Full Length Article

Open Access

Integration of Financially Intermediated Services for Firm Growth: A Micro Level Analysis from Pakistan

Aijaz Mustafa Hashmi¹, Hassan Raza², Syed Asim Shah³

Assistant Professor, Faculty of Management Science, NUML, Islamabad Pakistan

Assistant Professor, Faculty of Management Sciences, SZABIST Islamabad, Pakistan

Lecturer, Faculty of management Sciences, NUML Islamabad, Pakistan

ABSTRACT

Financial intermediation services offered by financial institutions facilitate the firms in smoothening its operations. This study considers the role of the intermediaries beyond the traditional savings and pooling of funds. It takes into account multiple intermediary services offered by financial institutions. These are inclusive of transaction cost reduction services, assurance of liquidity services, information sharing function and facilitation for delegated monitoring. Firms benefit from these services. This study testifies the impact of financially intermediated functions on firm growth. The sample of the study includes 130 listed companies in the PSX. The analysis employs Panel Data Analysis (PDA) technique. The results of Transaction Cost Reduction Services, Liquidity Assurance Services and Information Sharing Services are found to have a statistically significant impact while the proxy for Delegated Monitoring Services offered by intermediaries is found having an insignificant impact towards firm growth. The significance of the integrated intermediation services reflects that firms utilizing the offered intermediary services are benefitted and firm growth is observed as a Fixed Effect.

Key words: Intermediation, Financial Services, Firm Growth

1. INTRODUCTION

Financial structure of an economic system helps to collect funds from the savors and helps them to circulate in various areas of investments either by lending or by investing it directly in some sort of business. The system includes various institutes, markets and products and services which help in circulating the funds within the system. Levine (1997) stated that it is important that these systems are efficient in their working as they form the basis of economic growth of the country. Fisher (1930) said that a portion of income is saved by people in order to meet their desires and wishes. This

Address of Correspondence

Aijaz Mustafa Hashmi
amustafa@numl.edu.pk

Article info

Received May 28, 2020
Accepted Nov 17, 2020
Published Dec 30, 2020

amount of savings is then invested by these people within the financial sector to facilitate themselves with a better tomorrow. Intermediaries in the financial system are necessary to provide with the information regarding savings and investments and give a symmetry to the financial markets. However, all markets are not perfect and strong and therefore irregularities and asymmetry does exist.

Hashmi (2017) describes the role that financial intermediaries play in our financial system at multiple levels. He explored the impact of the financial intermediaries at the firm, industry and at the macroeconomic level. These play a significant role to facilitate the flow of funds.

Boot et al. (2020) discusses the past and future of financial intermediation in the era of technology. This is due to the emergence of Fin Tech which has facilitated the firms and individuals alike.

The efficiency of markets as defined by Fama (1970) exists in three forms i.e., weak, semi-strong and strong. Although, the regulation of information in the markets is necessary, the markets are still not working optimally. The best options are usually not availed by the investors and savers due to lack of information and symmetry in the market creating a huge disadvantage and barrier for both the savers and investors. Thus, the formation of financial intermediaries helps with overcoming these adverse effects of imperfect information system and to reduce the disadvantage faced by savers and investors and to make the funds flow more efficient and effective for economic growth.

Variety of products and services are offered to the lenders and borrowers by the financial intermediaries. These functions provided by intermediaries and their utilization for the firm growth are the basic reason for undergoing this study. This study is significant for the firm growth and understanding what functions of intermediaries will help with this growth. It can be implemented and reviewed all over the world especially in developing countries as they are more prone to the functionality of intermediaries. Many research papers have studied the influence of mediation on financial development, but firm growth is relatively a new target. This study will provide the literature regarding the financial intermediation and its impact on firm growth and will also be significant due to its generalization.

2. LITERATURE REVIEW

Financial intermediaries are a basic component for the funds flow within a financial system and provides a network of receiving funds from savers and lending it to people or institutions for investment purposes. There are five deviations that are mainly linked to the financial intermediaries including, liquidity, denomination, diversification, and maturity and information intermediation. These 5 changes lead to a few functions performed by financial intermediaries discussed later.

