EMPIRICAL NEXUS BETWEEN WORKING AND FINANCIAL WORKING CAPITAL MANAGEMENT AND ITS ANALOGY TO CAPITAL STRUCTURE

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ABSTRACT

Production-oriented firms need operational as well as financial working capital to sustain the business in a competitive environment. However, firms in underdeveloped countries face many issues in meeting the capital and revenue nature expenditure. Due to this issue these firms arrange capital from other sources like seed money. The financial working capital is linked with working capital components. Working capital is performing as an intermediary role between financial working capital and the capital structure of the firms. This study is proved that working capital is playing an intermediary role between financial working capital and capital structure of textile sector firms through empirical findings and as well as used GLS, Random Effect, Fixed Effect and GMM Techniques.

Keywords: Financial Working Capital; Working Capital; Capital Structure; WACC; GMM; GLS; Random Effect; Fixed Effect; Textile Sector Firms; Pakistan Stock Exchange

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1. Introduction

All over the world, the financial systems started changing when the world was hit with the worst economic crisis in 2007. This crisis resulted in changing the basic financial structure (Capital structure) of the companies, to cope with this, different contingencies were prepared in the form of costly external financing. Such measures have caused a strain in the financial environments of many financial institutions even putting small companies in a struggling situation (Kasurinen &

Hujanen, 2019). Thus, keeping given the forgoing financial flexibility has become a decisive factor for almost every company irrespective of small or large. Denis (2011) and Ahmed and Mwangi (2022) elucidates the term "financial flexibility" as the capacity of the firm to respond towards any changes in cash flow or investment opportunities while keeping in mind the maximizing of value approach. Gryglewicz (2011) on the other hand proposed that liquidity of resources should be the utmost preference while maintaining financial flexibility. It is also observed in the findings that the liquid resources for production companies are derived from their working capital. Net-working capital is the measure of liquidity which means whether a company can pay back its short-term liabilities or not (Emery, 1984).

Michalski (2008) has the opinion that companies should focus on maximizing the company's wealth through the management of working capital. In another research, (Frank et al., 2013) proposed an approach towards value creation through the management of net-working capital. However, (De Almeida & Eid Jr, 2014) have proposed in their research that a total of net-working capital results in a diminishing company value. This shows that various researchers have various opinions towards working capital. Different countries with various sizes of companies are now working on the research related to practices of working capital management in various contexts (Abdulnafea et al., 2022). Tran et al. (2017a) to devise policies for their respective companies that can maximize the value.

The working capital of firms has been interpreted by the different authors' in a different context. Some authors used the current ratio as representative of working capital (Hofmann & Martin, 2016; Jose et al., 1996). Some researchers used quick ratios as representative of working capital (Hofmann & Martin, 2016; Sah et al., 2022), other researchers used the subcategories of working capital such as operational working capital, net working capital and financial working capital (Abdulnafea et al., 2022; Khan et al., 2022).

Statements and Policy (2016) definition of net working capital is used until now which is working capital is equal to current assets minus current liabilities. Working capital management regarding the financing perspective was expressed in terms of the cash conversion cycle (Chancharat & Kumpamool, 2022; Tran et al., 2017a). Further, Baños-Caballero et al. (2010) proposed that companies that have a high turnover of cash inflows and outflows would have

longer cash-to-cash cycle (CCC) of working capital. At certain times operational working capital has been used in the form of operational process-related working capital because it represents the capital employed by the company's operational processes. Mullins (2009) have talked about the non-cash mechanisms of working capital which includes inventory, account payables and accounts receivables.

In a competitive environment, any production-oriented firm requires to maintain its working capital, as well as financial working capital to sustain. It is to be taken into consideration that financial working capital is stated as one of the basic sub-categories of the working capital. In underdeveloped countries, it is difficult for firms to meet their capital and revenue expenditures. Due to this issue, the firms try to arrange capital from various other sources such as seed money from relatives and friends, short term and long-term bank loans and trade credits (Jaworski & Czerwonka, 2022; Tran et al., 2017b) which eventually increases the cost of capital of the firm and in extreme cases, such organization is often declared defaulted if they cannot pay their liabilities on time or their market value of assets falls below the market value of liabilities (Elahi et al., 2014). Thus, it can be summarized that the working capital and financial working capital have been associated in certain contexts and both have a combined systematic effect on the capital structure of the organization.

