

Role of Small and Medium Enterprises in Managing Financial Liquidity in Corporate Sector: A Case Study of Pakistan

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Abstract

This study recognizes the importance of small and medium enterprises in improving the financial liquidity in the corporate sector. These enterprises play an important role in the sale of finished products on credit and managing the inventories of merchandizing goods. Consequently, the burden of inventory holding and receivables from consumers is transferred from large-scale industries to small and medium enterprises (SMEs). In such ways, they facilitate the large-scale manufacturers. Large-scale firms can focus on investment in fixed assets. This mechanism promotes the expansion of business activities in the economy. The small and medium enterprises in Pakistan play also an important role in earnings from exports. To identify these linkages is the main concern of the study. The study identifies the determinants of inventories, receivables, exports, and spending on employment. The study is based on 6 years' data from 398 companies listed on the Pakistan Stock Exchange, while panel least square techniques have been applied to estimate the parameters.

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1. Importance of Small and Medium Enterprises in Aggregate Business Activities

The strategic location, global connectivity, a large market with a growing population, fertile land, tourist places, and rich mineral resources are those advantages that provide the basis of attractive economic growth to Pakistan. However, ineffective policies, unrealistic planning, and lack of coordination are the major hindrances to the economic development and growth of Pakistan's economy. For instance, the major part of economic activities in Pakistan belongs to the small and medium enterprises (SMEs) but it is one of the negligible areas in monetary and fiscal policies. Major exporting sectors in Pakistan including textiles, garments, agriculture, food processing, light engineering, surgical goods, sports goods, leather, footwear, and furniture belong to small and medium enterprises (SMEs). These enterprises are

major contributors also to domestic economies through wholesale and retail activities, construction, education, hotels and hospitality services, transport, and tourism activities.

The small and medium enterprises (SMEs) are globally recognized as engines of growth. According to the World Economic Forum (2022), small and medium enterprises (SMEs) including mid-sized companies represent around 90% of all firms globally. Their contribution to global GDP is around 70%. Their role is significant in determining the nature of growth innovation and sustainability in global and domestic economies.

In Pakistan, there were more than 5 million small and medium enterprises (SMEs) in 2021 (SMEDA: 2021, Najib: 2021). According to the State Bank of Pakistan (2021), small

and medium enterprises (SMEs) constitute 90% of the economic establishments, contributing 30% to GDP and 25% to export earnings. The sector also employs 78% of Pakistan's non-agricultural labor force. However, the Small and Medium Enterprise Development Authority (SMEDA) has reported a 40% contribution of SMEs in GDP.

Gallup (2004) mentioned that manufacturing units in SMEs constitute 30% of the total value of manufacturing in the country. These units employ more than 60% of the total labor force in the manufacturing sector. The number of manufacturing units in SMEs is more than 98% of the total manufacturing units in the country. Interestingly, 59% percent manufacturing units are in rural areas. The data from the latest sources confirm the growing participation of SMEs in the national economy of Pakistan.

Another important role of small and medium enterprises (SMEs) in Pakistan is to facilitate large-scale industries in managing their working capital. To understand this point it is important to know that the majority of sports goods manufacturers, surgical instruments units, leather products manufacturers, garments manufacturers, textile processing, dyeing and bleaching, bed wear manufacturing, and towel manufacturing units belong to the small and medium enterprises (SMEs) in Pakistan. The textile brokerage houses which export the textile products also belong to the SMEs. These small and medium-scale brokerage houses buy exportable products from large-scale companies after receiving confirmed orders from abroad.

Mehar (2022) and Mehar (2007) have identified that investment requirements in the various stages of the textile chain in Pakistan are highly dependent on the types of products and compliance with local and global standards and regulations. The spinning (yarn manufacturing), weaving (fabric manufacturing), and composite (vertically integrated companies) units are considered capital-intensive sectors. But they produce intermediate products and are known as mainstream industries. While downstream industries are involved in textile processing, coloring and bleaching, garments manufacturing, towel manufacturing, brokerage houses for exports, and stitching. The downstream industries in the textile and clothing sector are less capital-intensive and such businesses can be launched by small and medium-sized enterprises (SMEs). There are two main advantages of investment in such downstream industries: (1) They add value to the intermediate products and earn more foreign exchange for the country; (2) the SMEs in downstream industries are closely associated with skilled and educated human resources. The marketing abilities, branding, cross-cultural linkages, expertise in the effective utilization of information technology, and knowledge of the grading, standardization, and compliance of various standards, rules, and regulations are closely related to human resource development. This area is more important for export-oriented firms which belong to downstream SMEs. Almost similar linkages can be observed in other sectors including chemical, leather, steel manufacturing, and auto industries.

The corporate assets can be classified into 3 categories: (1) Fixed assets (Plant, machinery, land, and building, etc.), (2) Liquid current assets (Cash, bank balance, and marketable securities), and (3) Illiquid current assets (Receivables and inventories). Financial liquidity is defined as the ease at which an asset can be converted into cash. Fixed assets, inventories, and receivables cannot be easily converted into cash, so they are not considered liquid assets. However, liquid and illiquid current assets constitute the working capital that is required for day-to-day payments for running business activities. The higher volume of inventories and receivables can reduce the volume of liquid assets. Small and medium enterprises (SMEs) provide an intermediating point between large-scale manufacturers and consumers. Sometimes, small and medium enterprises (SMEs) buy semi-finished or intermediate products from large-scale industrial units and convert them into finished goods. In some cases, they work as wholesalers, agents, or suppliers. In such ways, they facilitate the large-scale manufacturers through instant buying of their products. Consequently, the burden of inventory holding and receivables from consumers is transferred to the small and medium enterprises (SMEs). Identifying this linkage is the main concern of the study.

This study identifies the determinants of inventories, receivables, exports, and spending on employment. The significant positive impact of small and medium enterprises on receivables and inventories will reflect their role in facilitating large-scale manufacturers to improve their liquidity position. The availability of cash to large-scale industries may induce investment in fixed assets and enhancement in business activities. Similarly, the higher export sales by small and medium enterprises (SMEs) show their significant role in foreign exchange earning which is also an indicator of liquidity in the monetary system. The inflow of foreign exchange will increase the supply of money in the domestic economy which improves financial liquidity. The higher benefits to the employees may also lead to growth in aggregate consumption and savings in the domestic economy.

The next section of this paper describes the SME-related issues and facilitations in Pakistan. Section: 3 explains the structure of data related to this study. The methodology to test the hypothesis has been described in section: 4, while section: 5 discusses the empirical findings. The last section recommends some policy measures and highlights the limitations of empirical findings.

2. SMEs in Pakistan: Issues and Facilitative Measures

Despite the importance of SMEs in domestic and external sectors, these enterprises are facing several issues and barriers to their growth and survival. The fiscal and monetary system does not support SMEs in Pakistan. The banks' lending to SMEs in Pakistan is around 5 percent of total banks' lending. This ratio is 25 percent in India and 40 percent in Bangladesh. It shows a systematic bias against the SMEs in Pakistan. Japan International Cooperation Agency – JICA (2018) has reported

that the size and structure of the financial sector are important in financing small and medium enterprises in Pakistan. According to its report (JICA: 2018), the financial sector in Pakistan is limited among comparable emerging market economies despite the significant development in Pakistan's financial sector from 1993 to 2018. According to an assessment by JICA (2018), the banking sector dominates the financial sector with its assets accounting for 75% of the sector's total assets. While 16% of assets belong to the national saving schemes (NSS), 5% in insurance companies, 4% in nonbank institutions, and 0.1% in microfinance institutions (MFIs).

