewness and Kurtosis are also under the prescribed limits for the Panel Data, which suggest the normality of data.

Table II
Descriptive statistics

	ROA	ROE	CCC	MCCC	FFC	ADPP	ADPR	AGE	SIZE	LEV	DPOR
Mean	0.15110	0.30114	28.2911	12.9610	17.1285	5.76991	21.1000	1.49039	6.79720	0.04536	3.69956
Median	0.15224	0.31496	36.9440	30.1633	18.9756	1.55700	7.24816	1.49136	6.86365	0.02426	2.84459
Maximum	0.85121	1.63337	186.375	230.728	625.234	80.5599	171.144	1.81291	8.14677	0.25283	61.8856
Minimum	-1.43074	-4.75173	-187.075	-221.718	-621.128	0.01183	0.00000	0.84509	5.17470	0.00000	-65.5200
Std. Dev.	0.16779	0.44171	67.0368	83.5720	111.937	11.5870	28.8168	0.18229	0.64454	0.05169	7.54413
Skewness	-3.04739	-6.04947	-0.54414	-0.50171	-0.99906	3.44138	1.86915	-0.53512	-0.14025	1.65833	-0.00294
Kurtosis	34.0315	71.3067	3.73298	3.18902	14.1744	16.5834	6.75216	3.24701	2.46388	5.88318	49.3746
Jarque-Bera	10501.1	50528.1	18.0774	10.9472	1353.03	2434.77	294.563	12.6677	3.84409	202.787	22581.4
Probability	0.00000	0.00000	0.00011	0.00419	0.00000	0.00000	0.00000	0.00177	0.14630	0.00000	0.00000
Sum	38.0793	75.8876	7129.37	3266.19	4316.39	1454.01	5317.19	375.578	1712.89	11.4316	932.291
Sum Sq. Dev.	7.06705	48.9736	112798	175305	3145033	33699.2	208432	8.34112	104.273	0.67064	14285.4
Observations	252	252	252	252	252	252	252	252	252	252	252

4.2. Correlation Analysis

Pearson correlation results are shown in Table No. III, it include the coefficients for the variables to test the multicollinearity. These results shows a positive & significant correlation between ROE & ROA. The result indicates that ROA & ROE both have a significant and negative association with mCCC. But on the other hand side ROA & ROE both have positive significant correlation with FFC. All the control variables such as AGE, SIZE & DPOR are having positive significant associations with ROA & ROE,

except LEV which have a negative significant correlation with them. Finally, the result indicate that independent variables have very low correlation among them. As these correlations are under the suggested limit (i.e. 0.80) by Field (2005), which explain that no multicollinearity exists between them.

Table III
Correlation
Matrix

	ROA	ROE	MCCC	FFC	AGE	SIZE	LEV	DPOR	OCF	CHLD
ROA	1.00000									
ROE	0.69335	1.00000								
MCCC	-0.15052	-0.20207	1.00000							
FFC	0.16379	0.13196	-0.13719	1.00000						
AGE	0.21555	0.19767	0.13083	0.22129	1.00000					
SIZE	0.32256	0.29942	-0.48283	0.25392	0.14586	1.00000				
LEV	-0.08377	-0.09392	0.12367	-0.19805	0.01628	-0.13586	1.00000			
DPOR	0.32543	0.18681	-0.08508	0.26181	0.07908	0.10151	-0.09033	1.00000		
OCF	0.63545	0.95226	-0.18150	0.05508	0.15569	0.28376	-0.09503	0.18297	1.00000	
CHLD	0.14535	0.13407	-0.40581	0.35259	-0.13621	0.39646	-0.26614	0.16895	0.09359	1.00000

4.3. Empirical Results of Regression Analysis

4.3.1 Effects of Operating & Financial working capital on Business Performance (ROA)

The adjusted R^2 values show that overall the three models 1 to 3 in Table IV for ROA can explain 53.53%, 56.25% and 43.96% of all the variability, respectively. F-statistics explain the overall fitness of model, all the 3 models in Table No. IV are significance at the 0.01 level.

