ANALYSIS OF THE DETERMINENTS OF COMMERCIAL BANKS' PROFITABILITY IN PAKISTAN

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ABSTRACT- The objective of this study is to investigate the determinants of profitability of commercial banks in Pakistan. For this purpose, we used secondary data collected from annual reports of selected banks. The period of the study was 2014-2018. In the sample of study five commercial banks were selected to determine their profitability. Different statistical techniques such as Correlation Analysis, Regression Analysis and Analysis of Variance (ANOVA) were used to draw the results. We found that net interest income and provisioning against infected advances have negative relationship with profitability while non-mark-up income and number of employees (human capital) have positive association with the profitability of selected commercial banks. The most influential variable in our study is human capital which increases about 40 percent profitability of selected banks.

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1.INTRODUCTION:

Banking sector is considered to be the spine of the economy. An established and profitable banking sector enables access to finance at modest rates and thus, offers the stimulus for economic progress in an economy (Petria, Capraru & Ihantov, 2015). In view of the significance of banking sector for the steadiness of the economy in this globalized world, where economic markets are now cohesive, it is imperative to comprehend what regulates the profitability of banks. The financial sector of Pakistan embraces numerous financial organizations like commercial banks, investment banks, micro finance banks, stock exchange, insurance companies, development finance institutions etc. The Banking sector of Pakistan experienced fundamental changes in late 90s as an outcome of bring into line the bank management process to global finest practices. The enduring process of amalgamation/merger and denationalization of public banks caused noteworthy variations in the banking sector in the area of their structure, ownership and business practices.

Practically, determinants of banking profitability have been discovered mainly in industrialized economies where the banking sector is well established as compared to the emerging economies where it is rather under development and the banking area is not as established as in the industrialized economies (see Abreu & Mendes, 2000; Bourke, 1989; Dietrich & Wanzenried, 2011; Garcia & Guerreiro, 2016; Menicucci & Paolucci, 2016; Petria et al., 2015). In the financial statements of banks, we discover many methods that are used to measure profitability. They include ROA (return of assets), ROE (return of equity) and EPS (earning per share), etc. As much as

the determinants of bank's profitability, most of the studies recognized that cost ratio; loan-loss reserve ratip and wealth ratio are few elements that effect bank's profitability. Normally, it is established that an effective and active banking sector is important for a viable growth of an economy. In order to sustain financial stability and endure adverse shocks, the knowhow of the determinants of banking profitability is vital. Thus, the main goal of this paper is to study the internal and external factors that affect the profitability of banks in Pakistan.

Financial sector sturdiness and strength is very vital for the maintainable economic growing of an economy (Anuar, Choo, Khan, &Khan, 2011; Shah, 2016). In the services sector, banking industry is vital for the swift clearance of economic and commercial transactions. The Pakistani banking industry includes different category of banks i.e. Commercial (local), Islamic, Foreign, Microfinance and specialized banks. The State Bank of Pakistan is the main regulator and supervisory body which control and monitor the activities of commercial banks while Securities and Exchange Commission of Pakistan is the regulatory body for non-banking financial institutions.

For increasing economic growth of the country it is essential that the banks should grow and function in a positive manner. Profitability is very imperative for the banks same like other commercial organizations. Hence, it is essential to comprehend the determinants of profitability of commercial banks.

Huge progressive changes are witnessed in banking sector within the last decade. Performance.

1.2. Main Research problem:

The main research problem of our study is to analyze main determinants of the profitability of banking sector in Pakistan.

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1.3. Objective of study:

The objectives of this research paper are outlined in the following: -

● To examine the relationship between the determinants of commercial banks'
  profitability

● To study main determinants of banks' profitability.

● To investigate the impact of internal and external factors on banks'
  profitability

● To compare the mean differences of profitability among the different
  branches of commercial banks

1.4. Research Questions:

The main research questions of this study are given below: -

● Is there relationship among determinants of profitability of commercial
  banks?