These functions are taken into consideration and their effect on firm growth are reviewed. One of the studies showed that financial intermediaries have a major role in reducing the transactional cost while another reviewed the impact of liquidity assurance Benston and Smith Model (1976). Diamond and Dybvig Model (1983). Another model was made to study the information sharing which further also included the concept of delegated monitoring. Leland and Pyle Model (1977) Diamond Model (1984).

The continuous endowment of simplification provided by mediators is vital for rapid growth. Greenbaum, Thakor and Boot (2019) has covered this in the reviews on contemporary financial intermediation. Buckle and Thompson (2020) in their book, also describe the significance of the financial intermediaries for growth in the UK.

Matthews and Thompson (2008) express that monetary go-betweens have the capacity of bringing down different exchange costs, for example, search costs, confirmation costs, observing expenses, and authorization costs.

The spread gives a benefit opportunity, which can be abused by the presentation of a bank. The bank's exchange costs are meant by C . For purpose of article, we accept that the expense is exclusively borne by the borrower.

At that point, the expense/return structures become:

$$\text{Spread} = RB - RS = TB1 + TS1 + C \quad \dots \text{Equation 1}$$

where 1 demonstrates the expense after the presentation of the bank. The presence of the bank brings down the expense of the exchange if:

$$(TB + TS) - (TB1 + TS1) > C \quad \dots \text{Equation 2}$$

Reduction of costs is essential for banks and it is done through various means such as branches, networking, increasing size and maturity. Financial intermediaries change the demands of creditors into requirements of lending party. This is done through reviewing the type of financing required. For instance, households will require short term funding while corporates will require long term funding. Banks or intermediaries can issue instruments for short term funding, but it is avoided to reduce the costs. Similarly, reduction of cost by intermediaries is also done by centralization of the payment system which also reduces the verification cost.

H₁ (a): *There is significant impact of Transaction Cost Reduction Services on firm level growth.*

For various risk factors, uncertainty, and asymmetry within the market, it can be said that depositors or savers prefer to hold their wealth to fulfil their emergency liquidity requirements. Therefore, instead of assets the intermediation can also be reviewed in liquidity aspect. Bryant (1980) Diamond and Dybvig (1983). Financial intermediaries can be taken as providers of liquidity towards the depositors as well as for borrowers. Depositors and borrowers do not know when a sudden need for funds will arise. Therefore, when such needs arise, the banks and intermediaries need to sell off their liquid assets to fulfill these needs creating the “bank runs” environment.

According to Diamond and Dybvig (1983), banks are taken as intermediary to provide a buffer for sudden risks and to meet the unexpected short-term liquidity need for firms and helps them to overcome these situations without creating a huge loss. Financial intermediaries provide a form of assurance to the corporates and firms to resolve their unexpected issues to meet certain fund requirements and thus also impacts the growth level of firms availing such assurance.

H₁ (b): *There is significant impact of Liquidity Assurance Services on firm level growth.*

According to the piece of research done by Leland and Pyle's (1977), it is reviewed that asymmetry in information also arises due to the lack of initiative on borrowers' part. Borrowers have a thorough knowledge of the projects while lenders need to pay extra to get such information. Financial intermediaries help to stabilize the information condition in the market and reduces the barrier for both the borrowers and

lenders.

Banks and other financial intermediaries provide a communication front for investors for them to know the borrowers. The asymmetry of information can lead firms with lower value to show much higher value which creates a moral risk and gets them the funding on the expense of lenders. Financial intermediaries can solve this issue by monitoring firms and providing information. This study uses the literature on information sharing and the impact it has on firm growth. It is said that the availability and proper usage of information can increase the industry growth level as well.

H_{1(c)}: *There is significant impact of Information Sharing Coalition Function on firm growth.*

Bank's use delegated monitors to reduce the cost as it helps them to get accurate information without the extra cost of monitoring the information as well. It is also beneficial for banks to monitor the firm performance and decisions made by firms. The moral risk of banks decreases with increase in size and diminishes with a diversified portfolio. Diamond (1984).

