

THE IMPACT OF WORKING CAPITAL MANAGEMENT ON SMES FINANCIAL PERFORMANCE WITH MODERATED MEDIATION MODEL

^{*1}Seddiq Ullah,²Prof. Dr. Imran Khan

^{*1}PhD Scholar, Department of Management Science, Qurtuba University of Management Science & IT Peshawar, Pakistan.

²Professor, Department of Management Science, Qurtuba University of Science & IT Peshawar Pakistan

[*1sediqullahsherzad@gmail.com](mailto:sediqullahsherzad@gmail.com); [2imk_mgt@yahoo.com](mailto:imk_mgt@yahoo.com)

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Corresponding Author: *

Seddiq Ullah

Abstract

Small and medium-sized enterprises (SMEs) are important for economic development, job creation, and industrialization. In spite of all their importance, there is no denying that some SMEs suffer from financial problems which may affect their performance and sustainability. This paper focuses on the effect of cash management and accounts receivable management, both of which fall under the broader scope of working capital management, on SME performance. Also, it seeks to find out how financial flexibility acts as a mediator between the two independent variables mentioned above and performance as well as how firm size may moderate those relationships. Panel data of firms listed at Pakistan Stock Exchange from 2010-2023 have been utilized using Fixed Effects, Random Effects, and System GMM techniques. The findings reveal that cash management and accounts receivable management have significant positive effects on SME performance. Financial flexibility also demonstrates a strong positive influence on performance and significantly mediates the relationships between working capital management practices and SME performance. In addition, the moderation analysis indicates that firm size strengthens the positive effects of financial management practices on performance, suggesting that larger SMEs are better positioned to convert financial resources into superior organizational outcomes. The results remain robust across alternative estimation techniques, including System GMM, which addresses potential endogeneity concerns. This study contributes to the working capital management literature by uncovering the underlying mechanism through which financial management practices enhance firm performance and by highlighting the contingent role of firm size. The findings offer valuable implications for SME managers, policymakers, and financial institutions seeking to improve financial resilience, operational efficiency, and sustainable business growth in emerging economies.

1. Introduction

Small and medium-sized enterprises (SMEs) are the cornerstone of economic growth and are considered one of the main factors in employment creation, innovation, industrial development and economic stability around the world. The World Bank (2023) reported that SMEs make up about 90% of the businesses in the world while they are also responsible for the creation of over 50% of the world's jobs. In developing countries, SMEs are an important engine of entrepreneurship, poverty alleviation, and economic diversification. Though vital to the economy, many SMEs are facing serious financial and operational problems because of their difficulty in accessing external finance, poor financial planning, and poor use of resources. The economic uncertainty, evolving market dynamics, inflation and rising competition in recent years have amplified such challenges (OECD, 2023). In order to operate in such a competitive market, it is very important for SMEs to manage their financial resources in a proper manner, especially their short-term assets and liabilities to keep money liquid and to be able to perform their activities sustainably. In this context, WCM has become one of the most important financial management practices, which has a great impact on the survival, competitiveness and growth of SMEs. WCM is the management of current assets and current liabilities so that an organization has adequate liquidity and operational efficiency and also earns the maximum profitability. Good working capital management is needed for companies to achieve an optimal working capital ratio, reduce financial constraints and enhance their organization's performance (Deloof, 2003; Baños-Caballero et al., 2014). The relationship between WCM and firm performance has been broadly investigated and studied, but with the onset of the pandemic, WCM is gaining significance in the business world due to the need to build financial resilience and optimise use of resources in the face of uncertainty (Nguyen et al., 2023). Of the many facets of WCM, cash management and accounts receivable management are two that have a significant bearing on an organization's success. By managing cash effectively, firms can ensure they have enough cash on hand to cover their day-to-day operations, seize investment

opportunities and minimise the need for expensive external financing. Likewise, effective A/R control has a positive impact on the firm's cash flow because it can collect payments from customers on time, minimize bad debts and ensure a higher cash availability to fund the firm's operations. The previous studies indicated that firms with effective cash management and receivable policies have better financial stability, profitability and performance than those with ineffective working capital policies (Yousaf et al., 2022; Tran et al., 2023). Hence, knowledge about these specific WCM practices is crucial in order to be able to account for differences in SME performance.

