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Credit Risk in Asset Based Sukuk

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ABSTRACT

This paper aims to examine stock market with a capacity building perspective for economic growth, focusing on the factors that enhance stock market capitalization in the long term. This study evaluates cross country series data of 26 emerging countries listed at MSCI index, through a period of 2006 to 2019. The data were collected through World Bank, Pakistan Stock Exchange and SECP database. Vector Error correction model and Multiple Regression analysis were applied on data to analyze the impact of assorted factors on stock market capitalization to GDP as a measure of long term capacity.

The findings suggest that political stability and corporate tax rate are two important factors that may have significant impact on stock market capitalization to GDP. This research is different from all past researches with respect to methodological, aeon and acclimatization perspective. Capacity building is a relatively new phenomenon adopted from complex adaptive ecosystems and most studies in this area are of theoretical nature. Moreover, the fact that this research has considered not only the long term but also short-term market capitalization perspective, adds to its overall value and originality.

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1. Introduction

'The market simply goes to prove that we still have loco weeds
For the bull buys what he doesn't want, and the bear sells what he needs
I bought an elevator stock, and thought that I'd done well
Then the little bears all ran downstairs, and rang the basement bell'
(Frank Crumit-A tale of the ticker)

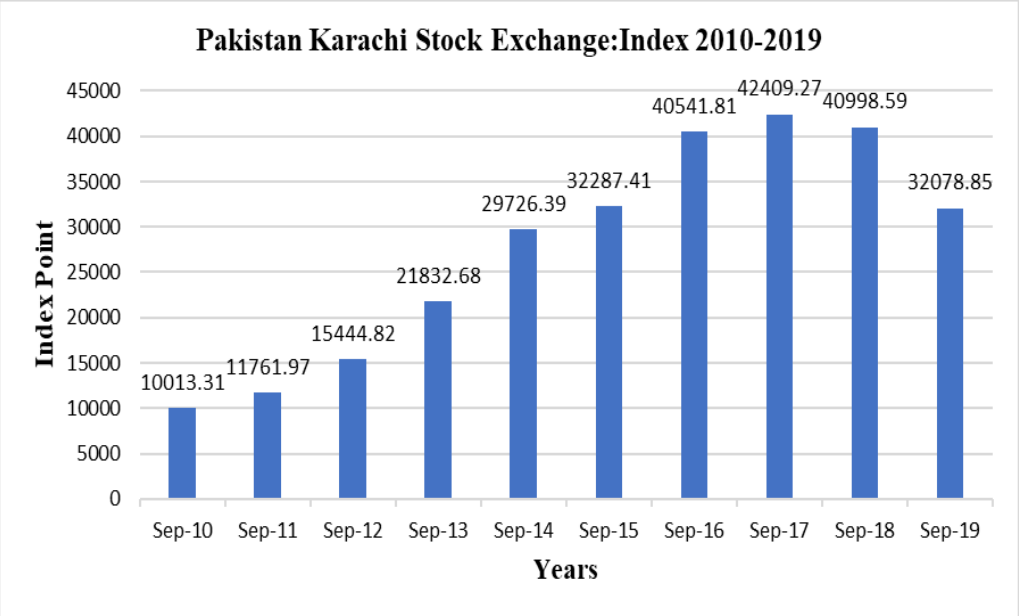
Stock markets are epitome of volatility as they perform the function of channeling the flow of funds from savers to investors. Large investment projects are made possible through pooling of individual

investments in a stock market. From a theoretical point of view, stock markets are postulated to promote long run economic growth through both consumption and investment channels (Iqbal, 2012). Life cycle/permanent income theory implies that higher asset prices increase individual's lifetime wealth resulting in higher consumption spending. This argument is valid if stock ownership by individuals is high. he Q-theory suggests a positive relation between investment and current and lagged stock prices. Thus, both the consumption- and investment-based theories imply that stock market has growth enhancing potential (Iqbal, 2012).

Othman Abbas (2016) assimilates that stock market liquidity and development of banking sector of a country provides the needed capital which assists in bringing investment within the market and improves the general condition of an economy. Financial market contributes tolerably in making this possible. This study tends to find out, whether stock exchanges of the countries affect the economic growth? Also, that, what are those critical variables of a stock market which contribute in enhancing the economic development of any country. Most of the studies of this field used a single stock market to concentrate and analyze the effects of stock market performance in the economy. Some of them also used aggregated stock markets of different countries and focus on other factors like size of the market and income level of the country. Many cross-country researches investigated the contribution of capital markets in building economy and agreed that well organized and effective financial investments are better tools to be used for economic development. Othman Abbas (2016) argued that with the rise within the popularity of worldwide stock markets, risk sharing is inspired by the market players which subsequently supports the resource allocation and improves economic growth.

Stock price index fell in 2008 due the recession in capital market of Pakistan. Stock market crashed in 2008 and stock price index reduced to 6000 points from 14000 points As past theories revealed the relationship between capital market and economy, therefore, by focusing on this field we would be able to diversify our risk and allocate our resources and investment efficiently.

FIGURE 1. 1 PAKISTAN KARACHI STOCK EXCHANGE INDEX



(https://www.ceicdata.com/en/pakistan/karachi-stock-exchange-index)

As per the world bank data, in 2010 the capitalization as per the GDP is 21.42. Afterward the percentage shows some downturn that is 15.25 in 2011. After it shows some growth as per previous year that is 19.46 in 2012. In 2013, capitalization as per the GDP shows some up growth as compare to 2010 that is 24.79. Similarly, in 2014 Market capitalization as percentage of GDP shows more growth as compare to previous years that is 30.07. Again 2015 is shows down turn that is 24.42. But after all the capitalization as per the GDP have maximum flow of growth in 2016 with the rest of all previous years from 2010-

2015 that is 32.97 as shown in the graph given below.

FIGURE 1. 2 STOCK MARKET CAPITALIZATION AS % OF GDP

(https://www.theglobaleconomy.com/Pakistan/Stock_market_capitalization/)

1.2 Objectives of the Study

To identify capacity building momentum of Pakistan through GDP to market capitalization ratio.
To compare capacity building momentum of Pakistan with other economies of the same stature.
To identify factors responsible for stock market capacity building in Pakistan.

To ascertain the impact of stock market capacity building on economic development.

1.3 Statement of the problem

Pakistan Stock Exchange (PSX) can increase in its market growth and investment portfolio, but as its registered points it decreases their points with the passage of time. PSX market growth and investment portfolio are not as per the emerging market. Their shown a decreasing trend in growth sectors. So, that all are not happen in PSX.

Extensive review of literature has identified about efficiently and a growth, but it will not discuss about capacity building with them. Without capacity building it can't explore such opportunity. As growth and efficiently concept is different, but before reach at that concept, it will need for capacity building to reach at that concept. Capacity building is a concept that mostly apply in ecology system but not in financial system. Financial system is also ecology system, because it all like units, hierarchy and move like that. One such theory adopted from ecology system it will increase in value. So, by using such measures it probably increases.

So, by using such capacity building concept we should need to explore all such opportunity of market growth and investment portfolio. Than can increase the growth of PSX in emerging market.

