

# **THE ECONOMIC IMPACTS OF LIQUIDITY AND LEVERAGE ON THE FINANCIAL PERFORMANCE OF MENA & GCC LISTED COMPANIES**

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## **Abstract**

*Motivated by the importance of company performance with respect to the company itself, its employees, its creditors, the government, and most importantly its investors, this research comes to shed some light on this topic. Moreover, the review of the literature revealed a dire need for some research material that studies the designated market, that is, the Gulf Cooperation Council (GCC) and Middle East and North Africa (MENA) region. The researchers relied on secondary quantitative research to conduct the necessary analysis. The researchers collected data from 71 randomly selected companies based on cluster selection for the period extending from 2011-2014 upon which the researchers ran several statistical tests. The researchers used SPSS and STATA software to generate some descriptive statistics regarding the collected data. The data constituted a balanced panel data enabling the researcher to study time-series and cross-sectional impact of liquidity, leverage, and geographical location of companies on the profitability of listed companies. The random effects regression analysis*

*claimed that leverage has a significantly negative impact on profitability while the dummy variable revealed that being a GCC company impacts positively and significantly on the profitability of a company. Based on the significant results of this work, the researchers recommend companies to manage their leverage position and try to enter the GCC market. As for the research community, it is recommended to conduct such research and enrich the literature with valuable research discussing the GCC and MENA region.*

*Keywords: Liquidity, Financial Leverage, Geographical location, GCC countries, MENA*

## **INTRODUCTION**

After the major news about economic, political, and financial changes hitting GCC and MENA region, companies operating in the region were affected one way or another. Inspired by these different reactions to market stimuli, this research comes to shed some light on factors that actually impact the operating results. Hence, this paper will test the effect of several firm-specific factors on the profitability of listed companies on GCC and MENA stock exchanges.

To add credibility to the actual scientific work done, the researcher relied on the literature review to formulate logical and educated hypotheses. The researchers worked on including research material from different geographical locations and from different development levels to try formulating a comprehensive overview about the different factors possibly impacting the financial performance of listed companies.

The researchers relied on secondary quantitative analysis by gathering data from the randomly selected companies. With the help of SPSS and STATA software, the researchers was able to run several regression analyses upon which some of the hypotheses were rejected and others were not. Based on the results, the researchers was able to come up with valuable recommendations for managers and businesses to be able to control and improve their profitability.

## **Research Objective**

The main purpose of the study is to provide valuable info about performance and provide managers with ideas they can implement to improve their performance measures.

## **Research Questions**

The following lines sum up the core research questions that this research paper works on answering through a detailed inferential research. The source of these questions is the previously defined problem definition.

- 1- Does liquidity impact profitability?
- 2- Does financial leverage of companies have any impact on profitability?
- 3- Does the region in which companies operate in impact on their profitability?
- 4-To what extent do the previously mentioned variables impact profitability of listed companies?

### **Research Hypotheses**

Statement 1: Liquidity impacts company's financial performance in GCC and MENA region.

H0: Liquidity has a significant negative impact on the profitability of GCC and MENA listed companies.

Ha: Liquidity does not have a significant negative impact on the profitability of GCC and MENA listed companies.

Statement 2: Financial leverage impacts the financial performance of GCC and MENA region companies.

H0: Financial Leverage has a significant negative impact on the profitability of GCC and MENA listed companies.

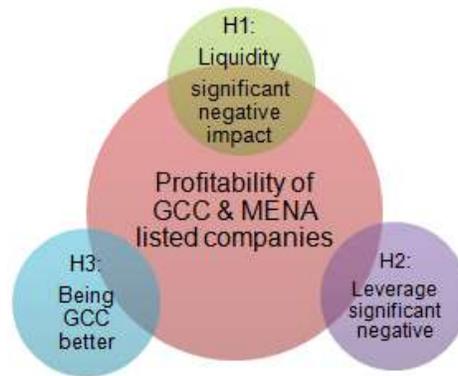
Ha: Financial Leverage does not have a significant negative impact on the profitability of GCC and MENA listed companies.

Statement 3: The geographical region in which companies operate in affects the profitability of listed companies.

H0: Companies listed on GCC stock exchanges have better profitability results than companies listed on MENA stock exchanges.