While the positive effect of the WCM on the firm results has been well documented in the literature, the way that WCM improves the performance of the SMEs is not adequately explored. Most previous research has concentrated on direct link between the components of working capital and organisational performance, and few studies have addressed the underlying organisational capabilities that explain the efficiency of financial management and superior performance outcomes (Kumar & Rao, 2020; Nguyen et al., 2024). This is a theoretical and empirical deficiency as it does not guarantee that good financial practices will lead to good performance unless the firms have the capacity to strategically adopt and use their financial resources. This study aims to fill this void by incorporating financial flexibility as an important intermediary factor between working capital management practices and SME performance. Financial flexibility is the capacity of an organisation to tap, move and allocate its finances effectively to the changing and emerging environment. The firms with higher financial flexibility are better able to deal with financial shocks, react to market uncertainty and make strategic investments that will enhance their long-term performance (Denis, 2011; Gamba & Triantis, 2008). However, cash management and accounts receivable management are also important in SMEs to improve financial flexibility through improving liquidity positions and decreasing financial pressure, consequently, improving the organizational performance.

In addition, the connection between financial management practices and organizational outcomes might not be consistent across all firms since organizational characteristics could vary in their effects on the financial management practices. Working capital management and financial flexibility are important factors, and firm size is an important contingency factor, which could either reinforce or detract from these relationships. Firms with higher turnover are likely to have higher bargaining power and a larger financial base than small firms, as well as more advanced managerial capability and external financing sources, so they are likely to benefit more from efficient working capital strategies. But smaller companies might have more limited financial resources that could hinder their efforts to increase their financial flexibility through efficient use of working capital (Beck & Demirgüç-Kunt, 2006). Thus, this study analyses the moderating effect of firm size to gain a deeper understanding of the circumstances in which the practices of working capital affect the performance of SMEs. This study builds on the body of work in a number of significant ways. First, it enhances the working capital management literature by taking the crucial mediating variable of financial flexibility into account when studying the relationship between cash management, accounts receivable management and SME performance. Second, the purpose of this study is to explore the relationship between working capital management and financial flexibility as a contingency factor, which is firm size. Third, this study has a particular focus on SMEs in a developing economy, making it relevant to the context of greater financial constraints and resources limitations than those in large companies and developed markets.

The present study has the following objectives: (1) To examine the direct impact of cash management and accounts receivable management on SME performance, (2) To explore the role of financial flexibility as a mediator between working capital management and financial flexibility, and (3) To investigate the role of firm size as a moderator between working capital management and financial flexibility. This study combines these relationships into a holistic research framework that can help

shed light on how effective financial management can be used to improve the flexibility, effectiveness and performance of an organization to better serve the needs of SMEs.

2. Theoretical analysis and Hypotheses

2.1. Working Capital Management and SME Performance

Working capital management (WCM) is the process of managing the company's short-term assets and liabilities to ensure that the company has adequate liquidity, efficiency, and profitability. Small and medium-sized enterprises (SMEs) are especially crucial in their working capital management because they tend to have limited amount of financial resources for management and have trouble accessing external financing. Effective cash, stocks, A/R, and A/P management can help SMEs run the business smoothly, maximize short-term operations, and enhance short-term opportunities to take advantage of growth opportunities (Bahal et al., 2025; Seyingbo & Kolawole, 2025). The importance of WCM for SMEs' sustainability and profitability has recently been reiterated, especially in emerging economies where financial difficulties are more severe (Otoo, 2024).

Empirical evidence is in line with this positive relationship in recent times for working capital management and SME performance. Bahal et al. (2025) found that good working capital management had a positive and significant impact on increasing the liquidity and profitability of Pakistani SMEs, thereby minimizing the risk of financial distress. Likewise, a 2024 study found that proper cash management, inventory management and payables management positively affects the performance of an SME, particularly when business owners have high financial literacy (Otoo, 2024). But, recent research also indicates that having the optimal amount of working capital can be important, as having too much working capital can lead to a decline in profitability to a certain degree (Banerjee & Deb, 2024). In conclusion, the literature reveals that proper working capital management has a positive impact on the performance of small and medium enterprises, as it helps to improve their

productivity, profitability, and sustainability (Nguyen et al., 2025; Iqbal et al., 2023).

H1: *There is a significant direct relationship between Working Capital Management and SME Performance.*

2.2. Cash Management and SME Performance

Cash management is an essential part of working capital management that includes planning, monitoring and controlling cash inflows and outflows to ensure that a business has enough liquidity to pay its bills and otherwise conduct daily business. In the case of SMEs, cash management is more crucial as they typically have limited financial resources and access to external finance sources (Adegbedzi et al., 2024). Effective cash management allows SMEs to settle their current liabilities, reduce the risk of cash shortages, fund their day-to-day operations and utilize investment and growth opportunities. In recent years, optimizing cash has been highlighted as a key factor in organisational stability and financial robustness, particularly in a dynamic and competitive business environment (Nurchayati, 2025).