2.1 Review of Literature

In this light stock markets influence growth through several channels: liquidity, risk diversifications, acquisition of information about firms, corporate governance and savings mobilization (Othman, 2016). Levine (1997) also shows that stock markets help protect investors against idiosyncratic risk by providing firms with the opportunity to hold a diversified portfolio. The diversification of risk also promotes investment in higher return projects and generates higher overall output growth (Nazir, Nawaz, & Gilani 2010). Again, due to the availability of portfolio diversification, firms can specialize in production activities thus increasing firm efficiency (Delali 2007).

The theoretical understanding of the stock market reactions to fiscal policies has been set out in a series of papers (Foresti & Napolitano 2017). In these studies, fiscal policy affects the stock market thanks to its effects on the level of economic activity. Therefore, according to economic theory, these effects can be positive, negative, or null depending on the assumption on the effects of fiscal policies on the level of economic activity.

(Perveen and Rahman 2018) explored impact of monetary and fiscal policies on Tehran stock market for period 2006-2012. The impact of money supply and exchange rate as monetary policy tools and government expenditures as fiscal policy tool on stock market was empirically analyzed. Analysis show that money supply negatively impacts stock market index. Further, govt. expenditures have significant influence on stock market index and exchange rate negatively impact stock market index. (Foresti and Napolitano 2017)

(Perveen & Rahman (2018) investigated the impact of monetary and fiscal policy on Iran's stock market. GDP, oil revenues, CPI, government expenditure, money supply, and stock exchange index have been used. Data was employed from 1991 to 2010 and Impulse response and variance decomposition model were employed for analysis. Results indicate that monetary and fiscal policies positively affect stock market directly or indirectly.

(Perveen and Rahman 2018) empirically explored the impact of fiscal and monetary policy on US equity revenues both in long run and short run for duration of 1960 to 2010. Researcher measured fiscal policy by federal budget deficit, monetary policy by federal rate and stock returns by S&P 500 index. Results of analysis confirms long run co-integration of equity prices with fiscal deficit, interest rate and industrial production. Monetary base and inflation show no effect on stock return in long run.

MAO and WU (2007) investigate impact of macroeconomic factors on stock returns of EU countries based on data from 2000 to 2012. The association was explored between equity returns and fiscal and macroeconomic variables like government debt, government expenditures, CPI, money supply, interest rate, foreign exchange reserve and foreign direct investments. Empirical analysis found correlation between CPI, interest rate and equity market return for developed EU stock market. While, emerging markets prove to be more vulnerable to fiscal developments.

Generally, 1interest 1rate 1was 1defined 1by 1MAO and WU (2007) 1as 1prices. 1Interest 1is 1a 1price 1that 1payable 1for 1the 1money 1that 1borrowed 1in 1a 1time 1period 1and 1stated 1in 1percentage 1from 1overall 1outstanding 1balance 1left 1where 1is 1changeable 1or 1fixed. 1In 1the 1context 1of 1most 1common, 1interest 1is 1the 1amount 1of 1charge 1to 1the 1debtors 1within 1the 1time 1of 1using 1the 1credit 1provided 1(Hariz et al. 2017). 1Paramati and Nguyen (2019)1define 1interest 1rate 1as 1a 1credit 1cost 1in 1economy 1and 1for 1more 1specific 1is 1a 1charge 1for 1price 1per 1year 1from 1the 1creditor 1to 1borrowers 1which 1is 1get 1a 1loan.

1Hariz et al. (2017) considers 1that 1the 1relevant 1financial 1market 1will 1aggressively 1establish 1the 1nominal 1interest 1rate 1on 1deposits 1is 1positive 1in 1real 1terms 1(Clarke, 11982). 1The 1reason 1is 1that 1the 1depositor 1must 1incite 1to 1money 1held 1in 1connection 1with 1the 1assets

1and 1real 1assets 1grow 1at 1average 1rate 1of 1inflation 1(Hariz et al. 2017). 1

Number 1of 1theories 1has 1discussed 1the 1interest 1rates 1and 1its 1influence. 1Debt 1funds 1theory of interest rate has determinant views on the interest level in financial market as a result of factors that give the impact to the Debt funds supply and demand. This theory determined the interest rate is like determined the supply and demand of goods, Debt funds supply is increases as increases in interest, the all other factors is held constant (Hariz et al. 2017). According to Keynes (1965), he describes liquidity preference theory as the interest rate that mentions as money theory, employment theory or interest theory (Moyo and Le Roux 2018). According on Keynes (1965), money supply and demand had influenced the interest rate. Keynes mentions that through the effects on the scheduled investment spending that is the main way that will affect the rates of interest. (Shula, 2017)

Furthermore, Fisher (1930) states that the power of interest rate was influenced by the two factors such as source of savings were determined by the household or the source of investment demand and capital mostly from commercial industry. This theory deliberates the high interest rate will enhance the desirability to saving more rather than consumption expenditure that make it have the positive relationship among the interest rate and the size of savings.

Moreover, ample amount of studies has been conducted stating the significance of Interest rates. Some notable literatures amongst them are (Hariz et al. 2017) did a research on Financial Reforms, Interest Rate Behavior and Economic Growth in the financial sector of Nigeria. (Hariz et al. 2017) did a research on The Effect of Interest Rate Fluctuation on the Economic Growth of Nigeria using agricultural, manufacturing, financial, education and industrial sector. (Hariz et al. 2017) did a research on The Effect of Interest Rate on Economic Growth Rate. Daniel Musyoka Mutinda (2014) did a research on The Effect of Lending Interest Rate on Economic Growth of Kenya.

The result from (Hariz et al. 2017) concludes that interest rate had an insignificant effect on GDP and (Hariz et al. 2017) also has examined that there is significant negative correlation between interest rate and GDP.

Following hypothesis could be inferred from the review of pertinent literature:

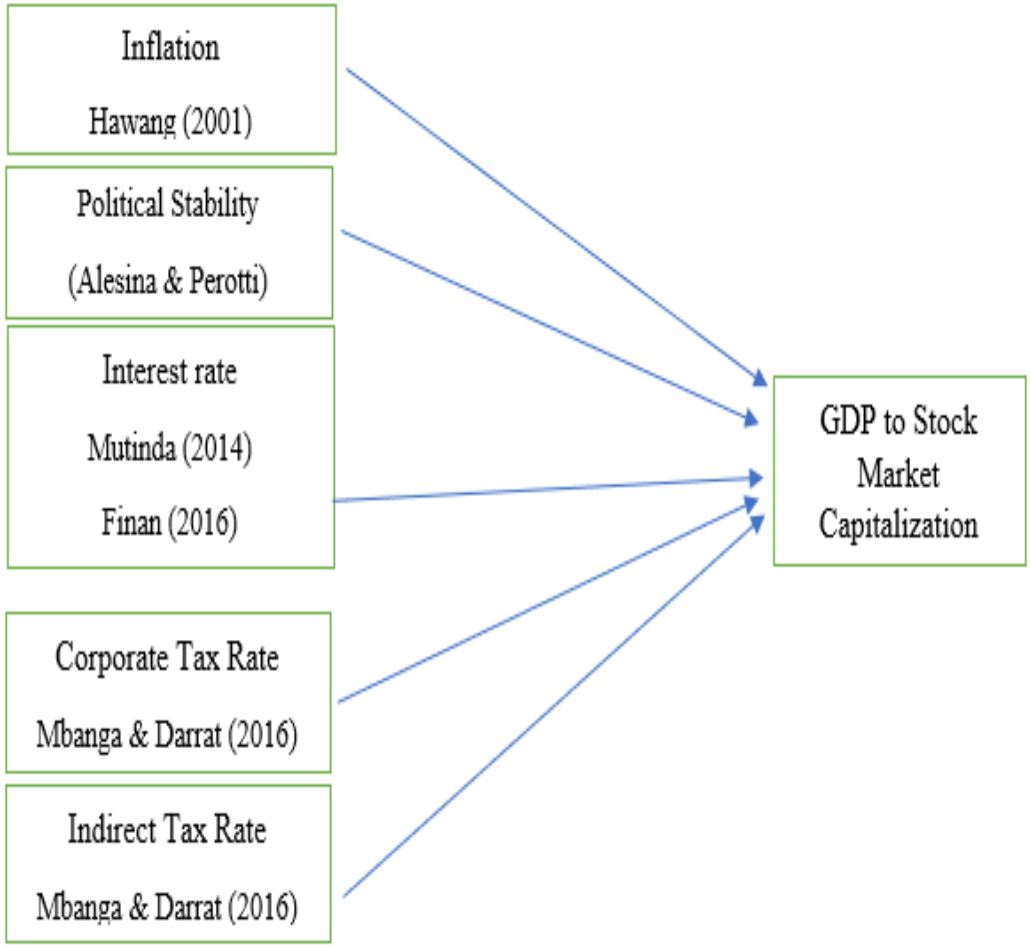
H1: Inflation (consumer price index) have significant impact on the GDP to stock market capitalization.
H2: Political Stability have significant impact on the GDP to stock market capitalization.
H3: Interest Rate have significant impact on the GDP to stock market capitalization.
H4: Corporate Tax Rate have significant impact on the GDP to stock market capitalization.
H5: Indirect Tax Rate have significant impact on the GDP to stock market capitalization.