Sherazi, Muhammad, Muhammad, Kashif, and Syed (2013), Mehar (2005d) and Mehar (2005c) have pointed out the financial constraint as the top obstacle in the growth of SMEs in Pakistan, while corruption was ranked second. The other obstacles determined through principal component analysis are social and technological constraints, lack of training, structure of management, and inadequate infrastructure. Ahmad and Karim (2015) profiled the flow of credit to manufacturing SMEs and their subsectors in Pakistan. They noted a growth in SME financing between 2006 and 2014. However, its share in total financing to industry was declining. Moreover, the flow of credit is concentrated in a few subsectors, which reflects the low level of diversification. It highlights that further diversification and growth are required to accelerate the country's economic development.

In the past, several initiatives have been taken by different institutions to boost the role of small and medium enterprises (SMEs) in Pakistan. World Bank spent USD 137 million on a 'Financial Inclusion and Infrastructure Project (FIIP)' from 2017 to 2022. The purpose of this project was to increase access and usage of digital payments and financial services for households, micro, small and medium enterprises (MSMEs), and other businesses. Due to this initiative, it is expected that the market potential of digital finance services in Pakistan will cross 36 billion USD by 2025, providing a 7% boost to the GDP, creating 4 million new jobs, and resulting in 263 billion USD additional deposits.

World Bank spent USD 100 million on the 'Punjab Jobs and Competitiveness Program' in 2016-2021 to support the implementation of the Punjab Growth Strategy (PGS) for manufacturing growth in the province. The project supported the regulatory reforms related to business registration, permits and licensing, contract enforcement, and property registration. World Bank has launched also a 'Developing Artisanal Livelihoods' program with USD 2.8 million in rural areas of Pakistan in 2014-18. The objective of this program was to demonstrate the effectiveness of a crafts-based cluster approach to alleviate poverty and improve the living conditions of weavers and embroiderers in rural areas of Pakistan.

Department for International Development (DFID) United Kingdom established 'Karandaz' in Pakistan in 2014. 'Karandaz' is a non-governmental organization (NGO) registered with the Securities and Exchange Commission of

Pakistan (SECP) under the Enterprise and Assets Growth Program (EAGR). The aim of this program was to improve the micro, small, and medium enterprises (MSMEs) access to finance. Department for International Development (DFID) has invested USD 50 million through a wholesale credit business and direct investment in equities. 'Karandaz' contributed around 38% capital of the Pakistan Microfinance Investment Company (PMIC) which provides loans to microfinance providers. The Bill and Melinda Gates Foundation has funded USD 32 million through the 'Karandaz Digital program. This program promotes the digitalization of government payments, which reduces the barriers to customers' access to finance.

The Development Credit Authority (DCA) started its business in Pakistan in 2014. The authority (DCA) guarantees up to 50% of the principle, which enables commercial banks to extend a total of USD 60 million of credit. Many commercial banks in Pakistan are utilizing this facility. USAID contributed USD 5 million to increase the outreach of SME finance by increasing utilization of the CDA partial guarantee extended to Khushali Microfinance Bank. Asian Development Bank (ADB) has approved a loan of USD 20 million to Khushali Microfinance Bank to expand access to credit for agriculture and micro, small, and medium-sized enterprises.

To provide equity capital to SMEs in partnership with local private equity firms a joint initiative in collaboration of USAID, Abraaj Group, Indus Basin Holding, JS Private Equity Management, and Pakistan Private Investment Initiative (PPII) was launched by USD 100 million. The initiative was started in 2016. A 'Small & Medium Enterprise Activity (SMEA)' project was implemented by Chemonics. This project was initiated by USAID with USD 35 million from 2017 to 2022. The objective of this initiative was to improve the financial and operational performance of SMEs in 7 sub-sectors (information and communications technology, light engineering, textile, hospitality, minerals, packaging, and leather).

The 'Innovation Challenge Fund for selection of innovative ideas in 2018, a 'Multi-Donor Trust Fund (MDTF)' to improve the competitiveness of marble and food processing sectors in Khyber Pakhtunkhwa (KP) in 2013, 'South-South Global Assets and Technology Exchange (SS-GATE)' system by United Nations Development Program (UNDP) in 2008, SME Business Support Fund (BSF) by Government of Pakistan in 2007 and Pakistan Export Finance Guarantee Agency Limited (PEFGAL) with the help of Asian Development Bank (ADB) in 1999 are included in the initiatives to support the SME sector in Pakistan.

To promote small and medium enterprises (SMEs), the State Bank of Pakistan (SBP) is focusing on leveraging technology not only in payments but also in modernizing lending platforms. SBP is also promoting an enabling regulatory environment for new players and forming new contractual relationships between financial institutions and third parties. The State Bank of Pakistan has established a

'Challenge Fund for SMEs (CSF)'. It aims to support banks to leverage technology and innovation to develop new or amend existing financial products and services and delivery platforms that will enhance access to finance in the SME sector. This fund provides an opportunity for banks to implement innovative digital banking products and services to improve access to finance to SMEs either individually or in collaboration with non-banking financial institutions (NBFIs)/ Fintech/ Electronic Money Institutions (EMIs)/ software houses. Commercial Banks are eligible to apply for CFS, however, the CFS Evaluation Committee will analyze the proposal based on feasibility, relevance, and impact on SME financing. The state bank has constructed a point-based criterion to assess the role of commercial banks in promoting financing for SMEs.

After these facilitative measures, commercial banks and other financial institutions are expected to facilitate small and medium-sized enterprises to generate employment and GDP growth. To automate the monthly reporting of SME financing data, the State Bank of Pakistan (SBP) has launched a data reporting portal in the name of 'SME financing' on its 'Data Acquisition Portal (DAP)'. The SBP has advised banks and development finance institutions (DFIs) to submit small and medium enterprise (SME) financing data in the prescribed format on a monthly basis with effect from the reporting period of June 2022 and onwards (SBP: 2023). The SBP has also issued guidelines for feeding the SME financing data. Due to regulatory requirements, several incentives, and facilitative measures by the State Bank of Pakistan the outstanding SME financing reached Rs.524 billion in December 2021 as compared to Rs.284 billion in December 2013. However, information asymmetries, high transaction costs, and lack of tangible collateral are those barriers that restrict the growth of SMEs in Pakistan.

In Pakistan, the responsibility for facilitating SME policy development lies with the Small and Medium Enterprises Development Authority (SMEDA), which is a constituent body of the Ministry of Industry and Production. It was explored by the government of Pakistan (2013) that there is a lack of coordination and regular information exchange mechanism among institutions which constrains their collective ability to deliver in the SME development process. So, a network of institutions stimulating the growth of SMEs was proposed (Government of Pakistan: 2013).