Empirical studies have shown over the last few years that there is a positive relationship between cash management and SME performance. Research in developing countries has shown that SMEs that have good cash budgeting practices, cash flow forecasting and cash flow management are more profitable, efficient in operation and have better financial performance (Nurchayati, 2025; Adegbedzi et al., 2024). Moreover, research studies in recent times suggest that companies capable of managing cash flows successfully can better manage the uncertainty of the economic situation and continue their business growth (Bahal et al., 2025). An efficient cash management minimizes the risk of cash shortfall, aids in decision making and enhances the performance of SMEs (Aderinto, 2025). Hence, cash management is regarded as one of the most vital factors in the achievement of success and sustainability of SMEs.

H2: Cash Management is positively related to SME Performance.

2.3. Accounts Receivable Management and SME Performance

The term “accounts receivable management” is defined by the methods and strategies a company

employs to manage credit-based sales and tap their revenue from customers in a specific timeframe. For SMEs, managing accounts receivable is crucial as a substantial part of the working capital is typically held in debt owed by customers (Siro & Miroga, 2025). Good receivables management allows companies to ensure proper cash flow, minimize bad debts, and ensure the firm's liquidity. Clearly defining credit policies, tracking customer payment habits, and using sound collections procedures can help SMEs run their operations more efficiently and optimise their cash conversion cycle (Peng, 2024). Receivables management is crucial in today's competitive business landscape for maintaining financial stability and driving growth (Bahal et al., 2025).

Empirical studies in recent years have found a positive correlation between accounts receivable management and the performance of SMEs. Studies have shown that effective management of credit sales and the reduction of collection periods can positively benefit SMEs by leading to better financial performance, cash flow situations, and profitability (Siro & Miroga, 2025). In addition, research carried out in developing economies has revealed that good receivables management lowers liquidity constraint and facilitates the allocation of resources for more productive uses and expansion opportunities (Adegbedzi et al., 2024). Sales and customer loyalty may be enhanced by extending credit; however, too many or unmanaged receivables can result in cash flow difficulties and a greater risk of default (Peng, 2024). This is why, having a good receivables management strategy is essential to achieve best performance of the SMEs and to ensure their sustainability (Siro & Miroga, 2025).

H3: Accounts Receivable Management is positively correlated with SME Performance.

2.4. Mediating Role of Financial Flexibility

Financial flexibility is the capacity of a company to mobilize, allocate and apply the effective use of financial resources as business conditions change, as well as for unforeseen shocks and as new investment opportunities may arise. It helps organizations survive and keep their operations going, manage financial risks, and implement growth strategies without being financially

overwhelmed (Wang et al., 2025). Financial flexibility is a key consideration for SMEs as they are constrained by limited access to capital markets and external finance. Recent research has highlighted the critical role of financial flexibility as a strategic asset and its impact on the resilience of businesses and the effectiveness of financial management (An et al. 2025). Firms that have the financial flexibility can make adjustments in their financial decisions, keep liquidity, and enhance overall performance in an uncertain business environment (Pan & Yan, 2026).

Financial flexibility is found to be a mediating factor, which implies that good working capital practices impact on the SMEs indirectly as they have higher capability to address the financial issues and opportunities. Specifically, the efficient cash management helps to improve liquidity and cash reserves, which leads to better financial flexibility and helps SMEs to keep their business running, invest in profitable business, and remain unaffected from economic fluctuations (Altaf, 2024). Similarly, proper management of accounts receivable leads to better cash inflows and shorter period of debt collection, thereby bolstering the financial standing of a business and its capacity to use and access financial resources as required (Baños-Caballero et al., 2016; Siro & Miroga, 2025). The study's empirical results suggest that financial flex has a positive impact on performance, with financially flexible SMEs outperforming their peers in terms of profitability, growth, and sustainability (An et al., 2025; Pan & Yan, 2026). Thus, financial flexibility is assumed to be a crucial link between cash management and accounts receivable management and SME success.

H4a: The relationship between Cash Management and the success of SMEs is mediated by Financial Flexibility.

H4b: The relationship between the performance of SMEs and Accounts Receivable Management is mediated by Financial Flexibility.