● What are the main determinants of banks' profitability?

● What is the mean difference of banks profitability with respect to their
  branches?

1.5. Scope of the study:

The scope of this study is large because its results can be beneficial both for the policy makers and managers of banking industry in Pakistan. The results will also useful for new researchers to conduct new aspects of the profitability of banking sector.

1.6 Limitations of the Study:

The purpose of this research is to find out the factors effecting commercial banks profitability in Pakistan. Nevertheless, due to some limitations the study does not cover all aspects of the research.

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● The research is limited to five commercial banks only.

● Only internal factors are included in the research because of lack of data
   availability.

● Secondary data is collected only for five commercial banks because the data
   of other commercial banks operating in Pakistan was not available for all the
   variables included in the study.

● The findings of this research cannot be generalized globally because this
   research is confined to Pakistani Banking sector only.

2.LITERATURE REVIEW:

The factors of banks' profitability are generally classified into internal
and external elements. Few of the studies were country based and some of
these considered groups of countries for studying the determinants of
profitability. Largely, these studies suggest that the determinants of
profitability for bank can be alienated into two clusters; internal and external
elements. These studies stipulate return on equity (ROE), return on asset
(ROA), net interest margin (NIM) and return on capital employed (ROCE)
being the reliant variables and considering the internal and external factors as
autonomous variables. To recognize the elements that have impact on bank's
profitability, experimental studies on banks profitability have put more
attention in recent eras. Subsequent are the studies in this segment directed to
enlighten the profitability of banks.

Many of the studies (Awan,2009), (Alshatti; 2016; Angbazo, 1997;
Berger, 1995; Bourke, 1989; Menicucci & Paolucci; 2016; Nessibi, 2016)
have determined that wealth (capital) ratio not only positively affects bank
profitability but the correlation is also statistically important. They added that
more capital (wealth) surge through banking profitability. Likewise,

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Molyneux and Thornton (1992) also established positive link between wealth (capital) ratio and bank's profitability. Still, the outcomes are narrowed only to the public-sector banks. On the other hand, Naceur (2003) and Petria et al. (2015) discover an opposite link between industry and bank productivity. Furthermore, Flamini et al. (2009) claimed that there is no direct link between industry focus and bank's productivity.

A study of Masood and Ashraf (2012) examined relationship between macroeconomic factors and Islamic banks. They have applied a panel data of twenty-five (25) Islamic banks from twelve (12) countries over the time period of 2006-2010. The outcomes of the study shown that bank network has an affirmative effect on Islamic bank's profitability whereas asset management, capital adequacy and advances to assets ratios are also causative element on banks ROA and ROE. Along with that, RGDP has adverse effect on banks ROA while positive influence on ROE. Operating efficacy, deposits and liquescency showed an immaterial effect on banks profitability. It can be established that, banks with well-organized management and larger bank network can raise ROA.

Ijaz et al. (2015) examined internal factors affecting profitability of Islamic banks in Pakistan in the time period 2006 to 2013. He used bank size, gearing ratio, operational efficiency, asset management, and capital adequacy ratios as independent variables while ROA and ROE were used as a proxy for dependent variable (profitability). He concluded that internal inconsistency and mismanagement also badly affect the profitability of banks.

3. RESEARCH METHODOLOGY:

This part covers the following aspects of the study; the population of the study, sample of the research, sample size, sampling technique, research

methodology, sampling design, mode of data collection, description of independent and dependent variables, theoretical framework, and as well as the statistical analysis.

3.1 Population of the Study:

This research is aimed at the investigation of the determinants of profitability of banks in Pakistan. Almost 48 commercial banks are working in Pakistan including Government- owned Scheduled Banks, Foreign Banks, Microfinance Banks, Specialized Banks, Islamic Banks, Commercial Banks and Development Finance Institution.