Delegated monitoring is one of the concepts and functions performed by banks as they can provide loans to firms when they are in need. This monitoring can help firms to growth a goodwill with banking sector and helps them to acquire funding easily when required. Diamond (1991). Bolton and Freixas (2000) also implied three reasons for preferring banks over market loans i.e., improvement of reputation, banks are reliable sources of credit, and the relationship development.

The financial intermediary undertakes some contracts that provide them with incentives and thus motivate them to receive timely information, utilizing it and making decisions accordingly. These are usually very costly and thus the process of diversification is introduced to reduce this cost. This helps to maintain firm returns and the timely payment of banks loan.

H_{1 (d)}: *There is significant impact of Delegated Monitoring on firm level growth.*

3. RESEARCH METHODOLOGY

For this study, the annual data from companies listed on the PSX i.e., Pakistan

Stock Exchange has been obtained. The equation for this study is presented in Equation 3.

$$\text{Firm Growth} = f(\text{Transaction Cost Function, Liquidity Assurance Function, Delegated Monitoring Function, Information Sharing Function}) \quad \dots \text{Equation 3}$$

Following proxies have been setup. The relevant transaction costs consist of search, verification, monitoring, and enforcement costs (Matthews and Thompson, 2008).

The term “Liquidity Assurance” is used as an oath or guarantee by the financial intermediaries when they have to provide loans for meeting the requirements of firms for a short time period. It includes various services and products including the markups, running and demand finances and fee for circulating credit.

A bond is formed between the financial intermediaries and the firms on the basis of provision of timely and accurate information. This sharing of details helps to remove the irregularity in the systems and helps to form better and timely decisions. To form this bond, firm has to pay some charges which do not include the interest expenses by financial intermediaries.

For this bond to not be fraudulent, many financial intermediaries send their spokesperson to sit in the annual meetings of firms to review their decisions. In some cases, they also buy some shares of the said firm to hold a strong position. This process is known as delegated monitoring. It is said to be beneficial for the firm as well as for the financial intermediary. Diamond (1984). Value of the firm’s growth can be reviewed in the light of overall assets.

The following equality reproduces the monetary intermediation with precise substitutions. The following equation has been utilized:

$$\text{Firm Growth}_{it} = \delta_0 + \delta_1 (\text{TCR})_{it} + \delta_2 (\text{RF})_{it} + \delta_3 (\text{MUonRF})_{it} + \delta_4 (\text{DF})_{it} + \delta_5 (\text{CFfor RC})_{it} + \delta_6 (\text{DirFinonBoard})_{it} + \delta_7 (\text{Shares held by FD})_{it} + \delta_8 (\text{FBank})_{it} + \delta_9 (\text{Bank OD})_{it} + \delta_{10} (\text{Bank CHGS})_{it} + \varepsilon_{it} \quad \dots \text{Equation 4}$$

Panel data is used as basis for reviewing the association among the functions provided by financial intermediaries and growth factor. Panel data is considered valid for several reasons among which the distinctive feature of incorporating both the cross sectional and longitudinal study stands out. It also provides options to understand the

heterogeneity among the data to reduce the error value and can help analyze huge data sets. Hsiao (1986). Panel data uses two models i.e., fixed-effect or random-effects which are chosen based on a test in which if both the effects differ systematically then fixed-effects is used and vice versa. Hausman (1978). Within panel data analysis, pooled ordinary least square (POLS) has been used due to its efficiency in predicting the coefficients of change with respect to the independent variable.

3. RESULTS AND ANALYSIS

The first table provides descriptive stats.

Table-1 (A): Descriptive Statistics						
	Transaction Cost Reduction	Running Finance	Mark Up on Running Finance	Demand Finance	Commitment fee for Revolving Credit	Bank Overdraft
Mean	13.013	8.520	7.031	0.632	0.138	0.457
Median	9.826	11.535	7.001	0.000	0.000	0.000
Maximum	17.179	18.742	27.000	16.516	7.000	16.064
Minimum	0.000	0.000	0.000	0.000	0.000	0.000
Std. Dev.	4.885	5.738	4.483	0.300	0.012	0.176

Table 1 (B) provides the further descriptive stats.