Likewise, the problem statement is reflected that textile sector firms of Pakistan are facing serious financial crises that increase the pressure on companies to build financial working capital, working capital management as well as maintain or organized the capital structure of the firms. The financial working capital consists of a set of financial objects such as inventory turnover, average receivables turnover, sales turnover, cash conversion cycle, operating profit margin, and net profit margin. Similarly, the working capital of the companies consists of the current ratio, quick ratio, sales to working and working capital requirement. Likewise, the capital structure of the firms depends on the equity and debt portions in the shape of the weighted average cost of capital ratio. All these financial working capital and working capital elements and used to meet the short-term and long-term obligations of the companies and support the capital structure of the firms. Though, there still is a lack of understanding of a mixture of financial working capital, working capital and capital structure of the firms and its importance by the focus on the capital requirement of the companies.

Thus, the objective of the current study is: (1) To highlight the impact of financial working capital on the working capital of textile sector firms in Pakistan. (2) To underline the impact of financial working capital on the capital structure of textile sector firms in Pakistan. (3) To check the impact of working capital on the capital structure of textile sector firms in Pakistan. Consequently, the research question is; (1) Is there a significant impact of the financial working capital on the working capital and capital structure by focusing on textile sector firms listed on the Pakistan Stock Exchange? (2) What is the significant impact of working capital on the capital structure of textile firms in Pakistan?

1.1 Research Contribution

The textile sector is playing a lifeline role in every country because it is contributing to GDP and NNP as well as also attached with other economic measures. The textile sector of Pakistan is also very important in, last decades due to the country's economical ups and downs. The textile sector of Pakistan has suffered from a financial crisis last decades. Due to a finance shortage, the number of textile firms has been declared defaulters and even had been sealed. This study is focused on working capital and financial working capital relationship with capital structure. The earlier study was only showing a direct relationship but did not highlight empirical proof. This study is also contributing new theoretical concepts on the accounting and financial side. Because an earlier theoretical concept was only appraised about the relationship among capital structure, working capital and financial working capital. Because working capital is consists of short-term obligations and based on short-term loans. On the other side, capital structure is based on long-term scenarios. It means that the direct relationship among these financial indicators is not valid and its empirical analysis is also not understandable.

The textile sector firms used the long-term loan and it’s directly showing the relationship with financial working capital as well as also showing the indirect relationship with working capital. This research highlighted that working capital is not directly in relationship with the capital structure of firms; however, it is playing an intermediary role between financial working capital and the capital structure of the firms. The empirical validity of this study is also showing this relationship.

2. Theoretical Foundation in light of Literature Review

Branches of accounting such as management accounting and financial accounting have come closer to each other's as stated by (Taipaleenmäki & Ikäheimo, 2013). Various technological especially in practices of accounting research have caused such convergence (Gill et al., 2022; Hemmer & Labro, 2008; Weißenberger & Angelkort, 2011). However, this consequently, resulted in changing major accounting measures which formed the part of performance measures (Christoffersen, 2013). The aforementioned performance measure gives a criterion for managers to evaluate and express the ultimate strategic goals (Gomes et al., 2011; Khan et al., 2022). Performance measures have been researched widely in different frameworks and meanings (Abdulnafea et al., 2022; Deville et al., 2014; Larimo et al., 2016). Herein authors' main focus will be on accounting measures and consequently these measures as a part of management accounting.

Cash flows and debt management are reviewed under financial management which is a part of corporate finance (Chancharat & Kumpamool, 2022; Fee et al., 2014; Isshaq & Bokpin, 2009) and related to the financial position of different firms (Horngren et al., 2009). The working capital structure provides the framework to analyze the financial capabilities of a given firm and subsequently it has been reviewed and managed from different viewpoints (do Nascimento et al., 2012). The Financial working capital (FWC) has been reviewed under financial management literature (Sombrio, 2013), rather than having studied as a separate identity.

Under the umbrella of strategic management, Asset management is the study of both current and fixed assets (Frolov et al., 2010; Maletič et al., 2022). Researchers have widely used and considered fixed assets in their studies; however, there are limited research available on the working capital itself. Further, researchers widely used the operational processes of working capital under the portion of the current assets, which is also part of working capital (Ojanen et al., 2012). Previously scholars have conducted few studies which comprise of both financial working capital and operational working capital but the major emphasis of the researchers has been on operational working capital management (Marttonen, 2013). Operational working capital has been connected to the financial working capital in literature by (Ivashina &

Scharfstein, 2010), however, no study has been found by the authors linking working capital to financial working capital as per their best of knowledge.

