Islamic Banking & Finance Review (IBFR)
Volume 11 Issue 2, Fall 2024
ISSN$_{(P)}$: 2221-5239, ISSN$_{(E)}$: 2413-2877
Homepage: https://journals.umt.edu.pk/index.php/IBFR

Article QR

Title:	**Role of Shariah-Compliant Financing and Financial Intermediation in Analyzing the Impact of Financial Inclusion on SME Growth in Balochistan, Pakistan**
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DOI:	https://doi.org/10.32350/ibfr.112.02
History:	Received: October 12, 2024, Revised: November 25, 2024, Accepted: December 20, 2024, Published: December 30, 2024
Citation:	Khan, C., Raheman, A., & Farooq, I. (2024). Role of Shariah-compliant financing and financial intermediation in analyzing the impact of financial inclusion on SME growth in Balochistan, Pakistan. *Islamic Banking & Finance Review*, *11*(2), 31–70. https://doi.org/10.32350/ibfr.112.02
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Conflict of Interest:	Author(s) declared no conflict of interest.

A publication of
Dr. Hasan Murad School of Management (HSM)
University of Management and Technology, Lahore, Pakistan

Role of *Shariah*-Compliant Financing and Financial Intermediation in Analyzing the Impact of Financial Inclusion on SME Growth in Balochistan, Pakistan

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Abstract

This study analyzes how SME growth is influenced by financial inclusion in Balochistan, a province of Pakistan. Furthermore, it also examines how the *Shariah*-compliant mode of financing and financial intermediation influences SME growth. A sample of 300 respondents was taken from three major cities in Balochistan, namely Quetta, Gwadar, and Turbat, based on judgmental sampling. Structural Equation Modelling (SEM) was employed to evaluate the direct impact of financial inclusion, *Shariah*-compliant financing, and financial intermediation on SME growth. As far as the direct effect of PLS-SEM is concerned, financial inclusion was found to be statistically significant to financial intermediation and two SME growth dimensions, namely profit growth and sales growth. The other two dimensions, namely market share growth and workforce growth, remain statistically insignificant. Whereas, financial intermediation is statistically significant and impacts negatively on SME growth (profit growth and sales growth) directly. In the case of indirect effect, *Shariah*-compliant financing was found to have a statistically negative and significant impact on financial inclusion and SME growth dimensions of profit growth and sales growth. Similarly, it was determined that financial intermediation mediates substantially and negatively impacts financial inclusion and SME growth.

Keywords: financial inclusion, financial intermediation, market share, *Shariah*-compliant financing, profit growth, sales growth, SME growth, workforce growth

Introduction

The concept of financial inclusion gained significance during the early 2000s and became the mutual objective of central banks and many governments. Initially, the key purpose of financial inclusion was to deliver

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financial services to the low-income class of the society at affordable cost. With the passage of time, this concept evolved to attain four dimensions. These dimensions are as follows: alternative customers are brought while stiff competition between service providers, sustainability of financial institutions based on institutional sustainability and financial sustainability, all households and enterprises have an easy access to finance and supervision, and prudential regulations are guided by sound institutions.According to the World Bank (2014), around three billion people lack access to financial services. The majority of these people reside in developing countries.

Financial inclusion has potential benefits; therefore, it is promoted by developing countries in their economies. It helps to uplift low-income groups to the formal financial system. Poor households can get financial opportunities to invest, save, and access credit through financial inclusion (Ellis & Lemma, 2010; Omar et al., 2020). Furthermore, it ensures the easy accessibility of financial services for micro, small, and medium-sized enterprises.

The National SME Policy 2007 defined SMEs (small and medium enterprises) on three benchmarks: worker strength should not exceed 250 people, annual income should not exceed Rs. 250 million, and the capital invested in the firm should be less than Rs. 25 million. Similarly, the State Bank of Pakistan (SBP) defines an SME as having less than 50 workers and annual sales of less than Rs. 150 million. SMEs contribute to economic growth by increasing household income and providing employment opportunities (Agussalim & Mappigau, 2013; Kamunge et al., 2014). According to Turyakira and Mbiddle (2015), there is limited research available on the contribution of SMEs concerning resources, competitiveness, and networking influence. The key role is played by access to financing for the company's survival. It shows its performance by having sufficient funds to finance its working capital, investment in fixed assets, market development, and attracting highly skilled workers.

Islamic finance has two characteristics, namely risk sharing and the development of entrepreneurship. Human-centered sustainable development and social justice expectations are fulfilled based on the equitable and asset-based economic model of Islamic SME finance. The Islamic modes of financing (*musharakah* and *mudarabah*) are well-suited to SME financing. Daud et al. (2011) stated that Islamic banking emerged

in Pakistan during the 1970s as a response to economic and religious needs. In the mid-1980s, practical and significant steps were taken toward Islamic banking.

Table 1
Banking Cluster

Banking Cluster	September 2021	June 2022	September 2022
Domestic Private Banks	301.46 Billion	332.90 Billion	317.59 Billion
Public Sector Commercial Banks	86.91	101.67	94.04
Islamic Banks	37.03	37.08	35.52
Specialized Banks others	8.79	8.83	8.58
DFIs	3.52	4.33	4.48
Total	437.71	484.81	460.21

Note. Source: State Bank of Pakistan (SBP, 2022)

The above table shows the categories of banks that provide SME financing. The major contributors are domestic private banks which, on average, contribute 317 billion rupees. The second largest SME financier is the public sector, comprising commercial banks. Whereas, the third largest are Islamic banks (IBs). On the other hand, minor contributors to SME financing include specialized banks, others, and DFIs.

Financial intermediation can be measured through market penetration (Mishkin, 2007; Kendall et al., 2010). Similarly, workforce growth, market share growth, sales growth, and profit growth reflect the growth of SMEs through their performance (Oshora et al., 2021). This study examines SME growth as influenced by financial inclusion in Pakistan as well as how the *Shariah* mode of financing influences SME growth. So, this study uses financial intermediation as a mediating variable between financial inclusion and SME growth in the Balochistan province of Pakistan.

Only a few studies have focused on financial inclusion and SME growth in Pakistan. Sarwar and Khattak (2021) studied the mediating role of family financial socialization in financial literacy and inclusion. Moreover, Ejaz and Hasan (2023) worked on estimating the financial inclusion index for developing countries. In addition, Rasheed and Siddiqui (2018) studied the attitude toward inclusive finance, that is, influence of owner-managers and

firm characteristics on SMEs' financial decision-making. This study is conducted to evaluate the impact of financial inclusion on SME growth in Balochistan and to moderate the role of *Shariah*-compliant financing in it. Furthermore, it analyzes the mediating role of financial intermediation between financial inclusion and SME growth. The significance of the study is that it would be helpful for managers and SME owners to know that financial inclusion, financial intermediation, and *Shariah*-compliant financing help them to overcome their financial constraints. Secondly, it would be helpful to determine whether these funds increase SME growth in terms of sales growth, profit growth, and market share growth. Thirdly, it would identify the barriers to SME growth and financing. The current study enriches the literature by identifying the factors that play an essential role in the financial inclusion of SMEs in Pakistan. Furthermore, it provides an in-depth understanding of the role of financial inclusion in the growth of SMEs, particularly profit growth, market share growth, and sales growth. Additionally, it would help to identify the moderating role of *Shariah*-compliant financing in the relationship between financial inclusion and SME growth in Pakistan.