TABLE 2. 1 TABLE OF VARIABLE DESCRIPTION

Variables	Description	Measurement	Source
Inflation (Shula 2017)	Inflation is a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increases over a period. It is the constant rise in the general level of prices where a unit of currency buys less than it did in prior periods. Often expressed as a percentage, inflation indicates a decrease in the purchasing power of a nation's currency.	Real Inflation, year to year, measure through consumer price index	World Bank Data base, Pakistan Stock Exchange SECP The Global Economy
Political stability (Perveen and Rahman 2018)	Political uncertainty (also called regime uncertainty) is a class of economic risk where the future path of government policy is uncertain, raising risk premia and leading businesses and individuals to delay spending and investment until this uncertainty has been resolved. Political uncertainty may refer to uncertainty about monetary or fiscal policy, the tax or regulatory regime, or uncertainty over electoral outcomes that will influence political leadership.	Political Stability Index (-2.5 weak, 2.5 strong)	World Bank Data base, Pakistan Stock Exchange SECP The Global Economy
Interest Rate/ Bond yield (Shula 2017; Moyo and Le Roux 2018)	An interest rate is the percentage of principal charged by the lender for the use of its money. The principal is the amount of money lent. As a result, banks pay you an interest rate on deposits. They are borrowing that money from you.	Yearly Interest Rate	World Bank Data base. Pakistan Stock Exchange. SECP The Global Economy
Fiscal Policy (Foresti and Napolitano	In economics and political science, fiscal policy is the use of government revenue collection (taxes or tax cuts) and Fiscal policy is based on the theories of the British economist John Maynard Keynes, whose Keynesian economics indicated that government changes in the levels of taxation and government spending influences aggregate demand and the level of	Dummy Variable 0 Loosening and 1 tightening.	World Bank Data base, Pakistan Stock Exchange SECP The Global Economy

2.2 Conceptual Framework

FIGURE 2. 1 FRAMEWORK



3.1 Method

The study sought to identify and describe the relationship between market capitalization and economic growth in Pakistan.

The study primarily relied on secondary data on market capitalization and economic growth over the period 2009 to 2019 annually. In 2012 Dorko while undertaking a similar research study also used secondary Data. The data was be sourced from World Bank data base, The Global Economy Security and Exchange Commission of Pakistan (SECP) and Pakistan Stock Exchange (PSX).

In this research Stock market capitalization to GDP (SMC) as a dependent variable and Political stability (PS), Real interest rate (RIR), Inflation consumer price index (CPI), Corporate tax rate (CTR) and Indirect tax rate (ITR) as an independent variable. Before implementing the model, all data are collected from World bank database, Pakistan Stock Exchange (PSE), Security and exchange commission of Pakistan and The Global Economy from 2009 to 2019 including twenty-six (26) emerging countries. The 26 emerging countries include Pakistan, China, India, Indonesia, Korea, Malaysia, Philippines, Taiwan, Thailand, Czech Republic, Egypt, Greece, Hungary, Poland, Qatar, Russia, Saudi Arabia, South Africa, Turkey, UAE, Argentina, Brazil, Chile, Colombia, Mexico, and Peru. For the results, the input of the data is used in three foam for analysis.

Firstly, all variables from 2009 to 2010 of all countries are used collectively to analysis the Vector Error Collection model (VECM), Secondly, for VECM there are three slab groups (0-40, 40-70, 70+), these groups are made by using the data of SMC from 2018 and 2019 of 26 emerging countries as a base for all

other variables because it is our target variable. The 26 emerging countries include Pakistan, China, India, Indonesia, Korea, Malaysia, Philippines, Taiwan, Thailand, Czech Republic, Egypt, Greece, Hungary, Poland, Qatar, Russia, Saudi Arabia, South Africa, Turkey, UAE, Argentina, Brazil, Chile, Colombia, Mexico, Peru. Now on the behalf of SMC as a base year the following slabs groups with countries are 0-40 group included Pakistan, Egypt, Greece, Hungary, Poland, Russia, Turkey, Argentina, Colombia and Mexico. 40-70 group included China, Indonesia, Saudi Arabia, UAE, Brazil and Peru. 70+ group included India, Korea, Malaysia, Philippines, Taiwan, Thailand, Qatar, South Africa and Chile, these all groups included data from 2009 to 2019 with variables SMC, PS, CPI, RIR, CTR and ITR.

Thirdly, for the Vector Autoregression model (VAR) and VECM groups are design as mentioned in the above paragraph. The change is taking complete values instead of averages. The excel sheet which is import in the EViews for analysis used as a group data and sheets not include the years and countries only values of variables are included. This analysis is run in three steps on the bases of group slabs (Soydemir 2000).

Vector autoregression (VAR) models introduced by the macro econometrician Christopher Sims (1980) to model the joint dynamics and causal relations among a gaggle of macroeconomic variables. VAR models are useful for forecasting. Consider a univariate autoregressive model— for instance, an AR (1) $Yt = \alpha + \beta Y\ t–1+ Єt$ —which describes the dynamics of only one variate Y t (i.e., national income) as a linear process of its own past. (Soydemir 2000)

A vector error correction (VECM) model may be a restricted VAR designed to be used with nonstationary series that are known to be cointegrated. You may test for cointegration using an estimated VAR object, Equation object estimated using nonstationary regression methods, or employing a Group object. The VEC has cointegration relations constructed into the specification in order that it restricts the long-run behavior of the endogenous variables to converge to their cointegrating relationships while allowing short-run adjustment dynamics (Saeed 2017).