Ha: Companies listed on GCC stock exchanges do not have better profitability results than companies listed on MENA stock exchanges.

Figure 1: The Hypotheses Model



## LITERATURE REVIEW

Saleem and Rehman desired to reveal the relationship between liquidity and profitability by their paper: Impact of liquidity ratios on profitability. Both researchers were encouraged to study this relationship due to the importance of liquidity as several stakeholders look at it for decision making. Suppliers check liquidity position before setting goods on credit. Employees check liquidity to know if the company is able to meet its obligations related to them and many more reasons. As the definition specifies, liquidity is the firm's ability to meet its current obligations; the short-term and current installment of long-term liabilities. If the current liabilities are higher than current assets, the company will be facing difficulties. These difficulties might be a factor impacting operations and profitability. As such, Saleem and Rehman chose the dependent variables to be ROA, ROE, and ROI whereas the independent variables were current ration, quick ration and liquid ratio. In order to run a quantitative empirical and inferential study, data of 26 enterprises of the Pakistani oil and gas industry were collected for the period extending from 2004 to 2009. These selected companies are listed on the Karachi Stock Exchange. The researchers ran a regression analysis with 3 models:

$$ROA = \alpha_1 + \beta_1 LR + U_i$$

$$ROE = \alpha_2 + \beta_{21} CR + \beta_{22} QR + \beta_{23} LR + U_i$$

$$ROI = \alpha_3 + \beta_{31} CR + \beta_{32} QR + \beta_{33} LR + U_i$$

The  $R^2$  of the models ranged from 73% to 90% with LR having a significant impact of ROA at  $p = -0.03$ . Moving on to ROE, liquidity does not have a significant impact at less than 5% whereas all ratios of liquidity have a significant impact at less than 5% on ROI. Finally, this paper was a first attempt to empirically address the relationship between liquidity and profitability with liquid ratio having the highest impact.

Zygmunt (2013) conducted a study to recognize the impact of liquidity on performance in Polish listed IT companies. His paper named, Does liquidity impact on profitability: A case of Polish listed IT companies which is divided into two sections: the research expectations and the

hypothesis testing. To start-up with, Zygmunt reflects on the importance of liquidity for company existence. Moreover, liquidity affects cost reduction, growth, changes in sales dynamics and company risk level. Previous studies on different industries, but not on IT companies have shown mixed results. Several theoretical and empirical studies hint that liquidity might impact profitability. Zygmunt collected data from the financial statements of companies listed on the Warsaw Stock Exchange for the period 2003-2011. Zygmunt ran a correlation coefficient to describe the dependence between liquidity and profitability in Polish listed IT companies. Moreover, he ran a linear regression model by using the ordinary least squares method. He used ROA, ROE, and ROS as the dependent variables while for the independent variables the choice was set on current ratio, quick ratio, receivable conversion period, inventory conversion period, accounts payable conversion period, and cash conversion period. The results showed that as the accounts payable conversion period, receivable conversion period an inventory conversion period increases the profitability of IT Polish companies. Although sometimes there is a delay in the influence of liquidity, the relationship between liquidity and profitability is statistically significant.

Ahmad et al (2015) wrote a paper addressing the relationship between financial leverage and profitability taking the Pakistani market as the research target. Influenced by the concept of capital structure, which is finding out the right combination between debt financing and equity financing, Ahmad et al chose this topic. Moreover, the notion that more loans lead to paying more interest thus decrease net incomes. Thus it is for seen the negative association. As such, the researchers hypothesized the idea that financial leverage has significant negative impact on firm profitability. To test this hypothesis, the researchers collected data from 18 cement companies listed on the Karachi Stock Exchange for the period 2005-2010. The dependent variable was the ROA while the independent variable was debt ratio. After gathering the data, the researchers ran a simple linear regression that resulted in an  $R^2$  of 29.8% with a significant level  $< 5\%$ . Thus, the results came back confirming the suggestion. Financial leverage has a significant and negative impact on firm profitability.

Al-Shamalieh and Khanafar (2014) conducted a research about the impact of leverage on profitability of firms. They took Jordan as their subject matter, more specifically, they studied the tourism industry.

