Effect of Firm Specific & Country Specific Factor's On Profitability of Banks in Pakistan

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Abstract- The basic objective of research is to investigate the factors which affect the profitability of the banks in Pakistan. In this study we investigate our factors to determine their impact on the profit. Data was collected from the 2003-2011. This period was used due to availability of data. Data is collected from the bank's website and WDI. Total 17 of the banks were taken for this research. Panel data technique was used to measure the results of the fixed effect modal and random effect modal.

To get this object researcher bring the Return on asset as independent variable. For the independent variables researcher make two factors. First one is bank specific and second is the country specific. Researcher found that the independent variables have shown a significant impact on the profitability of the bank. The variable Net interest margin, money and quasi money have significant impact on the profitability of the banks. Results found that both factors country (external) specific and firm (internal) specific variables make changes in the commercial bank profits.

Index Terms- Profitability of the banks, Return on average asset , Firm specific, country specific, Pakistan.

I. Introduction Of Study

From many years in the financial institutions there is too much improvement come especially in the banking sectors and competition also increase in the banks. These changes can be seen at both national and international level (Petria, Capraru, and Ihnatov 2015). Due to consistent good performance banks are urging to other banks to provide facilities in better ways. These banks are wholly controlled by the state bank of Pakistan. These banks are divided almost two categories. One is the Islamic bank and other is conventional bank. By giving these facilities these banks are diverse from other banks and their performance also varies from each other.

Javaid (2011) proved that there are two main factors which affect the profitability of banks. One is the country specific variable and other is firm specific variable. The country specific factors are included Inflation, Gross Domestic Product, Per Capita Income, interest rate which effect on performance of banks. The firm specific factors are which effect by internal management of industry.

Hussain, Malik, Hameed, Ahmad, and Riaz (2010) indicates that Commercial banks have two major sources of its income. One of them is the interest which banks received from customers and second is fees charged by bank for providing their services to public. Through these sources the banks are functioning. These are major source of earning of banks. Banks earning have good effect on economic growth.

Dietrich and Wanzenried (2014) argue that returns of banks vary from country to country. So we have to see that the level of the income has an important effect on profitability of banks and also on the determinants which is relevant to its profitability.

According to Angbazo (1997) the profit increase into all type of the countries which are the market oriented countries and bank oriented countries. If the financial systems of the banks are not good then the profit of the banks will also low and the growth of the country will also be effected. Capital is also the main factor for the improvement of the profitability. If capital of the banks will increase the profit of the banks will also be increased. Banks performance also depend on the profitability. Investment factor also increased if the profit of the company is high. People will more attract if the bank will have more profitability.

According to Angbazo (1997) net interest markup and the risk of interest rate mutually is the similar job, which effect the profitability. Net interest margin and the risk of interest rate, both also effect the product price of the banks. It also through a cross elasticity concerning the assets and the liabilities for the extents of the net interest markup. Net Interest Margin Is The Main Point for the purpose Of The Productivity Of The Region. It effects on the both of the volume and the equities side, this cost is set by the bank to control its intermediary expenses. It also increases the profit of the banks. Whereas the risk of the financial institutions particularly banks also increases.

Grosse and Goldberg (1991) indicates that net interest margin is also affect by the dissimilarity of the credit risk element. As the credit development the mark-up of interest also grow. If the credit risk of the financial institution particularly bank is also grow. Default risk is also a part through which we can measure the net interest margin of the large banks. When the accessibility of the credit growth, then the degree of interest also declines. Monetary system is that which contributes the oil to the feature which causes a step for the growth of the state. The financial institution particularly banks make a primary role in this activity.

Angbazo (1997) says that the mark-up of increase into all forms of the states which are the marketplace oriented states and financial institution (bank) oriented. If the monetary systems of the financial institution are not better then the gain of the banks will also reduce and the development of the state will also be influence. Investment is also the major part for the expansion of the productivity. If the investment of the financial institution i.e.banks will be more the gain of the banks will also increase. Bank performances also be determined by on the productivity. Investment element also grow if the gain of the company is extraordinary. Individuals will be further attract if the financial institution i.e. bank will have more productivity.

