THE ASIAN BULLETIN OF BIG DATA MANAGMENT
Vol. 4. Issue 1 (2024)
https://doi.org/ 10.62019/abbdm. v4i1.123

ASIAN BULLETIN OF BIG DATA MANAGEMENT
ISSN (Print): 2959-0795
http://abbdm.com/
ISSN (online): 2959-0809

Impact of Banks' Growth on Financial Performance with Offering Supply Chain Finance: A Comparative Study of Pakistani Banks Incorporating Data Analysis

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Chronicle

Article history

Received: February 24, 2024
Received in the revised format: Feb 27, 2024
Accepted: Feb 28, 2024
Available online: Feb 29, 2024

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Abstract

Supply Chain finance is important financing growth tool used by banks. However, existing literature pay less attention to the use of supply chain finance especially the in-depth investigation on the impact of banks growth with offering supply chain finance on financial performance. The objective of this study to empirically examines a comparative study between banks growth with offering supply chain finance impact on firm performance with banks not offering supply chain finance growth impact on financial performance. This study used dynamic generalized method of moments (GMM) technique, based on 22 Pakistani Banks (10 offer supply chain finance and 12 non-offering supply chain finance) data during 2012-2022. The results show a significant difference between banks growth by offering and non-offering supply chain finance impact on. Furthermore, the results show a significant positive impact of banks growth with supply chain finance on banks financial performance. This study encourages banks to offer supply chain finance that contributes towards their growth and financial performance.

Keywords: Supply Chain Finance, Bank Growth, Financial Performance, Data.

INTRODUCTION

In the modern expansion of the economy, financial management efficiency is crucial for business growth. Banks always strive for growth and introduce different financing solutions to enhance the economy function and particularly their own growth. Globally different banks start offering supply chain finance and has grabbed the attention as a strategic tool for growth, working capital optimization and increases the financial flow in supply chain. In Pakistan, the banking sector plays an important role to facilitate the financial transactions and to provide support the economic activities as well as improve the financial performance of banks. Pakistani banks have recognized the potential growth of offering supply chain finance and use it as financial growth tool to enhance their financial performance. Through financing options expansion for suppliers and buyers with supply chain, banks can facilitate to reduce payment delays, smoother transactions and mitigate financial risks. Supply chain finance is a finance optimization solution offered by the financial service providers to integrate with suppliers and buyers and increase the all-participants financial value (Pfohl & Gomm, 2009). Different research shows that supply chain finance is win-win situation for all the involved parties (i.e., banks, buyers and suppliers) (Wang & Xu, 2022; Cavenaghi,2014). In this supply chain pie, the bank's main focus is to enhance their involvement in supply chain finance side with offering different supply chain finance solutions (Atkinson,2008), and ultimately financial growth. According to Munir & Bhutta (2023), supply chain finance has significant positive impact on banks financial performance and interference the financial risk. After 2008 financial crisis, the use of trade credit increase and provide a compensation in the banks short-term decline loan (Patnaik, Hassan, Kumar, & Paul, 2020). In Pakistan, still there are many banks, offering traditional trade credit and not involved in supply chain finance solution. However, it is still unclear, how supply chain finance influences the banks' financial growth. Some researchers suggested that banks are evaluated by the stakeholders based on their financial performance and market growth (Ekinci & Poyraz,2019).

However, there is limited evidence empirically regarding the supply chain finance impact on their financial growth on banks. Banks growth is one of the widely used market-based measurement technique and grabs the banks investor and shareholder attention (Mertens & Thiemann, 2019). This literature gab needs to study and whether by offering supply chain finance banks financial growth improves or not. Therefore, how banks offer supply chain finance growth effect on financial performance with not offering supply chain finance banks growth effect on financial performance has become the focus of attention of all circles, which furthermore highlight the significance of this research gap. To fulfill this research gap, this research study the following questions:

- What is the impact of banks growth with offering supply chain finance on financial performance?
- What is the impact of banks growth without offering supply chain finance on financial performance?