For the post several years, Jordan has witnessed a large development in various economic fields. One of the major sectors that enabled this progress was the tourism sector. In an attempt to understand how leverage works, one should remember that it helps both the investor and the borrower; however, at the same time understand that leverage in operations magnifies gains and losses. As such, Al-Shamalieh and Khanafar hypothesized the existence of

a significant relationship between cost of funding and profitability. The researchers collected data from the randomly selected 5 listed companies out of the 11 companies listed on the Amman Stock exchange. The researchers ran a regression analysis that resulted in a  $R^2$  of 4.4%; however, the results also showed that leverage has a significant and negative impact on profitability at  $P=0.000$ .

One of the very few research papers analyzing the MENA region is this paper prepared by Almajali, Alamro and Al-Soub. These three researchers undertook the mission of investigating the factors affecting the financial performance of Jordanian Insurance companies. The subject of financial performance by itself has received attention from researchers as well as business practitioners, simply due to its implications to organization's health and survival. After Jordan's good performance in various sectors, the insurance sector did not match the growth in the economy. This was one of the reasons which motivated the researchers to identify the basic factors affecting the financial performance of Jordanian insurance companies. Stemming from the literature, this paper has considered Age, Leverage, Size, Liquidity, and Management competence index as the independent variable affecting the performance.

The total number of insurance companies enlisted at Amman Stock Exchange during the period 2002 to 2007 is 25 companies. The researchers considered the total population as the sample size of the study. The data was collected from the financial statements and reports, articles and relevant literature. The researchers relied on a regression analysis to investigate the impact of the variable. ROA (return on assets) as proxy for financial performance, debt to equity for leverage, current assets to current liabilities, total assets for size, number of years since establishment, and ratio of profit to number of professionals for management competence index. The researchers tested the following hypotheses:

H1: there is no significant effect for leverage on financial performance

H2: there is no significant effect for liquidity on financial performance

H3: there is no significant effect for age on financial performance

H4: there is no significant effect for size on financial performance

H5: there is no significant effect for management competence index on financial performance

The results came back with R-square of 0.37 and it is statistically significant at 0.000.

The multiple linear regression model is:  $FP = \alpha + b_1L + b_2Q + b_3G + b_4S + b_5M + E$

Based on the results, H1 is rejected since there is a significance ( $P<0.000$ ) impact on financial performance. H2 is rejected significance (0.046) and a positive one. H3 is accepted, there is no impact of age on financial performance. H4 null is rejected since size has a positive and significant impact on financial performance ( $P<0.000$ ). H5 null is rejected at  $P<0.041$  significant

at 5%. It means that management's competency impacts positively the financial performance of Jordanian insurance companies.

Nazim Ullah (2016) examined in his paper about the different bank-specific and macroeconomic factors that influence the profitability of the banking industry in the GCC region. The GCC market is composed of conventional and Islamic banks that contribute to the GDP of the country. Another characteristic of the market is that the owners of the banks are locals due to the severe entry barriers and largely licensing restrictions for foreign ownership. The researcher aims through his paper to find out the impact of several factors on profitability and if the reaction to these factors differ from conventional banks to Islamic banks. The researcher used a cross sectional data from the six GCC countries with 72 observations combining 26 Islamic and 46 conventional banks for the year 2014. The six countries were Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman, and Bahrain. As for the data, it was collected from the Bankscope database. The dependent variables representing the profitability and efficiency are ROE, ROA, and NIM. Bank size, capital adequacy, and liquidity are as the bank specific factors while GDP and inflation as the macro factors.

Ullah came up with the following 5 hypotheses:

H1: bank size is positively related to profitability

H2: equity to assets ratio is positively related to profitability

H3: net loan to assets ratio is negatively related to profitability

H4: inflation has a positive relationship with bank profitability.

H5: GDP is positively related to profitability

The researchers came up with several normal regression models, ordinary least square (OLS). He considered the variable of being conventional or Islamic as a dummy variable. The results showed that bank size has a positive and significant impact at  $P < 0.05$ . As for liquidity, the research showed that it has a positive and statistically significant impact at  $P < 0.01$ . Capital adequacy (+ve), GDP (-ve), and inflation (-ve) are insignificant. Finally, the dummy indicated that there is a statistically significance at  $P < 0.01$  which implies that there is a difference between Islamic and conventional bank influencing the profitability in the GCC countries.