A sample of 300 respondents was taken from three major cities in Balochistan, namely Quetta, Gwadar, and Turbat based on judgemental sampling. Questionnaires were circulated among 100 respondents from each city. In this study, financial inclusion is the exogenous variable, SME growth is the endogenous variable, and financial intermediation is the mediating variable. Structural Equation Modelling (SEM) was employed to evaluate the direct impact of financial inclusion, *Shariah*-compliant financing, and financial intermediation on SME growth. The findings indicate that as the direct effect of PLS-SEM, financial inclusion remains statistically significant to financial intermediation and SME growth dimensions, namely profit growth and sales growth. While, the other two dimensions, namely market share growth and workforce growth remain statistically insignificant. Whereas, financial intermediation remains statistically significant and impacts negatively on SME growth (profit growth and sales growth) directly. In the case of the indirect effect, *Shariah*-compliant financing has a statistically negative but significant impact on financial inclusion and SME growth dimensions of profit growth and sales growth. Similarly, financial intermediation mediates substantially and negatively impacts financial inclusion and SME growth.

The remaining structure of the paper is as follows: Section 2 reviews the literature, Section 3 presents the theoretical framework, Section 4 presents the data and methodology, Section 5 interprets the results and analysis, and section 6 narrates the discussion. Finally, the study is concluded and policies are recommended.

Literature Review

As per IMF, the financial inclusion of SMEs helps in economic growth, employment creation, macrofinancial stability, and the effectiveness of macroeconomic policy. It comes with new investment opportunities irrelevant to its parental wealth, particularly human capital (Ghassibe et al., 2019). On the other hand, the financial accessibility of SMEs improves their productivity by hiring highly skilled workers. Additionally, SMEs are considered a key source of employment and the engine of economic growth and development (Aga et al., 2015). Moreover, they contribute to economic growth by increasing household income and providing employment opportunities (Agussalim & Mappigau, 2013; Kamunge et al., 2014). According to Turyakira and Mbiddle (2015), there is limited research available on the contribution of SMEs concerning resources and networking influences. The proper enforcement of financial inclusion can enhance economic activity and bring improvement in their performance (Onaolapo, 2011; Egbetunde, 2012; Okafor et al., 2016). In addition, financial inclusion can be influenced by the level of employment in any country (Alshardan et al., 2016). Oshora et al. (2021) identified the determinants for financial inclusion as the cost of borrowing, collateral requirements, supply-side factors, demand-side factors, institutional framework, and market opportunity. Based on the findings, SMEs' performance and access to finance at a low cost can be improved via financial inclusion (Ratnawati, 2020). Generally, better implementation of financial inclusion can achieve high financial performance. The advantage of financial inclusion is that it reduces adverse selection and other problems (Nanziri, 2020). Efforts are made by economic actors to increase the availability, access, and benefits of the financial system (Bongomin, Ntayi et al., 2018; Khalatur et al., 2022; Lee et al., 2020). Moreover, labour, sales, market share growth, and profit are tools to measure firm performance (Rokhayati, 2015). In addition, Oshora et al. (2021) stated that the growth of SMEs can be reflected through sales growth, market share growth, profit growth, and workforce growth. The proper enforcement of financial inclusion can enhance economic

activity and bring improvement in the performance of SMEs (Khan et al., 2024; Martinez, 2011; Okafor, 2012; Onaolapo, 2015).

Additionally, Mustafa et al. (2018) stated that the lending behavior of Islamic banks (IBs) is that these banks lend less than 5% of their total lending. This is because they are concerned about the threat of lending to SMEs. Furthermore, according to Raza et al. (2017), SMEs can't borrow from banks due to religious restrictions. Mehrotra et al. (2015) stated how many of these SMEs use financial products offered through conventional bank platforms for their survival, contrary to their religious views. These SMEs borrow from alternative options upon the availability of other financing options meeting their religious principles. Firstly, there is a limited number of IBs to fulfil their financing criteria. Secondly, there are SMEs who want Islamic financing but don't have the financial facilities to meet the financial requirements of the SMEs. The estimated number of SMEs which do not opt for any financial assistance or use any banking channel to meet their necessities is 20% to 25%. Recently, the trend has changed since people are becoming aware of the Islamic modes of financing or the practice of Islamic finance in the banking sector which provides material assistance and spiritual satisfaction (Raza et al., 2017).

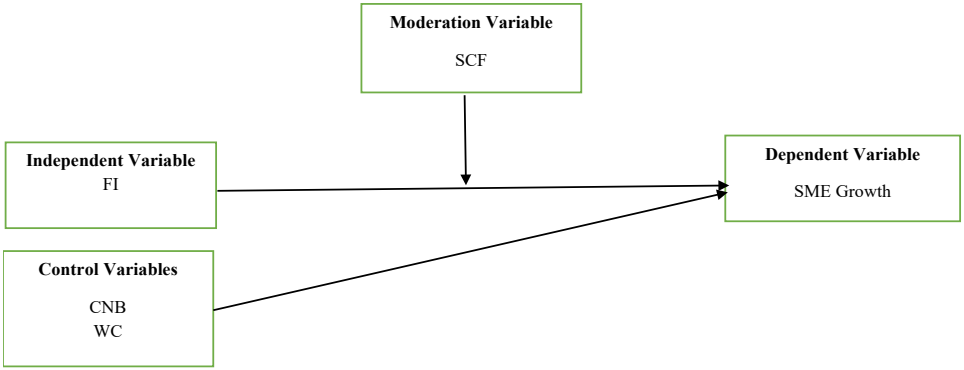
Mustafa et al. (2018) stated that IBs do not have a proper product line for SME financing to meet their needs. Additionally, El-Galfy and Khiyar (2012) explained that the barriers associated with SME financing are financial assistance or access to finance because firms do not have creditworthiness. This is because either SMEs are unaware of the product line offered by IBs for SME financing or they suffer from the non-availability of Islamic finance products as well as lengthy and time-consuming procedures to meet their financial requirements. The factors affecting the limited access to finance by SMEs are supply, regulatory, demand, policy, and institutional factors, which become barriers to their growth. IBs in developing countries cannot remove obstacles to the growth of SMEs because they lack financial products and services specifically designed for them. A study show approximately 35% of SMEs in the Middle East and North Africa (MENA) are excluded from the formal banking sector because they seek Sharia-compliant products that are not readily available in the market (Alam, 2015).