Table-1(B): Descriptive Statistics					
	Directors of Financial Intermediary on Board	Shares held by Financial Intermediary	Foreign Bank	Bank Charges	Total Assets
Mean	1.700	5.367	1.783	9.609	16.548
Median	2.000	0.000	0.000	12.431	19.571
Maximum	7.000	43.00	7.500	16.924	24.349
Minimum	0.000	0.000	0.000	0.000	0.000
Std. Dev.	1.274	3.115	3.545	6.313	7.980

Table 2 (A) provides the correlation stats for the variables of the study.

Table 2 (A): Correlations

	Transaction Cost Reduction	Running Finance	MU Running Finance	Demand Finance	Commitment Fee for Revolving credit	Bank Overdraft
Transaction Cost Reduction	1	.562**	.477**	.100**	0.021	.062*
Running Finance	.562**	1	.800**	.133**	0.005	.103**
Markup on Running Finance	.477**	.800**	1	.146**	-0.032	.111**
Demand Finance	.100**	.133**	.146**	1	-0.014	.263**
Commitment Fee for Revolving credit	0.021	0.005	-0.032	-0.014	1	-0.011
Bank Overdraft	.062*	.103**	.111**	.263**	-0.011	1
Directors of Financial Intermediary on Board	.319**	.213**	.180**	-0.012	-0.036	-0.042
Shares held by Financial Intermediary	.213**	.119**	.113**	.075**	0.009	-0.022
Foreign Bank Financing	.058*	.085**	.099**	0.019	-0.013	-0.031
Bank Charges Excluding Interest Expense	.748**	.570**	.458**	.115**	0.048	.079**
Total Assets	.837**	.493**	.401**	.076**	0.02**	0.043**
** . 0.01 level						
* . 0.05 level						

Table 2 (B) provides the Pearson's Correlation results.

	Directors of Financial Intermediary on Board	Shares held by Financial Intermediary	Foreign Bank Financing	Bank Charges Excluding Interest Expense
Transaction Cost Reduction	.319**	.213**	.058*	.748**
Running Finance	.213**	.119**	.085**	.570**
Markup on Running Finance	.180**	.113**	.099**	.458**

Demand Finance	-0.012	.075**	0.019	.115**
Commitment Fee for Revolving credit	-0.036	0.009	-0.013	0.048
Bank Overdraft	-0.042	-0.022	-0.031	.079**
Directors of Financial Intermediary on Board	1	.385**	.176**	.291**
Shares held by Financial Intermediary	.385**	1	0.037	.149**
Foreign Bank Financing	.176**	0.037	1	.127**
Bank Charges Excluding Interest Expense	.291**	.149**	.127**	1
Total Assets	.372*	.193	.107	.703**
**. 0.01 level				
*. 0.05 level				

Following section performs company-based PDA to quantify the influence of monetary intermediation services on firm growth. Table 3 reports the results of PDA-CE Model.

Table 3: PDA-CE Model		
Variables	Coefficient	Prob.
C	3.481	0.000
Transaction Cost Reduction (TCR)	0.800	0.000
Running Finance Services (LA)	0.219	0.037
Markup on Running Finance (LA)	-0.133	0.010
Demand Finance Services (LA)	0.012	0.021
Commitment Fee for Revolving Credit (LA)	0.010	0.041
Bank Overdraft Services (LA)	0.011	0.032
Directors of Financial Intermediary on Board (DM)	0.292	0.627
Shares held by Financial Intermediary (DM)	0.018	0.228
Foreign Bank Financing (DM)	0.025	0.741
Bank Services Charge Excluding Interest (ISC)	0.199	0.000
R-squared		
Adjusted R-squared		
Prob		

TCR Transaction Cost Reduction Services LA Liquidity Assurance Services
DM Delegated Monitoring Services ISC Information Sharing Coalition Services

The CEM has a changed R-squared of 0.363 impersonating that the illustrative factors of monetary intermediation cause 36.3% variety in firm level development. The

model has been discovered genuinely fit. Consequently, the abuse of the distinguished monetary intermediation administrations clarifies a huge segment of firm level development for the examination test.