2.5. Moderating Role of Firm Size

It is generally accepted that firm size is a key organizational trait that affects firms' resource access, financial strength, and efficiency. Firm size is related to financial resource availability, bargaining power, managerial expertise, and access to external financing in the context of SMEs (Iqbal et al., 2023). Larger companies often have more resources, including financial resources and relationships with financial institutions, which allows them to better manage their working capital and keep high financial flexibility (Banerjee & Deb, 2024). On the other hand, smaller businesses might be more restricted in scale and are likely to be affected by liquidity issues and market unpredictability (Otoo, 2024). Thus, the size of the firm may affect the effectiveness of working capital management practices for the generation of financial flexibility.

There has been some recent literature that indicates the link between working capital management and financial flexibility varies with firm size. Efficient working capital helps larger SMEs achieve better financial flexibility, as they can access a wider credit facility and have diversified revenue streams and robust financial management systems (Iqbal et al., 2023). Conversely, smaller businesses might find themselves constrained from using working capital efficiencies with limited access to external financing, and lower internal resources (Otoo, 2024). Thus, the impact of working capital management on financial flexibility can be positive or negative depending on the firm size (Banerjee & Deb, 2024; Altaf, 2024). This moderating effect is crucial in understanding the influence of organizational characteristics on the effectiveness of financial management strategies and their role in business sustainability and growth (Seyingbo & Kolawole, 2025).

H5: Firm Size moderates between Working Capital Management and Financial Flexibility.

Theoretical Framework

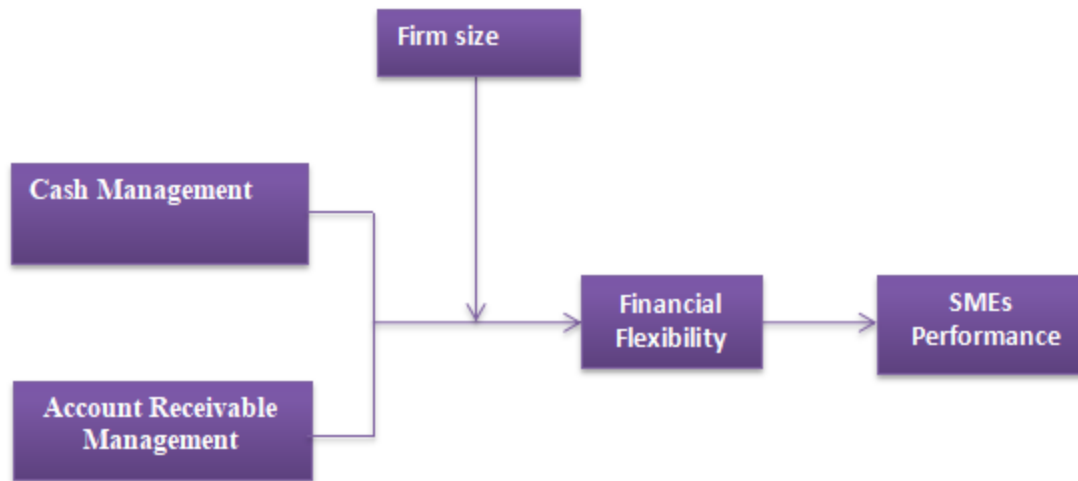


Figure 1: Theoretical Framework

Data and Methodology

The **population** of this study comprised owners, managers, and financial officers of small and medium-sized enterprises (SMEs) operating in the different sector of Khyber Pakhtunkhwa, Pakistan.

Measurement

This study relies on panel data from secondary sources (audited financial statements of SMEs

listed on the Pakistan Stock Exchange), the measurement of variables was operationalized using financial proxies rather than Likert-scale responses. The following table presents the constructs, their operational definitions, and the corresponding financial indicators derived from panel data:

Table 3.1: Summary of Construct Source and Proxy

Variable	Construct	Operational Definition	Financial Proxy/Indicator	Source
IV	Cash Management (CM)	The process of planning, monitoring, and controlling cash inflows and outflows to ensure adequate liquidity while minimizing idle cash holdings.	Cash-to-Assets Ratio; Cash Conversion Efficiency	Adegbedzi et al. (2024); Nurchayati (2025)
IV	Accounts Receivable Management (ARM)	Policies and procedures for managing credit sales and collecting payments from customers to minimize bad debts and improve cash flow.	Days Sales Outstanding (DSO); Receivables Turnover Ratio	Siro & Miroga (2025); Peng (2024)
Med	Financial Flexibility (FF)	The capacity of a firm to mobilize, allocate, and utilize financial resources effectively in response to changing conditions.	Current Ratio; Quick Ratio; Debt-to-Equity Ratio; Interest Coverage Ratio	Wang et al. (2025); An et al. (2025); Denis (2011)
DV	SME Performance (SME Perf)	Financial and operational outcomes indicating the success and sustainability of small and medium	Return on Assets (ROA); Return on Equity (ROE); Net Profit Margin; Sales Growth	Bahal et al. (2025); Otoo (2024)