Problem statement

This Research is conducted to investigate the factors that determine the firm profitability in the developed countries.But in Pakistan there is too little study is done about the factors that affect the banks profitability.According to author knowledge the study include variables on which little research has been done in the past.So this study fullfill the significant gap with the reference of commercial banks.

Research Questions

i. Which are the major factors in the banking sector that have impact on the firm performance?
ii. To find out either Firm specific or country specific factors are more affecting on firm profit?

II. Literature Review

There are different studies which have been done to identify the profitability of the banking sector. In the previous studies it was found that the profitability of the banking sector can be checked through profit on the interest margin, average profit on the asset and profit on the equity. While measuring the profitability of banking sector there are two factors which affect the performance of banking sector internally and externally. External factors consist of GDP per capita, lender interest rate net interest margin. Internal factors are bank specific and external factors are country specific that repercussions the environment of banks. Athanasoglou, Brissimis, and Delis (2008) have discussed in their studies that the growth of GDP and profitability of banks have positively connected while the load of tax and imposition of banks has negative relationship. It is also demonstrated that the load of tax is tiny because it is shifted to the clients such as borrowers, depositor etc. Dietrich and Wanzenried (2011) have described that the provision of advance loss is associated to the total advances. Furthermore it was also described that when the period of the disaster start its significance has been enhanced.

Micco, Panizza, & Yanez (2007) have bring to an end that there is a variation of profit margin between govt. banks and the private banks due to the difference in income size of people. In developed countries it was found that private Banks earned more profit as compare to the govt. banks. In lower developed countries foreign banks earn less profit.

Athanasoglou et al (2008) have explained the real GDP has not affect the profitability of the banks and it was also discussed that the attention has a positively associate with the profit of bank and the profitability of the bank is also affected by the inflation factor.

Kosmidou & Spathis (2000) have found that the profit of banks increase very quickly with the effect of euro exchange on the profit of the banking sector Due to the cost and profit examination. Sufian (2009) have examined that the profit of banks and the size of banks are significantly correlated, and the profit of the bank totally depends on the economy scale of the country the reason is that if the size of an economy will be large the profit will also be more. The performance of the banks depends upon the internal and external factors. The internal factors are depending on the internal management of the department and the external factors are related with the country situation and the industry specific.

Berger (1995) has shown that the leverage has also a great impact on the performance of the bank. If the total wealth of the bank will be high, than the profit will also be high, due to the less cost of the capital and liquidation will also decrease. Athanasoglou et al., (2008) have described that capital is the best way to measure the profitability of the bank. As the capital will be large the profit will also be more. Molyneux & Thornton (1992) have shown that there is the significant relationship between the profit of an institution and high payroll, through this human capital can be used efficiently and effectively.

According to Mamatzakis & Remoundos (2003) he has examined the determinants of profitability of the Greek banks, he have done with the analysis of their profits through the (ROA) return on asset and (ROE) return on equity, but with the help of these analysis results are not confidential.Athanasoglou et al (2008) have identified that the internal factors (Bank specific), external factors (Country specific) and macroeconomics all effect the performance or profitability of the banking sector which he was examine by the practical framework. All the factors except the bank size affect the performance or profit of the bank. At the end it was concluded that business cycle has a significant positive relationship with profit but it is when upper base business cycle exist.

Gul, Irshad, & Zaman, (2011) have described that the relationship between the profits of the commercial banks by firm specific, country specific and macroeconomics. He examine that the impact of loan, equity, assets, growth and inflation have impact on the profit but its main effect show on the (ROA) return on asset and (ROE) return on equity and interest margin. Through the solid practical evidence he found that there is a positive significant relationship between these factors and profitability of banking sector.

Structure conducts performance approach

Edwards, Allen, & Shaik 2006) SCP modal was used to analyse and measure the market. This approach has come in to existence in 1940. This SCP has its two prototypes. The first one is consisting of structure performance and the second is known as efficient structure. The structure performance expose that the attentiveness of market and the competition is associated with each other. This hypothesis tells that if the market attentiveness will be more the performance of the firm (ROA) will also increase. This factor pays no attention to the total deposits. Total deposit not effect if the market is attentive with each other. If the firms are more attentive then the profit of the firms will high. The second hypothesis tells that the profit of an institution is positively associated with the efficiency of the firm (total expenditure on total assets).