The results contained in Model 1 of table IV shows a convex relationship of mCCC & FFC with ROA, as the coefficients for the mCCC & FFC are (-0.000675) and (-0.000630) respectively, and both are negatively significance at the 0.01 level. These findings supports H_1 hypothesis and indicate that both operating and financial working capital have inverse relationship with business performance (ROA). The result shows that firms' profitability (ROA) and WC relate negatively in the absence of availability of internal cash flow. Therefore, we have examined the possible influence of internal availability of cash flow measured by OCF & CHLD on this relationship.

Table IV
Regression Models

<i>Variables</i>	Model 1 (eq.1)	Model 2 (eq.2)	Model 3 (eq.3)
mCCC	-0.000675*** (0.0000)		
FFC	-0.000630*** (0.0000)		
mCCC*OCF		-0.001139*** (0.0042)	
FFC*OCF		0.000542*** (0.0000)	
mCCC*CHLD			-0.000355* (0.1011)
FFC*CHLD			-0.000517** (0.0387)
AGE	-0.694127*** (0.0000)	-0.485881*** (0.0001)	-0.538938*** (0.0003)
SIZE	0.335999*** (0.0000)	0.228078*** (0.0000)	0.281510*** (0.0000)
LEV	-0.223275 (0.2990)	-0.216372 (0.3030)	-0.207145 (0.3923)
DPOR	0.004229*** (0.0000)	0.003217*** (0.0030)	0.004339*** (0.0004)
C	-1.084194*** (0.0000)	-0.685253*** (0.0028)	-0.959718*** (0.0002)
R-squared	0.577898	0.602522	0.490981
Adjusted R²	0.535318	0.562425	0.439632
F-statistic	13.57190	15.02679	9.561746
Prob (F-statistic)	0.000000	0.000000	0.000000
Observations	252	252	252

Notes: This table presents firm fixed effects regression with ROA (Business Performance) as the dependent variable; The above table is showing results of three Models, these models contains results as:

Model 1: without interacting effect of cash flow (OCF & CHLD)

Model 2 : With interacting effect of Cash flow (OCF)

Model 3 : With interacting effect of Cash flow (CHLD) ;

The sample consists of 252 firm-years over the period 2005-2018; p-values are in parentheses below coefficients; ***,** and * represent significance at the 0.01, 0.05 and 0.10 levels, respectively

Model No.2 in Table IV shows the interacting results of cash flow (OCF) with mCCC & FFC. As the coefficient of mCCC*OCF is (-0.001139) and negatively significance at the 0.01 level. Whilst for the FFC*OCF the coefficient is (0.000542) and positively significance at the 0.01 level. These findings also support H_{2A} & H_{2B} hypothesis.

In terms of interacting effect of cash flow (OCF), the result indicates that a convex association between operating working capital and firm's profitability (ROA) is still held and become stronger. Whilst for the financial working capital this relationship has become concave.

Interacting effect of cash flow (CHLD) with mCCC & FFC is presented in Model 3 of Table IV. The result shows a convex relation of ROA with mCCC & FFC is still held. As the coefficients of mCCC*CHLD & FFC*CHLD are (-0.000355) and (-0.000517), respectively & also supports the H_{2A} & H_{2B}. Whilst both are negatively significance at the 0.10 and 0.05 levels, respectively. The result

highlighted the influence of internal cash on WC and business performance (ROA) relationship. This result shows the inverse relationship of operating and financial working capital with business performance (ROA) still held, on the interaction of cash flow.

The above results of all three Models shows that in the presence of internal cash, higher level of operating working capital will negatively affect the business performance (ROA), whilst higher level of financial working capital will positively influence business performance (ROA).

4.3.2 Effects of Operating & Financial working capital on Business Performance (ROE):

In current section, the ROE the proxy of financial business performance is used to investigate its' association with OWC and FWC. The adjusted R^2 values show that overall these three models 4 to 6 in Table V for ROE can explain 29.23%, 36.98% and 25.80% of all the variability, respectively. F-statistics explain the overall fitness of model, all the 3 models in Table No. IV are significance at the 0.01 level.