## METHODOLOGY

The purpose of the current study is to examine the impact of several firm-specific factors on the profitability of companies listed on the MENA and GCC stock exchanges. Moreover, it aims at identifying the significance of those impacts (Daugherty, 2016). This part outlines the procedures followed throughout the study. It introduces a complete description of the

methodology of the study, the community, the sample, the instrumentation, the pilot study, a description of the proxies used for representing the variables and the research design.

Research design provides the outline of the actual research steps to be followed in order to reach the final objectives of this research. That is, the following section will present the data, the type, the population and sample in size and contents the chosen dependent and independent variables and the research techniques chosen (Webster, 1985).

In research, as Bryman (2011) introduces in his book about the research methods in business, there are mainly two types of data: primary and secondary. In simple words, the primary data is the data that is collected by the researcher himself/herself and is the product of his/her individual findings. As for the secondary data, it is the material provided by other researchers and the researcher is using their findings in his/her research. Moreover, primary data may provide the most direct and specific information to researchers, however it can be costly and time consuming. However in some instances, good quality data have already been collected, so it may not be necessary to duplicate the effort.

In other cases, limited financial resources or time are issues faced by the researchers. In which case, it may be less expensive to hire an experienced assessor or statistician to identify data sources and carry out an appropriate data analysis, rather than conduct a survey to collect primary data.

With this knowledge, you can feel more confident about planning to use secondary data in your impact assessment and you will have the necessary elements to help you choose the appropriate sources for the required data.

The study used the secondary quantitative data analysis in studying the factors impacting the profitability of companies. The study required acquiring the audited financial statements of a selection of companies listed on the different GCC and MENA stock exchanges for the years 2011-2014. The results were further analyzed by calculating several ratios which were chosen as proxies for the dependent and independent variables. The calculated data is input on the SPSS and STATA in order to run the selected statistical tests (Cameron & Trivedi, 2009).

The research was conducted based on the financial data from balance sheet and income statement of the years 2011, 2012, 2013, and 2014. The researchers decided on these four years due to availability of data, in addition to the fact that these years reflect several turning points in the Arab world. The collected data includes data from different companies for different set of years. As such, the data constitute panel data.

Panel (or longitudinal) data are cross-sectional and time-series. There are multiple entities, each of which has repeated measurements at different time periods (Joseph, 2010).

## ANALYSIS AND FINDINGS

### Qualitative Results and Analyses

Based on the readings of the latest literature review, the researcher acquired some intellect about the possible impact of the factors being studied in this work. To start with leverage, it is clear that almost all previous work comes to the same conclusion that leverage has a negative and significant impact. As for liquidity, the previous results are misleading. Hence, these factors require thorough studies. Finally, the dummy variable lacks the most information with respect to geography and its impact on profitability. Moving to the methodology, the regression models are considered the best fit with respect to studying the impact of variables on a dependent variable.

### Quantitative Results and Analyses

The researchers conducted a regression analysis to study the impact of several factors on the profitability of listed companies in GCC and MENA stock exchanges. As mentioned before, the data is a balanced panel data, as such it is necessary to identify which regression best fits the study. The first step of the research was to gather some descriptive information. The second step was to run several correlation tests, Spearman and Pearson Tests, to identify the relationship between the variables and especially between the dependent and independent variables. Finally, the researchers rely on regression to test the hypotheses. The regression however, was not a simple one. The researchers were forced to follow several tests to see which regression best fits the collected data. The following section presents all the previously mentioned tests in detail with their respective results and interpretation.

### Descriptive Survey Results

The descriptive survey starts with a summary of several statistics from mean, standard deviation, and several more.

Table 1: Descriptive Statistics

		Liquidity-Current Ratio	Leverage-Debt Ratio	Return on Assets	Return on Equity	Geography Impact
N	Valid	284	284	284	284	284
	Missing	0	0	0	0	0
Mean		2.1811	38.6087	5.3684	8.0919	.56

Median	1.4550	36.3800	4.2100	7.3500	1.00
Std. Deviation	2.37184	21.86621	8.75078	14.66811	.497
Minimum	.06	2.13	-20.45	-46.11	0
Maximum	17.93	93.26	41.92	51.91	1

Table 1, presents the summary of the collected data. The main titles of this table are all the variables and their respective mean, minimum, maximum, and standard deviation for the four year period considered for this study (2011-2014). All the variables have 284 observations which reflect the balanced panel data. To start with liquidity variable, the mean is 2.181 with a standard deviation of 2.371. The minimum value of CR is 0.06 while the maximum is 17.93. Moving to leverage, the mean value is 38.61% with a standard deviation of 21.87%. The minimum value is 2.13% while the maximum DR is 93.26%. The minimum value of ROA is -20.45% while the maximum is 41.92%. As for ROE, the mean is 8.09% with a 14.67% standard deviation. The minimum ROE is -46.11% while the maximum ROE reached 51.91%. Finally, the mean value of the dummy variable (geography impact) is 0.56.

