Impact of Bank Specific and Macroeconomic Factors on Financial Performance of Banking Sector in Pakistan: Evidence from Pakistan Stock Exchange

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Abstract

Purpose – The objective of this study was to investigate the impact of bank specific and macro-economic factors on financial performance of the banks in Pakistan. Three key measures of profitability (dependent variables) analyzed in this study consist of Return on Asset (ROA), Return on Equity (ROE) and Net Interest Margin (NIM).

Design / Methodology / Approach – Bank-specific factors used in the study were capital adequacy, asset quality, management quality, earning ability, and liquidity management. In addition, Gross Domestic Product (GDP) and Inflation (CPI) were taken as macroeconomic factors. Banks listed on Pakistan stock exchange is the population of study. Data for the period of nine years was collected from secondary sources. Multiple linear regression was used to observe the determinants of profitability.

Findings – In ROA model, capital adequacy, asset quality, earning ability and inflation are significant to bank profitability. In the model of ROE capital adequacy and earning ability have significant impact on financial performance. Moreover, capital adequacy and earning ability were significant to NIM.

Practical Implications – Bank capitalization must be enhanced because it helps the banks to reduce the cost of financing. Earning ability in inversely related to profitability. So, banks must reduce their expenses because as expenses increase the profits shrink.

Originality Value – The current study focused on the impact of bank specific and macroeconomic factors on financial performance of banking sector in Pakistan by taking the evidence from Pakistan stock exchange, and contributes towards the existing literature on banking and policy making in Pakistan.

Key Words: Bank-specific factors, Macroeconomic factors, Financial performance

Research type – Research Paper
1.0 INTRODUCTION

Financial conditions of companies are important concerns for investors, debtors, practitioners and creditors. As creditors, capital providers and investors rely on financial performance for both profitability and safety of their investments. Most particularly, investors and creditor prefer to understand where their capital is going on or where it should be. Balance sheet’s financial statement approaches such problems by providing precise information regarding to investment of company’s asset. Balance sheet also helps to evaluate the equity components and outstanding debt of company. Practitioners use various models to observe the financial condition of institutions.

Banking sector is determination of any economy that’s play primary role in economic development of any country. Stock exchanges, insurance companies, commercial banks and banking finance companies are the financial institutions which are operating in Pakistan. With the help of commercial banks national savings can be mobilized to the productive sector that’s good for economic growth a country. Profitable commercial banks guarantee the stability of financial system in a country.

Profitability has become serious challenge for banks to make their financial position stable and sound with respect to meet the risk associated with globalization. Higher profitability helps the banking sector in efficient way to confront the negative shocks and stabilize toward financial system. The administration of commercial banks can be influenced by subjective and extraneous factors. The internal or subjective factors are particular bank attributes which affect the bank’s performance. Internal decisions and opinions of management influence these factors. The external factors may be area wide or countries wide which are out of company control and affect the profitability of banks.

2.0 LITERATURE REVIEW

Lelissa, (2014) analyzed the determinants of Ethiopian commercial banks by taking the bank specific along with external factors. Finding showed that capital and liquidity management have no significant effect on performance of the banks. While GDP and bank size showed no effect on profitability. Inflation was observed as determinant of the profitability.

Dawood, (2014) investigate the factors which affect the commercial bank’s profitability in Pakistan for the period of 4 year from 2009 to 2012. He used internal factors which include capital ratios, risk management, and management policies along with external factors
(government policies, and inflations etc. By using ordinary least square (OLS) he observes that
capital adequacy, cost efficiency, and liquidity decide the effectiveness and profitability of
Pakistani commercial banks. Although bank size and deposit no impact on return on asset.

2.1 Financial Performance

Performance deals with the attainment of the given mission measured toward preset standards
of speed, completeness, accuracy and cost. Financial statement of any firm provides different
information that creditor use to analyze the performance of company.

2.1.1 Return on Asset (ROA)

Return on asset is an indicator that describes how a company is profitable proportionate to its
assets. ROA is financial performance indicator that suggests the profitability of banks. It's a brief
idea about how much a firm's management is efficient in availing its assets to earn the profits.
Khrawish(2011), it shows the relation of income to assets. It indicates the capability of banks' management to produce income by utilizing company's assets at their determination. It shows
how effectively the resources of the bank are utilized to earn profit. It also shows that how much
bank management is efficient in generating income from total institution resources (khrawish,
2011). Wen (2010), states that ROA suggest the efficiency of company management of using its
resources.