The outcomes show exchange cost decrease administrations by the monetary delegates bring about firm level development. The coefficient has a genuinely critical estimation of 0.800. This mirrors that the exchange cost decrease administrations devoured by the organization bring about expanded development levels.

The outcomes distinguish a huge effect of liquidity affirmation administrations on firm development. All the intermediaries for liquidity confirmation mirror a huge effect on firm development. These incorporate a huge coefficient for running money, markup on running account, request account, responsibility expense for rotating credit and bank overdraft administrations. This can be deducted that usage of liquidity affirmation administrations bring about firm development in the investigation test.

For delegated monitoring services, the representation of intermediary's non-executive director on firm's board identifies an insignificant influence on development. The existence of directors as heads of delegate on board as agent non leader chiefs has been clear in writing in improving monetary execution of firms. Anyway, in this investigation, the variable of portrayal of heads of monetary middle people on board is measurably insignificant. The association of an unfamiliar bank additionally doesn't discover critical effect on firm development. The Corporate Model in Pakistan is a closed model but the adoption of the Code of Corporate Governance in its letter and spirit is arguable in the family controlled corporate structure in Pakistan. Thus, the delegated monitoring was unable to find a significant impact on the firm growth in the present sample.

Ultimately, for Information sharing Coalitions, the bank charges paid by the firm for use of administrations decidedly affects firm level development. This fills in as the impression of usage of data sharing alliance capacity of the banks. For bank charges paid for monetary administrations from the bank has a coefficient estimation of 0.199. Exactly, an essentially certain effect has been recognized on the firm level development. In this manner the organizations are profited by data administrations of the delegate.

The values of the fixed impact model are accounted for as Table 4.

Table 4: Fixed Effect Model		
Variable	Coefficient	Prob.
C	3.090	0.000
TCR	0.726	0.000
RF	0.080	0.002
MUonRF	-0.026	0.037
DF	0.066	0.029
CFforRC	0.327	0.021
BankOD	0.003	0.050
DofFIonBoard	0.050	0.319
Shares held by FI	-0.013	0.440
FBFinancing	0.007	0.585
Bank Charges	0.234	0.000
Adjusted R-squared	0.314	
Prob	0.000	

The above table 4 clearly shows that across the firms, the financial intermediated services utilization has a significant impact on firm level growth. The Fixed Coefficient Model shows that exchange costs, liquidity affirmation and data dividing alliances among monetary mediators and the firm altogether affect firm development. The outcome shows that the impact of monetary intermediation capacities is fixed in every industry.

Table 5 reports Redundant Fixed Effect Testing

Effects Test	Statistic	Prob.
Cross-section F	4.783	0.000
Cross-section Chi-square	554.848	0.000

Table 6 reports that Hausman statistics is significant so Fixed Effect Model is a right choice.

Table 6: Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	57.192	11	0.000

This verifies that the each of the firm has a fixed intercept which is different from other firms.

4. CONCLUSION

This study concludes that impact of financial intermediation services on firm

growth has been empirically tested and found significant across the firms with the exception of delegated monitoring. Panel Data Analysis was applied and the proxies for the variables of Transaction Cost Reduction, Liquidity Assurance Services and Information Sharing Coalition Services were found having a significant impact on firm level growth. The proxy for the variable of delegated monitoring was found having a statistically insignificant impact on firm growth. This is a reflection that the firms' adoption of the Code of Corporate Governance issued by the Securities and Exchange Commission of Pakistan has not been fruitful. It also shows that CCG issued by the SECP had not been adopted in its true sense to benefit in terms of firms' growth in the taken sample for the study. In any case, the other monetary intermediated administrations show a measurably huge effect which mirrors that organizations using postulations administrations have been emphatically profited. The outcomes are in arrangement with the investigation by Chauvet and Jacolin (2015) that organizations with more significant level of monetary incorporation for example admittance to monetary administrations affect association's development. The fixed impact results are critical which show that the effect of monetary intermediation capacities on development is fixed across each board. Each firm has a fixed impact which is unique in relation to different firms in the board. The organizations contrast in their size and structure and needing monetary administrations required. The delegates are available in the framework to encourage the organizations for quick development. Hence, at the firm level, firms need to use the capacities offered by the monetary mediators considerably more effectively to empower them to raise their development levels.