3.2 Sample of the Study:

We have selected five major commercial banks' (Allied Bank, Habib Bank Ltd, Muslim Commercial Bank Ltd, National Bank of Pakistan Ltd and United Bank Ltd to measure their profitability during the period 2014-2018.

3.3 Types of Data

We used secondary data in this study for period 2014-2018.

3.4 Data Collection:

We collected data from the financial statements of five selected commercial banks, websites of the State Bank of Pakistan and Pakistan Stock Exchange.

3.5 Selected Variables:

Net Interest Margin Percentage (interest earned / interest expensed), Balance of Provision Column (provisioning against infected advances), Net non-Mark-up Income and number of employees were taken as independent variables. The profit before taxation was taken as the dependent variable in the study.

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3.6. Econometric model of the study:

The model is engraved as under: -

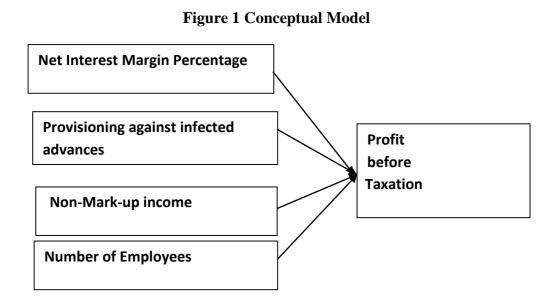$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \varepsilon$$

Where:-

Y=	Profit before taxation
X1=	Net Interest Margin Percentage
X2=	Provisioning against NPLs
X3=	Balance of Net Mark-up Income
X4=	Numbers of employees.
B_0 =	Intercept

b_1, b_2, b_3, b_4 and b_5 are slope of coefficients.

ε = Error term.

3.7 Conceptual Model

Conceptual model is the most important part of the research. It is comprised the independent (predictors) variables and as well as dependent variable.In literature review different variables were identified as determinants or predictors of banks' profitability. Theoretical framework determines the relationship between independent and dependent variables. The sketch of our proposed model is given on next page:

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Figure 1 Conceptual Model

| Net Interest Margin Percentage |
| Provisioning against infected advances |
| Non-Mark-up income |
| Number of Employees |

Profit before Taxation

3.8 Research Hypothesis:

There are two main hypotheses of this research, which are as under: -

H_0: Selected determinants have no significant influence on profitability of commercial banks in Pakistan.

H_1: Selected determinants have a significant influence on profitability of commercial banks in Pakistan.

3.9 Analytical Techniques:

1.Pearson Correlation Analysis

2.Analysis of Variance

3. Regression Analysis

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4.DATA ANALYSIS

4.1 Demographic statistics:

The results of demographic statistics are shown in table 1.

Table 1: Demographic statistics

Variables / Symbols	Mean	Standard Deviation	Minimum	Maximum
PBT	0.0071	0.0135	-0.0576	0.0327
NIMP	0.1436	0.1231	0.0506	0.6638
PANPLs	0.9056	0.0534	0.6533	0.9886
BNM	0.0719	0.0830	0.4587	0.8783
NE	19.4489	0.8899	16.2672	21.2937

Note; PBT (profit before taxation), NIMP (net interest margin percentage), BPC (provisioning against infected advances), BNM (balance non-mark up), and NE (number of employees). Table 1 shows demographic statistics of research variables; such as their mean value, standard deviation, minimum and as well as maximum values.

4.2 VIF Analysis

The results of VIF analysis are shown in Table 2: -

Table 2: Results of Variance Inflation Factors

Serial Number	Variance Inflation Factor (VIF)
1	1.00
2	1.07
3	1.59
4	1.78

| 5 | 1.61 |

Table 2 shows values of the Multi-collinearity using Variance Inflation Factor (VIF) to deal with the most common problem related to the data. All the values of independent variables are less than 10 so; there is no Multi-collinearity among variables. If the value of Variance Inflation Factor relating to any independent variables is greater than 10 then it will be excluded from the model because it shows multi-collinearity problem among independent variables.