4.1 Results and discussion

This chapter also included the different techniques like Vector autoregression, Vector error correction model, and descriptive statistics for the analysis of our variable data. It includes the impact of Political stability, Inflation, Real interest rate, Corporate tax rate and Indirect tax rate on the Stock market capitalization to GDP during 2009-2019 of twenty-sex emerging countries, and analysis of pakistan It also included the interpretation of the results of outputs.

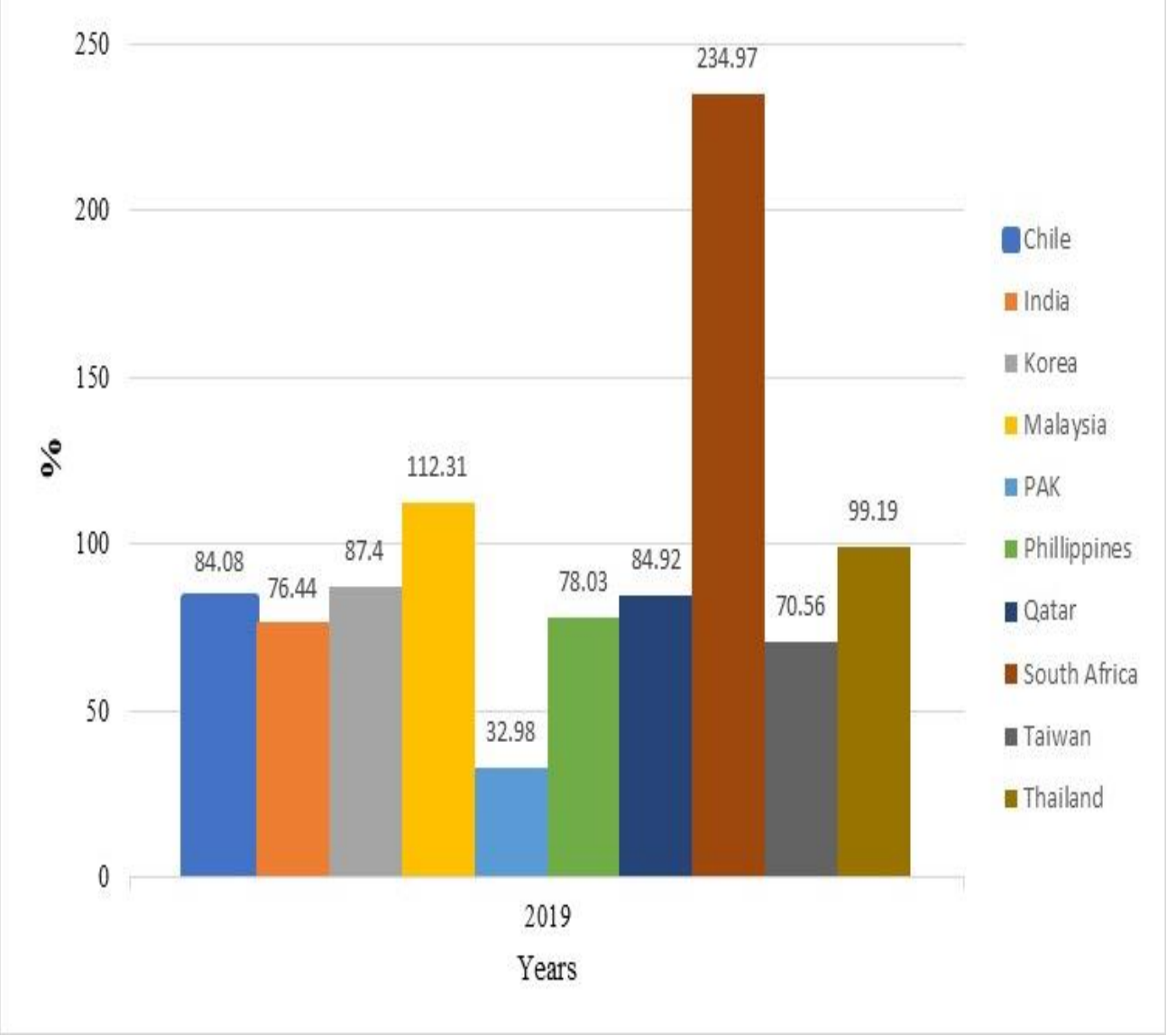
The use of the stock market capitalization-to-GDP ratio increased in prominence after Warren Buffett once commented that it was "probably the best single measure of where valuations stand at any given moment." It is a measure of the total value of all publicly traded stocks in a market divided by that economy's gross domestic product (GDP). The ratio compares the value of all stocks at an aggregate level to the value of the country's total output. The result of this calculation is the percentage of GDP that represents stock market value.

Typically, a result that is greater than 100% is said to show that the market is overvalued, while a value of around 50%, which is near the historical average for the U.S. market, is said to show undervaluation. If the valuation ratio falls between 50 and 75%, the market can be said to be modestly undervalued. Also, the market may be fair valued if the ratio falls between 75 and 90%.

FIGURE 4. 1 STOCK MARKET CAPITALIZATION TO GDP PAKISTAN

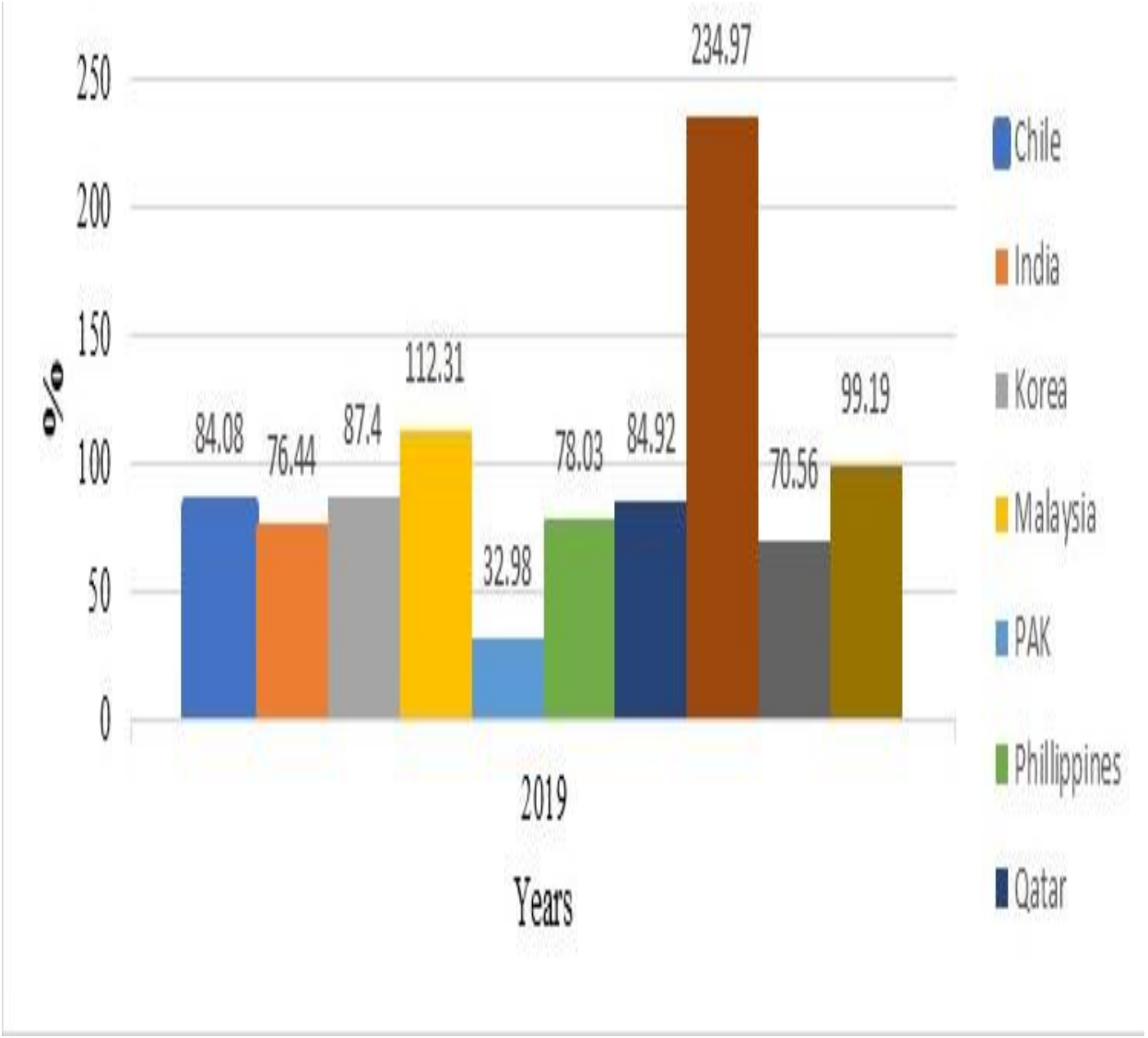
Typically, a result that is greater than 100% is said to show that the market is overvalued, while a value of around 50%, which is near the historical average for the U.S. market, is said to show undervaluation. If the valuation ratio falls between 50 and 75%, the market can be said to be modestly undervalued. Also, the market may be fair valued if the ratio falls between 75 and 90%.