In view of this, the objective of the study that the banks growth with offering supply chain finance and impact on their financial performance and second objective of the study also check the banks growth without offering supply chain finance and their impact on financial performance based in a sample of 22 Pakistan banks data from 2012 to 2022. The marginal contribution of this paper include: firstly, exploring the path of banks growth from the perspective of supply chain finance and impact on firm performance and a comparison with non-offering supply chain finance banks growth impact on financial performance. Secondly, the scarcity of empirical studies and supply chain finance important in the survival and economic situation make this research an appealing substance of literature. Thirdly, this research provides a practical guidance for the banks and government financial department to pay attention to enhance the benefits of supply chain finance.

THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

According to signaling theory, when there is asymmetry information among the two parties and one-party work to minimize the asymmetry information (Bhattacharya, 1979; Miller,1985). Due to more and more competition between the banks in the market, they always work for to expand their services, therefore the finance providers in the supply chain like banks work to improve their firm growth by offering supply chain finance solutions. This growth signal by offering supply chain finance has significant impact on firm performance. Brigham, (2012), explained that with the help of signaling theory the investor gets information about firm growth and performance based on firm financial behavior. So, supply chain offering is firm potential growth signal and enhance firm growth. For every investor firm growth is one of most important financial decision, through offering supply chain finance banks give an information signal, which ultimately affect the firm financial performance (Kim,2009) Bank's growth with Supply chain finance and Banks Financial Performance. Supply chain has three flows product, information and finance flow, supply chain finance is related to financial flow form the finance provider to supplier/buyer (Atkinson, 2008). Supply chain finance offered by banks and have direct significant impact on the bank's growth (Laeven, Levine, & Michalopoulos, 2015).

On the other side traditional trade finance also used as a trade financing method and effect the financial service provider financial performance (Davydov, 2015). In the literature their mixed studies of different financing methods innovation and impact on firm growth. Beck (2016, studied the trade financial innovation impact on firm growth by using 32 countries data of time period 1996-2010 and concluded that more financing innovation has positive significant impact on firm growth and performance. Banks growth in the ultimate target of any bank and growth has significant impact on banks financial performance (Soedarmono,2016). On the base of above theoretical background and literature review, banks growth has significant on financial performance of banks with supply chain finance. Thus, high growth has impact on financial service provider finance performance.

H1: There is Significant relationship between banks growth with offering supply chain finance and financial performance.

H2: There is a significant relationship between banks growth without supply chain finance and financial performance.

DATA SOURCE AND VARIABLES DESCRIPTION

This research empirically compares the impact of banks growth with offering supply chain finance on banks financial performance with non-offering banks growth on banks financial performance. The sample of the study consist of 22 banks in which 10 banks offering supply chain finance and 12 commercial banks not offering supply chain finance in Pakistan from the time period 2012-2022. All variables' data is collected annually from State bank of Pakistan and balance sheet of individual banks. The control variables inflation, real GDP, tier-1 capital ratio, loan to assets ratio and bank size data is collected from Economic Survey of Pakistan and individual banks annual reports.

Bank's Growth

Firm growth is measured in three ways assets growth, profit growth and loan growth followed by back, 2016. Assets growth is measured as year-on-year growth in total assets. Proft growth proxy is measured as year-year in profit. Loan growth is proxy of year-on-year growth in total loans.

Financial Performance

Financial performance is measured with return on assets which is computed as net income to total assets. The return on assets is used because it shows the management ability to make profit form bank's assets.

Control Variables

In the research country-level control variables are inflation and GDP. Inflation is measured as percentage change in the price of goods and services consumed. Gross domestic product (GDP) is measured as total market value product/services produce in year. In the literature there is positive relationship between GDP and financial performance (Soukhakian, 2016). Other control variables at bank-level are Tier-1 capital ratio, loan to assets ratio and bank size. Tier-1 ratio is measured as total capital to toral risk-weighted assets. It is banks equity capital with its total risk-weighted assets and tell that banks asset that weighted with credit risk. If banks offer supply chain finance it will affect their financial performance. Firm performance has positive significant relationship between tier-1 capital ratio (Rangkuti, 2021). To control this tier-1 capital ratio effect, this study used it as control variable in the equations. Loan to assets ratio is measured as total debt divided by total assets. Nugrah (2021), loan to assets ratio has significant impact on firm performance. To control this loan to assets ratio, used as control variable. Bank size in one of most important and considerable variables with measured the banks performance as a control variable as all banks have different bank size. Bank size measured as natural logarithm of bank total assets. Gupta, (2022), examined the bank size and financial performance of banks and concluded that there is significant positive relationship between bank size and bank financial performance.