The main dimensions of financial intermediation are the quality of financial services and market penetration. Market penetration is used as a

proxy to measure financial intermediation. The physical distances between bank branches are vast; therefore, the young population lacks in account ownership, according to Demirguc-Kunt et al. (2017). The opening of new branches is possible due to market penetration, which ultimately leads to financial intermediation by providing quality financial services in line with the economic and social status of account holders (Chandan & Mishra, 2010; Coffie et al., 2023; Kendall et al. 2010). In the presence of efficient financial inclusion, the channeling of savings and investments improves the efficiency of SMEs and provides them with better financial facilities (Aduda & Kalunda, 2012). Herispon (2017) stated that financial inclusion gives access to finance and abrogates the barriers to financial services. Thus, the SME sector requires urgent financial inclusion. In addition, financial inclusion is essential for SMEs because it helps them overcome their financial constraints (Fahmy et al., 2016).

Figure 1

Moderation of SCF between FI and SME Growth



Note. Source: Muneer and Ahmad (2017)

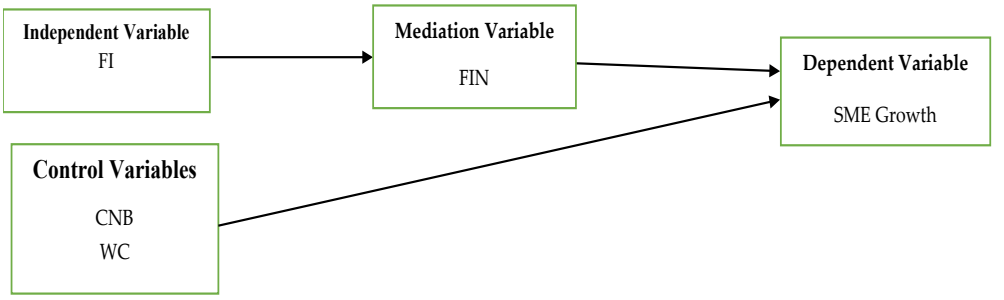
Theoretical Framework

The theoretical framework is derived from the system theory of financial inclusion (FI), public theory of FI, and financial intermediation theory. According to the system theory of financial inclusion, the system is an integrated and dependent part. So, the economic system comprises the financial system, including IBs, CBs, and SMEs, among others. CBs' interest rates, collateral requirements, and other financial requirements hinder financial inclusion. On the contrary, financial inclusion through *Shariah*-compliant finance (SCF) offered by *Shariah*-compliant financial institutions including IBs is more accessible due to the risk-sharing

mechanisms and redistribution principles. Hence, all segments of the economy become a part of the financial system. So, the efficiency and profitability of both sectors are enhanced.

Figure 2

Mediation of Financial Intermediation between FI and SME Growth



Note. Source: Ratnawati (2020)

Description of the Variables

The details of the variables and their measurements are given below.

Exogenous Variable

Financial inclusion is the exogenous variable in this study. Its indicators include benefits for well-being, use of storage service finance, access to finance, and quality of financial services (Bongomin, Munene et al., 2018; Ratnawati, 2020; World Bank, 2014).

Endogenous Variable

The endogenous variable in this study is SME growth and its indicators are workforce growth, sales growth, market share growth, and profit growth (Delmar et al., 2003; Ratnawati, 2020).

Moderating Variable

Shariah-compliant financing modes including *musharakah, mudarabah, murabaha, istishna, ijara, qardh,* and *salam* were used in the questionnaire. According to Mohieldin et al. (2012), SMEs' access to finance could be increased by offering them risk-sharing financing instruments based on *Shariah*-compliance. The SME owners were asked

whether using any of these modes was considered a *Shariah*-compliant mode of SME financing in their business.

Mediating Variable

Financial intermediation is the mediating variable in this study and its dimension is market penetration (Kendall et al., 2010; Ratnawati, 2020).

Characteristics and Nature of Business

Ademosu (2022) explained the characteristics and nature of business in the SME sector. This includes the sector in which the SME is operating, the number of workers in that particular SME, the legal status of the SME, the commencement of the business, and business turnover in a financial year.

Working Capital

According to Brealey et al. (2014) and Kieschnick et al. (2013), working capital management focuses on managing the current assets, which include inventories, accounts receivable, and cash, whereas current liabilities include the current payable.

Table 2

Definition and Measurement of Each Variable's Dimensions

Variables	Definition	Indicators and Symbols
SME Growth	The results of an individual's, team's, or work function's operations within a specific time frame to accomplish goals that are generally agreed upon (Delmar et al., 2003; Davidsson, 2006; Chauvet & Jacolin, 2017; Ratnawati, 2020; Rokhayati, 2015)	WFG PG MSG SG
Financial Inclusion	For the public to profit from the financial system and other economic agents, efforts are made to guarantee its availability and boost public participation (Ardic et al., 2011; Bongomin, Munene et al., 2018; Lee et al., 2020; Ratnawati, 2020).	Quality of financial services Use of storage service for finance Access to finance

Variables	Definition	Indicators and Symbols
Shariah-Compliant Financing	A joint venture, or *musharakah*, is an enterprise where two or more individuals pool their resources to form a firm. Profits are divided among partners in a predetermined ratio, while losses are distributed based on the percentage of the capital contributed (Usmani, 2002).	Usage of SCF products and services
	Mudarabah (sharing profits) While one partner handles financial management, the other supplies capital. The profits are allocated according to a predefined ratio and investors bear the associated losses (Iqbal et al., 2002).	Does the usage of SCF Improve SME performance?
	Murabaha (Price + Financing) It is a sales contract in which the client is shown the cost and profit up front (Kenya Bankers Association, 2013).	
	Ijara (lease) In a lease agreement, the asset owner allows another party to implement its asset-related *Shariah* permissible aims (Usmani, 2002)	Alternative financial accessibility to CBs
	Wakalah (Agency contract) *Wakalah*, also known as an agency contract, is a contract in which an individual authorizes another individual to carry out a specific task. Managers act on behalf of their shareholders (Bank Negara Malaysia, 2015).	

Variables	Definition	Indicators and Symbols
Financial Intermediation	It is the channeling of funds and can be measured through market penetration because the entry of new financial services providers and commencement of new branches in the financial markets could develop new ways to provide different financial services to the lower class that align with their economic status (Mishkin, 2007; Kendall et al., 2010; Ratnawati, 2020).	Market Penetration
Characteristics and Nature of Business	SMEs are defined in every country based on sales in monetary terms, the number of employees, the economic worth of the company's assets, and the company's output (Cunningham & Rowley, 2008)	Industry in which SMEs operate SME ownership Legal status Number of employees working
Working Capital	The excess of the current asset over current liabilities. It includes the management and financing of the current assets through current liabilities (Raheman et al., 2010).	Cash management Creditors management Inventory management Receivables management

Data and Methodology

Data

Before the commencement of the study, a pilot study of 50 samples was conducted in Quetta City to check the reliability and validity of the instrument. This study was conducted using a field survey. Data was collected through questionnaires from SME owners and managers. A sample of 300 respondents was taken from three major cities of Balochistan,

namely Quetta, Gwadar, and Turbat. Questionnaires were circulated among 100 respondents from each city through online and offline surveys. The entire target group was considered based on judgment sampling techniques due to population density and based on the location of most SMEs in Balochistan. Quetta, the capital city of Balochistan, has a dense population. Whereas, Gwadar and Turbat are the centers of the China-Pakistan Economic Corridor (CPEC).