The literature on the linkages between financial management and asset management is found in the study of (Denis & McKeon, 2012) in which he linked asset management with financial management through the financial flexibility, flexibility is the decision making regarding debt and capital portion and hence, linked to the capital structure. So, financial working capital can affect the overall working capital of the firm and ultimately can affect the capital structure of the firm. Working capital management, financial working capital management decisions and financial flexibility are part of the strategic decision (Bancel & Mittoo, 2011). Strategic decisions demand precise information and calculations from a company's performance and link to the financial working capital management.

Figure 1: Author Calculation

In such modern times where industries are becoming more and more concerned regarding their financial decisions as the situation of globalization of financial features has become very critical i.e. the need for supply chain partners for working capital is increasing in a significant manner (More & Basu, 2013). The working capital is a very important index of operational performance for supply chains. Thus, supply chains confront many impediments to their growth globally.

Consequently, the enterprises have started to put major decisive emphasis on the financial flows along with flows of goods and information. For example, according to a report, almost 15% of the organizations established their requirement in the synchronization of their financial

inflows and outflows. And through this, the name 'Financial Supply Chain Management' gained much attention. In this research, we will comprehend the augmented forecasting and monitoring of supply chain cash flows to ease the effective supply chain material movement under the term Financial supply chain management. As there is not a certain explanation of SCF but generally, it can be defined as a set of financial instruments and practices that majorly includes Payable-centric and Accounts Receivable- centric sets to access working capital and enhance the liquidity of the supply chain by forming partnerships between them. J.P Morgan in the report in 2009 makes a draft to clarify the notions of the relationship between physical supply chain, supply chain and financial supply chain management. Working capital and financial working capital have believed be influence the firm's debt position in short term and consequently in high leverage. Nevertheless, many researchers have reported the fact that the firm's capital structure is only influenced by the long-term debt and equity structure (Brealey et al., 2012). However, leverage is affected by both, short-term debt and long-term debt and eventually both affect the capital structure (DeAngelo, 2022; He & Tian, 2014; Siddik et al., 2017).

3. Methodology

In this study, a secondary data set has been used for the empirical evidence. Data of this research has been obtained from the annual reports of the textile companies of Pakistan. The top companies from the overall textile sector have been selected based on the asset size. Data range from 2011 to 2021. Following is the list of variables that are used in this research to estimate the nexus between working capital management and financial working capital management and its analogy on capital structure.