2.1.2 Return on Equity (ROE)

Return on equity is the ratio that defines the profit earned from invested shareholder equity.
Rate of return on the shareholder's equity of common stock holder is measured by it. ROE is the
ratio that shareholder observe to forecast the return from their invested capital or investment of
their saving. Company having higher return on equity is likely more capable in generating profit
internally. Thus, company with greater ROE is more efficient in profit earning. Khrawish (2011)
explained ROE; it can be calculated by dividing net income after tax to total equity capital.

2.1.3 Net Interest Margin (NIM)

Net interest margin is the measurement of difference in interest paid to lender and received from
borrower by the bank with respect to their assets. NIM is expressed as the percentage of
amount that financial institutions earn on loans in specified time and other assets minus interest
paid on the funds which were borrowed and dividing it by income earned on amount of average
asset in that specific time zone. NIM can be obtained by dividing net interest income to total earning assets (Gul et al, 2011).

2.2 Bank Specific Factors

Bank specific factors are internal factors are those factors which have impact on financial performance of the banks. CAMEL is frequently used technique to determine the profitability. CAMEL parameter includes capital adequacy, asset quality, management efficiency, earning ability and liquidity management. Each indicator is explained below.

2.2.1 Capital Adequacy

Capital adequacy indicates the viability, financial health and stability of banks with respect to capital over assets similar to the loans and investment. Amount of funds available to bank to support his business actions and play the role of buffer in unfavorable situation (Althanasoglou et al. 2005). Bank capital produces liquidity because deposits are more fragile to run the banks. Chances of distress reduced if greater capital is available. Capital adequacy is amount of money needed by the bank in order to reduce the losses and enable the bank to withstand in risk and financial stability. Dang (2011), states that capital adequacy ratio is used to judge the adequacy of the capital. Capital adequacy has direct impact on profitability by concluding its extension toward risky investment (Sangmi and Nazir, 2010).

2.2.2 Asset Quality

Assets of any bank have greater share of loans in balance sheet. Quality of asset or loan is very important for depositor, because the basic means of profit for bank are depositor. This factor delivers idea of assets that have been reserved for the situation of uncertainty.

Abebaw and Depaack (2011), observed that capital have positive and powerful effect on profitability of the banks in Ethiopia. A bank must have sufficient capital to support the risk associated to assets in conformity with the risk-weighted capital ratio foundation. Best proxies of asset quality are nonperforming loans ratio.

Sangmi and Nazir (2010), observed that lower non performing loans to total loans indicate the good financial position of bank. For the better performance this ratio should be low. Negative impact of asset quality on profitability suggests the poor quality of loans that increases the cost of provision and decreases the interest revenue.
2.2.3 Management Efficiency

Management efficiency is capability of management and board of directors to identify the risk, measure it and take steps to control it associated with activities of institution to ensure sound, safe and effective operations in obedience with applicable laws, rules and regulation. (Uniform Financial Institutions Rating System 1997).

Grier (2007) states that management is more important factor in CAMEL rating system which has a critical role in the success of any institutions. Moreover management quality is subject to observe as examination of asset quality.

2.2.4 Earning Ability

To measure the earning ability and efficiency of bank we should observe the ability of bank to control the cost ultimately earning the higher profits. Consistency in profits not only absorbs the losses but also help institutions to build the public confidence and provide the adequate provisions.

Grier, (2007) stated that consistent profits are essential for institutions to sustain. Profitability ratio tells about the ability of organization to earn profits from assets. Cost to income ratio (COSR) is mostly used to evaluate the earning ability of banks. Lower ratio indicates the higher profit.

2.2.5 Liquidity Management

Liquidity is another bank specific factor that delivers the bank performance to investor or depositors. It is the ability of institution to accomplish its obligation, especially their depositors. Adequate liquidity level is positively associated with profitability (Dang, 2011). The ratios used to show the liquidity of the bank according to Dang are total loan to customer deposits and customer deposit to total asset. Ilhomovich, (2009) applied cash to deposit ratio to gauge the liquidity of banks in Malaysia. Level of liquidity of the bank has no relationship with bank performance (Said and Tumin, 2011).

2.3 Macroeconomic Factors

Macroeconomic factors are external factors which have direct impact on the bank performance includes interest rate, political instability, gross domestic product (GDP), inflation, money supply,
exchange rate and unemployment etc. External factors cannot be controlled by the institutions management.