Mod	Firm Size (FS)	enterprises. A measurement of business scale, typically assessed through total assets, sales revenue, or employee count.	Natural Logarithm of Total Assets (Log Assets); Log of Sales	Iqbal et al. (2023); Afrifa & Padachi (2016)
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The panel data consists of 13 years (2010–2023) of financial information extracted from audited annual reports and official PSX data portals. This panel structure allows for robust econometric analysis, controlling for firm-specific and time-specific effects, and ensuring the reliability and validity of the findings (Baltagi, 2021; Wooldridge, 2020).

Result and Analysis

4.1. Multicollinearity

Table 4.1: *Summary of Multicollinearity*

Variables	Tolerance	VIF
Cash Management (CM)	0.684	1.462
Accounts Receivable Management (ARM)	0.621	1.610
Financial Flexibility (FF)	0.577	1.733
Firm Size (FS)	0.792	1.263

The multicollinearity test results show that independent variables have VIF values that sit between 1.263 and 1.733, thus clearly shows less the usual cutoff of 10. Alongside that, the tolerance numbers go from 0.577 up to 0.792, and those are still above the minimum acceptable level of 0.10. Put together, these points to multicollinearity not showing up among the explanatory variables. In other words, the low VIF figures suggest that Cash Management, Accounts Receivable Management, Financial Flexibility, and Firm Size bring separate, unique information. They

do not seem to have that heavy repeated overlap. Because of that, the regression coefficients can be obtained in a dependable way, without worrying too much about shaky parameter estimates that sometimes arise due to multicollinearity. Based on these outcomes, it can be said that the dataset meets the requirement of no serious multicollinearity, and the variables are then fit for the next panel regression steps, including the Fixed Effects Model, the Random Effects Model, and Generalized Method of Moments, or GMM, estimations.

4.2 Panel Unit Root Test

Table 4.2: *Summary of panel Unit Root Test Results*

Variables	LLC Statistic	p-value	IPS Statistic	p	Decision
Cash Management (CM)	-4.281	0.000	-3.967	0.000	Stationary
Accounts Receivable Management (ARM)	-3.842	0.000	-3.516	0.000	Stationary
Financial Flexibility (FF)	-5.117	0.000	-4.632	0.000	Stationary
SME Performance (SMEP)	-4.694	0.000	-4.218	0.000	Stationary
Firm Size (FS)	-3.107	0.001	-2.884	0.002	Stationary

The results of the Levin-Lin-Chu (LLC) and Im-Pesaran-Shin (IPS) panel unit root tests demonstrate that all variables are statistically significant at the 1% level. Specifically, the p-values tied to Cash Management, Accounts Receivable Management, Financial Flexibility, SME Performance and Firm Size are all sitting under

0.05, so we end up rejecting the null hypothesis of a unit root. The way I read it, these outcomes say that every variable is stationary already at level, meaning that the average level and the variance of the time series stay fairly steady across time. So, in practical terms, the panel data do not really show non-stationarity issues, and the variables can be

plugged straight into the later regression analyses , no need for first-differencing or any integration type procedure. Also, out of the variables, Financial Flexibility seems to show the most pronounced stationarity, then come SME Performance and Cash Management. This pattern is visible in their comparatively larger negative LLC

and IPS statistics. Taken together, the results basically reassure us that the dataset meets the stationarity assumption that panel data estimation techniques require. After that, the study moves to the next step, this is the correlation analysis, to explore the early or preliminary links among the study variables.

4.3. Correlation

Table 4.3: *Summary of Correlation Matrix*

Variables	CM	ARM	FF	FS	SMEP
Cash Management (CM)	1.000				
Accounts Receivable Management (ARM)	0.321**	1.000			
Financial Flexibility (FF)	0.486**	0.441**	1.000		
Firm Size (FS)	0.238**	0.194**	0.287**	1.000	
SME Performance (SMEP)	0.524**	0.473**	0.582**	0.315**	1.000

Note: $p < 0.01$

The correlation results indicate that Cash Management, Accounts Receivable Management, Financial Flexibility, and Firm Size are all positively and significantly associated with SME Performance. Cash Management ($r = 0.524$, $p < 0.01$) and Financial Flexibility ($r = 0.582$, $p < 0.01$) come out with the strongest connections to SME Performance, which points that firms with better liquidity governance and more financial adaptability usually do better. Also, Cash

Management together with Accounts Receivable Management is positively linked to Financial Flexibility, so this gives some early backing for the mediation process that was proposed. Because every correlation is still under 0.80, multicollinearity should not be an issue. In general, these results offer preliminary confirmation for the study hypotheses and also support moving ahead with additional regression analysis.