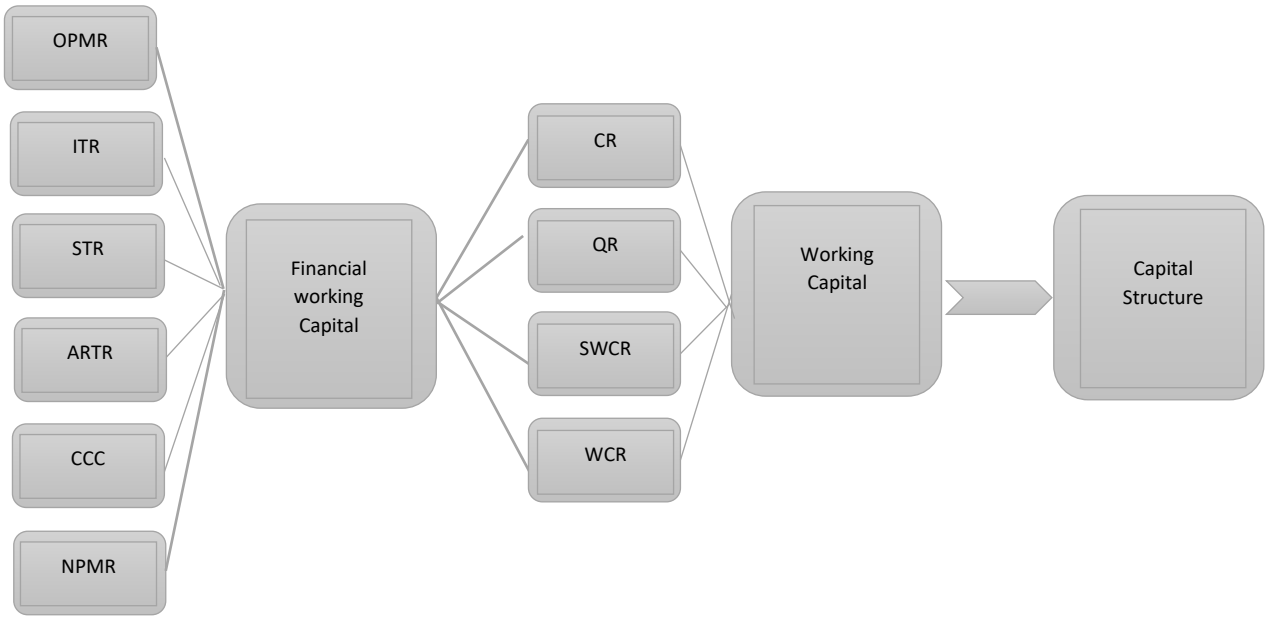
Table 1

Sr. #	Area of Study	Variable	Variable Symbol	Sources of Usage of Variables
1	Capital Structure	The weighted average cost of capital	WACC	Groth and Anderson (1997) Eschenbach and Cohen (2006) Hofmann and Kotzab (2010)
2	Financial Working Capital Management	Inventory turnover ratio	ITR	Filbeck and Krueger (2005) Nouri et al. (2016) Khan et al. (2016)
		Sales turnover ratio	STR	(Koralun-Bereźnicka, 2014; Nouri et al., 2016)
		Average receivables turnover	ARTR	(Koralun-Bereźnicka,

		ratio		2014; Nouri et al., 2016)
		Cash conversion cycle	CCC	Jose et al. (1996) Baños-Caballero et al. (2010) Hofmann and Kotzab (2010); (Shah, 2016) Nouri et al. (2016) Khan et al. (2016)
		Operating profit margin ratio	OPMR	Jin et al. (2017)
		Net profit margin ratio	NPMR	(Jin et al., 2017)
3	Working Capital Management	Current Ratio	CR	Jose et al. (1996) Hofmann and Kotzab (2010)
		Quick Ratio	QR	Jose et al. (1996) (Tufail & Khan, 2013)
		Sales to working capital ratio	SWCR	Al-Mwalla (2012) Aregbeyen (2013) Karadagli (2013)
		Working capital requirement	WCR	Al-Mwalla (2012) Aregbeyen (2013) Karadagli (2013)

Source: Author Design

In the light of literature, an estimable model of this research in the shape of graphical and equation form is as follows:



Research Model: Source Author's Design

Model 1: $CR_{i,t} = \alpha_0 + \alpha_1(IT)_{i,t} + \alpha_2(STR)_{i,t} + \alpha_3(ARTR)_{i,t} + \alpha_4(CCC)_{i,t} + \alpha_5(OPMR)_{i,t} + \alpha_6(NPMR)_{i,t} + \mu_{i,t}$

Model 2: $QR_{i,t} = \alpha_0 + \alpha_1(IT)_{i,t} + \alpha_2(STR)_{i,t} + \alpha_3(ARTR)_{i,t} + \alpha_4(CCC)_{i,t} + \alpha_5(OPMR)_{i,t} + \alpha_6(NPMR)_{i,t} + \mu_{i,t}$

Model 3: $SWCR_{i,t} = \alpha_0 + \alpha_1(IT)_{i,t} + \alpha_2(STR)_{i,t} + \alpha_3(ARTR)_{i,t} + \alpha_4(CCC)_{i,t} + \alpha_5(OPMR)_{i,t} + \alpha_6(NPMR)_{i,t} + \mu_{i,t}$

Model 4: $WCR_{i,t} = \alpha_0 + \alpha_1(IT)_{i,t} + \alpha_2(STR)_{i,t} + \alpha_3(ARTR)_{i,t} + \alpha_4(CCC)_{i,t} + \alpha_5(OPMR)_{i,t} + \alpha_6(NPMR)_{i,t} + \mu_{it}$

Model 5: $WACC_{i,t} = \alpha_0 + \alpha_1(CR)_{i,t} + \alpha_2(QR)_{i,t} + \alpha_3(SWCR)_{i,t} + \alpha_4(WCR)_{i,t} + \mu_{i,t}$

Model 6: $WACC_{i,t} = \alpha_0 + \alpha_1(IT)_{i,t} + \alpha_2(STR)_{i,t} + \alpha_3(ARTR)_{i,t} + \alpha_4(CCC)_{i,t} + \alpha_5(OPMR)_{i,t} + \alpha_6(NPMR)_{i,t} + \mu_{i,t}$