Empirical Model

In this study, there is a correlation between regressor and error term linked with dependent variables lag values and affects its current value. Therefore, this analysis is based on Generalized Method of Momentum (GMM) developed by Arellano and Bound (1991) and Arellano Bover (1995). This technique used in the growth model estimation by Bond et al. (2001) to correct the unobserved heterogeneity, measurement error, omitted variable bias and possible endogeneity which may affect the growth estimations. In this study AR (1) and AR (2) terms also added in the model for no correlation:

$$FP_{i,t} = FP_{i,t-1} + \beta_{01} + \beta_1 GSCF_{i,t} + \beta_2 CV_{i,t} + \varepsilon_{i,t} \quad \textbf{(1)}$$

$$FP_{i,t} = FP_{i,t-1} + \beta_{02} + \beta_3 GNSCF_{i,t} + \beta_4 CV_{i,t} + \varepsilon_{i,t} \quad \textbf{(2)}$$

FP represent the financial performance measured as return on assets, GSCF represent banks growth by offering supply chain finance, GNSCF represent the banks growth with not offering supply chain finance, CV represent control variables, i and t represent the banks and year respectively and ε is the error term.

RESULTS

Table-1 and Table-2 shows the correlation, mean and standard deviation of all the banks variables offering supply chain finance and non-supply chain finance offering banks respectively.

Table-1 Correlation & Descriptive Results (with Supply Chain Finance)

	ROA	PG	LA	AG	LIR	LGDP	T1	TCA	BS
ROA	1								
PG	0.240	1							
LA	-0.090	0.103	1						

AG	0.123	-0.031	0.049	1					
LIR	-0.066	-0.034	0.060	-0.098	1				
LGDP	0.005	0.046	-0.042	-0.024	-0.537	1			
T1	-0.255	-0.117	-0.157	-0.107	0.012	0.077	1		
TCA	0.085	-0.109	-0.081	-0.014	0.165	-0.079	0.067	1	
BS	0.238	0.070	-0.251	0.195	-0.429	0.196	0.029	-0.037	1
Mean	0.538	0.137	0.508	0.175	1.319	1.317	0.021	0.163	13.795
Standard Deviation	0.560	0.271	0.452	0.229	0.202	1.135	0.049	0.150	0.991

Table-2 Correlation & Descriptive Results (without Supply chain finance)

	ROA	PG	LA	AG	LIR	LGDP	T1	TCA	BS
ROA	1								
PG	-0.113	1							
LA	0.125	0.098	1						
AG	-0.045	-0.038	0.110	1					
LIR	0.084	-0.135	0.053	0.019	1				
LGDP	0.109	-0.112	0.039	0.075	0.225	1			
T1	-0.087	-0.082	-0.184	-0.067	0.046	0.035	1		
TCA	-0.045	-0.034	-0.733	-0.039	-0.053	-0.037	0.123	1	
BS	-0.048	-0.011	-0.209	0.069	-0.238	-0.126	-0.104	-0.088	1
Mean	0.024	0.033	0.610	0.218	1.030	1.852	0.014	0.136	12.535
Standard Deviation	0.093	0.416	0.226	1.009	0.306	0.214	0.011	0.146	0.466

Table 3 shows the results of banks growth with supply chain finance on banks financial performance. In banks profit growth results shows significant positive, as 1% increase in offering supply chain finance banks profit also increased by 0.325. furthermore, banks loan and assets growth also show significant positive result with increase on 0.020 and 0.306 respectively. Nguyen & Nguyen (2023) also examined the supply chain finance efficiency in banks operation and effect on banks profitability. This study concluded that with supply chain finance as innovational technique used to surpassed the traditional financial has significant contribution in banks growth and financial performance. Thus, H1 accepted based on equation 1 that is there is significant relationship between banks growth with supply chain finance and banks financial performance. Along with this banks and country level control variables also has significant effect on the impact of banks growth with supply chain finance on banks financial performance.