The results contained in Table V, Column 1 for Model 4 shows once again a convex relationship of mCCC and FFC with ROE, as the coefficients for the mCCC & FFC are (-0.001790) and (-0.001343) respectively, both are negatively significance at the 0.01 level. These findings supports H_1 hypothesis indicate that both operating and financial working capital have inverse relationship with business performance (ROE). The result shows that firms' performance (ROE) and working capital relate negatively in the absence of availability of internal cash flow. Therefore, we have examined the possible influence of internal availability of cash flow measured by OCF & CHLD on this relationship.

In Model 5 of Table V shows the results of the interaction of cash flow (OCF) with mCCC & FFC. As the coefficients of mCCC*OCF and FFC*OCF are (-0.005897) and (-0.000304) respectively, and only mCCC*OCF is negatively significance at the 0.01 level & support H_{2A} . Whilst for the FFC*OCF it is negatively insignificant and reject the H_{2B} . In terms of interacting effect of cash flow (OCF), the result indicates that only a convex relationship of operating working capital and business performance (ROE) is still held and become stronger.

Interacting effect of cash flow (CHLD) with mCCC & FFC is presented in Model 6 of Table V. The result shows relationship of ROE with mCCC & FFC, both have become concave with the interaction of cash flow. As the coefficients of mCCC*CHLD & FFC*CHLD are (0.001608) and (0.002893) respectively and support the H_{2A} & H_{2B} . Whilst both are positively significance at the 0.05 and 0.01 levels, respectively. The result highlighted the influence of internal cash on WC and business performance (ROE) relationship. The result indicate that with the interaction of internal cash this relationship has become opposite.

The results of these three Models 4 to 6 shows that in the presence of internal cash, higher levels of operating and financial working capital will positively influence business performance (ROE).

Table V
Regression Models

<i>Variables</i>	Model 4 (eq.4)	Model 5 (eq.5)	Model 6 (eq.6)
mCCC	-0.001790*** (0.0004)		
FFC	-0.001343*** (0.0001)		
mCCC*OCF		-0.005897*** (0.0000)	
FFC*OCF		-0.000304 (0.1667)	
mCCC*CHLD			0.001608** (0.0146)
FFC*CHLD			0.002893*** (0.0002)
AGE	-1.447541*** (0.0006)	-1.751601*** (0.0000)	-1.513910*** (0.0007)
SIZE	0.684940*** (0.0000)	0.709441*** (0.0000)	0.695604*** (0.0000)
LEV	-1.738415** (0.0133)	-1.250562* (0.0602)	-1.756568** (0.0172)
DPOR	0.004354 (0.2215)	0.008239** (0.0158)	0.005532 (0.1298)
C	-2.088176*** (0.0057)	-1.908627*** (0.0082)	-2.149067*** (0.0057)
R-squared	0.357184	0.427602	0.326067
Adjusted R²	0.292339	0.369860	0.258082
F-statistic	5.508242	7.405392	4.796195
Prob (F-statistic)	0.000000	0.000000	0.000000
Observations	252	252	252

Notes: This table presents firm fixed effects regression with ROE (Business Performance) as the dependent variable; The above table is showing results of three Models, these models contains results as:

Model 4: without interacting effect of cash flow (OCF & CHLD)

Model 5 : With interacting effect of Cash flow (OCF)

Model 6 : With interacting effect of Cash flow (CHLD) ;

The sample consists of 252 firm-years over the period 2005-2018; p-values are in parentheses below coefficients; ***,** and * represent significance at the 0.01, 0.05 and 0.10 levels, respectively

Pictorial presentation of above results findings are as under:

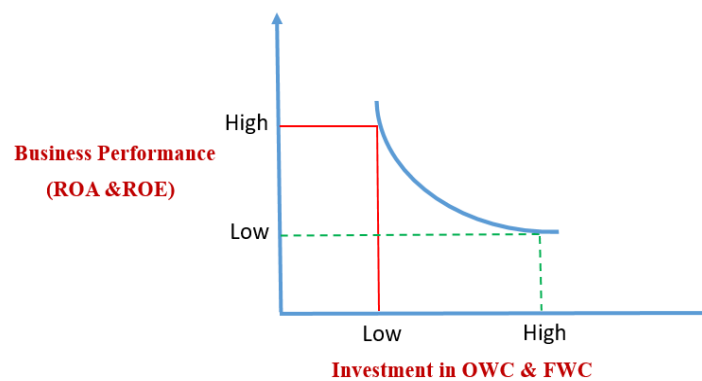


Figure 4.1

In the absence of Internal cash flow (Convex)