Model 7: $WACC_{i,t} = \alpha_0 + \alpha_1(CR)_{i,t} + \alpha_2(QR)_{i,t} + \alpha_3(SWCR)_{i,t} + \alpha_4(WCR)_{i,t} + \alpha_5(IT)_{i,t} + \alpha_6(STR)_{i,t} + \alpha_7(ARTR)_{i,t} + \alpha_8(CCC)_{i,t} + \alpha_9(OPMR)_{i,t} + \alpha_{10}(NPMR)_{i,t} + \mu_{i,t}$

4. Empirical Findings and Discussion:

Table 2

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
WACC	180	22.8886	19.2197	1.89	118.41
CR	180	1.4132	0.7911	0.56	5.22
QR	180	0.5998	0.4622	0.12	2.6
SWR	180	0.0506	0.1103	-0.26	.34
WCR	180	19.5712	1.6570	14.83	22.93
ITR	180	6.2517	2.6613	0.74	17.15
OPMR	180	9.0238	4.2361	-2.46	21.61
NPMR	180	4.9645	3.9331	-3.85	18.26
CCC	180	71.5653	46.8753	2.03	491.84
ARTR	180	28.0741	19.9453	1.39	111.77
STR	180	27.0450	14.8425	8.87	151.25

Source: Authors' Calculation

The above-mentioned table is highlighting descriptive statistical results of dependent and independent variables like a mean, minimum value, maximum value and standard deviation. The total numbers of samples are 180 that are used in this study. On average the current ratio which is an indicator of working capital shows 1.41% which is greater than 1 and shows healthy positions of the industry. On average the cash conversion cycle of the firms is 71.5 days which shows that the cash is revolving about 5 times a year.

Table 3

Correlation Matrix

	WACC	CR	QR	SWR	ITR	OPMR	NPMR	CCC	ARTR	STR	LNWCR
WACC	**1.0000**										

CR	0.0510	**1.0000**									
QR	0.0745	0.8745	**1.0000**								
SWR	0.2166	0.8578	0.8062	**1.0000**							
ITR	-0.368	-0.163	-0.065	-0.390	**1.0000**						
OPMR	0.1796	0.0802	0.0731	0.1295	-0.278	**1.0000**					
NPMR	0.2341	0.2714	0.2489	0.3266	-0.211	0.8872	**1.0000**				
CCC	0.0664	0.0205	0.0452	0.2340	-0.588	0.0778	0.0421	**1.0000**			
ARTR	0.0861	0.0124	0.2074	0.1980	-0.303	0.1626	0.1184	0.6176	**1.0000**		
STR	0.1964	0.0346	0.1436	0.2526	-0.426	0.0624	0.1612	0.5038	0.3546	**1.0000**	
WCR	0.5893	0.4690	0.4025	0.6744	-0.482	0.2397	0.3855	0.1553	0.0995	0.2012	**1.0000**

Source: Author Calculation

The above results are showing the correlation results among variables. The relationship between QR and CR is quite high because the selected firms have very few stocks and prepaid expenses in their balance sheet. SWR and CR and QR are also showing a strong relationship because firms usually maintain reasonable cash levels in their businesses. Most of the variables show moderate relationships with each other's however, some show weak relationships.

Table 4

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

Null Hypothesis (Ho): Constant variance

	Statistics	**Notation**	**p-value**
Model 1	70.67	χ^2	0.0000
Model 2	73.19	χ^2	0.0000
Model 3	1.92	χ^2	0.1658
Model 4	0.84	χ^2	0.3593
Model 5	18.14	χ^2	0.0000
Model 6	11.72	χ^2	0.0006
Model 7	21.26	χ^2	0.0000

Source: Authors' Calculation

Heteroscedasticity is a solid term to discuss, but not difficult to understand. It is highlighted the unequal variation among variables. We have applied the most widely used Breush-Pagan test for the calculation of the heteroskedasticity problem. As shown in Table 4 Model 1, 2, 5, 6 and 7 have the presence of heteroscedasticity. While model 3 and model 4 have not been affected by the heteroscedasticity problem. Therefore the authors have applied the relevant statistically estimating technique for each model keeping given the above-stated facts. For models that have the problem of heteroscedasticity, we have changed the estimation

technique from simple Olx to fixed generalized least square or GMM depending upon the additional diagnosis of endogeneity problem in the variables.

Table 5 shows the multicollinearity among variables. The mean VIF of model 1 through model 4 has the same values because the independent variables are the same in these models. The value of the mean VIF is 3.07 which is under 5 and 10 as well. The values of the OPMR and NPMR is almost the same, the reason behind this similarity is very obvious if we look at the balance sheet of the firms their gap between these two is very much low, that's the same reason in table 3 correlation between these two variables are on the higher end but less than 0.90. However, in model 7 the value of these two variables is relatively less than the value of CR and SWR.