Traditional profit measure indicator

This customary approach is used to enhance the firm's performance and to determine the firm's scale of economy. By focusing on this sector the performance of the firm will increase. Due to this firm's scope will also increase and the risk factor will also account (Edwards et al., 2006).Alexiou and Sofoklis (2009) they have conduct the study on the firm particular and the country specific variable, by use of the structure conduct performance theory and apply on it the panal data approach, and collect the data from more than 6 of the Greek banks. He finds that the firm particular variables are more significant and positive rather than country specific factors. Molyneux and Thornton (1992) have explained that by applying the market structure modal the performance have been increase and the result in shape of the profitability also increase. There is a positive significant association between the profit and the other variables. Anjum Iqbal (2012) described in his study with the analysis for the examination of measuring efficiency of Islamic banks. So for this study data was collected from the period of the 2007 – 2010. The researcher use data envelopment approach for this study. They have found that the old banks earn more profit as compare to the newest banks. The old banks are more profitable and efficient rather than newest. Aprile et al. (2013) has proved his study with the analysis of the financial institution and by measuring their performance in Taiwan. For this purpose data was collect from the period of the 1994- 2009. For this purpose they used two stage summed up approach, they find that (ROA) return on assets of the private banks are more rather than foreign owned banks. Berger (1995b) explained structure impact on the performance of the banks and it also effect by the market performance. Market performance is used for the upgrade in the profit of the monopolist. A recent study which was conducted on the market performance described that the companies with large share capital and have large range of products, they are capable to work in the market and can earn more profit. Berger (1995a) described that market performance and management of banking institutions increase the deposits which results to raise the profit. While on the other hand it is also examined that managerial efficiency not only raises profit but it can also raise the share capital. So it was concluded that there is a significant positive correlation between the profit and concentration.

Short (1979) explored that the ownership of the bank is also one of the issue of its profitability. The banks which are private owned earn highly economic profit while the banks which are owned by the govt. have a low profit. There is not a significant relationship between the govt and private owned banks. Molyneux & Thornton (1992) is the first person who has explained the profitability of the different bank of the different countries. He explained that there is a significant relationship between the equity's return and the rate of interest. Furthermore he also approved that there is a significant relationship between the ownership of government and bank concentration.Sathye (2001) explored that the internal banks provide more quality as compare to the external banks. It is also find that the internal banks are less cost conscious as compare to external. The productivity of the internal banks is also high as compare to the external banks. Hoggarth, Milne, & Wood (1998) also explained that the too much fluctuations in the returns of the bank only due to the inflation factor. It becomes very difficult to evaluate the credit decisions when less increase in the inflation happened and advance is given at expected rate of inflation. Anticipation in the fluctuation of inflation in future creates misinterpretation with respect to making decision and planning. At last it was examined that the high variability in the rate of inflation is suitable for the investment in the property. In any other way it is very harmful for other investment. It may be cause a lot of loss or benefits. Sufian & Chong (2008) have explored that the profitability of banking sector can be judged through the ROA and ROE. Bank profit is normally treated as determine of any changing in the sector. If any factor influence on it we can check it through its profit.Molyneux & Thornton (1992) discourage this concept that reductions in the expenses results an increase in the efficiency of employees and also the profit of the business. But he identifies that when we increase our expense in the shape of increase in salaries of the employees the profit of an institution increase. The employee's productivity goes up and they will perform more efficiently. It will show a presiding effect on the profit and performance of the institution. The macroeconomic factor of country affects the profit of the bank. When the growth rate of the country goes up, then it charges more margin of the return, and the quality of their asset also improves. Goddard, Molyneux, & Wilson (2004) described that the firm performance of an institution is also associated with the performance of their employees. If the employees of an organization are more motivate with salaries as compare to other benefits then the firm should increase their salaries instead of the other benefits. This is also considered as a main restriction which exists in organization. Many banks are trying to diversify the unpredicted losses which occur. For this purpose they use a liquidity ratio and capital to asset ratio. Molyneux & Thornton (1992) have explained that change in the Real GDP effect the demand side of the bank.External factors such as interest rate of the central bank and inflation which influence the profitability of the banks. Most of the studies have found that there is positive significant relation between the inflation and interest of the central bank .Huybens & Smith (1999) have explained when the inflation is changed unexpectedly, then it's too much difficult to allocate the resources of the financial sector correctly. The assets and the money are influenced by the unexpected increase in inflation rate.