The government of Pakistan (2021) has formulated a National SME Policy in 2021. This Policy provides a set of recommendations to support SME growth as part of a holistic and integrated framework. Several policy interventions have been recommended in this policy. These include access to finance, regulations and tax regimes, skills, industrial infrastructure, and promoting entrepreneurship culture, amongst others. The Policy framework is based on two central pillars – reforming the Policy and regulatory environment and addressing SME market constraints, both demand and supply side. Within the Policy and regulatory environment, the focus is on creating enabling and business-friendly policies, regulatory simplification, and instituting a regime that allows

easy entry & and exit of firms and start-ups to flourish. The supply side focuses on fiscal and monetary incentives, SME facilitation, entrepreneurship and innovation, credit and skills, and infrastructural provisions necessary for SME growth. Demand-side recommendations belong to the ease of market access and the role of public procurement in creating demand for SME products and services.

Table 1. Analysis of SME financing in Pakistan (Billion PKR unless specified)

Financing Category	As of 30 th June	
	2022	2023
Aggregate Financing from Financial Institutions		
Outstanding SME Financing	484.8	457.1
Domestic Private Sector Financing	8,438.2	8,761.4
SME Financing as % of Domestic Private Sector Financing	5.7	5.2
SME Non-performing Loans Ratio (%)	16.5	17.1
Number of SME Borrowers (Thousand)	169	154
Composition of SME Financing: By Utilization		
Fixed Investment	147.1	150.0
Working Capital	293.8	275.0
Trade Finance	43.8	32.0
Composition of SME Financing: By Source of Financing		
Domestic Private Banks	332.9	281.9
Public Sector Commercial Banks	101.7	118.5
Islamic Banks	37.1	44.0
Specialized Banks & and others	8.8	8.0
DFIs	4.3	4.7

Source: State Bank of Pakistan (2023)/ Author's presentation

The Policy recommends the adoption of a unanimous SME definition by all stakeholders and the issuance of an SME size certificate (based on voluntary registration on the SME Registration Portal) that allows for the identification of SMEs and supports building a National SME Database. Notably, different definitions of SMEs have been used for different purposes in Pakistan. However, at the international level (according to the International Finance Corporation), a small unit means a unit with 10 to 50 employees, and total assets from 0.1 to 3 million USD and annual turnover from 0.1 to 3 million USD, while a medium unit means a unit with 50 to 300 employees and total assets from 3 to 15 million USD and annual turnover from 3 to 15 million USD. While a hybrid model is used to classify the enterprises by the World Economic Forum. According to this model, less than 10

employees and 1 million USD in annual revenue are defined as micro-enterprises. Less than 49 employees and/ or annual revenue below 5 million USD are defined as micro-enterprises. Medium-sized enterprises are the business with 50 to 250 employees and/ or annual revenue below 50 million USD. Mid-size enterprises are those business entities that cover 250 to 4999 employees and/ or have annual revenue below 1.75 billion USD. Business entities with more than 5,000 employees and/ or \$1.75 billion annual revenue are classified as large enterprises.

In Pakistan (according to the Small and Medium Enterprise Development Authority -SMEDA) a unit with 10 to 35 employees or productive assets of Rs. 2 to 20 million was considered a small unit, while a medium unit covering 36 to 99 employees or productive assets of Rs. 20 to 40 million. The definition of small and medium units by the SME bank is based on the value of total assets. A unit with total assets less than Rs.20 million is considered a small unit while the value of total assets of a medium unit is ranged between Rs.20 to Rs, 100 million. A unit with less than 10 employees is defined as a small unit by the Federal Bureau of Statistics. According to the State Bank of Pakistan: (SME Prudential Regulations) a manufacturing entity that does not employ more than 250 persons with total assets at cost excluding land and building up to Rs.100 million, or a trade/ services concern that does not employ more than 50 persons with total assets at cost excluding land and buildings up to Rs 50 million, or a concern (trade, services or manufacturing) with net sales not exceeding Rs.300 million as per latest financial statements is considered as small or medium enterprise. Enterprises exporting up to 2.5 million USD per annum are considered small by the State Bank of Pakistan. An entity engaged in handicrafts or manufacturing of consumer or producer goods with fixed capital investment up to Rs.10 million including land & and building is defined as a small or medium enterprise by the Sindh Government (Department of Industries). A unit with a fixed investment of up to Rs.20 million excluding land and building is defined as a small or medium enterprise by the Punjab Small Industries Corporation.

The latest SME policy (Government of Pakistan: 2021) has redefined small and medium enterprises. According to the new policy, a unit will be categorized as 'small' if annual its sales turnover is up to PKR 150 million. The unit will be categorized as 'medium' if its annual sale is above PKR 150 million but less than PKR 800 million. While a small or medium enterprise up to 5 years old will be considered a Start-up small enterprise or Start-up medium enterprise (SMEDA: 2021).

3. Structure of Data and Macroeconomic Trends

The study is based on 6 years' data from 398 companies listed on the Pakistan Stock Exchange. The data was extracted from the annual reports of these companies (SBP: 2023). Table: 2 shows the classification of companies in the sample. This table shows the sector-wise distribution of companies in the sample, 116 out of 398 companies are classified as small

and medium enterprises. The classification of companies is based on the definition of small and medium enterprises (SME) in the latest SME policy formulated by the Government of Pakistan (2021). According to this definition, a company will be considered a small or medium enterprise if its annual sale is less than 800 million Pak rupees (PKR). In this case, the company will be qualified to avail those advantages which are available to small and medium enterprises in Pakistan. The ease of compliance with regulatory and listing requirements and concessional borrowing from commercial banks are included in these advantages. To capture the effect of SME status on export sales, inventories, receivables, and benefits to employees, a dummy variable has been created in this research. The numeric value of this dummy variable is equal to '1' if a company is classified as small or medium enterprise (SME) and '0' otherwise. The list of variables with their abbreviated names and sources of data has been presented in Table: 3.

The reported data in annual accounts are based on standard accounting policies and procedures. There are some discrepancies in the definitions of some variables in accounting procedures and finance theory. For instance, preference shares capital is included in equity in accounting statements, while it cannot be considered a part of equity according to finance theory. So, before applying the statistical techniques for empirical findings, some variables have been recalculated. In this analysis, preference shares capital is not a part of owners' equity. Similarly, the surplus on the revolution of assets has been treated as a separate variable- it is not included in equity. Notably, operating assets are a major part of fixed assets, however, some non-operating assets are also included in the fixed assets. In this analysis, land buildings and vehicles for administrative uses are included in non-operating fixed assets.

Based on data in the sample, table: 4 envisages the importance of small and medium enterprises (SMEs) in Pakistan. It is envisaged that 72% of their total sales revenues are generated through exports, while 31% of their sales revenues are spent on payments of salaries and other benefits to the employees. So, their services for the inflow of foreign exchange and employment of labor are important for the economy of Pakistan. Their investment in assets (in terms of assets to sales revenue ratio) is more than 5 times as compared to large firms. They require more working capital as compared to large firms because their current assets in terms of current assets to sales ratio are significantly higher than large firms. The higher need for cash and bank balance, receivables from customers, and merchandizing inventories are visualized in Table: 4. The descriptive statistics of the variables have been shown in Table: 5. This table shows the significant difference between small and medium enterprises (SMEs) and large-scale firms.

This analysis is based on 6 years data from 398 companies, however, data for some variables are not available in some cases. The number of observations for each regression has been reported in the results. All data has been reported in thousand rupees (PKR) unless specified.