Table 5

Test for Multi-Collinearity

	Model 1		**Model 2**		**Model 3**		**Model 4**		**Model 5**		**Model 6**		**Model 7**	
Variable	**VIF**	**1/VIF**	**VIF**	**1/VIF**	**VIF**	**1/VIF**	**VIF**	**1/VIF**	**VIF**	**1/VIF**	**VIF**	**1/VIF**	**VIF**	**1/VIF**
CR									6.02	0.165			8.74	0.114
SWR									6.47	0.154			8.47	0.118
NPMR	5.60	0.113	5.60	0.113	5.60	0.113	5.60	0.113			5.60	0.178	8.06	0.124
OPMR	5.45	0.153	5.45	0.153	5.45	0.153	5.45	0.153			5.45	0.183	7.57	0.132
QR									4.65	0.214			6.82	0.146
ITR	1.86	0.436	1.86	0.436	1.86	0.436	1.86	0.436			1.86	0.538	2.87	0.348
CCC	2.43	0.388	2.43	0.388	2.43	0.388	2.43	0.388			2.43	0.411	2.69	0.372
WCR									2.08	0.480			2.53	0.395
ARTR	1.62	0.471	1.62	0.471	1.62	0.471	1.62	0.471			1.62	0.618	2.16	0.462
STR	1.49	0.642	1.49	0.642	1.49	0.642	1.49	0.642			1.49	0.673	1.80	0.554
Mean VIF	**3.07**		**3.07**		**3.07**		**3.07**		**4.81**		**4.81**		**4.81**	

Source: Authors Calculation

'

Table 6 shows the results of the first four models. In the below-mentioned table under model 1 GLS regression results are indicated that ITR, ARTR and NPMR coefficient values are significant empirically as well as theoretically. It means showing an impact on CR. The results indicated that firms are speedily used inventory or raw material for the preparation of textile goods (as depicted in the descriptive statistics), quickly collect receivables and then get profit. The results are also paralleled with previous studies. On the other side STR, CCC and OPMR coefficient values are insignificant empirically. This situation is representing that textile sector

firms are more spend on operational expenses (selling, general and administrative expenses) and suppliers are also quickly collecting money against the issuance of raw material.

Under model 2 in table 6 GLS regression results are indicated that ITR, CCC, and NPMR coefficient values are significant empirically as well as theoretically. It means showing an impact on QR. The results indicated that textile sector firms are speedily used inventory or raw material for the preparation of textile goods, and then get profit. The Cash Conversion cycle of the textile sector is also short in above said QR model. On the other side STR, ARTR and OPMR coefficient values are insignificant empirically. This situation is representing that textile sector firms are more spend on operational expenses (selling, general and administrative expenses) and suppliers are also quickly collecting finance against the issuance of raw material. The textile sector firms also do not quickly collect cash from debtors in the above-said model. The above-said scenario is also representing an overall significant summary of results.

Table 6

Regression Model Estimations								
	Model 1		***Model 2***		***Model 3***		***Model 4***	
	Dependent Variable is CR		***Dependent Variable is QR***		***Dependent Variable is SWR***		***Dependent Variable is WCR***	
Regressors	**(General Least Square Regression, FGLS)**		**(General Least Square Regression, FGLS)**		**(Random effects General Least Square Regression, GLS)**		**(Fixed effects General Least Square Regression, GLS)**	
	Coefficient	**p-value**	**Coefficient**	**p-value**	**Coefficient**	**p-value**	**Coefficient**	**p-value**
ITR	-0.049	0.065	-0.002	0.848	-0.007	0.038	-0.144	0.060
STR	-0.010	0.010	-0.018	0.457	-0.013	0.426	-0.025	0.786
ARTR	-0.090	0.761	0.052	0.006	0.103	0.002	0.018	0.066
CCC	0.100	0.014	-0.100	0.005	-0.253	0.279	-0.359	0.001
OPMR	-0.159	0.000	-0.076	0.000	-0.345	0.000	-0.246	0.000
NPMR	0.227	0.000	0.108	0.000	0.156	0.000	0.257	0.000
C	2.284	0.000	0.711	0.000	0.711	0.000	21.433	0.000
HAUSMAN TEST	--		--		Val > $\chi 2 = 0.9580$		*val<$\chi 2 = 0.0000$*	