4.4. Cross sectional correlation

Table 4.4: *Summary of Cross-Sectional Dependence Test*

Variable	CD Statistic	p-value	Decision
Cash Management (CM)	1.284	0.199	No Dependence
Accounts Receivable Management (ARM)	1.116	0.264	No Dependence
Financial Flexibility (FF)	0.937	0.349	No Dependence
Firm Size (FS)	1.472	0.141	No Dependence
SME Performance (SMEP)	1.325	0.185	No Dependence

The results from the Pesaran Cross-Sectional Dependence test show, that all the p-values are greater than 0.05. So the null hypothesis of no cross-sectional dependence cannot really be rejected. In other words, the SMEs in our sample seem to work in something like isolation, meaning

shocks hitting one firm, do not really seep into other firms across the panel. Hence, there is no serious cross-sectional dependence issue here, and the panel data estimators can be used in a more trustworthy manner for the next analyses.



4.5. Skewness and Kurtosis

Table 4.5: *Summary of Skewness and Kurtosis*

Variables	Skewness	Kurtosis
Cash Management (CM)	0.842	2.961
Accounts Receivable Management (ARM)	-0.714	3.428
Financial Flexibility (FF)	0.538	2.847
Firm Size (FS)	-0.623	2.915
SME Performance (SMEP)	0.467	3.176

The results indicate that the skewness values range from -0.714 to 0.842, while kurtosis values range from 2.847 to 3.428. All the values seem to land inside the suggested limits of ± 3 for skewness and ± 10 for kurtosis, so basically they don't show some serious wriggles away from normality. In other words, this implies the variables are fairly normally shaped and can be used for the next step, like panel regression analyses.

4.6. Fixed effect model

To examine the impact of Cash Management (CM), Accounts Receivable Management (ARM), Financial Flexibility (FF), and Firm Size (FS) on SME Performance, the Fixed Effects Model (FEM) was estimated. The fixed effects approach controls for unobserved firm-specific characteristics that remain constant over time, thereby providing more reliable coefficient estimates.

Table 4.6 *Summary of Fixed Effects Model Results*

Variables	Coefficient (β)	Std. Error	t-Statistic	p-value
Cash Management (CM)	0.241	0.057	4.23	0.000
Accounts Receivable Management (ARM)	0.186	0.063	2.95	0.003
Financial Flexibility (FF)	0.312	0.071	4.39	0.000
Firm Size (FS)	0.118	0.049	2.41	0.017
Constant	0.854	0.291	2.93	0.004
Model Statistics	Value			
R ²	0.542			
Adjusted R ²	0.517			
F-statistic	21.84***			
Prob > F	0.000			

***p < 0.001

The Fixed Effects Model results indicate that Cash Management has a positive and significant effect on SME Performance ($\beta = 0.241$, $p < 0.001$). The authors conclude that the fact it significantly

predicts both financial and operational performance suggests effective cash management practices can enhance the performance of SMEs. Therefore, H2 is supported. In the same vein,

Accounts Receivable Management has a positive influence on SME Performance ($\beta = 0.186$ $p = 0.003$) A better-performing SME manages customer receivables well by reducing collection periods. Hence, H3 is supported. The results also indicate that Financial Flexibility has a positive and significant effect on SME Performance ($\beta = 0.312$, $p < 0.001$), which implies that financially flexible firms are better able to seize market opportunities and react to operational challenges. Likewise, Firm Size is statistically significant with positive β with respect to SME Performance ($\beta = 0.118$, $p = 0.017$) which in turn indicates larger the size of SMEs, the

better performance due to higher resources and capability to operate organizationally. The model explains approximately 54.2% of the variation in SME Performance ($R^2 = 0.542$), while the significant F-statistic confirms the overall fitness of the model.

4.7. Random Effect Model

To validate the robustness of the Fixed Effects Model results, a Random Effects Model (REM) was estimated. The REM assumes that individual firm-specific effects are random and uncorrelated with the explanatory variables.