FIGURE 4. 2 STOCK MARKET CAPITALIZATION TO GDP (0-40 GROUP)



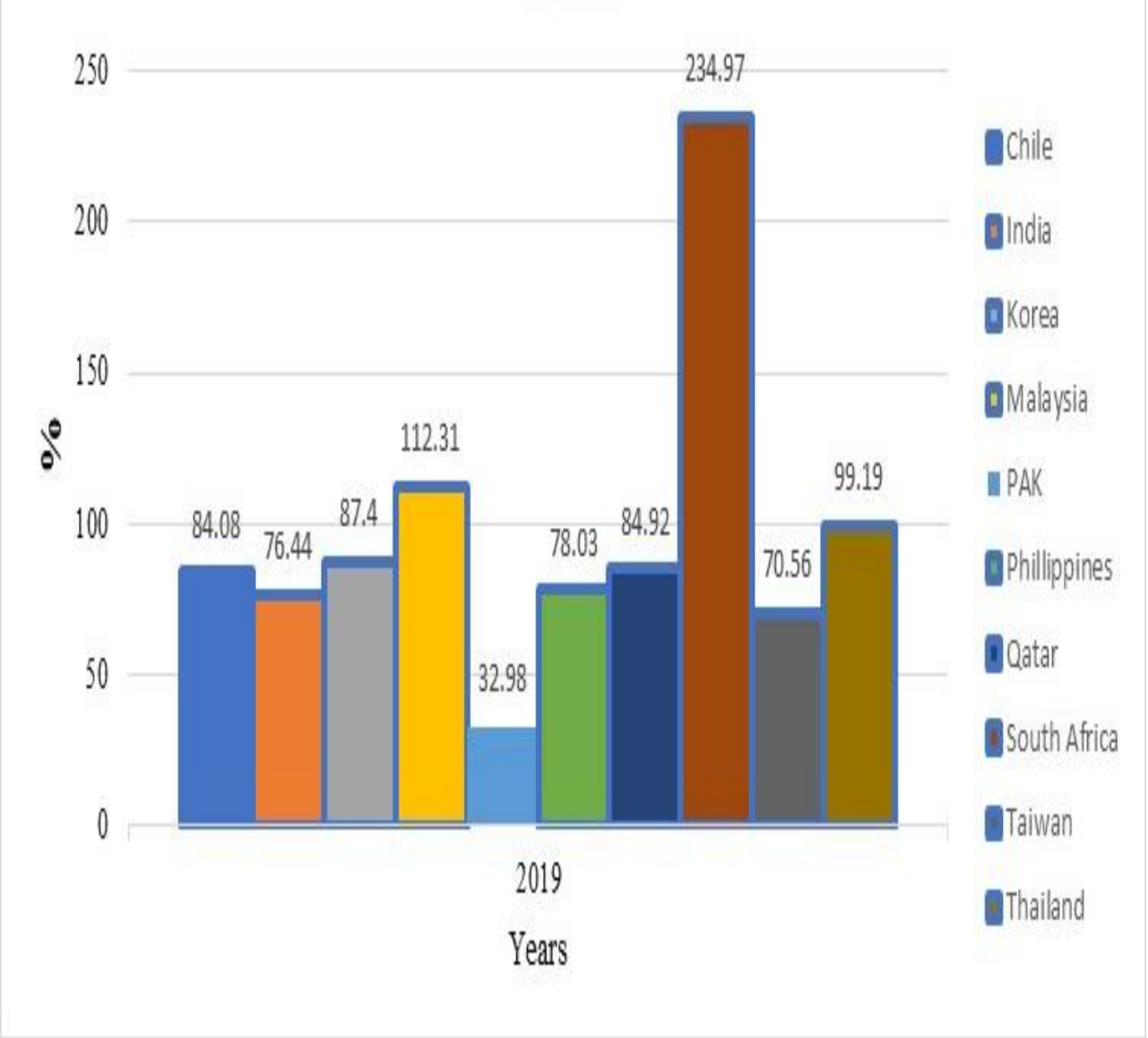
The average for 2019 of all 0-40 emerging countries group is 23.93 percent. The highest value is in Pakistan 32.98 percent and the lowest value is in Argentina 8.87 percent as shown in the above chart:2, of 0-40 emerging countries group. In the above chart 2, there are those countries whose SMC is below 40%, and all are undervalued countries. Typically, a result that is greater than 100% is said to show that the market is overvalued and is an indicator of well-developed stock market, while a value of around 50% and below is undervaluation and that indicate the underdeveloped of stock market, so for that all countries in the above chart 2 are underfeeding.

FIGURE 4. 3: STOCK MARKET CAPITALIZATION TO GDP 40-70 GROUP



The average for 2019 of all 40-70 emerging countries group is 48.22 percent. The highest value is in Saudi Arabia 63.44 percent and the lowest value is in Pakistan 32.98 percent as shown in the above chart of 40-70 emerging countries group. There are those countries whose SMC is above 40%, and all are undervalued countries as they all round about 50%. Typically, a result that is greater than 100% is said to show that the market is overvalued and is an indicator of well-developed stock market, while a value of around 50% and below is undervaluation and that indicate the underdeveloped of stock market. If the valuation ratio falls between 50 and 75%, the market can be said to be modestly undervalued, so for that all countries in the above chart 3 Saudi Arabia and UAE are modestly undervalued.