III. Research Methodology

The Research methodology chapter explains the model of regression and theoretical framework of the dependent and the independent variable. It also includes the size of data, size of bank, data collection resources and research model. The Main focus of this study is to check the main factors which too much effect on the profitability of Pakistan's bank. Independent variables of the study are country specific factors and firm specific factors. Country specific factors are which effect due change in the law and order or any boom or recession period. Firm specific factors are those factors which effect by the internal management.
Data was collected from the bank websites and the World development indicator.

Research Model and Variables Proxies

In this section, the research model is included.

Model for the return on assets

Y = α + β1 LOGGDP + β2 LOGDS + β3 NIM + β4 LENDIR + β5 M3mqmg + β6 TETA + β7 FUNDCOST + β LLPTL

Y= ROAA

LOGGDP = Logarithm of gross domestic product.

LOGDSQ = Logarithm of total deposits

NIM = Net interest margin

LENDIR = Lender interest rate

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M3mqmg = Money and Quasi Money Growth In Pak
TETA = Total Expenditure over the total Assets
Funding Cost = Interest Exp. / Avg. Deposit
LLPTL = loan loss provision over the total loss.

Data collection

In this study, secondary technique is used and the collection of data is made through the annual reports of the banks, already published articles and other WDI website. The arrangement of the data is made according to the particulars of the study.

Sampling

Only 17 commercial banks were taken for this research. These numbers of banks were taken due to availability of data, because this data was avail best at that time. If a number of the banks were increased then the availability of data decrease. The banks were taken as a random sampling. These banks include both the Islamic and conventional banks.

IV. Empirical Results and Findings

Descriptive Statistics and Empirical Results

Descriptive statistics is used to describe the variables in which mean, standard deviation, minima and maxima value of variables is discussed. These are discussed below in the form of frequency tables:

Table 1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
BANKID	153	9	4.915068	1	17
YEAR	153	2007	2.590468	2003	2011
ROAAT	149	.0065101	.0206949	-0.08	0.04
LOGGDP	136	11.11125	.110798	10.92	11.25
LOGDSQ	136	16.16684	1.044477	13.41	17.94
NIM	149	.0300671	.015531	0.02	0.07
LENDIR	120	11.48808	2.467558	7.26	14.54
M3MQMG	136	15.62	4.314005	5.69	20.51
TEATA	149	.0885906	.0392328	0.1	0.25
FUNDCOST	149	.0543624	.0320119	0.1	0.14
LLPTL	149	.0795973	.0736581	0	0.4

In the study our dependent variables is return on assets and remaining are the explanatory variables. According to table LOGDSQ have the highest value in term of means and dependent Variable have a lowest mean value. M3MQMG have the highest standard deviation.

Correlation matrix

Correlation matrix is used to investigate the relation among independent variables. According to researchers if relation between variables is more than .80 than issue of multicolinearity will come and researcher must take action to remove this issue.

Table 2: Correlation matrix

	LOGGP	LOGDSQR	NIM	LENDIR	M3MQMG	TEATA	FUND COST
LOGGDP	1						
LOGDSQR	-0.0187	1					
	.8373						
NIM	-0.0618	0.3449	1				
	0.475	0.0000					
LENDIR	0.5063	0.4805	0.1992	1			
	0.0000	0.0000	0.0266				
M3MQMG	0.3595	-0.1166	0.2388	-0.2182	1		
	0.0000	0.1988	0.0051	0.0149			
TEATA	-0.0131	0.0461	0.0952	0.4871	-0.404	1	