Source: Authors' Calculation

In the presence of heteroscedasticity model further, two techniques should be anticipated such as fixed effect or random effect. In this context, the Hausman test should be used for the selection of fixed or random techniques. If the p-value is higher than 5%, then the random effect model is preferably used. Under model 2 in table 6, Random Effect GLS regression results are

indicated that ITR, CCC, and NPMR coefficient values are significant empirically as well as theoretically. It means showing an impact on SWR. The results indicated that textile sector firms are speedily used inventory or raw material for the preparation of textile goods, and then get profit. The Cash Conversion cycle of the textile sector is also short in the above said SWR model. On the other side STR, ARTR and OPMR coefficient values are insignificant empirically. In the presence of heteroscedasticity model further, two techniques should be anticipated such as fixed effect or random effect. In this context, the Hausman test should be used for the selection of fixed or random techniques. If the p-value is lower than 5%, then the random effect model is preferably used.

The above-mentioned Fixed Effect GLS regression results are indicated that ITR, CCC, and NPMR coefficient values are significant empirically as well as theoretically. It means showing an impact on WCR. The results indicated that textile sector firms are speedily used inventory or raw material for the preparation of textile goods, and then get profit. The Cash Conversion cycle of the textile sector is also short in above said WCR model. On the other side STR, ARTR and OPMR coefficient values are insignificant empirically. This situation is representing that textile sector firms are more spend on operational expenses (selling, general and administrative expenses) and suppliers are also quickly collecting finance against the issuance of raw material.

Table 7

Regression Model Estimations		
Dependent Variable is WACC		
Regressors	**(General Least Square Regression, GLS)**	
	Coefficient	**p-value**
CR	-7.655	0.051
QR	8.225	0.055
SWR	-51.192	0.006
WCR	9.66	0.000
C	-156.14	0.000
Source: Author Calculation		

The above-mentioned model outcomes are directly linked with WACC. The said results are representing that QR and WCR results are theoretically and empirically significant. The results are also paralleled with previous studies. The results of the remaining two variables CR and SWR are not significant. This scenario indicates that textile sector firms have less cash in hand and cash at the bank means to say the reduction in working capital value. This scenario is directly linked with financial working capital and also shows a relationship with financial working capital models. Because an increase in operational expenses (OPMR) and timely payment to suppliers against raw material (STR) as well as late collected receivables from debtors (ARTR) the textile sector firms are using current assets (cash in hand, cash at bank) that directly impact on working capital. Due to the reduction in working capital, the results of CR and SWR are insignificant. Further reduced working capital is directly showing an impact on capital structure in place of Debt and Equity (WACC).

Table 8

Regression Model Estimations

Dependent Variable is WACC

Regressors	**(General Least Square Regression, GLS)**	
	Coefficient	**p-value**
ITR	-3.951	0.000
STR	-0.046	0.659
ARTR	0.091	0.265
CCC	-0.082	0.033
OPMR	-1.158	0.003
NPMR	1.296	0.095
C	56.849	0.000

Source: Author Calculation

The results in table 8 are developing a relationship with WACC. In the above said regression results ITR, CCC, and NPMR coefficient values are significant empirically. It means showing an impact on WACC. On the other side STR, ARTR and OPMR coefficient values are insignificant empirically. This scenario is directly linked with working capital and also shows a relationship with working capital models. Because an increase in operational expenses (OPMR) and timely payment to suppliers against raw material (STR) as well as late collected receivables

from debtors (ARTR) the textile sector firms are using current assets (cash in hand, cash at bank) that directly impact on working capital. Due to the reduction in working capital, the results of CR and SWR are also insignificant. Further reduced working capital is directly showing an impact on capital structure in place of Debt and Equity (WACC).

Table 9

Durbin-Wu-Hausman Tests for Endogeneity in IV estimation
Null Hypothesis (Ho): Regressor is Exogenous

Wu-Hausman F test:	2.5850	F(1,118)	P-value = 0.1105
Durbin-Wu-Hausman chi-sq test:	2.7654	Chi-sq(1)	P-value = 0.0963

Source: Authors' calculations

The above test is indicating that data have also a problem of endogeneity. When the existence of endogeneity and heteroskedasticity are in data, then one step GMM technique is suitable.