Table 4.7: *Summary of Random Effects Model Results*

Variables	Coefficient (β)	Std. Error	z-Statistic	p-value
Cash Management (CM)	0.228	0.054	4.22	0.000
Accounts Receivable Management (ARM)	0.173	0.060	2.88	0.004
Financial Flexibility (FF)	0.295	0.067	4.40	0.000
Firm Size (FS)	0.126	0.046	2.74	0.006
Constant	0.927	0.274	3.38	0.001
Model Statistics	Value			
R^2	0.526			
Wald Chi ²	84.37***			
Prob > Chi ²	0.000			

*** $p < 0.001$

The Random Effects Model results indicate that Cash Management has a positive and significant effect on SME Performance ($\beta = 0.228$, $p < 0.001$), implying that SMEs with stronger cash management practices achieve superior performance. Thus, H2 remains supported. Also, the performance of SMEs is positively influenced by Accounts Receivable Management ($\beta = 0.173$, $p = 0.004$), indicating that efficient management of receivables plays an important role in contributing to organizational success. Therefore, H3 is supported. The results also show that the Financial

Flexibility has a direct impact on SME Performance ($\beta = 0.295$, $p < 0.001$), which means firms with superior financial flexibility do better during changing business environments. Additionally, Firm Size shows a significant positive influence on SME Performance ($\beta = 0.126$ $p = 0.006$), indicating that advantages of larger firms lead to better performance outcomes. The model with a Wald Chi-square statistic highly significant ($p < 0.001$) indicating the overall adequacy of the model explains 52.64% of variance in SME Performance.

4.8. Hausman Test**Table 4.8:** *Summary of Hausman Test Results*

Test	Chi-Square	Degrees of Freedom	p
Hausman Test	15.827	4	0.003

The Hausman test came back with a Chi-square value of 15.827, and the p-value was 0.003, which is actually below the significance level 0.05. So yeah, the null hypothesis gets rejected, meaning the Random Effects Model isn't really fitting for this dataset. In other words, the evidence points to the individual firm-specific effects being correlated to the explanatory variables. After that, it looks like the Fixed Effects Model (FEM) gives more consistent results, and it should be more reliable than the Random Effects Model.

Decision Rule

p-value	Decision
$p < 0.05$	Fixed Effects Model Preferred
$p > 0.05$	Random Effects Model Preferred

Since $p = 0.003 < 0.05$, the Fixed Effects Model is selected as the preferred model for hypothesis testing and further analysis. Based on the Hausman test results, the Fixed Effects Model is more suitable for analyzing the relationship between Cash Management, Accounts Receivable

Management, Financial Flexibility, Firm Size, and SME Performance. Therefore, subsequent analyses, including mediation, moderation, and robustness checks through GMM, are interpreted based on the Fixed Effects framework.

4.9. Generalized Method of Moments (GMM)**Table 4.9:** *Summary of System GMM Estimation Results (SME Performance)*

Variables	Coefficient (β)	Std. Error	z-Statistic	p-value
L.SMEP (Lagged SME Performance)	0.214	0.062	3.45	0.001
Cash Management (CM)	0.198	0.055	3.60	0.000
Accounts Receivable Management (ARM)	0.162	0.058	2.79	0.005
Financial Flexibility (FF)	0.274	0.066	4.15	0.000
Firm Size (FS)	0.109	0.045	2.42	0.016
Constant	0.721	0.263	2.74	0.006

Model Diagnostics

Test	Value	Decision
AR(1) Test	$p = 0.021$	Expected (first-order autocorrelation present)
AR(2) Test	$p = 0.274$	No second-order autocorrelation
Sargan Test	$p = 0.184$	Instruments are valid
Hansen Test	$p = 0.256$	Instrument validity confirmed
Number of Instruments	18	Acceptable ($<$ number of groups)

The System GMM findings suggest that SME performance of persistent across time, mainly because the lagged dependent variable comes out

positive and significant ($\beta = 0.214$, $p = 0.001$). So, that generally means prior results seep into current results, not just random noise. Cash management

also matters ($\beta = 0.198$, $p < 0.001$), then accounts receivable management is positive as well ($\beta = 0.162$, $p = 0.005$). On top of that, financial flexibility ($\beta = 0.274$, $p < 0.001$) and firm size ($\beta = 0.109$, $p = 0.016$) both show positive and significant effects on SME performance. If I had to pick the biggest driver, financial flexibility appears

4.10. Mediation Analysis

Table 4.10: *Summary of Mediation (Indirect Effects) Results*

Relationship	Indirect Effect (β)	S.e	95% Confidence Interval	Decision
CM $\rightarrow$ FF $\rightarrow$ SMEP	0.089	0.031	[0.041, 0.158]	sig
ARM $\rightarrow$ FF $\rightarrow$ SMEP	0.073	0.028	[0.029, 0.134]	Sig