	0.8796	0.5925	0.2465	0.0000	0.0000		
FUNDCOST	-0.0356	0.0405	0.1877	0.5627	-0.4463	0.798	1
	0.681	0.6386	0.0214	0.0000	0.0000	0.0000	
LLPTL	-0.0523	-0.0554	0.2581	0.1559	-0.1031	0.5426	0.4025
	0.5452	0.5202	0.0014	0.0838	0.2323	0.0000	0.0000

The variables, namely LOGDSQ and the LOGGDP are correlated with -0.0187.The nature of the relation between these variables is negative. There is a negative relation between NIM and LOGGDP. There is the High significant positive relation between the LENDIR and the LOGGDP and this relation is by 0.5063 and this is significant at 1 percent significance level.
There is a significant positive relation between LENDIR and the LOGDSQ and this is significant and positive relation which is significant at 1 percent significance level. M3mqmg and the LOGDSQR are positively correlated with each other. M3mqmg and the NIM are negatively correlated at 1% significance level. The correlation between the TEATA and LOGGDP is -0.0131. This correlation is negative and insignificant. The correlation between the TEATA and LOGDSQ is 0.0461. This correlation is positive and insignificant. The correlation between the TEATA and NIM is -0.0952. This correlation is negative and insignificant. The correlation between TEATA and NIM is -0.0952.This correlation is negative and insignificant.

The correlation between the TEATA and lender is 0.4871. This correlation is positive and significant at the level of 1%. The correlation between the TEATA and lender is -0.4040. This correlation is negative and significant at the level of 1%. The correlation between the FUNDCOST and LOGGDP is -0.0356. This correlation is negative and insignificant. The correlation between the fund cost and LOGDSQR is 0.0405. This correlation is positive and insignificant. The correlation between the fund cost and NIM is -0.1877. This correlation

Multicollinearity Test **Table3: VIF**

Variable	**VIF**	**1/VIF**
LENDIR	7.91	0.126403
FUNDCOST	5.95	0.178965
LOGGDP	3.88	0.25797
TEATA	3.48	0.287605
LOGDSQR	2.29	0.437339
NIM	1.92	0.520035
M3MQMG	1.76	0.568337
LLPTL	1.66	0.602655
Mean VIF	**3.56**	

VIF is used to check out whether multicollinearity is exist in the independent variables or not. When independent variables are correlated with each other this is called mullticolinearity In the above table the mean value of VIF is 3.56 which is less than 10. So there is no mullticorrenality.

Fixed Effect Model

Table 4: Fixed effect model

	Co-eff.	**Std. Dev.**	**T- Value**	**P > T**
LOGGDP	-0.0009039	0.0012906	-0.7	0.485
LOGDSQR	0.000758	0.0006358	1.19	0.236
NIM	0.6675243	0.10799	6.18	0.000
LENDIR	0.0001213	0.0008334	0.15	0.8850
M3MQMG	0.0004771	0.0002324	2.05	0.043
TEATA	-0.2133732	0.0511995	-4.17	0.000
FUNDCOST	0.0554053	0.0872989	0.63	0.527
LLPTL	-0.129268	0.0263308	-4.91	0.000
_CONS	0.0007526	0.01696	0.04	0.965

Random Effect Model

Table 5: Random Effect Model

	Co-eff.	Std. Dev. Error	Z- Value	P > Z
LOGGDP	-0.0015597	0.0011756	-1.33	0.185
LOGDSQR	0.0005106	0.000557	0.92	0.359
NIM	0.674154	0.0745726	9.04	0.000
LENDIR	0.0002193	0.0007505	0.29	0.7700
M3MQMG	0.0004037	0.0002295	1.76	0.079
TEATA	-0.276021	0.0391419	-7.05	0.000
FUNDCOST	0.0802258	0.0639739	1.25	0.21
LLPTL	-0.0927185	0.0146	-6.35	0.000
_CONS	0.013102	0.0148696	0.88	0.378

Interpretation of the Model

Results show that in case of LOGGDP P value is more than .05 which means that there is no significant relation between Return on assets and LOGGDP. In case of LOGDSQR P value shows that there is no relation between those two variables. According to findings NIM has P Value which is .000 which means that there is high significant positive relation between NIM and Return on assets. There is no relation between LENDIR and Return on assets. There is significant relationship between M3MQMG and Return on assets. There is high significant negative relation between TEATA and Return on assets. There is high significant negative relation between LLPTL and Return on assets.