2.3.1 Gross Domestic Product (GDP)

Gross domestic product is mostly used economic factor and it is measurement of total economic activity in an economy. Demand of banks asset is affected by GDP. Decline in GDP growth reduces the demand of credit which negatively affects the bank profitability. On the other hand, in growing economies GDP shows positive impact on profitability. Credit demand in developing economies is high because of the nature of business cycle. GDP represent yearly change in GDP. According to Athanasoglou et al. (2008), Bikker et al. (2002), and Demirguc-Kunt et al. (1999) there is positive relation between GDP and profitability.

2.3.2 Inflation rate

High inflation correlates with higher income and cost. Inflation will be expected to exercise the positive effect on profitability if a bank raises the income. Revel, (1979) initiate the problems of the relationship between inflation and profitability, stated that impact of inflation on financial performance depends on whether inflation affects both operating cost and salaries of the bank. Alexiou and Sofoklis (2009), Kasman et al. (2010), Althanasoglou et al. (2008), Claeys and Vennet (2008), concluded positive association between inflation and profitability. According to Vong and Chan (2009) relation between inflation and profitability is not clear.

2.4 Research Gap

Prediction of financial performance is one of the major issues faced by investors. CAMEL model is one of the most prominent models to assess the performance of banks. In past substantive researches have been done on this subject but most of them was in the developed economies and a limited empirical evidence is available from the developing economy like Pakistan. Various studies have been conducted in Pakistan on profitability of banks by using the bank specific/internal factors. But there is no research in this context on camel parameters as internal with external factors both in Pakistan.

2.5 Conceptual Framework

Conceptual framework is developed from review of literature and is presented in figure 1, whereas description and computation of variables is described in Table 1 (refer to appendix):
2.6 Hypotheses of the Study

**H1:** There is a significant relationship between bank specific, macroeconomic factors and ROA.

**H2:** There is a significant relationship between bank specific, macroeconomic factors and ROE.

**H3:** There is a significant relationship between bank specific, macroeconomic factors and NIM.

### 3.0 RESEARCH METHODOLOGY

It comprises the approaches adopted to analyze the data for the aim to answer the research questions. There are three section of research methodology. 1) Research design 2) Data source and arrangement 3) Econometric specification

#### 3.1 Research Design

The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way.
3.1.1 Population and sample selection

Something with same properties or characteristics represents the population. All commercial and Islamic, domestic and foreign banks operating in Pakistan is the population of study. Good population selection is one of the most important parts of formal research.

3.2 Data sources and arrangement

This study employs the secondary data that is actually annual accounting data of banks and macroeconomic data accumulated for the period of nine years from 2006 to 2014. Data of variables was collected from different sources. Bank specific data (capital adequacy, earning ability, liquidity, management quality and asset quality) was collected from State Bank of Pakistan (SBP) database. Macroeconomic (GDP, inflation) data was incorporated into the analysis gathered from World Bank data base.

3.3 Model specification

Given regression models is used to check the impact of bank specific and macroeconomic factor on profitability indicator ROE, ROA and NIM.

\[ \pi_{it} = \alpha_0 + \alpha_1 CA_{it} + \alpha_2 AQ_{it} + \alpha_3 MQ_{it} + \alpha_4 EA_{it} + \alpha_5 LM_{it} + \alpha_6 GDP_{it} + \alpha_7 INF_{it} + \epsilon_{it} \]

Where;

\( \pi_{it} \) = Performance of Bank i at time t as expressed by ROA, ROE, NIM

\( \alpha = \) Intercept

CA reflects capital adequacy

AQ represent asset quality

MQ express management

EA is used to represent earnings ability

LM shows liquidity management

\( \alpha_1 - \alpha_7 = \) Coefficients parameters

GDP indicates the Gross Domestic Product
INF reflects Average Annual Inflation Rate

E is Error term

4.0 RESULTS AND DISCUSSIONS

In this part descriptive statistics is showing the minimum, maximum value, mean and standard deviation of the data.

4.1 Descriptive Statistics

Table 2 (refer to appendix) demonstrate the descriptive statistics of internal factors that conclude the performance of banks in Pakistan. It is shown in the table; average capital ratio of the banks in Pakistan is 10.37.

Table 2 shows the descriptive statistics of the variables. ROA, NIM along with ROE are the parameters that describe the profitability of banks in Pakistan. Average ROA is 0.51% indicating the managerial efficiency since their assets are capable of generating. On average ROE -2.49% is elaborating that banks management is not effective in profit generation from each unit of shareholder equity or bank capital. While the average of other financial parameter NIM proxified by net interest income to total asset is 3.16%. It is indicated from NIM that banks are more efficient in conditions of determining least costly option of funding and is capable in making the wise loan decision.