Figure 2: Mean ROA and ROE

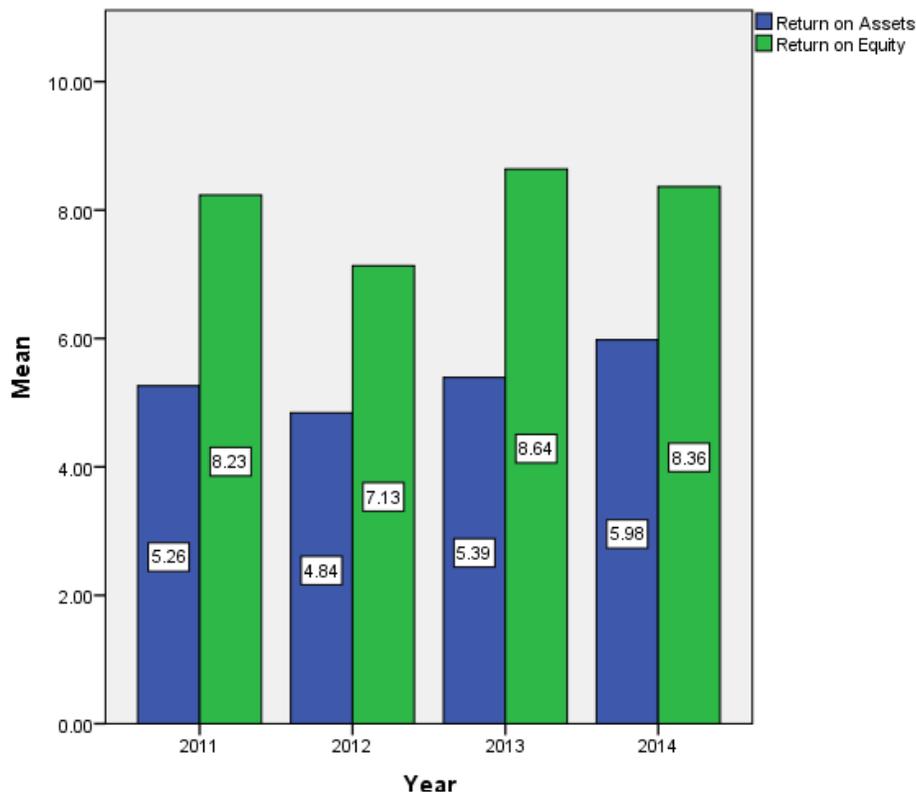


Figure 2, produces a comparison between ROE and ROA as well as a comparison across the years. To start, the ROE of the selected companies were higher than the ROAs during all the years of the study. Taking ROA by itself, the highest average was achieved in 2014 with 5.96% while the lowest was in 2012 with 4.84%. The changes from year to year varied from a 9% decrease to 11% increase. This fact suggests that factors have contributed to these changes. Moving to ROE, the highest mean was scored in 2013 with 8.64% followed by 2014 (8.36%), 2011 (8.23%), and 2012 (7.13%). From 2011 to 2012, ROE decreased 13.4% however the following year, in 2013, it scored a 21.2% increase. These show that in 2012 a changing factor was introduced.