Random effect modal is a type of panel data analysis and used to investigate the impact of independent variables on the dependent variables.

Houseman Test

According to houseman test Random effect Model is appropriate for our study.

Ordinary Least Square (OLS)
Table 6: Ordinary Least Square (OLS)

	Co-eff.	Std. Dev.	T- Value	P > T
LOGGDP	-0.0015597	0.0011756	-1.33	0.187
LOGDSQR	0.0005106	0.000557	0.92	0.361
NIM	0.674154	0.0745726	9.04	0.000
LENDIR	0.0002193	0.0007505	0.29	0.7710
M3MQMG	0.0004037	0.0002295	1.76	0.081
TEATA	-0.276021	0.0391419	-7.05	0.000
FUNDCOST	0.0802258	0.0639739	1.25	0.212
LLPTL	-0.0927185	0.0146	-6.35	0.000
_CONS	0.013102	0.0148696	0.88	0.38

Now we interpret the OLS regression analysis. First we will investigate the impact of independent variable on the dependent variable.

i. Due to change by one unit in the value of the LOGGDP, will give negative effect on the value of the ROA by -.0015597.
ii. Due to change by one unit in the value of the LOGDSQR, causing positive impact on the value of the return on the average assts.
iii. Due to one unit increment in the value of the LENDIR, would increase the value of the return on the average assets by .0002193 on average.
iv. Due to one unit increment in the value of the NIM, would increase the value of the return on the average assets. This value of co-eff. is significant.
v. Due to one unit increment in the value of the M3MQMG, would increase the value of the return on the average assets. This value of co-eff. is significant.
vi. When there is increment in the TEATA by one unit, which is -.0015597, showing negative impact on the value of the return on the average assts.
vii. One unit change in the value of the fund cost which is .0802258, causing positive impact on the value of the return on the average assts. This value of co-eff. is insignificant.

Table 7: ANOVA Model Summary

R-squared	0.8306
Adj. R-squared	0.8187
F(8, 114)	69.86
Probe > F	0.0000

R-square

This means that on the basis of independent variables how much variation is explained in the dependent variables so findings show that 83 percent variation is explained in the dependent variable on the basis of independent variables.

Adj R-squared

When there is a large number of variables than we use Adj R-squared instead of R-squared.

Fitness of the model

F test is used to check out the fitness of the model in the study the value of F test is. 000 which means that the fit is good at 1 percent of significance level.

V. Conclusion

The main objective of the study was to investigate the factors which affect the profitability of the banks in Pakistan. In this research two types of dependent variable were taken. One is the firm specific and other is country specific. At there the ROA was taken as the dependent variable. Why these variables were taken? Because we want to know that which variables are more effect on the banks profit and which are not.

The firm (internal) specific variables are loan loss provision on the total loss, log deposit square, funding cost and last total expenditure on total assets. Country specific (External) factors are GDP, lender interest rate and money, quasi money and money growth.

For Analysis of data 17 commercial banks were taken. The data gathered from commercial banks for 2003- 2011. For analysis researcher used panel data analysis. Panel data analysis has fixed effect and random effect. Results found that both factors country (external) specific and firm (internal) specific variables make changes in the commercial bank profits. Although ROAA results shows that NIM and M3MQMG shown positive, highly significant relation with a dependent variable. If banks want to boost up their profit, then banks should more attention to these variables. There is no relation between LENDIR and Return on assets. There is a significant relationship between M3MQMG and Return on assets. There is a high significant negative relation between TEATA and Return on assets. There is a high significant negative relation between LLPTL and Return on assets.

Limitation of the study

1. Research only emphasis commercial bank, this sector is individual in his characteristics. It’s not related to any other business other than banks.
2. Results of other businesses and financial business will differ from banks result.
3. Analysis of Panel data is used in the study for the results. Data was collected from 2003-2011. For upgrading of results sample size of data can be increased.
4. Whole data is based on financial reports. So, all data depends on information provided in the reports.
5. Many other factors of country specific and firm specific are not included in the study.

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