Method

Structural equation modeling (SEM), run through Smart PLS4, was used to estimate and analyze the respondent's responses. PLS-SEM was selected due to its use in management and other fields of concern, as well as in complex models in terms of relationships, and to estimate the conceptual relationships among the latent constructs. The PLS path is predominantly used to estimate the dependent variable and it is a well-developed system for the SEM technique (Hair et al., 2012). For this study, SmartPLS4 was applied. It is a newer and more advanced PLS-SEM tool that is currently being used by the researchers the most.

Results

Descriptive Analysis

The sample was taken from three major cities in Balochistan, namely Quetta, Gwadar, and Turbat. Quetta is the capital of Balochistan. In contrast, Gwadar and Turbat are the centers of the China-Pakistan Economic Corridor (CPEC). The overwhelming majority of SME owners or managers were male, comprising 88% of the sample. Whereas, female contribution to the sample was 12% because of the tribal system existing in the province. The majority chunk of SME owners or managers aged between 26 and 30 years, comprising a percentage of 20.7%. The next segment of SME owners or managers aged between 31 and 35 years, comprising 20% of the sample. The third segment aged above 45 years, comprising 15% of the sample. Whereas, the lowest percentage of the age group is less than 20 years, comprising 6%. In terms of education, most SME owners and managers did graduation, which is 34% of the total sample. Those with secondary education comprised 32.7% of the sample. The percentage of uneducated owners and managers was 3.3%, which is the lowest percentage in the education category.

Table 3
Demographic Analysis

Particulars	Description	Frequency	%
Gender	Male	264	88
	Female	36	12
	Total	300	100
Age	< 20 years	18	6
	21-25 years	54	18
	26-30 years	62	20.7
	31- 35 years	60	20
	36-40 years	46	15.3
	above 45 years	60	20
	Total	300	100
City	Quetta	100	33.3
	Turbat	100	33.3
	Gwadar	100	33.3
	Total	300	100
Education	Uneducated	10	3.3
	Junior High School	74	24.7
	Secondary School	98	32.7
	Graduate	102	34
	Postgraduate	14	4.7
	Other	2	.7
	Total	300	100

Correlation Analysis

Tables 4 and 5 show the correlation matrix of *Shariah*-compliant financing and financial intermediation.

Table 4
Correlation Matrix of Shariah-Compliant Financing

Variables	1	2	3	4	5	6	7	8
1. Characteristics and Nature of Business	1.00							
2. Financial Inclusion	0.32	1.00						
3. MSG	0.79	0.41	1.00					
4. PG	0.78	0.38	0.96	1.00				
5. SG	0.81	0.34	0.92	0.94	1.00			

Variables	1	2	3	4	5	6	7	8
6. SCF	0.16	0.06	0.15	0.18	0.20	1.00		
7. WFG	0.77	0.28	0.83	0.86	0.88	0.16	1.00	
8. WC	0.77	0.29	0.63	0.66	0.73	0.10	0.77	1.00
9. Shariah Compliant Financing x Financial Inclusion	0.14	0.12	0.15	0.14	0.09	0.40	0.18	0.13

Table 5

Correlation Matrix of Financial Intermediation

Variables	1	2	3	4	5	6	7
1. Characteristics and Nature of Business	1.00						
2. Financial Inclusion	0.32	1.00					
3. Financial Intermediation	0.18	0.66	1.00				
4. MSG	0.79	0.42	0.21	1.00			
5. PG	0.78	0.38	0.17	0.96	1.00		
6. SG	0.81	0.34	0.15	0.92	0.94	1.00	
7. Work Force Growth	0.77	0.28	0.14	0.83	0.86	0.87	1.00
8. Working Capital	0.77	0.28	0.19	0.63	0.66	0.73	0.77

Table 5 shows that financial inclusion is positively correlated with SME growth, financial intermediation, and *Shariah*-compliant financing. There is a highly positive correlation between financial inclusion and financial intermediation (coefficient value = 0.65). In the case of the correlation between financial inclusion and the factors affecting SME growth, market share is strongly correlated (coefficient value = 0.432). Whereas, there is a weak positive correlation between financial inclusion and workforce growth (coefficient value = 0.318). Further, there is a weak correlation between financial intermediation, *Shariah*-compliant financing, its moderating effect on financial inclusion, and the factors of SME growth. The weakest correlation is observed between financial intermediation and sales growth (correlation coefficient = 0.149). Contrarily, the strongest correlation exists among the factors of SME growth.

Table 6

KMO and Bartlett's Test

KMO and Bartlett's Test	*Shariah*-Complaint Financing	Financial Intermediation
Kaiser-Meyer-Olkin	.790	.798

Bartlett's Test of Sphericity	Approx. Chi-Square	3855.431	3765.665
	df	143	143
	Sig.	.000	.000

The KMO values are 0.790 and 0.798, which are treated as moderate per the threshold set by Kaiser (1974). The probability value of the Bartlett's test of sphericity is statistically significant (0.000), showing that the sample is adequate and depicts measurements accurately.

Variance Explained and Rotated Component Matrix

We have assumed eigenvalues greater than 1 and eliminating the elements with loading factors less than 0.3 for all latent constructs. The test revealed the eight factors of the rotated solution; the listed factors explain 13.9% (Table 7) of compliant financing. Similarly, the test revealed seven factors of rotated solution; the listed factors explain 15.1% (Table 8) of financial intermediation. No severe threat emerges from common method variance because unrotated solutions do not generate a general factor. The extraction method used was principal component analysis (PCA).