Table 10

Dynamic panel-data estimation, one-step system GMM

WACC	Coefficient	Robust Standard Error	Z	P>|z|
CR	-6.2889	1.9931	-3.16	0.002
QR	6.5431	3.0269	2.16	0.031
SWR	-38.7869	21.1151	-1.84	0.066
ITR	-1.7995	0.3439	5.23	0.000
OPMR	-0.4294	0.3749	-1.15	0.252
NPMR	0.6062	0.4479	1.35	0.176
CCC	-0.0814	0.0168	-4.84	0.000
ARTR	0.06369	0.0366	1.74	0.083
STR	0.0892	0.0472	1.89	0.059
WCR	6.8084	0.6365	10.70	0.000
CONS	-88.5819	14.1191	-6.27	0.000

Source: Authors' calculations

As per GMM results the QR, ITR, NPMR, CCC, STR, and WCR values are significant theoretically and empirically as well as matched with earlier studies. The results of CR, SWR, OPMR and ARTR are theoretically defined but its results are empirically insignificant. It means that increase in operational expenses (OPMR) and late collected receivables from debtors (ARTR) the textile sector firms are using current assets (cash in hand, cash at bank) that directly impact on working capital. Due to the reduction in working capital, the results of CR and SWR are also insignificant. Further reduced working capital is directly showing an impact on capital structure in place of Debt and Equity (WACC).

Table 11

Arellano-Bond test for AR (1) and (2)		
Arellano-Bond test for AR (1) in first differences:	z = -7.57	Pr > z = 0.086
Arellano-Bond test for AR (2) in first differences:	z = -0.53	Pr > z = 0.183

Source: Authors calculations

Table 12

Over identification restrictions test		
Sargan test of over identification restrictions: (Not robust, but not weakened by many instruments.)	chi2 (76) = 0.67	Prob > chi2 = 0.482

Source: Authors calculations

The above tables clarify the robustness check for total results. These outcomes demonstrate with an expectation of tools validity and general results are robust.

5.1 Theoretical Contribution

The current study is contributed in four perspectives. In the first stance, the study has highlighted the job of financial working capital with its dimensional role. Similarly, in the second perspective, the study is theoretical contributes to the working capital management importance to meet the current obligations of the firms. Meanwhile, thirdly the study has contributed through capital structure involvement and imperative position for the betterment of the financial performance of the firm. Likewise, the study has also been drawn attention to mediating role of working capital management between financial working capital and capital structure. The current study is theoretical contributed to the financial working capital management concept as well financial chain concept that directly linked up the company capital structure and drives further direction to the researcher for the future.

5.2 Practical Implication

In the parallel of the theoretical side, the study has also significant for the practical side. The study provides the direction to managers of the textile sector firms to manage, understand and control the financial working capital in the context of the cash conversion cycle along with maintaining the working capital cycle to meet the short-term obligation. The current study also provides direction to the managers of textile sector firms to handle the debt-equity percentage in the shape of capital structure. With the help of this study, the textile sector firms will enhance the volume of working capital to meet the short-term liquidity and its results will be gained in the

shape of a stronger capital structure. The textile sector firms will be used this research model to maintain their liquidity and capital structure position to compete in the financial market through the highest market share price.

5.3 Future Direction and Limitations

In the parallel of the theoretical and practical side, the study has some limitations along with the future direction. The study has been conducted with a focus on the developing economy resembling Pakistan. In this context, the same study with a focus on developed economies will be conducted for comparison purposes of developing and developed economies in the future. Similarly, the current study is conducted by the focus of textile sector firms due to continuous use of financial working capital during the whole financial year. In the light of the above said, the future study will be executed in another sector of Pakistan for confirmation of the novelty of the research design and model.

5.4 Conclusion

The earlier studies simply discussed the relationship between financial working capital, working capital and cost of capital. The outcomes of this research are also matched with previous studies. The earlier studies are only showing a relationship but this study has proved that working capital is playing an intermediary role between financial working capital and the capital structure of firms. The results have highlighted that textile sectors firms are more spend on operational expenses (selling, general and administrative expenses) and also late recovered receivables from debtors. Due to this textile sector firms are used current assets of the companies and its result in a picture of shortage of working capital in form of (cash in hand or cash at the bank). The working capital is linked with the capital structure of the company. The ideal ratio every firm's capital structure is 40:60. It means 40% equity and 60% debt. When financial working capital (ARTR,OPMR) is not performing well then it shows impact on working capital (CR, SWR) and its impact directly delivered on the capital structure of firms. In this scenario, firms are taking more debts to meet day-to-day activities and the debt ratio is increased up to 80% even its gone to 100% debt, then the result is a defaulter of the firm. So I concluded that this study is proved that working capital is playing an intermediary role between financial working capital and the capital structure of firms.

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