FIGURE 4. 4: STOCK MARKET CAPITALIZATION TO GDP 70+ GROUP



The average for 2019 of all 70+ emerging countries group is 96.09 percent. The highest value is in South Africa 234.97 percent and the lowest value is in Pakistan 32.98 percent as shown in the above chart of 70+ emerging countries group. There are those countries whose SMC is above 70%, and all are fair valued countries as they all round about 70%. Typically, a result that is greater than 100% is said to show that the market is overvalued and is an indicator of well-developed stock market like South Africa and Malaysia in above chart 4, while a value of around 50% and below is undervaluation and that indicate the underdeveloped of stock market. If the valuation ratio falls between 50 and 75%, the market can be said to be modestly undervalued, so for that all countries in the above chart 4 Taiwan is a modestly undervalued. Also, the market may be fair valued if the ratio falls between 75 and 90% so, in the above chart 4, Chile, India, Korea, Philippines, Qatar and Thailand are fair valued countries.

TABLE 4. 1: DESCRIPTIVE STATISTIC OF PAK

Descriptive Statistic						
	SMC_PAK	PS_PAK	CPI_PAK	RIR_PAK	CTR_PAK	ITR_PAK
Mean	26.024	(2.546)	7.435	3.646	33.182	16.636
Median	24.790	(2.480)	7.200	4.693	34.000	17.000
Maximum	32.980	(2.400)	13.600	8.321	35.000	17.000
Minimum	15.250	(2.810)	2.500	(5.079)	30.000	16.000
Std. Dev.	6.662	0.142	3.917	4.420	2.089	0.505
Skewness	(0.206)	(0.484)	0.326	(1.196)	(0.528)	(0.567)
Kurtosis	1.556	1.923	1.636	3.076	1.645	1.321
Jarque-Bera	1.033	0.960	1.048	2.627	1.353	1.881
Probability	0.597	0.619	0.592	0.269	0.508	0.390

The mean or average value of the SMC (DV) of Pakistan is 26.024, and as per this description the value of SMC_PAK lies between 15.250 to 32.980 as shown in the table 1. The average distance of SMC_PAK between a single observation and the mean is 6.662 in emerging countries. Similarly, the description of other variables is shown in the table 1.

4.3.1 Vector Error Correction Estimates (PAK)

In Vector error correction model (VECM) analysis included Stock market capitalization to GDP (SMC_PAK) as a dependent variable and Political stability (PS_PAK), Real interest rate (RIR_PAK), Inflation consumer price index (CPI_PAK), Corporate tax rate (CTR_PAK) and Indirect tax rate (ITR) as an independent variable.

TABLE 4. 2: VECTOR ERROR CORRECTION ESTIMATES PAK

Vector Error Correction Estimates			
Cointegrating Eq:	**CointEq1**		
SMC_PAK (-1)	1.000		
CTR_PAK (-1)	1.664 (0.030) [54.609]		
ITR_PAK (-1)	-3.455 (0.206) [-16.773]		
C	-23.736		
Error Correction	**D(SMC_PAK)**	**D(CTR_PAK)**	**D(ITR_PAK)**
CointEq1	-2.287 (0.407) [-5.625]	0.024 (0.070) [0.347]	0.012 (0.089) [0.138]
C	102.744 (26.603) [3.862]	-9.149 (4.586) [-1.99]	-2.049 (5.815) [-0.353]
PS_PAK	37.259 (9.724) [3.831]	-3.083 (1.676) [-1.839]	-0.776 (2.126) [-0.365]
CPI_PAK	-0.467 (0.219) [-2.133]	0.081 (0.038) [2.151]	0.009 (0.048) [0.179]
RIR_PAK	-0.804 (0.392) [-2.052]	0.061 (0.068) [0.901]	0.027025 (0.086) [0.316]
R-squared	0.912	0.787	0.050
Adj. R-squared	0.842	0.617	-0.709
F-statistic	12.969	4.628	0.066
Determinant resid covariance (dof adj.)		0.001	

The output obtained from the analysis is shown in above table 5. The vector error correction equation is as follows:

VECM: $\Delta Y = \beta_o + \sum_{i=1}^{n} \beta_i \, \Delta Y_{t-i} + \sum_{i=0}^{n} \delta_i \, \Delta X_{t-i} + \vartheta Z_{t-1} + \mu_i$ .....(4.2)

From results the cointegrating equation coefficient is -2.287 for the error correction term lag zero period and coefficient values of x for this lag are PS_PAK= 37.259, CPI_PAK=-0.467, RIR_PAK=-0.804 and the constant c is 102.744.

The cointegrating equation for the long run model is also shown as follows:

$Z_{t-1} = ECT_{t-1} = Y_{t-1} - \beta_0 - \beta_1 X_{t-1}$ ……... (4.3)

In the results the value of SMC_PAK (-1) =1.000, CTR_PAK (-1) =1.664 and ITR_PAK (-1) -3.454 for the lag period zero and constant (β_0) for the cointegrating equation is -23.736.

The R-squared is 91% for this lag period and Adj. R-squared is 84% that predicted a good value, this variance is obtaining by testing different combination of endogenous and exogenous variables.

4.3.2 Unrestricted Vector Autoregression (VAR 0-40)

TABLE 4. 3: UNRESTRICTED VECTOR AUTOREGRESSION (0-40)

Unrestricted Vector Autoregression (VAR 0-40)						
	SMC	**PS**	**CPI**	**RIR**	**CTR**	**ITR**
SMC (-1)	0.513972 (0.17170) [2.99335]	0.006734 (0.00468) [1.44015]	-0.121278 (0.10640) [-1.13980]	-0.140213 (0.07433) [-1.88644]	-0.051478 (0.04469) [-1.15178]	0.005081 (0.02171) [0.23409]
SMC (-2)	0.158221 (0.17053) [0.92784]	-0.006030 (0.00464) [-1.29860]	0.141848 (0.10567) [1.34233]	0.161768 (0.07382) [2.19148]	-0.025252 (0.04439) [-0.56891]	-0.020156 (0.02156) [-0.93502]
PS (-1)	4.704016 (6.83003) [0.68873]	0.400689 (0.18599) [2.15441]	-10.43934 (4.23249) [-2.46647]	-3.207232 (2.95657) [-1.08478]	4.067862 (1.77785) [2.28808]	-0.188740 (0.86340) [-0.21860]
PS (-2)	-3.292768 (6.60077) [-0.49885]	0.539324 (0.17974) [3.00054]	9.255757 (4.09042) [2.26279]	2.466244 (2.85733) [0.86313]	-3.294821 (1.71817) [-1.91763]	0.125415 (0.83442) [0.15030]
CPI (-1)	0.197090 (0.25363) [0.77709]	-0.006130 (0.00691) [-0.88763]	0.855878 (0.15717) [5.44559]	0.120640 (0.10979) [1.09883]	-0.101871 (0.06602) [-1.54306]	-0.034067 (0.03206) [-1.06256]
CPI (-2)	0.357377 (0.27047) [1.32131]	-0.019758 (0.00737) [-2.68271]	-0.450990 (0.16761) [-2.69073]	-0.019032 (0.11708) [-0.16255]	0.189191 (0.07040) [2.68722]	-0.022792 (0.03419) [-0.66662]
RIR (-1)	0.314125 (0.35397) [0.88743]	0.000259 (0.00964) [0.02682]	0.207820 (0.21935) [0.94743]	0.782232 (0.15323) [5.10507]	-0.042330 (0.09214) [-0.45942]	-0.000815 (0.04475) [-0.01821]
RIR (-2)	-0.038973 (0.32337) [-0.12052]	0.001786 (0.00881) [0.20282]	-0.197049 (0.20039) [-0.98334]	-0.146482 (0.13998) [-1.04645]	0.132544 (0.08417) [1.57467]	0.017199 (0.04088) [0.42074]
CTR (-1)	1.079929 (0.63695) [1.69548]	-0.029265 (0.01734) [-1.68732]	-0.285412 (0.39471) [-0.72310]	0.190101 (0.27572) [0.68947]	0.834730 (0.16580) [5.03467]	-0.069454 (0.08052) [-0.86259]
CTR (-2)	-0.770229	0.018543	0.290969	-0.136833	0.063860	0.001284