Table 7

Total Variance Explained for Shariah-Compliant Financing

Component	IE Values		ESQ Loadings		RSQ Loadings	
	Overall	%Variance	Overall	%Variance	Overall	%Variance
1	13.858	37.453	13.858	37.453	10.238	27.569
2	4.961	13.407	4.961	13.407	7.378	19.122
3	3.068	8.292	3.068	8.292	3.042	8.569
4	2.272	6.139	2.272	6.139	2.567	7.232
5	1.972	5.428	1.972	5.428	2.147	6.352
6	1.847	4.010	1.847	4.010	1.893	5.435
7	1.632	3.168	1.632	3.168	1.283	4.370
8	1.07	2.179	1.07	2.179	1.521	3.832

Table 8

Total Variance Explained for Financial Intermediation

Component	IE Values		ESQ Loadings		RSQ Loadings	
	Overall	%Variance	Overall	%Variance	Overall	%Variance
1	15.145	37.793	15.145	37.793	9.721	24.612
2	6.548	16.211	6.548	16.211	7.792	19.232
3	4.856	11.559	4.856	11.559	6.373	16.382
4	2.271	6.653	2.271	6.653	2.494	7.631

Component	IE Values		ESQ Loadings		RSQ Loadings	
	Overall	%Variance	Overall	%Variance	Overall	%Variance
5	1.862	4.602	1.862	4.602	2.151	6.728
6	1.440	3.591	1.440	3.591	1.797	4.484
7	1.028	2.610	1.028	2.610	1.145	2.868

Furthermore, Tables 9 and 10 show that the factor loading of each item exceeding 50% is acceptable, according to the threshold level of factor loading. The principal component analysis and rotation method through Varimax with Kaiser normalization were used to extract the desired results. SmartPLS4 was used to examine the cross-loading appearing with their original variables, while there were no overlaps among these items.

Table 9

Factor Loading Matrix for Shariah-Compliant Financing

	1	2	3	4	5	6	7	8
WFG1	.676							
WFG2	.644							
WFG3	.781							
PG1		.841						
PG2		.888						
PG3		.905						
MSG1			.831					
MSG2			.863					
MSG3			.877					
SG1				.646				
SG2				.656				
SG3				.833				
FI1					.884			
FI2					.916			
FI3					.761			
FI0					.880			
SCF2						.936		
SCF3						.965		
SCF7						.943		
SCF8						.961		
SCF11						.971		
SCF13						.983		
CNB2							.619	

	1	2	3	4	5	6	7	8
CNB3							.650	
CNB4							.729	
CNB6							.513	
WC2								.863
WC15								.780
WC18								.729
WC24								.753
WC24								.763

Note. Extraction Method: Principal Component Analysis. Rotation converged in 7 iterations

Table 10

Factor Loading Matrix for Financial Intermediation

	1	2	3	4	5	6	7	8
WFG1	.760							
WFG2	.643							
WFG3	.791							
PG1		.831						
PG2		.851						
PG3		.874						
MSG1			.870					
MSG2			.853					
MSG3			.813					
SG1				.735				
SG2				.811				
SG3				.793				
FI11					.726			
FI2					.669			
FI3					.615			
FI10					.679			
FIN1						.584		
FIN2						574		
FIN3						.564		
FIN5						.628		
CNB2							.553	
CNB3							.780	
CNB4							.674	

	1	2	3	4	5	6	7	8
CNB6							.862	
WC2								.567
WC15								.583
WC18								.554
WC24				.				.589
WC26				.				.595

Note. Extraction Method: Principal Component Analysis. 9 components extracted.

Confirmatory Factor Analysis (CFA)

According to Hair et al. (2016), two sub-models are combined to test the path model. Firstly, the inner and structural models show the relationships between the latent variables. Secondly, the outer measurement model concerns the relationship between each construct and its indicator.

Measurement (Outer) Model

The results of each item are shown in Tables 11 and 12. Each item fulfills the requirements of the threshold set for attaining a value above 0.6 and the cut-off point of factor loadings, which means that each set of items measures the intended variables. All items filtered in the last step include 8 items that represent financial inclusion, 5 items representing financial intermediation, 12 items showing SME growth, and 8 items representing *Shariah*-compliant financing.

Table 11

Confirmatory Factor Analysis for Shariah-Compliant Financing

	CNB	FI	MSG	PG	SG	SCF	WFG	WC	SCF x FI
CNB2	0.76								
CNB3	0.68								
CNB4	0.94								
CNB6	0.76								
FI1		0.98							
FI2		0.94							
FI3		0.71							
FI0		0.95							
MSG1			0.98						
MSG2			0.97						
MSG3			0.92						
PG1				0.80					

	CNB	FI	MSG	PG	SG	SCF	WFG	WC	SCF x FI
PG2				0.99					
PG3				0.96					
SCF2						0.96			
SCF3						0.98			
SCF7						0.95			
SCF8						0.98			
SCF11						0.99			
SCF13						0.99			
SG1					0.86				
SG2					0.93				
SG3					0.86				
WC2								0.63	
WC15								0.91	
WC18								0.90	
WC24								0.86	
WC26								0.86	
WFG1							0.96		
WFG2							0.88		
WFG3							0.90		
SCF x FI									1.00

Table 12

Confirmatory Factor Analysis for Financial Intermediation

	CNB	FI	FIN	MSG	PG	SG	WFG	WC
CNB2	0.87							
CNB3	0.68							
CNB4	0.98							
CNB6	0.90							
FI1		0.98						
FI2		0.99						
FI3		0.86						
FI0		0.94						
FIN1			0.77					
FIN2			0.78					
FIN3			0.78					
FIN5			0.86					
MSG1				0.97				
MSG2				0.99				
MSG3				0.99				
PG1					0.94			

	CNB	FI	FIN	MSG	PG	SG	WFG	WC
PG2					0.92			
PG3					0.92			
SG1						0.93		
SG2						0.91		
SG3						0.93		
WC2							0.89	
WC15							0.83	
WC18							0.85	
WC24							0.70	
WC26							0.71	
WFG1								0.96
WFG2								0.94
WFG3								0.86

Internal Consistency and Reliability

According to Hair et al. (2012), indicator reliability can be found through the outer loading of each variable. The item can be retained between 0.40 and 0.70 factor loadings. In the current study, the loadings of the observed variables (items) are higher than 0.7 (Tables 5.7 and 5.8).

Convergent Validity

It was suggested by Fornell and Larcker (1981) that convergent validity can be found through the extraction of average variance (AVE). The AVE threshold must be at least 0.50 or more to show the convergent validity of the latent variables. Table 13 shows the AVE values for all the latent variables. *Shariah*-compliant financing has the lowest AVE value (0.555) and market share growth (0.950) has the highest AVE value of all the latent variables. The AVE values in Table 13 indicate that the variables successfully achieved the minimum criteria of 0.5. Moreover, Bagozzi and Yi (1988) and Hair et al. (2011) provided the rule of thumb for assessing internal consistency by using composite reliability in PLS modeling. The coefficient value for composite reliability is 0.7 and above. Table 5.11 reports the results for the composite reliability of all latent variables. The values range from 0.845 (financial inclusion) to 0.973 (market share growth). This shows the acceptable internal consistency and reliability for further analysis.