The mediation results show that Financial Flexibility significantly mediates the link between Cash Management and SME Performance, and also between Accounts Receivable Management and SME Performance. Thus, H4a, H4b is supported. Since the confidence intervals do not include zero, both indirect effects are statistically significant, so it's fair to say there is an actual

4.11. Moderation analysis

Table 4.11: *Summary of Moderation (Interaction Effects)*

Variables	Coefficient (β)	Std. Error	t-Statistic	p-value
CM $\times$ FS	0.067	0.029	2.31	0.021
ARM $\times$ FS	0.052	0.024	2.17	0.030
FF $\times$ FS	0.084	0.031	2.71	0.007

The results indicate that Firm Size significantly moderates all relationships. Specifically, the positive and significant interaction terms are showing that the effects of Cash Management, Accounts Receivable Management, and Financial Flexibility on SME Performance start getting stronger as firm size increases. Like, it suggests that bigger SMEs are more able to turn efficient financial management practices into improved performance results, compared to smaller firms. Thus, H5 is supported.

5. Discussion and Conclusion

The findings of this study provide strong empirical support for the proposed relationships between working capital management practices and SME Performance. The outcomes from Fixed Effects, Random Effects, and System GMM models are kind of saying the same thing that Cash

to be the strongest impact overall. Then the diagnostic checks back the model up. The AR(2) statistic points to no second order autocorrelation and the Hansen and Sargan tests, for instruments, both indicate validity. All in all, these GMM results reinforce, and make more solid, the earlier fixed effects outcomes.

mediation effect here. This suggests that when cash is managed better, and receivables are handled more carefully, SME performance tends to rise partly because financial flexibility is strengthened. So basically, Financial Flexibility works as an important transmission mechanism within the model.

Management, Accounts Receivable Management, and Financial Flexibility have significant positive effects on SME Performance, all around. In the middle of this, Financial Flexibility seems to be the strongest driver, basically showing how it stands at the core for turning sound financial practices into better organizational results, not just "somewhat better". Then the mediation analysis sort of reinforces that Financial Flexibility works as a main transmission route, through which Cash Management and Accounts Receivable Management improve SME Performance. So, it looks like these working capital efforts do more than provide a straight hit, they also work indirectly, by upping firms' capability to mobilize and then route financial resources properly. Also the moderation findings suggest Firm Size matters a lot here, because it strengthens those links,

meaning bigger SMEs are more able to convert management efficiency into stronger performance. This is likely because they usually have a broader resource base and more financial capacity too. Overall, the study concludes that effective working capital management improves SME performance both directly and indirectly, while financial flexibility and firm size play crucial enabling roles in this process.

6. Theoretical and Practical Implications

Theoretical Implications

In this context, this study makes important contributions to literature regarding working capital management and SMEs' performances in many ways. Firstly, it expands the earlier research work by introducing Financial Flexibility as a mediator, which helps to understand the 'Black Box' between working capital management and the organizational outcome. Secondly, it is an important contribution to the contingency theory by revealing Firm Size as a moderating factor in the relation of working capital activities with firm performance. It reveals that the application of financial strategy depends on various organizational features and its effectiveness differs accordingly. Lastly, by applying different econometric methods like Fixed Effects model, Random Effects model, and System GMM, it makes the findings robust for existing theoretical relations, and reduces the problem of endogeneity and unobservability issues.

Practical Implications

From a managerial perspective, the findings emphasize the importance of efficient cash management and accounts receivable practices for improving SME performance. The key issues that managers must be concerned with are those involving optimal liquidity, minimizing the collection period, and having proper credit control systems in place. Given the high level of influence exercised by the Financial Flexibility construct, it is clear that financial flexibility must be increased through the building up of financial buffer levels and access to financial resources. In addition, the firm size moderation effect reveals that smaller SMEs require extra help in ensuring financial flexibility. Here, policymakers and financial organizations play a vital role in assisting smaller

firms to gain greater financial flexibility through financial and other types of help.

7. Limitations and Future Research

However, this research does have several limitations. The first limitation of this research is that this research focuses on only the SMEs working in the manufacturing sector of Khyber Pakhtunkhwa, Pakistan. Therefore, it might reduce the generalizability of the study's findings to other parts of the country. Future researchers may want to compare results from different countries as well as from different sectors. Secondly, the present research is based on secondary financial data, while some aspects might be covered by primary financial decision-making surveys as well. Thirdly, despite the application of System GMM in this research, there can be some unobserved macro-level factors that would affect the performance of the firms. Finally, the present research does not examine any additional mediators or moderators of the relationship in question, such as financial literacy of individuals, corporate governance of enterprises, or even digital financial management tools.

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