From the above output table, the SMC strongly influences ascensive by the t-statistics of 2.99 for lag interval 1.but for the lag interval 2 SMC is not influences ascensive. The PS for the lag interval 1 and 2 is

not predict or influence the SMC. CPI for the lag interval 1 not influence the SMC, but for the lag interval 2 influence the SMC with 1.321. RIR for the lag interval 1 and 2, is not influence the SMC. CTR for the lag interval 1 influence the SMC with 1.695, but no impact for the lag interval 2. ITR for the lag interval 2 influence the SMC with 1.495 and ITR for lag interval 2 have no impact. Similarly, the impact of SMC, PS, CPI, RIR, CTR and ITR impact for other equation is shown in the above output table. SMC have 51.40% and 15.82% increase in the SMC on average for the lag interval 1 and 2. CPI have 19.70% and 35.74% increase in the SMC on average for the lag interval 1 and 2. RIR have 31.41% increase in the SMC for the lag interval 1. PS and CTR have 470% and 107% increase in the SMC for the lag interval 1. Similarly, for all other equation the impact of IVs is shown in the above output table.

4.3.3 VECM (0-40)

In this VECM analysis the results obtain from analysis are:

TABLE 4. 4: VECTOR ERROR CORRECTION ESTIMATES (0-40 GROUP)

Vector Error Correction Estimates						
Cointegrating Eq:	**CointEq1**					
SMC (-1)	1.000					
	8.594					
	(3.543)					
PS (-1)	[2.425]					
	7.651					
	(0.403)					
CPI (-1)	[19.00]					
	(1.259)					
	(0.617)					
RIR (-1)	[-2.042]					
	3.233					
	(0.516)					
CTR (-1)	[6.268]					
	6.239					
	(1.048)					
ITR (-1)	[5.952]					
C	(266.381)					
Error Correction:	**D(SMC)**	**D(PS)**	**D(CPI)**	**D(RIR)**	**D(CTR)**	**D(ITR)**
	0.105	(0.005)	(0.098)	0.039	0.000	(0.014)
	(0.027)	(0.000)	(0.008)	(0.011)	(0.009)	(0.004)
CointEq1	[3.912]	[-10.47]	[-12.23]	[3.560]	[0.038]	[-3.873]
	(0.160)	0.005	(0.088)	(0.201)	(0.049)	0.020
	(0.158)	(0.003)	(0.047)	(0.064)	(0.052)	(0.021)
D(SMC (-1))	[-1.011]	[1.862]	[-1.879]	[-3.144]	[-0.938]	[0.927]
	(0.037)	(0.003)	0.021	(0.105)	(0.094)	(0.007)
	(0.187)	(0.003)	(0.056)	(0.075)	(0.062)	(0.025)
D (SMC (-2))	[-0.199]	[-0.835]	[0.385]	[-1.385]	[-1.524]	[-0.266]
	(3.460)	(0.391)	(2.395)	(2.283)	4.752	0.544
D (PS (-1))	(7.157)	(0.128)	(2.131)	(2.895)	(2.369)	(0.958)

	(4.645)	(0.231)	4.266	0.322	(4.006)	(0.646)
	(6.976)	(0.125)	(2.077)	(2.822)	(2.309)	(0.934)
D (PS (-2))	[-0.666]	[-1.852]	[2.053]	[0.114]	[-1.734]	[-0.691]
	0.169	0.005	0.062	(0.083)	(0.246)	(0.007)
	(0.366)	(0.007)	(0.109)	(0.148)	(0.121)	(0.049)
D (CPI (-1))	[0.461]	[0.754]	[0.564]	[-0.560]	[-2.027]	[-0.152]
	0.440	(0.002)	(0.207)	(0.113)	0.184	0.031
	(0.284)	(0.005)	(0.085)	(0.115)	(0.094)	(0.038)
D (CPI (-2))	[1.549]	[-0.375]	[-2.447]	[-0.981]	[1.961]	[0.825]
	(0.156)	(0.006)	0.176	(0.200)	(0.182)	(0.040)
	(0.353)	(0.006)	(0.105)	(0.143)	(0.117)	(0.047)
D (RIR (-1))	[-0.441]	[-0.922]	[1.671]	[-1.404]	[-1.557]	[-0.849]
	(0.056)	(0.003)	0.021	(0.105)	0.075	(0.013)
	(0.269)	(0.005)	(0.080)	(0.109)	(0.089)	(0.036)
D (RIR (-2))	[-0.208]	[-0.685]	[0.265]	[-0.967]	[0.840]	[-0.350]
	0.647	(0.000)	0.057	(0.046)	0.139	0.064
	(0.595)	(0.011)	(0.177)	(0.241)	(0.197)	(0.080)
D (CTR (-1))	[1.088]	[-0.038]	[0.323]	[-0.190]	[0.707]	[0.804]
	0.241	0.011	(0.049)	0.167	0.086	0.064
	(0.537)	(0.010)	(0.160)	(0.217)	(0.178)	(0.072)
D (CTR (-2))	[0.449]	[1.115]	[-0.308]	[0.771]	[0.486]	[0.891]
	(2.363)	0.054	(0.656)	(0.032)	(0.428)	(0.087)
	(1.570)	(0.028)	(0.467)	(0.635)	(0.520)	(0.210)
D (ITR (-1))	[-1.505]	[1.905]	[-1.403]	[-0.050]	[-0.824]	[-0.412]
	0.699	(0.020)	(0.035)	(0.430)	(0.264)	0.058
	(1.274)	(0.023)	(0.379)	(0.515)	(0.422)	(0.170)
D (ITR (-2))	[0.549]	[-0.873]	[-0.092]	[-0.835]	[-0.625]	[0.340]
	1.596	0.007	(1.270)	0.310	(0.297)	0.054
	(1.241)	(0.022)	(0.369)	(0.502)	(0.411)	(0.166)
C	[1.287]	[0.323]	[-3.438]	[0.618]	[-0.722]	[0.327]
R-squared	0.660	0.881	0.929	0.562	0.323	0.476
Adj. R-squared	0.523	0.833	0.900	0.384	0.048	0.263
F-statistic	4.788	18.258	32.063	3.160	1.176	2.236
Determinant resid covariance (dof adj.)		129.292				
Determinant resid covariance		14.653				
Standard errors in ( ) & t-statistics in [ ], SMC, PS, CPI, CTR and ITR taken as an Endogenous variable and constant c as an Exogenous variable using Lag interval 1 and 2 for endogenous.						