Table 13
Convergent Validity

	Cronbach's alpha	CR	AVE	Decision
FI	0.845	0.895	0.681	
MSG	0.973	0.983	0.950	
PG	0.966	0.978	0.936	
SG	0.935	0.959	0.886	
Work Force Growth	0.917	0.948	0.858	Reliable
Shariah Compliant Financing	0.838	0.881	0.555	
Financial Intermediation	0.886	0.920	0.743	
CNB	0.794	0.859	0.608	
Working Capital	0.861	0.900	0.647	

Note. CR (Composite Reliability) and AVE (Average Variance Extract)

Discriminant Validity

Valid discriminant requirements can be achieved when the square root of the AVE value is greater than the correlations among the latent variables. Tables 14 and 15 show AVEs' square root values. Correlational values are shown in Tables 4 and 5. The square root values of AVE are greater than the correlational values (column and row-wise). Therefore, discriminant validity is proved according to the Fornell and Larcker criteria.

Table 14
Fornell and Larcker Criteria for the Discriminant Validity of Shariah-Compliant Financing as Moderator

Variables	1	2	3	4	5	6	7	8
1. CNB	0.78							
2. FI	0.32	0.83						
3. MSG	0.79	0.41	0.97					
4. PG	0.78	0.38	0.96	0.97				
5. SG	0.81	0.34	0.92	0.94	0.94			
6. Shariah Compliant Financing	0.16	0.06	0.15	0.18	0.20	0.74		
7. Work Force Growth	0.77	0.28	0.83	0.86	0.88	0.16	0.93	
8. Working Capital	0.77	0.29	0.63	0.66	0.73	0.10	0.77	0.80

Table 15

Fornell and Larcker Criteria for the Discriminant Validity of Financial Intermediation as Mediator

Variables	1	2	3	4	5	6	7	8
1. Characteristics and Nature of Business	0.78							
2. Financial Inclusion	0.32	0.82						
3. Financial Intermediation	0.18	0.66	0.86					
4. MSG	0.79	0.42	0.21	0.97				
5. PG	0.78	0.38	0.17	0.96	0.97			
6. SG	0.81	0.34	0.14	0.92	0.94	0.94		
7. Work Force Growth	0.77	0.28	0.14	0.83	0.86	0.87	0.93	
8. Working Capital	0.77	0.28	0.19	0.63	0.66	0.73	0.77	0.80

Discriminant validity is established between two reflective constructs when HTMT value is less than 0.90. Tables 16 and 17 below show HTMT values less than 0.90, showing that all constructs are discriminantly valid.

Table 16

HTMT Criteria for the Discriminant Validity of Shariah-Compliant Financing as Moderator

Variables	1	2	3	4	5	6	7	8	9
1. Characteristics and Nature of Business	0.64								
2. Financial Inclusion	0.42	0.37							
3. Shariah Compliant Financing	0.35	0.60	0.43						
4. MSG	0.39	0.61	0.14	0.34					
5. PG	0.82	0.59	0.80	0.78	0.71				
6. SG	0.72	0.29	0.52	0.36	0.54	0.73			
7. WFG	0.33	0.28	0.34	0.28	0.59	0.39	0.63		
8. Working Capital	0.32	0.87	0.72	0.50	0.25	0.17	0.23	0.76	
9. SCF x FI	0.62	0.32	0.54	0.09	0.08	0.20	0.04	0.19	0.16

Table 17

HTMT Criteria for the Discriminant Validity of Financial Intermediation as Mediator

Variables	1	2	3	4	5	6	7	8
1. Characteristics and Nature of Business	0.80							
2. Financial Inclusion	0.16	0.44						
3. Shariah Compliant Financing	0.54	0.52	0.56					
4. MSG	0.49	0.81	0.84	0.54				
5. PG	0.66	0.19	0.61	0.24	0.40			
6. Sales Growth	0.17	0.68	0.33	0.78	0.79	0.38		
7. WFG	0.23	0.78	0.54	0.50	0.79	0.59	0.48	
8. Working Capital	0.29	0.70	0.81	0.86	0.67	0.67	0.71	0.86

Structural (Inner) Model

Figure 2

Moderation Result of PLS-SEM through Smart PLS4

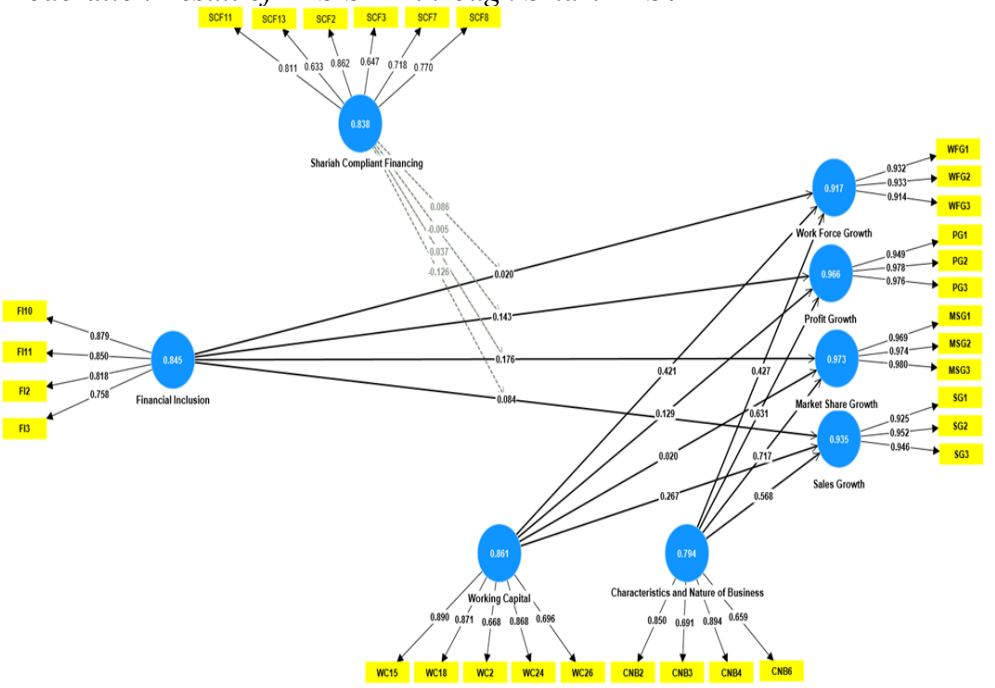
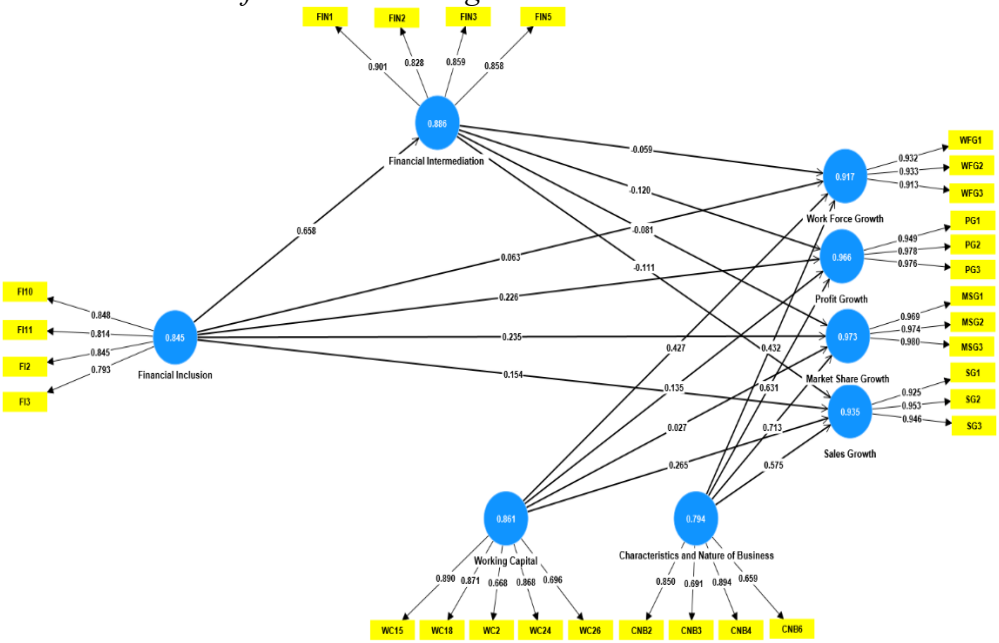