REFERENCES

- Bađun, M. (2009). *Intermediation by Banks and Economic Growth: A Review of Empirical Evidence. Financial Theory and Practice*, 33(2), 121-152.
- Andrieş (2009)
- Bencivenga, V. R., & Smith, B. D. (1991). *Financial intermediation and endogenous growth. The Review of Economic Studies*, 58(2), 195-209.
- Benston, G. J., & Smith, C. W. (1976). *A transactions cost approach to the theory of financial intermediation. Journal of finance*, 215-231.
- Bernanke, B., & Gertler, M. (1987). *Financial fragility and economic performance (No. w2318). National Bureau of Economic Research.*
- Bolton, P., & Freixas, X. (2000). *Equity, bonds, and bank debt: Capital structure and financial market equilibrium under asymmetric information. Journal of Political Economy*, 108(2), 324-351.

- Boot, A. W., Hoffmann, P., Laeven, L., & Ratnovski, L. (2020). *Financial intermediation and technology: what's old, what's new?* European Central Bank.
- Brealey, R., Leland, H. E., & Pyle, D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. *The journal of Finance*, 32(2), 371-387.
- Bryant, J. (1980). A model of reserves, bank runs, and deposit insurance. *Journal of banking & finance*, 4(4), 335-344.
- Buckle, M., & Thompson, J. (2020). *The UK financial system: Theory and Practice*. Manchester University Press.
- Chauvet, L., & Jacolin, L. (2015). *Financial inclusion and firms performance*.
- Demirgüç-Kunt, A., & Levine, R. (2008). *Finance, financial sector policies, and long-run growth*. World Bank Policy Research Working Paper Series, Vol.
- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies*, 51(3), 393-414.
- Diamond, D. W. (1991). Monitoring and reputation: The choice between bank loans and directly placed debt. *Journal of political Economy*, 689-721.
- Diamond, D. W. (1996). Financial intermediation as delegated monitoring: A simple example. *FRB Richmond Economic Quarterly*, 82(3), 51-66.
- Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *The journal of political economy*, 401-419.
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work*. *The journal of Finance*, 25(2), 383-417.
- Fisher, I. (1930). *The theory of interest: As determined by impatience to spend income and opportunity to invest it*. Reprints of economic classics. Fairfield, NJ: A.M. Kelley.
- Gorton, G., & Pennacchi, G. (1990). Financial intermediaries and liquidity creation. *Journal of finance*, 49-71.
- Gorton, G., & Winton, A. (2002). *Financial Intermediation*. Handbook of the Economics of Finance. G. Constantinides, M. Harris and R. Stulz.
- Greenbaum, S. I., Thakor, A. V., & Boot, A. W. (2019). *Contemporary financial intermediation*. Academic Press.
- Hashmi, A. M. (2017). *Impact of Financial Intermediation on Micro and Macro Level Growth in an Emerging Economy: An Analytical Study from Pakistan* (Doctoral dissertation, CAPITAL UNIVERSITY).
- Hashmi, A. M., & Haider, M. H. (2012). Efficacy of financial intermediation and growth in real sector: Theoretical and empirical evidence from Pakistan, U.S and U.K. *Interdisciplinary Journal of Contemporary Research in Business*, 3 (11), 724-735.
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, 1251-1271.
- Hsiao, C. (1986). *Analysis of Panel Data*, Vol. 11 of Econometric Society Monographs. Cambridge University Press, New York.
- Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of economic literature*, 688-726.
- Levine, R. (2005). Finance and growth: theory and evidence. *Handbook of economic growth*, 1, 865-934.
- Matthews, K., and J. Thompson (2008): *The Economics of Banking*. John Wiley and Sons, Ltd, West Sussex, Second Edition.
- Trew, A. (2006). Finance and growth: a critical survey*. *Economic Record*, 82(259), 481-490. Demirguc-Kunt and Levine (2008)