Table-3: Impact of Banks Growth on Financial Performance (with Supply Chain Finance)

	G_P	G_L	G_A
ROA (-1)	-0.034 (0.622)	0.077 (0.000)	0.223 (0.241)
PG	0.325*** (0.000)		
LA		0.020* (0.065)	
AG			0.306** (0.041)
LIF	-0.073 (0.024)	-0.034 (0.345)	-0.024 (0.010)
LGDP	-0.093 (0.019)	-0.226 (0.000)	-0.324 (0.027)

T1	2.076 (0.017)	2.102 (0.000)	0.913 (0.355)
TCA	-0.290 (0.732)	0.477 (0.000)	0.268 (0.770)
BS	-0.011 (0.863)	0.029 (0.078)	-0.302 (0.401)

P-value >10% (*) >5% (**) and >1% (***)

Table-4: Impact of Banks Growth on Financial Performance (without Supply Chain Finance)

	G_P	**G_L**	**G_A**
ROA (-1)	-0.064 (0.080)	-0.082 (0.000)	-0.084 (0.071)
PG	0.007 (0.207)		
LA		0.016* (0.09)	
AG			0.024 (0.456)
LIF	-0.073 (0.024)	-0.034 (0.345)	-0.024 (0.010)
LGDP	0.019 (0.057)	-0.002 (0.039)	0.035 (0.00)
T1	0.266 (0.069)	-0.02 (0.867)	0.100 (0.819)
TCA	-0.147 (0.530)	-0.091 (0.584)	-0.037 (0.483)
BS	-0.021 (0.075)	0.024 (0.078)	-0.025 (0.001)

P-value >10% (*) >5% (**) and >1% (***)

Table 4 shows the results of banks growth without supply chain finance on banks financial performance. The results show different results from the above banks offering the supply chain, profit and assets are showing insignificant results. In Pakistan banks without offering supply chain finance growth in loan is 0.007 with p-value 0.207 and assets growth result is 0.024 with p-value 0.456. not support the existing literature Banks loan growth has significant positive results of 0.016 at 1% significance level. In Pakistan still many banks offering the traditional trade financing to generate profit which indicates the loan growth in non-offering supply chain finance banks has significant positive impact on financial performance of banks. Thus, H2 is not fully accepted as there is a significant relationship between banks growth without supply chain finance and banks financial performance.

CONCLUSION

Supply chain finance, considered as an innovational trade financing technique and surpassed the traditional trade financing methods. This research aims to explore the comparative difference between the growth of offering supply chain finance with non-offering Banks in Pakistan in the time period of 2012-2022. Using the dynamic panel and dynamic data estimation technique GMM, this research shows the banks offering supply chain finance growth in profit, loan and assets has significant impact on financial performance of banks, whereas, banks non-offering supply chain finance growth in profit and assets has insignificant results but growth in loans has significant impact on financial performance of banks. More precisely, in the case of Pakistan banks still using both trade financing methods traditional and supply chain finance.

This implies that supply chain finance is not still get enough attention and only way of trade financing due to lack of awareness among the supplier and buyers particularly and banks. This fining of the research substantial implications. This research opens a new window on the concept of supply chain finance in the Pakistani banks growth and financial performance which will helpful to bankers and policymakers to understand spread the awareness about supply chain finance in Pakistan banking sector. Furthermore, globally supply chain finance research provide help to understand the supply chain finance and banks growth in developing and developed countries due to different financial system. To conclude, along with possible implications this research has limitation, only Pakistani bank data used to analysis banks growth impact with supply chain finance and without supply chain finance on performance, future research can further study difference between developing and developed countries. the user of supply chain finance like supplier/buyers their growth and its impact on performance. Furthermore, Qualitative research on this topic using focus group interviews, structure questionnaires could help to understand the actual awareness and use of supply chain finance over traditional trade finance can also be study as future research.

DECLARATIONS

Acknowledgement: We appreciate the generous support from all the supervisors and their different affiliations.

Funding: No funding body in the public, private, or nonprofit sectors provided a particular grant for this research.

Availability of data and material: In the approach, the data sources for the variables are stated.

Authors' contributions: Each author participated equally to the creation of this work.

Conflicts of Interests: The authors declare no conflict of interest.

Consent to Participate: Yes

Consent for publication and Ethical approval: Because this study does not include human or animal data, ethical approval is not required for publication. All authors have given their consent.

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