Average capital holds by Pakistan banks was 10.37% measured by total equity to total asset. It presents that Pakistani banks keep extra capital than needed. Average asset quality in the given period is 8.83%. Another important factor, management quality which is proxied by loans to deposit is 66.98% on average. That’s means in Pakistan 67% of banks earnings are earned from intermediation of banks. Above table also demonstrates the average expense to revenue that is 113.17%. So, they are efficient in regulating their expenses and maximize the productively which finally results the higher profit as proved byand Faizulayev (2011).

Average net loans to total assets were 45.31% indicating that 45.31% deposits in Pakistani banks are used for lending. This indicates that banks hold more statutory liquidity than required. Because of the great difference between deposits and lending rate customer deposits are cheapest source of funds that banks use to earn profit.
4.2 Correlation Analysis

Explanatory variables of the research and their relations with bank performance as represented in this part by the 3 dependent variables ROA, ROE and NIM. The Pearson's correlation coefficient shows the magnitude of relationships; whether they are positive or negative. Majority of the independent variables have less than 0.4 as shown in table 3 in this way it marks a weak relation with each variable and hence significant correlation is absent between the explanatory variables which help in isolated impact of those variables.

ROE and NIM are positively to capital, while ROA showed inverse relation with capital. These are consistent to the findings of Ongore (2013), Mehta (2012) and Sheikh (2010), because as the CA goes up then bank will have a better cushion to withstand with losses or credit ventures. Metha (2012) asserted that high capital ratio strength the banks to invest in safe asset i.e. T-bills.

Asset Quality is inversely related ROE, NIM and ROA, due to the increase in provisions against losses of bank relative to total loans then profitability is at the stake. There is strong negative correlation between ROA & ROE because of this fact that loans consist of largest portion of assets in banks and so it strongly affects profitability negatively if AQ increase.

Management quality (MQ) also has negative relation with ROE, NIM & ROA. Risk of insolvency increases as percentage of advances increases. Management quality explains how efficiently managers are attracting the financially strong depositors by providing loans from deposits; so as MQ goes up; profitability will increase as studied by Jaivid et al., (2011) and Momeneen et al., (2012).

Earning ability has negative relation with all profitability indicators. While liquidity shows negative relation with ROE because asset amount being committed in loans increases then liquidity decreases and this affect financial performance negatively. But liquidity is positively related to NIM & ROA. Finally, external factor GDP is positively correlated with ROE and ROA that means economy is flourishing and performance is expected to increase. Inflation has negative relation with two performance measures.
4.3 Regression analysis

Table 4 shows the correlation of variables. In this section the findings of regression analysis are described how much change in independent variable internal (bank specific or CAMEL) and external factors will influence the profitability indicators NIM, ROE and ROA. Three regression models are utilized in this study. In pure regression model bank specific and macroeconomic parameters are put into examination.

4.3.1 Regression Outputs Model

Regression output shows the impact of internal and external factors on banks' profitability in Pakistan. Kindly refer to appendix to observe regression output.

Table 4 shows the regression results of the variables. As it is illustrated in table 4 that major bank specific factors have significant impact on profitability as signified by NIM, ROE and ROA at the level of 95% confidence because their p-values are greater than 0.05. Capital adequacy and management capability are showing the significant impact on performance as observed by Almazari (2014), Aktar et al. (2011), and Ongore (2013) while asset quality is insignificant to ROE and NIM but significance to ROA that is consistence to Ameur et al (2013), Ongore(2013), Almazari (2014) and Akhter et al. (2011). As capital adequacy increase the profitability of the bank will increase whereas decrease in provision against advances to total loan (asset quality) performance will increase. The findings are consistent with Ongore (2013), Aktar et al. (2011) and Almazari (2014). Furthermore it is expected that management quality will be positively related to profitability as stated by Faizulayev (2011), although results were shown contradictory. Findings are similar to Reddy et al (2011) but inconsistent to Ongore (2013) and Almazari (2014). MQ is negatively related to profitability, because profitability will decrease as MQ increases as measured by ROA and ROE, whereas profitability measured by NIM will expected to increase as MQ increases because extra interest income earned from lending more loans. Results are consistent to Redy et al (2011).