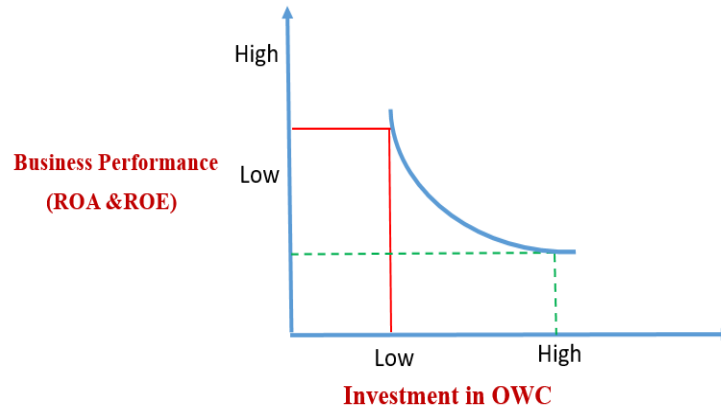


Figure 4.2 Interacting Effect of Internal cash flow* (Convex)
*OCF & CHLD (ROA)
 OCF (ROE)

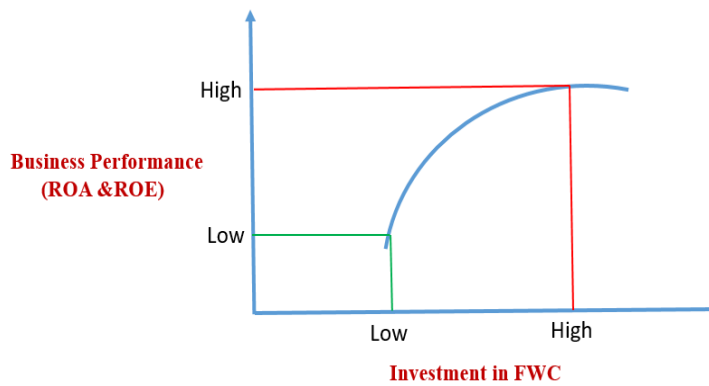


Figure 4.3 Interacting Effect of Internal cash flow* (Concave)
*OCF (ROA)
 CHLD (ROE)

5. Conclusions

This paper provides empirical evidence and adds a new dimension to working capital, i.e. Financial and Operating working capital, by unraveling obscured portion of balance sheet. Moreover, by revealing concealed advance payments both paid and received, this study has introduced and empirically tested an extension, i.e. Modified cash conversion cycle (mCCC), in CCC. Which is the most acceptable and widely used measuring technique of operating working capital.

Generally CCC is a good measure, but the results shows that mCCC provides a more realistic and efficient view of OWC, especially to those industries which involves advance payments in their dealing. The results show that operating and financial working capital relationship to business performance is convex; however, after considering the interacting effects of internal cash, only the relationship of financial working capital to business performance has become concave. Whilst the operating working capital still hold the convex relationship with business performance.

The finding of the research suggest that managers should separate the working capital into financial and operating working capital, and manage them accordingly. The results highlight the fact that managers should consider internal cash flow and in case of absence of internal cash, firms should strive to reduce the investment in operating and financial working capital. On the other hand, firms with available

internal cash flow should increase investment in financial working capital only to improve business performance.

Generally the study is important because it will play a very essential and vital role in the academic decisions of efficient working capital. It will be helpful to the financial experts and business practitioner in analyzing, and utilization of their recourses.

The study has offered insights into the new knowledge of financial working capital, new measurement of operating working capital through empirical results of modified cash conversion cycle (mCCC), and the interacting role of Cash flow, and concealed advance payments in the context of this relationship; for business practitioners and class teachers, who deal with working capital and business performance. It also describe the new dimensions to the researchers for future research in this field.

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