Figure 3: Distribution of Companies

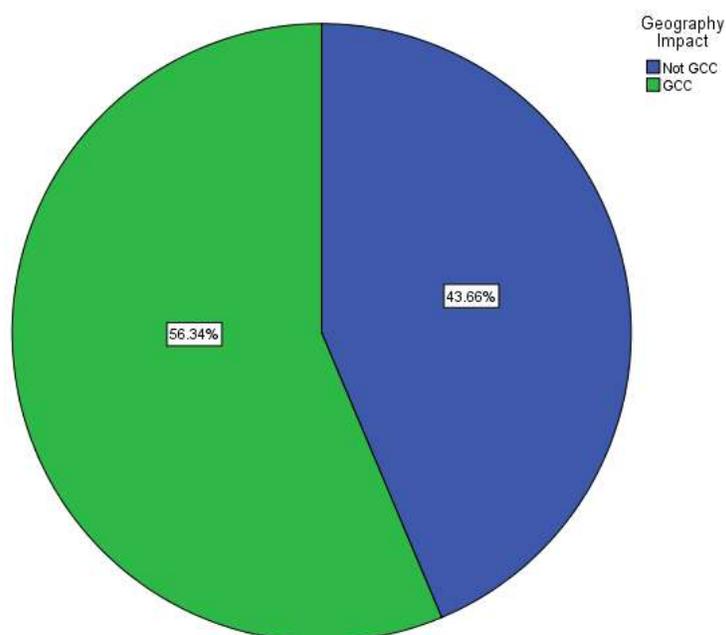


Figure 3, shows the portions of companies divided between GCC or Non GCC companies. As it is shown, 56.34% of the selected companies are GCC companies while 43.66% are non GCC. There is a difference of almost 13%. This number reflects the actual market showing that in the Arab World, GCC has more listed companies and existence in the market. These numbers are rather intriguing. Non GCC stock exchanges are older in operation and supposedly should have more companies listed. As for the GCC companies, the major changes in the stock exchanges have contributed to their strength and existence in other markets as well.

Table 2: Pearson Correlation Results

		Liquidity-Current Ratio	Leverage-Debt Ratio	Return on Assets	Return on Equity	Geography Impact
Liquidity-Current Ratio	Pearson Correlation	1	-.491**	.289**	.146*	.069
	Sig. (2-tailed)		.000	.000	.014	.246
	N	284	284	284	284	284
Leverage-Debt Ratio	Pearson Correlation	-.491**	1	-.303**	-.143*	-.080
	Sig. (2-tailed)	.000		.000	.016	.176
	N	284	284	284	284	284
Return on Assets	Pearson Correlation	.289**	-.303**	1	.889**	.212**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	284	284	284	284	284
Return on Equity	Pearson Correlation	.146*	-.143*	.889**	1	.178**
	Sig. (2-tailed)	.014	.016	.000		.003
	N	284	284	284	284	284
Geography Impact	Pearson Correlation	.069	-.080	.212**	.178**	1
	Sig. (2-tailed)	.246	.176	.000	.003	
	N	284	284	284	284	284

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The researchers ran two correlation matrices to identify the relationship among the variables generally, and between the dependent and independent variables more specifically.

The first correlation test is the Pearson Correlation which is widely used in research. It is clear from the table that liquidity and leverage are negatively correlated with a coefficient of -0.491. This relationship is significant at  $p=0.000 < 0.01$ . Liquidity and ROA have a significant positive correlation at  $p=0.000 < 0.01$  with a coefficient 0.289. As for liquidity and ROE, the relationship is positive (coefficient=0.146) at 5% significance ( $p=0.014$ ). As for leverage and ROA, the correlation is negative (-0.303) at 1% significant level ( $p=0.000$ ) and the correlation between leverage and ROE is also negative (-0.143) at 5% significance level ( $p=0.016$ ). ROA and ROE are positively (0.889) and significantly correlated at 1% significance ( $p=0.000$ ).

Pearson correlation is a parametric measure best used for normally distributed data.

Table 3: Spearman's Correlation Results

		Liquidity- Current Ratio	Leverage-Debt Ratio	Return on Assets	Return on Equity	Geography Impact
Liquidity-Current	Correlation Coefficient	1.000	-.578**	.308**	.164**	.094

Ratio	Sig. (2-tailed)	.	.000	.000	.006	.115
	N	284	284	284	284	284
Leverage-Debt Ratio	Correlation Coefficient	-.578**	1.000	-.335**	-.089	-.058
	Sig. (2-tailed)	.000	.	.000	.137	.330
	N	284	284	284	284	284
	Correlation Coefficient	.308**	-.335**	1.000	.926**	.302**
Return on Assets	Sig. (2-tailed)	.000	.000	.	.000	.000
	N	284	284	284	284	284
	Correlation Coefficient	.164**	-.089	.926**	1.000	.253**
	Sig. (2-tailed)	.006	.137	.000	.	.000
Return on Equity	N	284	284	284	284	284
	Correlation Coefficient	.094	-.058	.302**	.253**	1.000
Geography Impact	Sig. (2-tailed)	.115	.330	.000	.000	.
	N	284	284	284	284	284

\*\* . Correlation is significant at the 0.01 level (2-tailed).