4.3.4 VECM.(40-70)

The output obtain from vector error correction model are given below:

TABLE 4. 5: VECTOR ERROR CORRECTION ESTIMATES (40-70 GROUP)

Vector Error Correction Estimates						
Cointegrating Eq:	**CointEq1**					
SMC(-1)	1.000					
	16.354					
	(9.135)					
PS(-1)	[1.790]					
	(4.777)					
	(1.697)					
CPI(-1)	[-2.815]					
	0.212					
	(0.471)					
RIR(-1)	[0.449]					
	2.082					
	(1.785)					
CTR(-1)	[1.166]					
	(2.340)					
	(0.705)					
ITR(-1)	[-3.316]					
C	(45.935)					
Error Correction:	**D(SMC)**	**D(PS)**	**D(CPI)**	**D(RIR)**	**D(CTR)**	**D(ITR)**
	(0.212)	(0.003)	0.023	(0.213)	(0.005)	0.050
	(0.168)	(0.003)	(0.040)	(0.119)	(0.035)	(0.047)
CointEq1	[-1.259]	[-1.105]	[0.573]	[-1.796]	[-0.134]	[1.049]
	(0.016)	(0.000)	(0.045)	0.083	(0.013)	(0.017)
	(0.207)	(0.004)	(0.049)	(0.145)	(0.042)	(0.058)
D(SMC(-1))	[-0.078]	[-0.093]	[-0.903]	[0.568]	[-0.295]	[-0.299]
	0.260	0.008	(0.050)	0.019	(0.033)	(0.019)
	(0.182)	(0.003)	(0.043)	(0.128)	(0.037)	(0.051)
D(SMC(-2))	[1.426]	[2.436]	[-1.153]	[0.1479]	[-0.882]	[-0.380]
	(9.928)	(0.167)	0.295	3.189	(0.088)	0.600
	(9.902)	(0.184)	(2.360)	(6.969)	(2.032)	(2.777)
D(PS(-1))	[-1.002]	[-0.910]	[0.125]	[0.458]	[-0.043]	[0.216]
	11.234	(0.030)	(1.885)	(3.234)	(0.939)	1.766
	(9.716)	(0.180)	(2.315)	(6.838)	(1.994)	(2.724)
D(PS(-2))	[1.156]	[-0.166]	[-0.814]	[-0.473]	[-0.471]	[0.648]
	(0.580)	(0.007)	(0.477)	(0.141)	(0.013)	0.019
	(1.070)	(0.020)	(0.255)	(0.753)	(0.220)	(0.300)
D(CPI(-1))	[-0.542]	[-0.348]	[-1.872]	[-0.187]	[-0.058]	[0.064]
	0.221	(0.001)	(0.417)	(0.257)	(0.047)	0.070
	(0.924)	(0.017)	(0.220)	(0.650)	(0.190)	(0.259)
D(CPI(-2))	[0.239]	[-0.075]	[-1.895]	[-0.395]	[-0.250]	[0.271]

4.3.5 VECM (70+ Group)

TABLE 4. 6: VECTOR ERROR CORRECTION ESTIMATES (70+ GROUP)

Vector Error Correction Estimates						
Cointegrating Eq:	**CointEq1**					
SMC(-1)	1.000					
	(283.566)					
	(800.632)					
PS(-1)	[-0.354]					
	(1,079.089)					
	(297.243)					
CPI(-1)	[-3.630]					
	990.900					
	(325.963)					
RIR(-1)	[3.039]					
	386.807					
	(150.922)					
CTR(-1)	[2.564]					
	56.962					
	(127.214)					
ITR(-1)	[0.448]					
C	(11,069.8)					
Error Correction:	**D(SMC)**	**D(PS)**	**D(CPI)**	**D(RIR)**	**D(CTR)**	**D(ITR)**
	0.001	7.87	0.000	(0.001)	(0.000)	-7.13
	(0.001)	(2.0)	(0.000)	(0.000)	(0.000)	(8.0)
CointEq1	[0.519]	[0.387]	[2.489]	[-4.874]	[-1.812]	[-0.089]
	(0.345)	0.000	(0.004)	(0.012)	(0.004)	0.002
	(0.121)	(0.002)	(0.011)	(0.010)	(0.010)	(0.007)
D(SMC(-1))	[-2.859]	[0.217]	[-0.349]	[-1.228]	[-0.351]	[0.250]
	(0.465)	0.002	(0.006)	(0.008)	(0.003)	0.006
	(0.141)	(0.002)	(0.013)	(0.012)	(0.012)	(0.009)
D(SMC(-2))	[-3.291]	[1.048]	[-0.479]	[-0.655]	[-0.292]	[0.681]
	(7.276)	(0.238)	(1.379)	2.085	1.198	0.167
	(11.787)	(0.183)	(1.059)	(0.975)	(0.990)	(0.719)
D(PS(-1))	[-0.617]	[-1.302]	[-1.302]	[2.138]	[1.211]	[0.232]
	15.209	(0.135)	(1.116)	1.557	(0.055)	(0.525)
	(11.736)	(0.182)	(1.055)	(0.971)	(0.986)	(0.716)
D(PS(-2))	[1.296]	[-0.741]	[-1.058]	[1.603]	[-0.056]	[-0.733]
	0.113	(0.006)	(0.357)	(0.417)	(0.058)	(0.132)
	(2.022)	(0.031)	(0.182)	(0.167)	(0.170)	(0.123)
D(CPI(-1))	[0.056]	[-0.182]	[-1.965]	[-2.491]	[-0.338]	[-1.072]
	1.059	(0.003)	(0.197)	(0.015)	(0.209)	(0.074)
	(1.750)	(0.027)	(0.157)	(0.145)	(0.147)	(0.107)
D(CPI(-2))	[0.605]	[-0.102]	[-1.253]	[-0.104]	[-1.423]	[-0.693]

The empirical investigation of this study by VECM model and VAR shows that there is a significant relation between the stock market capitalization to GDP ratio and the political stability, inflation, real interest rate, corporate tax rate and indirect tax rate.

This relation supported our literature. Now by this there is impact of DV on the stock market and economic growth. When there a significant between stock market capitalization to GDP and political stability there will be enhance of stable economic growth, when the stock market is stable from such impact than it will flourish the stock market capitalization by developing stable economy in such developing countries like Pakistan and the capacity for the stock should also enhance. Real interest rate also has a significant impact from investigation, so it also enhances the stock market capitalization, there the overvaluation of the capital which enhance the economic growth of the emerging countries because that also allow the investors and householders towards investment and savings but for all that there should be capacity for such capitalization in the equity market.

5.1 Conclusion 1and 1recommendations

From this study we conclude that the impact of Inflation, corporate tax rate and indirect tax rate significantly enhances the market capitalization of stock market. Stable corporate tax rate helps the corporation to expansion and enhance their capital assets in a short run or long run. It also increases the market capitalization which ultimately enhances the economic growth and helps to boost up the capacity of the stock market.

This research is helpful for the firms and investors who are the part of this economy. This study also has implications for the policy makers and financial advisors, who are liable to make better and more efficient policies. The results of this study will be helpful for them to enhance the economic growth by investing in the stock market.

This region shall be considered as the key area of research in the coming future for the economists and researchers of financial development and economic growth. As far as the industry is concerned with the capitalization growth can be considered as the direct indicator of economic growth.

This region is rich in resources, the only factor which is required is the stable environment for the investors and research and development. The government that can also play a vital role in increasing stock market capitalization by using different interventions like decreasing tax and interest rate.

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