Figure 3

Mediation Result of PLS-SEM through Smart PLS4



Results of Direct Relationships

Table 18

Direct Effect of Shariah-Compliant Financing

Hypothesis	Co-efficient	*t*	STD	*p*	Decision
FI -> MSG	0.535	4.42	0.121	0.00	Accepted
FI -> PG	0.143	0.04	3.20	0.001	Accepted
FI -> SG	0.084	0.05	1.80	0.04	Accepted
FI -> WFG	0.020	0.04	0.48	0.32	Declined
Shariah Compliant Financing -> MSG	0.011	0.07	0.17	0.43	Declined
SCF -> PG	0.058	0.04	1.64	0.04	Accepted
SCF -> SG	0.113	0.095	1.692	0.043	Accepted
SCF -> WFG	0.031	0.182	0.172	0.432	Declined
Working Capital -> Market Share Growth	0.020	0.074	0.264	0.396	Declined

Hypothesis	Co-efficient	*t*	STD	*p*	Decision
Working Capital -> Profit Growth	0.13	0.08	1.67	0.04	Accepted
Working Capital -> Sales Growth	0.27	0.07	3.86	0.00	Accepted
Working Capital -> Work Force Growth	0.42	0.08	5.08	0.00	Accepted
Characteristics and Nature of Business -> MSG	0.72	0.06	11.78	0.00	Accepted
CNB -> Profit Growth	0.63	0.07	9.06	0.00	Accepted
Characteristics and Nature of Business -> SG	0.57	0.07	8.19	0.00	Accepted
CNB -> WFG	0.43	0.08	5.31	0.00	Accepted

Table18 shows that financial inclusion is statistically significant and positively impacts financial intermediation, market share growth, profit growth, and sales growth but has an insignificant impact on workforce growth. The findings are in line with Ratnawati (2020) and Oshora et al. (2021). The advantage of financial inclusion is that it reduces adverse selection and other problems (Nanziri, 2020). Financial inclusion and *Shariah*-compliant financing positively impact profit growth and sales growth, but they have an insignificant impact on market share growth and workforce growth. If financial inclusion increases by 1%, SME profit increases by 14.3% (on average), whereas the other variables remain constant. Likely, financial inclusion increases by 1%, SME profit increases by 8% (on average), and the other variables remain constant. Similarly, when *Shariah*-compliant financing increases by 1%, SME profit growth increases by 5.8% (on average), whereas the other variables remain constant. Furthermore, *Shariah*-compliant financing increases by 1%, SMEs' profit growth increases by 11.3% (on average), and the other variables remain constant. Muneer and Ahmed (2017) confirmed the current findings that explain that the profitability of SMEs could be affected when Islamic financing acts independently. Contrarily, the controlling variables impact the four dimensions of the SME's growth positively and significantly.

Table 19
Direct Effect of Financial Intermediation

Hypothesis	Co-efficient	*t*	STD	*p*	Decision
FI -> Financial Intermediation	0.66	0.06	11.37	0.00	Accepted
FI -> MSG	0.23	0.06	4.24	0.00	Accepted
FI -> PG	0.23	0.06	3.78	0.00	Accepted
FI -> SG	0.15	0.06	2.78	0.003	Accepted
FI -> Work Force Growth	0.06	0.05	1.36	0.09	Declined
Financial Intermediation -> Market Share Growth	-0.08	0.06	1.32	0.09	Declined
Financial Intermediation -> Profit Growth	-0.12	0.06	1.84	0.03	Accepted
Financial Intermediation -> Sales Growth	-0.11	0.06	1.87	0.03	Accepted
Financial Intermediation -> Work Force Growth	-0.06	0.05	1.10	0.14	Declined
Working Capital -> MSG	0.03	0.07	0.36	0.36	Declined
Working Capital -> PG	0.14	0.08	1.76	0.04	Accepted
Working Capital -> SG	0.26	0.07	3.63	0.00	Accepted
Working Capital -> Work Force Growth	0.43	0.08	5.12	0.00	Accepted
Characteristics and Nature of Business -> MSG	0.71	0.06	11.92	0.00	Accepted
CNB -> Profit Growth	0.63	0.07	9.22	0.00	Accepted
Characteristics and Nature of Business -> SG	0.58	0.07	7.88	0.00	Accepted
CNB -> WFG	0.43	0.08	5.50	0.00	Accepted

Table 19 shows that financial intermediation has a negative impact on workforce growth and market share growth, although it is statistically significant and negatively impacts SMEs' profit and sales growth. When financial inclusion increases by 1%, the banks' financial intermediation increases by 65.3%, while keeping the other variables' effect constant. Additionally, if financial intermediation increases by 1%, SMEs' profit increases by 22.6%, while keeping the other variables' effect constant. Likewise, when financial intermediation increases by 1%, sales growth increases by 15.4%, while keeping the other variables' effect constant. On the other hand, if financial intermediation increases by 1%, profit growth

decreases by 12%, while keeping the other variables' effect constant. The results are in line with Ratnawati (2020). Based on the findings, financial intermediation can improve SMEs' performance and access to finance at a low cost. Generally, better implementation of financial intermediation can achieve high financial performance.