As the normality test showed that most of the collected data is not normally distributed, it is recommended to rely on Spearman's rho Test for identifying the correlation among the variables as it is a non-parametric test. As such, the Spearman's rho test was conducted and results are in this table, liquidity and leverage are negatively correlated (-0.578) at 1% significance level ( $p=0.000$ ). This result was foreseen as a company with better liquidity position; the need to acquire external financing relatively diminishes. Moving to the relationship with ROA and ROE, the correlation is positive (0.308 and 0.164, respectively) and at 1% significance level. As for leverage and ROA, the correlation is negative (-0.335) at 1% significance ( $p=0.000$ ). ROA and ROE are almost perfectly positively correlated (0.926) at 1% significance. Finally, geography is positively correlated with ROA (0.302) and ROE (0.253).

To sum up, the final results of the hypotheses testing indicated the fact that some of the results agreed with the previous research work while others did not. Moreover, With respect to liquidity, the results agree with Zygmunt, Salem & Rehman, and Nazim Ullah that there is a positive impact on profitability. The researchers agree with the result as being in a better liquidity position might help the company build stronger relations with suppliers and short-term creditors and score better contacts with them.

As for Leverage factor, the result of this paper reaffirms what Al-Shamalieh and Khanafar claimed about the negative impact on profitability. The researchers consider the result logical and true. As the percentage of debt increases in a company, it will be forced to pay more

interest as such its profit will go down. Moreover, as it becomes riskier, it might miss out on some projects that eventually diminish its profits.

Finally, this research work's result about being a GCC country or not revealed a positive and significant impact. Based on the researchers' discretion and readings, this result was foreseen. The latest news and success stories from the GCC region as well as the GDP growth they recorded in the past decade were the cornerstone of the hypothesis which was proven by this work.

## **CONCLUSION**

After the completion of the research work, the researchers were left with a set of valuable information as well as some intriguing questions. This research work formulated 3 sets of hypotheses after a thorough revision of the previous literature work. The main factors being studied were liquidity, leverage, and concept of geographic location and their respective impact on the profitability of GCC and MENA listed companies.

The researchers relied on secondary quantitative data provided by the audited financial statements of seventy-one randomly selected companies based on stratified sampling. With a total number of 284 observations, the researcher was able to run random effects regression for the two models: ROA and ROE.

The results of the regression model came back significant with Debt Ratio having a negative significant impact on profitability. The Dummy Variable, being GCC or not, turned out to have a positive significant impact at  $p = 0.000$ . Hence, businesses in their everyday operations should keep an eye on leverage. Special teams should be assigned to study the optimum capital structure and come up with control measures to decrease waste and increase efficiency.

Here, the researchers were faced with an imperative question about that random, time variant characteristic specific for each company that impacts how the independent variables react.

## **RECOMMENDATIONS**

The following set of recommendations is addressed to the practitioners in the business field:

- Work on understanding how leverage impacts the companies' profitability. Companies should try to find the optimum capital structure that maximizes profit at the same time maximizes the market price per share.

- Work on utilizing the fixed assets more efficiently as huge investments are already spent.
- For GCC companies, try to benefit from the geography aspect.
- For non GCC companies, try to come up with strategies to enter the GCC markets.

## LIMITATIONS OF THE STUDY

The study relies on the financial statements provided and released by companies. The researchers are basing their study upon these numbers. The study is basically an analysis of the financial data extracted from the statements. A more accurate result would have been based on a survey or interviews with the selected companies to have an insight from within the company's management. Another limitation is the chosen period of the study: 2011 – 2014. This time frame is interesting as it witnessed a lot of changes in the region.

Furthermore, the companies are of different sectors which forced the researchers to calculate several ratios differently based on the sector. This fact created some inconsistencies in the research data with respect to the methods of preparing Financial Statements and the accounting principles adopted.

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