4.3 Correlation Analysis:

Table 3: Results of Correlation analysis

	1	2	3	4	5
PBT	1.00				
NIMP	- 23		1.00		
PAIA	-07		-21	1.00	
BNM	29		-48	49	1.00
NE	56	-5	36	38	1.00

Note; PBT (profit before taxation), NIMP (net interest margin percentage), PAIA (provisioning against infected advances), BNM (balance non-mark up), and NE (number of employees) Table 3 shows the correlation between the study variables. Results of study revealed that there are positive relationships and as well as negative correlations between variables.Net interest margin and provisioning against infected advances have negative relations with profitability of bank because decrease in spread between borrowing and

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lending and in non-performing loans decrease profit level of banks while non-mark-up income and number of employees have positive relations with profitability. As non-mark-up income is generated through fee and services while efficiency gain is achieved through human capital. So these two variables have positive correlation with banks' profitability.

4.4 Regression Analysis:

Table   4 Regression Analysis

S.No	Variables	1	2	3	4	5
1.	**NIMP**	-0.0219**	-0.0243**	-0.0126	0.0140	0.0196***
2.	**PAIA**	-0.0259	0.0600**	-0.0975***	-0.0463***	
3.	**BNM**	0.00536***	0.0389***	0.0304***		
4.	**NE**	0.4053***				
R-Square		33%	35%	43%	59%	73%

Note; PBT (profit before taxation), NIMP (net interest margin percentage), BPC (provisioning against infected advances), BNM (balance non-mark-up), and NE (number of employees)

Table 4 shows the results of regression analysis. According to the findings of study, determinants of profitability (independent variables or predictors) of commercial banks play a significant role in variation of profit. R^2 shows the degree of variation in dependent variables due to independent variables. If one unit increases net interest margin the profitability will likely to decrease by two percent and one-unit increase in non-performing loans it will likely to decrease profitability by 2.5 percent. If one unit increases in non-mark up

income the profitability will likely to increase by 0.53 percent. Similarly, if one unit increases in human capital it will likely to cause increase in profitability of the bank by 40 percent. It proves that human capita has major impact on the profitability of the commercial banks.

5. CONCLUSIONS:

On the basis of the above results, we have drawn the following conclusions: -

Development of the country is associated with banking sector growth because banks play a central role in improvement of the economy of any country. The objective of this study was to analyze the determinants of profitability of commercial banks ((Allied Bank, Habib Bank, Muslim Commercial Bank, National Bank, and United Bank). Time series data for the period of 2014-2018 was used and it was extracted from Banks' annual reports, websites of the State Bank of Pakistan and Securities and Exchange Commission of Pakistan. For the purpose of hypothesis testing the inferential statistics was applied. Determinant of banks profitability were included Net Interest Margin, Percentage (interest earned / interest expensed), Provisioning against non-performing loans), balance of Net Mark-up Income and number of employees were taken as independent variable. The profit before taxation was taken as dependent variable in the study. The results show the significant correlation between independent and dependent variables. In our study, human capital has significant contribution (40%) in the profitability level of commercial banks. Net interest margin and non-performing loans have negative relationship with profitability of banks while non-mark-up income and number of employees have positive association with profitability of the bank.

6. Recommendations:

In the light of above conclusion, we would like to give the following recommendations: **-**

● In future, current work must be extended by including some other independent variables such a total asset to total expenditure, interest rates, investment to total assets, borrowing and lending, current ratio, regulation and taxation indicators, staff expenses to total assets.

● Another extension should be the investigation of internal and as well as external factors that affect profitability of banks in Pakistan

● Furthermore, it is needed to expand the number of commercial banks as sample of study in predicting their factors for profitability.

● The commercial banks must focus on the development of human capital because if the human capital is well trained and efficient it will significantly improve their profitability level.

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CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

This research work was carried out in collaboration between two authors.

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