The coronavirus pandemic in 2020 affected GDP growth and businesses all over the world. Pakistan is not exempted from these adverse effects. The effect of the coronavirus pandemic (COVID) on sales revenue and receivables has been tested through dummy variables which is equal to '1' for the year 2020-21 and '0' otherwise. The coronavirus pandemic has also affected GDP growth which is an explanatory variable in this analysis.

Table: 6 summarizes the macroeconomic situation from 2016 to 2021. The higher fluctuation in the growth of manufacturing production, industrial production, and GDP is envisaged in Table: 6. The rate of inflation also highly fluctuated during the period (2016 to 2021). The Covid-19 pandemic is one of the causes of fluctuation in growth and inflation. But, no significant improvement in domestic credit was observed.

Figures: 1 to 2 reflect the association of sales revenue and macroeconomic conditions. It is an interesting observation that despite lower GDP growth and a higher rate of inflation during corona pandemic period in Pakistan, export sales show steady growth. The reason is obvious: The declining exports of intermediate products from Pakistan during the coronavirus pandemic period (mainly yarn and fabric) provided an opportunity for downstream industries to convert these products into finished goods (garments, towels, bed sheets, and other consumer products). The downstream industries which mainly belong to small and medium enterprises (SMEs) took advantage of this situation. Consequently, the export sales do not show a declining trend in the pandemic period. However, the role of monetary policy was not supportive in this period. There was not a significant change in the magnitude of domestic credit to the private sector in the pandemic period. While domestic credit to the private sector is much lower in Pakistan as compared to the global average. Even it is lower than in South Asian countries.

Figures: 3 and 4 visualize the difference between large-scale firms and small and medium enterprises (SMEs). Small and medium enterprises (SMEs) require more investment in current assets including liquid assets. They need more spending on receivables from customers and merchandizing inventories. However, their contributions to exports and benefits to employees are more important.

Table 2. Sample specification: (Year: 2016-21)

Sector	No. of Companies
Textile: Spinning, weaving and finishing	121
Textile: made-ups, garments, and clothing	4
Fibers (Including jute, synthetic, silk and rayon)	10
Sugar	28
Food products	24

Chemicals and Pharmaceuticals	44
Manufacturing	41
Mineral products	10
Cement	18
Motor vehicles, trailers, and auto parts	22
Fuel & Energy	22
Information, communication & transport services	16
Coke and refined petroleum products	11
Paper and paperboard products	10
Electrical machinery and apparatus	6
Other services activities	11
Total	398
SMEs	116

Source: State Bank of Pakistan (2023)/ Author's presentation

Table 3. List of variables and sources of data

Abbreviation	Description	Source
BNFTS	Expenses on salary, wages and other benefit to employees: temporary and permanent	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
CGS	Cost of goods sold	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
COVID	Dummy variables equal to '1' for the Covid-19 years (2020 and 2021) and '0' otherwise	Author's depiction
DCPS	Domestic credit to private sector as % of GDP	International Financial Statistics, International Monetary Fund (2023)
DIVDND	Cash dividends	Financial Statement

		Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
EAT	Earning after tax	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
EQUITY	Shareholders' equity (excluding preference shares capital)	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
EXCHRAT	Official exchange rate (Local currency units per USD)	World Development Indicators; World Bank (2023)
FXDAST	Fixed assets at cost	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
GR	The dummy variable is equal to '1' if a company belongs to garments manufacturing and '0' if otherwise	Author's depiction based on State Bank of Pakistan (2023)
GROW	GDP growth (annual %)	World Development Indicators; World Bank (2023)
ICT	The dummy variable is equal to '1' if a company belongs to information and communication technology and '0' if otherwise	Author's depiction based on State Bank of Pakistan (2023)

INDGRW	Growth in Industry (including construction) value added (%)	World Development Indicators; World Bank (2023)
INFLCPI	Rate of inflation based on consumer prices (annual %)	World Development Indicators; World Bank (2023)
INVNTRY	Closing inventory of raw materials, work-in- progress, and finished goods	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
LVRG	Leverage ratio: Ratio of total assets to shareholder's equity	Author's calculations
MNFGROW	Growth in manufacturing value added (%)	World Development Indicators; World Bank (2023)
PAIDUP	Paid-up capital (Ordinary shares capital)	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
PAYOUT	Cash dividend to earning after tax	Author's calculations
PRTEXCH	Price level ratio of PPP conversion factor (GDP) to market exchange rate	World Development Indicators; World Bank (2023)
RCVBLS	Trade debit and other accounts receivables	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
REER	Real effective exchange rate index (2010 = 100)	World Development Indicators;

		World Bank (2023)
SALES	Total sales revenue	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
SALEXPT	Export sales (Net)	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
SME	The dummy variable is equal to '1' if the annual sales revenue of the company is less than Rs.800 million, and '0' otherwise.	Author's depiction based on the Government of Pakistan (2021)
SP	The dummy variable is equal to '1' if a company belongs to textile spinning and/or weaving and '0' if otherwise	Author's depiction based on State Bank of Pakistan (2023)
SRVLUTN	Surplus on revaluation of fixed assets	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)
TOTAST	Total Assets (Equity & Liabilities)	Financial Statement Analysis; State Bank of Pakistan/ Pakistan Stock Exchange (2023)

Source: Author's depiction

Table 4. Financial comparison: large firms versus small and medium enterprises (Based on aggregate data)

Financial Indicator/ Ratio	Large Firms	Small and Medium Enterprises
Cash and bank balance to sales revenue	0.04	0.15
Merchandizing inventories to sales revenue	0.11	0.62
Trade credits and receivables to sales revenue	0.27	0.56
Current assets to sales revenue	0.50	1.88
Exports as % of total sales revenue	7.8	72.0
Employees' benefits and salaries as % of earnings after tax	5.5	31.0
Total assets to sales revenue	1.16	5.59
Interest expenses as % of long-term borrowing*	16.9	18.6
* Including other financial charges		

Source: Author's calculations

Table 5. Financial and operational indicators descriptive statistics (In million PKR unless specified)

Variable	Large Scale Companies			Small and Medium Enterprises		
	Mean	Median	Standard Error	Mean	Median	Standard Error
Earning from exports	2397.2	315.7	213.1	1364.3	132.6	222.4
Total sales revenue	18625.8	4949.9	1602.3	232.1	156.8	8.6
Cost of goods sold	13404.0	2490.1	1455.6	2477.5	378.9	251.5
Salaries and other benefits to employees	1351.4	294.3	107.1	320.8	63.7	44.7
Earning after tax	1024.1	96.7	213.8	256.8	2.6	117.1
Reserves and surplus	7238.9	761.8	1389.1	715.1	38.8	146.4
Surplus on the revolution of assets	1512.1	358.2	190.6	649.9	214.9	77.3
Owners' equity	6657.3	1295.0	1178.3	1619.4	232.2	216.6