Effect of *Shariah*-Compliant Financing as Moderating and Financial Intermediation as Mediating Variable on Financial Inclusion and SME Growth

Table 20

Indirect Effect Result of the Moderating Effect of Shariah-Compliant Financing on Financial Inclusion and SME Growth

Hypothesis	Co-efficient	*t*	STD	*p*	Decision
SCF x FI -> MSG	0.037	0.109	0.340	0.367	Declined
SCF x FI-> Profit Growth	-0.005	0.222	1.687	0.049	Accepted
SCF x FI -> Sales Growth	-0.126	0.133	1.728	0.041	Accepted
SCF x FI -> WFG	0.086	0.269	0.321	0.374	Declined

Table 20 shows that the moderating effect of *Shariah*-compliant financing is statistically significant and it negatively impacts financial inclusion and SME growth dimensions (profit growth and sales growth). On the contrary, *Shariah*-compliant financing impacts workforce and market share growth positively but insignificantly. If *Shariah*-compliant financing increases by 1% as a moderator, then association between financial inclusion and SMEs' profit growth decreases by 5%, keeping the effect of the other variables constant. Similarly, *Shariah*-compliant financing increases by 1% as a moderator, then it decreases association between financial inclusion and SMEs sales growth by 12.6%, keeping the effect of the other variables constant. Muneer and Ahmed (2017) confirmed the current findings which predict that the profitability of SMEs could be affected when Islamic financing acts independently and negatively impacts SME growth due to moderators as the mode of financing.

Table 21

Mediating Effect of Financial Intermediation on Financial Inclusion and SME Growth

Hypothesis	Co-efficient	*t*	*STD*	*p*	Decision
FI →FIN→Workforce growth	-0.05	0.04	1.25	0.11	Declined

Hypothesis	Co-efficient	*t*	*STD*	*p*	Decision
FI →FIN→Profit growth	-0.08	0.25	1.73	0.04	Accepted
FI → FIN→ Market share growth	-0.07	0.27	1.75	0.14	Declined
FI → FIN → Sales growth	-0.04	0.04	1.63	0.04	Accepted

Table 21 shows that the mediating effect of financial intermediation is statistically significant and it negatively impacts financial inclusion and SME growth dimensions (profit growth and sales growth). Overall, financial intermediation has a negative impact, either statistically significant or insignificant. If financial intermediation increases by 1% as a mediator, then association between financial inclusion and SMEs profit growth by 8%, keeping the effect of the other variables constant. Similarly, when financial intermediation increases by 1% as a mediator, then it decreases association between financial inclusion and SME sales growth by 7%, keeping the effect of the other variables constant. The premium on external financing of the borrowers from the banks strictly prohibits it; hence, they predominantly go for informal or self-finance through their social contacts (Montiel, 2003).

Variance Inflation Factor (VIF)

VIF is used to detect multicollinearity. Hair et al. (2016) stated that VIF should be less than 5. In our case, the VIF statistics for the variables are less than 5, showing no multicollinearity among them.

Table 22

Variance Inflation Factor

Variables	VIF
CNB2	1.665
CNB3	1.547
CNB4	3.813
CNB6	2.891
FI1	4.256
FI2	4.778
FI3	2.420
F10	4.430
FIN1	1.048
FIN2	1.294

Variables	VIF
FIN3	1.522
FIN5	3.473
MSG1	3.463
MSG2	4.169
MSG3	4.847
PG1	2.219
PG2	4.430
PG3	4.812
SG1	1.970
SG2	2.632
SG3	2.052
WC2	2.414
WC15	2.086
WC18	1.823
WC26	3.368
WFG1	3.070
WFG2	2.627
WFG3	1.647

Predictive Relevance of Model

The model for the fitness test *R* square was executed using PLS-SEM. According to Gans, 10-20% cpmprise the normal range in cross-sectional estimation. Notably, the statistical values of all observations given above in Table 23 is between 0.433 and 0.670.

Table 23

Predictive Relevance of Model

Variables	R^2	Adjusted R^2
FIN	0.433	0.429
MSG	0.663	0.654
PG	0.652	0.642
SG	0.695	0.686
WFG	0.670	0.661

Discussion

Based on the above results, as far as the direct effects are concerned, financial inclusion is statistically significant and positively impacts financial intermediation, market share growth, profit growth, and sales

growth, but has an insignificant impact on workforce growth. These findings are in line with Ratnawati (2020) and Oshora et al. (2021). The advantage of financial inclusion is that it reduces adverse selection and other problems (Nanziri, 2020). Financial inclusion and *Shariah*-compliant financing positively impact profit growth and sales growth, although they have an insignificant impact on market share growth and workforce growth. Muneer and Ahmed (2017) confirmed the current findings which predict that the profitability of SMEs could be affected when Islamic financing acts independently. Contrarily, the controlling variables impact the four dimensions of SME growth positively and significantly.

The moderating role of *Shariah*-compliant financing is statistically significant and negatively impacts financial inclusion and SME growth dimensions (profit growth and sales growth). Conversely, *Shariah*-compliant financing impacts workforce and market share growth positively but insignificantly. Muneer and Ahmed (2017) confirmed the current findings which predict that the profitability of SMEs could be affected adversely when Islamic financing acts independently and negatively impacts SME growth due to moderators such as the mode of financing. SME owners and managers lack financial knowledge about Islamic financial products and services available for SMEs, while less motivated IB staff is unable to create awareness among the masses about their offerings.

Overall, financial intermediation has negative impacts, either statistically significant or insignificant. The premium on the external financing of the borrowers from the banks strictly prohibits it; hence, they go for informal or self-finance through their social contacts (Montiel, 2003). In addition, Similar experiences are faced by SMEs operating in Pakistan because they are considered as unbanked firms to avoid adverse selection and adverse selection problems (Nanziri, 2020).

Conclusion and Policy Recommendations

In the current study, SEM was employed to evaluate the direct impact of financial inclusion, *Shariah*-compliant financing, and financial intermediation on SME growth. It was determined that the effect of financial inclusion on SME growth and financial intermediation is significant and positive. Contrarily, it was established that *Shariah*-compliant financing positively impacts SME growth (profit growth and sales growth) as the independent variable and negatively as the moderator.

On the other hand, financial intermediation remains statistically significant and negatively impacts financial inclusion and SME growth dimensions, namely profit growth and sales growth. In contrast, it has an insignificant impact on workforce growth and market share growth.

Central banks can play a crucial role in promoting financial inclusion and SME growth by

- implementing policies and regulations that increase access to financial services,
- providing liquidity and credit facilities to financial institutions, supporting SME lending,
- encouraging financial innovation, including *Shariah*-compliant financing options, and
- monitoring and supervising financial institutions to ensure their stability and soundness.

In the context of *Shariah*-compliant financing, central banks can

- develop regulatory frameworks that support Islamic finance,
- encourage the development of *Shariah*-compliant financial products and services,
- provide guidance and oversight to ensure the stability and integrity of Islamic financial institutions, and
- the government should formulate a strategy to support SMEs in financial inclusion by reducing bureaucratic hurdles, simplifying licensing processes to encourage SMEs to formalize and access financial services, and implementing initiatives such as credit guarantee schemes, collateral-free loans, and interest subsidies to increase SMEs' access to affordable credit. Thus, the economic objectives of the country can be achieved.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study will be provided by the corresponding author upon request.

Funding Details

This research did not receive grant from any funding source or agency.

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