Another internal factor earning ability showed negative and significant relation with all measures of profitability. The results stand in line with Redy et al. (2011), Ameur et al. (2013) and Almazari (2014). Alternatively liquidity management exerted no impact on financial performance indicator ROA, ROE and NIM. These findings are consistent to Faizulayev (2011) and Ongore et al. (2013).
Inflation and GDP affects the bank profitability according to the economic conditions existing in country (Alexiou & Sofoklis, 2009). Inflation has positive or negative impact it depend on the situation either it is anticipated or unanticipated (Perry, 1992). Bashir (2003) suggested that if inflation remains anticipated, then banks profit margin will be during high inflation rate and if it remains unanticipated, banks will not be able to change rates and costs then cost of financing rise quicker than inflation results in poor profits. Demirguc-Kunt and Huizinga (1999) also analyzed the same scenario in developing countries. Inflation rate in Pakistan are observed unanticipated. It may induce a positive effect in those countries where financial markets are well-established and economies are in boom but negative effect in developing countries. According to the above results, GDP has negative and significant relation with ROA findings are same as the findings of Acaravci et al. (2013) and Ayele (2012) were but different to Ameur et al. (2013). Relation of GDP was found statistically insignificant with ROE and NIM. Findings are similar to Ongore (2013), Kanwal et al. (2013) and Faizulayev (2011) and inconsistent to Al-Gazzar (2014). On the other hand, inflation has negative and significant relation with ROA that is same to the finding of kanwal et al. (2013). Inflation is insignificant to ROE and NIM that stand in line with Al-Gazzar (2014) and Ameur et al. (2013).

4.4 Discussion of Regression Result

Bank panel data was used to be able to observe the effect over the year.

**Conditional Rule:** Reject the hypothesis if p-values are less than 0.05 as shown in table 5.

5.0 CONCLUSION

The study investigated the factors or determinants that influence and impact on the performance of bank. Two fundamental determinants of bank profitability were analyzed; the bank-specific determinants and the macroeconomic determinants.

Using Return on Asset (ROA) as the fundamental measure of bank profitability, three bank-specific factors capital adequacy, asset quality and earning ability and two macroeconomic factors GDP and inflation were significant to profitability. In second measure of profitability (ROE) capital adequacy, management quality and earning ability were significant. In the final measure of performance (NIM), asset quality, management quality, capital adequacy and earning ability were statistically significant. Moderating
role of macroeconomic factors GDP and inflation is significant. Thus, it is possible to conclude that the interaction effect of GDP and inflation on the financial performance of commercial banks in Pakistan was significant.

REFERENCES


## APPENDIX

### Table 1: Description and computation of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Asset</td>
<td>Net income/Total Asset (ROA)</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>Net income/Total Equity (ROE)</td>
</tr>
<tr>
<td>Net Interest Margin</td>
<td>Net interest income/Total Asset (NIM)</td>
</tr>
<tr>
<td>Capital Adequacy</td>
<td>Total Equity/Total Asset (CA)</td>
</tr>
<tr>
<td>Asset quality</td>
<td>Loan Loss Reserve/Total Loans (AQ)</td>
</tr>
<tr>
<td>Management Quality</td>
<td>Loans/Deposits (MQ)</td>
</tr>
<tr>
<td>Earning Ability</td>
<td>Total expenses/Total revenue (EA)</td>
</tr>
<tr>
<td>Liquidity Management</td>
<td>Net loans/Total Assets (LM)</td>
</tr>
<tr>
<td>Gross Domestic Product</td>
<td>GDP growth rate</td>
</tr>
<tr>
<td>Inflation</td>
<td>CPI</td>
</tr>
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</table>

### Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
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</thead>
<tbody>
<tr>
<td>ROE</td>
<td>189</td>
<td>-.1474</td>
<td>2.35</td>
<td>-.0249</td>
<td>1.15104</td>
</tr>
<tr>
<td>NIM</td>
<td>189</td>
<td>.00</td>
<td>.07</td>
<td>.0316</td>
<td>.01452</td>
</tr>
<tr>
<td>ROA</td>
<td>189</td>
<td>-.07</td>
<td>.04</td>
<td>.0051</td>
<td>.01904</td>
</tr>
<tr>
<td>Capital Adequacy</td>
<td>189</td>
<td>-.03</td>
<td>.49</td>
<td>.1037</td>
<td>.07459</td>
</tr>
<tr>
<td>Asset Quality</td>
<td>189</td>
<td>.00</td>
<td>.40</td>
<td>.0883</td>
<td>.06627</td>
</tr>
<tr>
<td>Management Quality</td>
<td>189</td>
<td>.25</td>
<td>1.12</td>
<td>.6698</td>
<td>.16553</td>
</tr>
<tr>
<td>Earning Ability</td>
<td>189</td>
<td>.49</td>
<td>3.40</td>
<td>1.1317</td>
<td>.33827</td>
</tr>
<tr>
<td>Liquidity Management</td>
<td>189</td>
<td>.13</td>
<td>.71</td>
<td>.4531</td>
<td>.10280</td>
</tr>
<tr>
<td>GDP</td>
<td>189</td>
<td>.02</td>
<td>.06</td>
<td>.0378</td>
<td>.01318</td>
</tr>
<tr>
<td>Inflation</td>
<td>189</td>
<td>.07</td>
<td>.20</td>
<td>.1109</td>
<td>.04101</td>
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</table>

### Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>ROE</th>
<th>NIM</th>
<th>ROA</th>
<th>CA</th>
<th>AQ</th>
<th>MQ</th>
<th>EA</th>
<th>LM</th>
<th>GDP</th>
<th>INF</th>
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<tbody>
<tr>
<td>ROE</td>
<td>1</td>
<td>.294*</td>
<td>.418*</td>
<td>.090</td>
<td>-.247*</td>
<td>-.145*</td>
<td>-.242*</td>
<td>-.051</td>
<td>.097</td>
<td>-.106</td>
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<tr>
<td>NIM</td>
<td>.294*</td>
<td>1</td>
<td>.638*</td>
<td>.011</td>
<td>-.309*</td>
<td>-.116</td>
<td>-.577*</td>
<td>.015</td>
<td>-.123</td>
<td>.117</td>
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Table 4: Regression Results

<table>
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<tr>
<th></th>
<th>ROA</th>
<th>ROE</th>
<th>NIM</th>
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<tr>
<td>(Constant)</td>
<td>0.080</td>
<td>1.537</td>
<td>0.070</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.088</td>
<td>0.000</td>
</tr>
<tr>
<td>CA</td>
<td>0.064</td>
<td>5.807</td>
<td>0.077</td>
</tr>
<tr>
<td></td>
<td>0.000*</td>
<td>0.000*</td>
<td>0.000*</td>
</tr>
<tr>
<td>AQ</td>
<td>-0.089</td>
<td>-1.801</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>0.000*</td>
<td>0.317NS</td>
<td>0.784NS</td>
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<tr>
<td>MQ</td>
<td>-0.006</td>
<td>-2.079</td>
<td>-0.020</td>
</tr>
<tr>
<td></td>
<td>0.612NS</td>
<td>0.082***</td>
<td>0.091***</td>
</tr>
<tr>
<td>EA</td>
<td>-0.040</td>
<td>-0.894</td>
<td>-0.030</td>
</tr>
<tr>
<td></td>
<td>0.000*</td>
<td>0.002**</td>
<td>0.000*</td>
</tr>
<tr>
<td>LM</td>
<td>-0.007</td>
<td>2.640</td>
<td>0.017</td>
</tr>
<tr>
<td></td>
<td>0.707NS</td>
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<td>0.412NS</td>
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<tr>
<td>GDP</td>
<td>-0.195</td>
<td>-7.848</td>
<td>-0.182</td>
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<tr>
<td></td>
<td>0.093***</td>
<td>0.521NS</td>
<td>0.142NS</td>
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<tr>
<td>INF</td>
<td>-0.122</td>
<td>-4.512</td>
<td>0.006</td>
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<tr>
<td></td>
<td>0.002**</td>
<td>0.267NS</td>
<td>0.878NS</td>
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<table>
<thead>
<tr>
<th></th>
<th>R2</th>
<th>ADJUSTED R2</th>
<th>SSE</th>
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<tr>
<td></td>
<td>0.724</td>
<td>0.710</td>
<td>0.01016</td>
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<tr>
<td></td>
<td>0.168</td>
<td>0.126</td>
<td>1.07330</td>
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<tr>
<td></td>
<td>0.485</td>
<td>0.459</td>
<td>0.01086</td>
</tr>
</tbody>
</table>
F-test 68.569 5.032 22.147

P-value 0.00 0.00 0.00

Note
*Statistically significant at 1%
** Significant 5%
***Statistically significant at 10%
NS statistically insignificant

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Table 5: Results of Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
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<td>.000</td>
</tr>
<tr>
<td>H2</td>
<td>Accepted</td>
<td>.000</td>
</tr>
<tr>
<td>H3</td>
<td>Accepted</td>
<td>.000</td>
</tr>
</tbody>
</table>