Paid up capital	1582.1	122.7	173.6	469.2	28.7	85.0
Long-term borrowing	3182.6	232.5	545.6	554.8	78.3	82.7
Leverage ratio	2.3	2.2	0.4	1.6	1.9	0.6
Current liabilities	8303.2	1345.3	892.1	1472.9	258.5	177.0
Payables	5576.7	553.1	731.4	654.1	122.3	99.7
Receivables	5162.3	289.3	800.8	490.8	48.6	147.8
Cash and bank balance	758.6	62.8	86.1	124.1	9.8	19.4
Inventories	2176.8	469.2	166.2	567.4	111.6	58.5
Current assets	9276.4	1605.2	985.6	1557.9	249.1	243.0
Fixed Assets at cost	9461.7	1754.7	862.4	2186.9	422.6	245.2
Intangible assets	482.6	6.4	90.9	71.3	2.9	22.9
Operating assets at cost	10762.2	2258.3	1045.2	2408.0	443.4	245.3
Operating assets after depreciation	6375.1	1436.5	566.1	1717.4	309.6	187.5
Total assets	21653.6	3453.1	2231.7	4626.8	569.5	1041.2

Source: Author's estimations

Table 6. Macroeconomic factors

Year	Domestic Credit to Private Sector (% of GDP)	GDP growth (%)	Industrial Growth (%)	Growth in Manufacturing (%)	Rate of inflation-Consumer Prices (%)
2016	14.68	5.53	5.69	3.69	3.77
2017	15.31	4.43	4.67	4.87	4.85
2018	16.63	6.15	9.18	7.79	5.79
2019	15.69	2.50	0.25	4.52	1.58
2020	15.33	-1.27	-5.75	-7.80	9.74
2021	15.35	6.49	7.81	1.52	9.50

Source: World Bank (2023)

Figure 1. Economic growth and exports

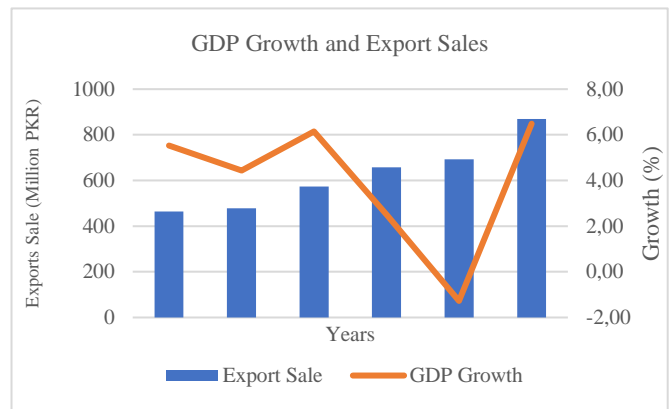


Figure 2. Macroeconomic trends and sales revenues

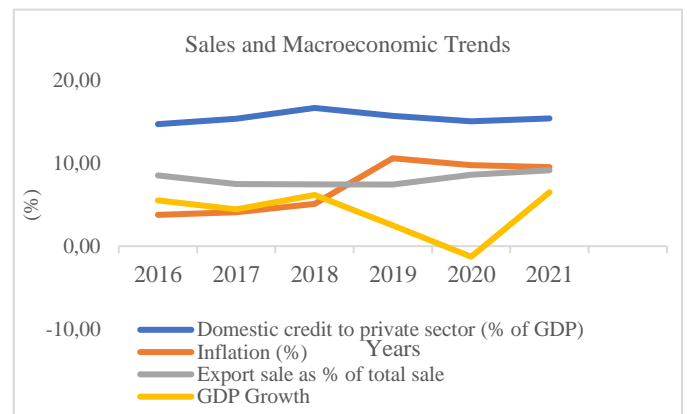


Figure 3. Role in firms in exports and employees' benefits

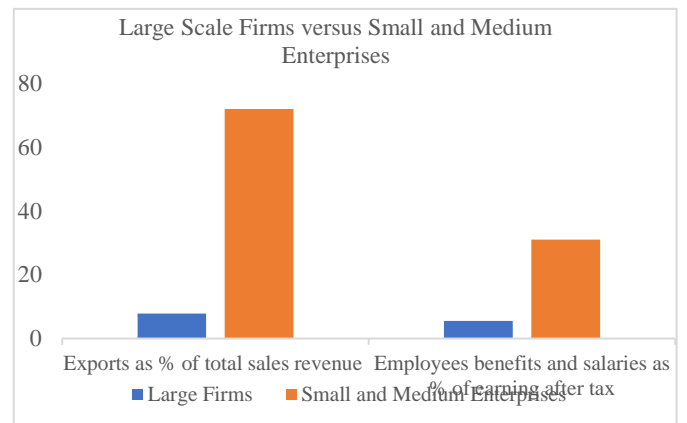
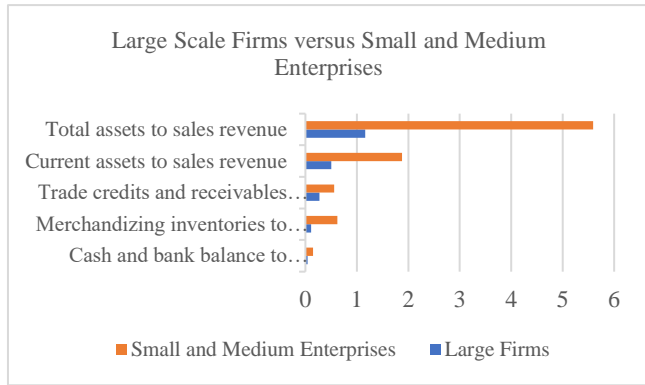


Figure 4. Structure of assets

4. Methodology to Test the Hypothesis

In this study, we have tested how trade credits and receivables (RCVBS), merchandizing inventories (INVNTY), earnings from exports (SALEXPT), and employees' salaries and other benefits (BNFTS) are determined by the small and medium enterprises (SMEs). The merchandizing inventories (INVNTY) and trade credits and receivables (RCVBS) are major components of working capital. The higher size of working capital indicates the more utilization of capital in non-fixed assets. The large-scale units and capital-intensive industries produce industrial raw materials and intermediate products (like fibers, yarn, gray cloth, plastic and basic chemicals, etc.) while small and medium enterprises convert these intermediate goods into finished products. In this way, small and medium enterprises (SMEs) have to invest their capital in current assets: inventories (INVNTY), and trade credits (RCVBS), while large-scale industries focus mainly on the acquisition of fixed assets (FXDAST). This mechanism indicates the importance of small and medium enterprises (SMEs) in managing the financial liquidity in the corporate sector. The impacts of explanatory factors on trade credit and receivables (RCVBS), merchandizing inventories (INVNTY), earning from exports (SALEXPT), and benefits to the employees (BNFTS) can be explained in the following equations:

$$\begin{aligned}
 RCVBS_{it} &= \beta SALES_{it} + \gamma FXDAST_{it} + \Omega SME_i + \delta X_{it} + \mu_i + \tau_t + \epsilon_{it} \\
 INVNTY_{it} &= \beta RCVBS_{it} + \gamma INFLCPI_t + \Omega COVID_t + \delta X_{it} + \mu_i + \tau_t + \epsilon_{it} \\
 SALEXPT_{it} &= \beta TOTAST_{it} + \gamma GROW_t + \Omega SME_i + \delta X_{it} + \mu_i + \tau_t + \epsilon_{it} \\
 BNFTS_{it} &= \beta TOTAST_{it} + \gamma SALES_{it} + \Omega SME_i + \delta X_{it} + \mu_i + \tau_t + \epsilon_{it}
 \end{aligned}$$

The above-mentioned equations show the direct effects of small and medium enterprises (SME) on trade credit and receivables (RCVBS), earnings from exports (SALEXPT), and benefits to the employees (BNFTS), while the indirect effects of small and medium enterprises (SME) on merchandizing inventories (INVNTY) and benefits to the employees (BNFTS) can be expressed as follows:

$$\frac{dINVNTY}{dSME} = \frac{\partial INVNTY}{\partial RCVBS} \cdot \frac{\partial RCVBS}{\partial SME}$$

$$\frac{dBNFTS}{dSME} = \frac{\partial BNFTS}{\partial SME} + \frac{\partial BNFTS}{\partial SALES} \cdot \frac{\partial SALES}{\partial SME}$$

Where 'RCVBS_{it}' is trade credits and accounts receivables of company 'i' in year 't', 'INVNTY_{it}' is the value of inventories in finished goods, raw material and work-in-process of company 'i' in year 't', 'SALEXPT_{it}' is earning from the export of company 'i' in year 't', and 'BNFTS_{it}' is the monetary value of benefits to the employees including wages, salaries of company 'i' in year 't'. 'GROW_t' is the annual growth of GDP in percentage in year 't' and 'INFLCPI_t' is the rate of inflation in year 't'. 'SALES_t' indicates the annual sales revenue of company 'i' in year 't', 'TOTAST_{it}' is the total assets of the company 'i' in year 't', and 'FXDAST_{it}' indicates fixed assets of company 'i' in year 't'. 'COVID-19' is a dummy variable that is used to capture the effect of the coronavirus pandemic in the year 2020 and 2021. 'X_{it}' is a vector of exogenous control variables; 'μ_i' denotes unobserved time-invariant heterogeneity at the country level; 'τ_t' is a country-fixed effect; and 'ε_{ijt}' is an independent disturbance term. The descriptions of variables and sources of data have been shown in Table: 3.

Several control variables to estimate the net effects of small and medium enterprises (SME) on trade credits and receivables (RCVBS), inventories (INVNTY), earnings from exports (SALEXPT), and benefits to the employees (BNFTS) have been included in the estimations. These relations can be expressed in the following 4 equations:

$$RCVBS_{it} = \alpha_i + \beta_1 SALES_{it} + \beta_2 FXDAST_{it} + \beta_3 (SME_i * TOTAST_{it}) + \epsilon_{it} \quad (1)$$

$$\begin{aligned}
 INVNTY_{it} &= \alpha_i + \beta_1 RCVBS_{it} + \beta_2 INFLCPI_t \\
 &+ \beta_3 COVID_t + \beta_4 (GR_i * COVID_t) \\
 &+ \beta_5 DCPS_{it} + \epsilon_{it} \quad (2)
 \end{aligned}$$

$$\begin{aligned}
 \left(\frac{SALEXPT}{SALES}\right)_{it} &= \alpha_i + \beta_1 \left(\frac{CGS}{SALES}\right)_{it} + \beta_2 GROW_t + \beta_3 GR_i \\
 &+ \beta_4 SP_i + \beta_5 (SME_t * COVID_t) \\
 &+ \beta_6 (SME_t * PAIDUP_{it}) + \beta_7 (SME_t * TOTAST_{it}) + \epsilon_{it} \quad (3)
 \end{aligned}$$

$$\begin{aligned}
 \left(\frac{BNFTS}{EAT}\right)_{it} &= \alpha_i + \beta_1 TOTAST_{it} + \beta_2 EQTY_{it} \\
 &+ \beta_3 SURVLUTN_{it} + \beta_4 SALES_{it} + \epsilon_{it} \quad (4)
 \end{aligned}$$

'EQTY_{it}' indicates the owners' equity of company 'i' in year 't' and 'SURVLUTN_{it}' is the surplus on the revolution of assets of company 'i' in year 't'. 'SME_i', 'GR_i', and 'SP_i' are dummy variables to capture the small and medium enterprises, companies in the garment industry, and companies in the spinning industry respectively. The numeric value of these dummy variables is '1' if the company belongs to the concerned category and '0' otherwise.

Panel least square (PLS) techniques have been applied to estimate the parameters. The Hausman (Cross-section random chi-square) and Lagrange Multiplier (Breusch-Pagan, Honda, King-Wu) tests have been applied to test the appropriateness of panel least square (PLS) techniques. Based on these criteria, the fixed effect models have been used for the estimation of receivables from customers (RCVBLS) and merchandizing inventories (INVNTRY), while common effect models have been suggested for the estimation of export sales (SALEXPT) and salaries and other benefits (BNFTS) to the employees. Every equation has been estimated in 3 alternative scenarios. The objective of estimation in alternative scenarios is to check the robustness of parameters. Notably, Wooldridge (2002) and David (2003) have indicated that serial correlation in linear panel-data models biases the standard errors. For the selection of appropriate models to minimize the information losses, the Akaike information, Schwarz and Hannan-Quinn criteria have also been reported in the results.

5. Statistical Results and Empirical Findings

Tables: 7 to 10 present the statistical results of the above-mentioned equations. These results quantify the impacts of explanatory variables and indicate the significance of parameters and overall goodness of fit in the equations. The results are confirmed by 3 alternative scenarios. The robustness of the estimated parameters has been checked by using these alternative scenarios.

The adjusted R-squares and F-statistics show the goodness of fit in all estimated equations, indicating that the explanatory variables included in the models significantly explain the effects. All the equations in the models are well-fitted, as confirmed by the adjusted R-squares and F-statistics. The magnitudes of the Akaike information criterion, Schwarz criterion, and Hannan-Quinn criterion have also been reported. The Lagrange Multiplier Tests (Breusch-Pagan, Honda, and King-Wu) and Hausman justify the selection of panel least squares (PLS).

Based on empirical analysis, it is concluded that small and medium enterprises play a significant role in the determination of exports and financial liquidity. Table: 7 depicts that a higher cost of production leads to a higher share of exports in total sales. In fact, in the presence of a higher cost of goods sold (CGS) as a percentage of total sales (SALES), the producers cannot depend on domestic sales only. The lower profit on domestic sales, stiff market competition, and unobtainability of benefits of the economies of scale push the producers to attain international markets. In the case of higher cost of production (CGS), the producers have to focus on international markets. The growth of GDP (GROW) or growth in the production of industrial and manufacturing goods (MNFYGROW and INDGROW) are supply-side indicators, which show the availability of goods for exports. So higher production growth is a cause of higher exports. Based on regression analysis, table: 7 shows the significant contribution of garment (GR) and spinning (SP)

sectors in the exports of Pakistan. The importance of small and medium enterprises (SMEs) in the determination of exports has been captured through 3 interaction variables. The interaction of small and medium enterprises with the coronavirus pandemic (SME*COVID) shows that small and medium enterprises (SMEs) have set off losses in exports to some extent. The role of small and medium enterprises (SMEs) was positive when exports were declining during the coronavirus pandemic period in 2020 and 2021. The higher investment in terms of assets (TOTAST) and paid-up capital (PAIDUP) by small and medium enterprises (SME) leads to higher exports. However, the roles of the exchange rate (EXCHRT), leverage ratio (LVRG), and domestic credit (DCPS) are not significant. The insignificant role of domestic credit (DCPS) has also been confirmed by Mehar (2022).

Empirical pieces of evidence confirm the significant positive association between sales revenue (SALES) and receivables from customers (RCVBLS). Sales on credit is a natural part of businesses. The letter of credit in case of export sales (SALEXPT) and receivables (RCVBLS) in process from domestic customers is a part of business activities. So, growth in receivables (RCVBLS) is attached to the growth in sales (SALES). The important result shows a negative impact of investment in fixed assets (FXDAST) on receivables (RCVBLS). The businesses with higher investments in fixed assets (FXDAST) cannot afford higher amounts of receivables (RCVBLS). They avoid sales on credit. However, it was observed in Table: 4 that higher investment in receivables from customers (RCVBLS) is associated with the small and medium enterprises (SMEs). A slop dummy to capture the effect of small and medium enterprises (SMEs) has been included in the equation to estimate the receivables (RCVBLS). The interaction of the dummy (SME) variable with the size of total assets (TOTAST) shows a negative sign in regression analysis. This result is consistent in all 3 alternative scenarios. It indicates that growth in total assets of a small or medium enterprise (SME) will be a cause of lower receivables (RCVBLS). It is notable that small and medium enterprises (SMEs) in this study are defined on the basis of their sales revenue (SALES). These firms are not categorized based on their total assets (TOTAST). The higher investment in assets (TOTAST) reduces receivables (RCVBLS) from customers in small and medium enterprises (SMEs).

A negative association between receivables (RCVBLS) and merchandizing inventories (INVNTRY) is quite obvious. Some businesses prefer to transfer their goods from their stores and showrooms to the customers. They prefer to sell on credit instead of incurring the cost of storage. There is always a trade-off between sales on credit (RCVBLS) and goods in inventories (INVNTRY). If a firm prefers to sell its products on credit (RCVBLS), the size of its inventories (INVNTRY) will be lesser. The growth in inventories is negatively associated with the rate of inflation (INFLCPI). The availability of domestic credit (DCPS) is a cause of growth in inventories (INVNTRY). In the presence of domestic credit (DCPS), the firms can hold their products in inventories (INVNTRY). A significant increase in inventories

(INVNTY) has been observed during the coronavirus pandemic (COVID) in 2020 and 2021. The effect of the coronavirus pandemic (COVID) on inventories (INVNTY) was more severe in the garments manufacturing industry (GR) in Pakistan. These effects have been captured by intercept and slope dummies of corona pandemic dummy variables (COVID). The blockage of exports of intermediate products (yarn and fabric) from Pakistan during the coronavirus pandemic provided an opportunity for to garment industry (GR) to expand its production. However, this unplanned expansion in garments manufacturing was a cause of growth in sales (SALES) and inventories (INVNTY) of the garments industry (GR)

Table: 10 shows that growth in sales revenue (SALES) is the only significant determinant of salaries and other benefits to employees (BNFTS). The benefits to the employees increase by growth in sales revenue (SALES). It is an illusion that higher dividend payment (PAYOUT) to the shareholders is a cause of lower benefits to employees (BNFTS). The role of dividend payout ratio (PAYOUT), companies in the information and telecommunication sector (ICT), and small and medium enterprises (SME) are statistically insignificant. However, the share of employees' benefits (BNFTS) in earning after tax (EAT) is significantly lower in the firms with large size of assets (TOTAST). The firms with higher equity (EQTY) pay lower benefits to their employees (BNFTS). Similarly, the higher surplus fund in equities created by the revaluation of assets (SURVULTN) is negatively associated with the employees' benefits (BNFTS).

Table 7. Dependent variable: Export sales revenue to total sales revenue (SALEXPT/SALES)

Method: Panel Least Squares (Common Effect Model)

Sample: 2016-2021

Periods included: 6; Cross-sections included: 196; Total panel (unbalanced) observations: 943

Independent Variable/ Option	I	II	III
Constant	7.169 (0.107)	3.823 (0.092)	-10.091 (-1.574)
CGS/SALES: Cost of goods sold to sales revenue	0.053*** (12.016)	0.055*** (12.712)	0.055*** (12.700)
GR: Dummy variable equal to '1' if a company belongs to garments manufacturing	31.490*** (3.502)	31.583*** (3.527)	31.643*** (3.535)
SP: Dummy variable equal to '1' if a company belongs to the spinning or/ and weaving industry	5.286** (2.063)	5.443** (2.133)	5.687** (2.225)
MNFGROW: Growth in manufacturing value added (%)	1.130*** (2.550)		
INDGROW: Industry (including construction) value added as % of GDP		0.775** (2.329)	

GROW: GDP growth (%)			1.308* (1.930)
COVID: Dummy variable equal to '1' for year 2020 and 2021	12.803 (1.264)	0.036 (0.009)	3.530 (0.874)
SME*COVID: Dummy variable for SMEs*Dummy variable for Covid-19	15.481*** (2.792)	13.802** (2.484)	14.030*** (2.574)
SME: Dummy variable equal to '1' for SMEs	15.413 (0.229)	15.850 (0.236)	5.958* (1.731)
DCPS: Domestic credit to private sector as % of GDP	-0.894 (-0.202)	0.374 (0.122)	
SME*DCPS: Dummy variable for SMEs* Domestic credit to the private sector as % of GDP	-0.593 (-0.137)	-0.707 (-0.165)	
LVRG: Leverage ratio			-0.009 (-0.039)
SME*LVRG: Dummy variable for SMEs*Leverage ratio			-0.452 (-0.948)
PAIDUP: Paid-up capital	3.81E-08 (0.126)		
SME*PAIDUP: Dummy variable for SMEs*Paid up capital	3.71E-06** (2.318)		
TOTAST: Total Assets		5.84E-09 (0.153)	8.15E-09 (0.214)
SME*TOTAST: Dummy variable for SMEs* Total assets		6.57E-07*** (3.635)	6.65E-07*** (3.681)
EXCHRT: Official exchange rate (Local currency units per USD)	-0.029 (-0.451)		
PRTEXCH: Price level ratio of PPP conversion factor (GDP) to market exchange rate		-47.999 (-0.942)	
REER: Real effective exchange rate index (0.020 (0.534)
Overall Significance			
R-squared	0.204	0.210	0.211
Adjusted R-squared	0.193	0.200	0.200
F-statistic	19.801	20.596	20.670
Criteria for Model Selection			
Akaike information criterion	10.048	10.040	10.039
Schwarz criterion	10.115	10.106	10.106
Hannan-Quinn criterion	10.073	10.065	10.064
Testing for Fixed/ Random/ Common Effect			

Lagrange Multiplier Test: Breusch-Pagan	0.001	0.002	0.004
Lagrange Multiplier Test: Honda	-0.029	-0.039	-0.066
Lagrange Multiplier Test: King-Wu	-0.029	-0.039	-0.066
#T-Statistics in parenthesis			
*p < 0.1; **p < 0.05; ***p < 0.01			

Source: Author's estimations

Table 8. Dependent variable: Closing inventory (INVNTRY)

Method: Panel Least Squares (Fixed Effect Model)

Sample: 2016-2021

Periods included: 6; Cross-sections included: 290; Total panel (unbalanced) observations: 1641

Independent Variable/ Option	I	II	III
Constant	1978172.0** *	1901811.0** *	-6031185.0** (-2.500)
RCVBLS: Trade debit and other accounts receivables	-0.017** (-2.196)	-0.017** (-2.237)	-0.017** (-2.305)
INFLCPI: Rate of inflation based on consumer prices	-125442.9* (-1.870)	-126371.4* (-1.891)	-213693.3*** (-2.971)
COVID: Dummy variable equal to '1' for year 2020 and 2021	1386796.0** *	1482230.0** *	2020564.0*** (4.400)
SME	-218879.500 (-0.945)		
SME*PAIDUP: Dummy variable for SMEs* Paid up capital		-0.023 (-0.358)	-0.021 (-0.327)
GR*COVID: Dummy variable for garments' manufacturing*Dummy variable for Covid-19		5949643.0** *	
SP*COVID: Dummy variable for textile spinning and weaving*Dummy variable for Covid-19		-565931.9 (-1.375)	
DCPS: Domestic credit to private sector as % of GDP			531555.7*** (3.312)
Overall Significance			
R-squared	0.486	0.491	0.490
Adjusted R-squared	0.372	0.378	0.377
F-statistic	4.272	4.326	4.322
Criteria for Model Selection			

Akaike information criterion	33.093	33.085	33.087
Schwarz criterion	34.070	34.069	34.067
Hannan-Quinn criterion	33.456	33.451	33.451
Testing for Fixed/ Random/ Common Effect			
Lagrange Multiplier Test: Breusch-Pagan	337.812***	395.430***	413.712***
Lagrange Multiplier Test: Honda	18.379***	19.885***	20.339***
Lagrange Multiplier Test: King-Wu	18.379***	19.885***	20.339***
Hausman Test (Cross-section random Chi-Square)	72.214***	63.773***	51.055***
#T-Statistics in parenthesis			
*p < 0.1; **p < 0.05; ***p < 0.01			

Source: Author's estimations

Table 9. Dependent variable: Trade debit and other accounts receivables (RCVBLS)

Method: Panel Least Squares (Fixed Effect Model)

Sample: 2016-2021

Periods included: 6; Cross-sections included: 305; Total panel (unbalanced) observations: 1698

Independent Variable/ Option	I	II	III
Constant	3779516.0*** (9.771)	-2581641.0 (-0.294)	-2659343.0 (-0.303)
SALES: Sales revenue	0.084*** (7.988)	0.084*** (7.975)	0.084*** (7.973)
FXDAST: Fixed assets at cost	-0.169*** (-7.627)	-0.169*** (-7.607)	-0.169*** (-7.606)
SME*TOTAST: Dummy variable for SMEs* Total Assets	-0.156*** (-7.578)	-0.156*** (-7.583)	-0.156*** (-7.585)
DCPS: Domestic credit to private sector as % of GDP		421181.6 (0.739)	425588.9 (0.746)
GROW: GDP growth (%)		-42306.5 (-0.341)	-41561.3 (-0.334)
SME*ICT*TOTAST: Dummy variables for SMEs*Dummy variable for ICT companies*Total assets			0.173 (0.255)
Overall Significance			
R-squared	0.635	0.635	0.635
Adjusted R-squared	0.554	0.554	0.553

F-statistic	7.870	7.813	7.783
Criteria for Model Selection			
Akaike information criterion	35.840	35.842	35.843
Schwarz criterion	36.826	36.834	36.839
Hannan-Quinn criterion	36.205	36.209	36.212
Testing for Fixed/ Random/ Common Effect			
Lagrange Multiplier Test: Breusch-Pagan	371.009***	371.170***	371.145***
Lagrange Multiplier Test: Honda	19.261***	19.265***	19.265***
Lagrange Multiplier Test: King-Wu	19.261***	19.265***	19.265***
Hausman Test (Cross-section random Chi-Square)	270.349***	269.450***	268.808***
#T-Statistics in parenthesis			
*p < 0.1; **p < 0.05; ***p < 0.01			

Source: Author’s estimations

Table 10. Dependent variable: Salary, wages and other benefit to employees to earning after tax (BNFTS/EAT)

Method: Panel Least Squares (Common Effect Model)

Sample: 2016-2021

Periods included: 6; Cross-sections included: 118; Total panel (unbalanced) observations: 407

Independent Variable/ Option	I	II	III
Constant	346.5*** (5.643)	277.2*** (4.069)	451.2*** (3.275)
TOTAST: Total Assets	-1.66E-05*** (-8.001)	-1.67E-05*** (-8.074)	-1.7E-05*** (-8.136)
EQTY: Equity	-1.35E-05*** (-2.827)	-1.42E-05*** (-2.979)	-1.4E-05*** (-2.985)
SURVLUTN: Surplus on revaluation of fixed assets	-5.94E-05*** (-3.282)	-6.7E-05*** (-3.658)	-6.6E-05*** (-3.575)
PAYOUT: Payout ratio	1.338 (0.967)	1.481 (1.075)	1.496 (1.081)
SME: Dummy variable equal to '1' for SMEs	-134.062 (-1.378)	-58.434 (-0.572)	-50.457 (-0.491)
ICT: Dummy variable equal to '1' for companies in ICT	107.691 (0.371)	138.382 (0.479)	152.315 (0.526)
SALES: Sales revenue		6.3E-06*** (2.293)	6.7E-06** (2.434)

GROW: GDP growth (%)			-17.184 (-0.898)
INFLCPI: Rate of inflation based on consumer prices			-19.239 (-1.189)
Overall Significance			
R-squared	0.310	0.319	0.323
Adjusted R-squared	0.299	0.307	0.307
F-statistic	29.553	26.356	20.742
Criteria for Model Selection			
Akaike information criterion	16.462	16.454	16.459
Schwarz criterion	16.532	16.534	16.558
Hannan-Quinn criterion	16.490	16.486	16.498
Testing for Fixed/ Random/ Common Effect			
Lagrange Multiplier Test: Breusch-Pagan	0.018	0.051	0.007
Lagrange Multiplier Test: Honda	-0.134	-0.226	-0.082
Lagrange Multiplier Test: King-Wu	-0.134	-0.226	-0.082
#T-Statistics in parenthesis			
*p < 0.1; **p < 0.05; ***p < 0.01			

Source: Author’s estimations

6. Policy Implications and Limitations

The importance of small and medium enterprises in the promotion of exports and improving financial liquidity is recognized in this study. From a policy formulation point of view, it is an important conclusion that small and medium enterprises play an important role in the sale of finished products on credit and manage the inventories of merchandizing goods. In this way, the burden of managing the working capital is shifted from large-scale industry to small and medium enterprises. Large-scale firms focus on investment in fixed assets. This mechanism promotes the expansion of business activities in the economy.

Before finalizing the conclusion, it is notable for policymakers that these results and conclusions are based on the data of companies listed on the Pakistan Stock Exchange. The Panel Least Square (PLS) technique was applied to estimate the parameters. In interpreting these results, it is notable that small and medium enterprises (SMEs) are defined on the basis of their sales revenue. After the classification of a company as a small or medium enterprise, Pakistani laws provide some benefits and easiness in regulatory requirements.

The role of small and medium enterprises suggests that there is no competition between large-scale firms and small and medium enterprises. These enterprises are complementary parts of the mainstream industry. The

importance of large-scale industry, transnational corporations, and big industrial units should not be undermined. These are important inseparable requirements of research and development activities, innovations, inventions, technological advancement, and macroeconomic development. Small and medium enterprises work as corresponding parts of the big corporations.

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