Stock Market Performance and Its Impact on Economic Growth

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Stock Market Performance and Its Impact on

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Declaration

I iqra khatoon Registration No **01-321212-058** hereby declare that I have produced the work presented in this thesis, during the scheduled period of study. I also declare that I have not taken any material from any source except referred to wherever due that amount of plagiarism is within acceptable range. If a violation of HEC rules on research has occurred in this thesis, I shall be liable to punishable action under the plagiarism rules of the HEC.

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Certificate

It is certified that iqra khatoon, 01-321212-058 has carried out all the work related to this thesis under my supervision at the Department of business school, bahria university and the work fulfills the requirement for award of MBA degree.

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ABSTRACT

This research article is an attempt to explore the impact of stock market performance on economy of a country. Comparative analysis of various research studies has been undertaken to determine the variables or factors acting as baseline parameters. The adopted methodology was quantitative research conducted on six different countries (US,japan,china,Germany,Malaysia,Pakistan) for the period of time (2004 to 2020) 16 years. Analysis of results reveals that market capitalization is significant indicating a positive relation between stock market performance and economic growth. This research study confirms that well-functioning stock markets promote economic growth through faster capital accumulation as well as better resource allocation.

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DEDICATION

I dedicate this dissertation and my entire degree program to BAHRIA UNVERSITY ISLAMABAD CAMPUS:

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SECTION 1:

1.1: PROBLEM STATEMENT

It has been debated by many researchers that economy plays a major role in determining the stock prices naturally. Usually, there is an influential set having complex factors that control prices movement within the stock markets. With economy expansion, demand of financial institutions increases which leads to growth of services overall resulting in influencing performance of stock markets. It is therefore evident that stock markets are more prostrate to influence from country's economy policy. By selection of multiple companies' data (US,japan,china,Germany,Malaysia,Pakistan), an effort has been made to practically find a relation comprising a number of variables resulting in determination of impact of stock market performance on economic growth.

1.2: PROJECT OBJECTIVE

Objective of this research project is tree-fold:

➢ To empirically analyse economic growth as well as stock market performance
➢ To find a set of factors / variable effecting economic growth
➢ To evaluate a relation determining stock market performance impact on country's economic growth

1.3: INTRODUCTION

Global economics and corporate finance run as financial institution of a country and stock markets obviously play a vital role in these financial institutions. Effect of stock market performance on economic growth should therefore be determined so as to appraise its effect on economic growth of country. Stock market development is progressively becoming an imperative factor to impact upon economic growth. The significance of stock markets lies in their contributions. That is why industrialists, government advisors as well as central bank keep a close eye on stock market activities as it is momentous both for investors and industry. However, there exists an intimate relationship of financial markets development with economic growth. Financial markets are principally dominated by banks. Banks are usually engaged in three basic functions:

- Assist payment mechanism in economy
- Extend credit to borrowers
- Engage in maturity transformation

If government borrows from banks, borrowing of private sector is curtailed. If borrowing factor of government is low, banks implausibly lend money to private sector. This is because their calculation on capital adequacy and management of maturity risk requirements is better. Now an emerging question rises here that from

where can businesses get loans for funding their capital investment? From here, capital market comes into existence. It is worth mentioning that capital is created from savings. The word 'capital' includes equipment and infrastructure for production of goods and services, training and education for productive manpower, technology progression, as well as natural capital in from of land, agriculture, minerals etc. Savings by people increase the stock of loans in economy. Thus, the borrowers borrow loans from banks ultimately using the funds deposited by savers.

In economies having relatively small stock markets, capital growth is usually followed by banking systems share in the financial system. On the other hand, in economies with large stock markets,any additional development or advancement increases equity markets' share.It is also evident that equity ratio-initially decreases and it increases only with the development of stock market. Thus, stock market should fundamentally be developed more competitive for the betterment of a country's economic growth.In this study,we evaluated major contributory work on stock market effect on economy growth. This study serves as a theoretical and an empirical overview primarily focusing on financial stock market's impact on the economic growth of a country.

Specifically, this paper explores the role of stock market capitalization, total value of stock traded and stock turnover ratio on economic growth. In the conducted study, the regression analysis has been used to analyze effect of relationship between the variables being used. The rest of the paper has been categorized as follows: section two is review of literature work done on evaluating the impact of stock market performance on economic growth, section three describes adopted research methodology; section four is the elaboration of experimental results and discussion on the same while the last section is the conclusion.

SECTION 2:
LITERATURE REVIEW

Guglielmo, Peter, and Soliman (2004) examined the significant role of stock markets in promoting economic growth in the long-run. They did empirical analysis of seven countries by testing causality linkage between stock markets and economic growth. Hence, they found results of evidence having causality in only two countries out of their total selected countries. In their next test run, causality was found in five cases but measure of financial development resulted in stock market development.

Ross and Sara (2005) studied pragmatic relationship of stock market, banking, and economic growth. They found that stock market liquidity and banking development robustly correlated with economic growth, capital accumulation, and productivity growth. Their overall result was a strong and a positive relationship of financial development with economic growth. Results of which were attributed to the financial factors.

Muhammad, Nadeem and Liaquat (2008) explored relationship of stock market development and economic growth in Pakistan. They suggested an intimate relationship between the two. Their results robustly indicated stock markets an imperative helm of country's economic growth.

Wangstudied China's (2007)stock market to find impact of the stock market development on economic growth and resulted in a negative relationship between

them. Therefore, he concluded that in developing countries, stock market development rarely contributes economic growth.

Mian, Muhammad and Usman (2010) investigated the relationship of stock market development and economic growth. They took size and liquidity as independent variables along with FDI. Their results reported that stock markets development sustained better economic growth. Although the stock markets of Pakistan are developing but they are a feasible opportunity of better and maintainable economic growth in Pakistan.

Ake and Dehuan (2010) suggested the stock market growth long-run relationship with economic growth after their declaring their study results and also revealed that the stock market liquidity helped to improve the future economy growth in Euronext countries.

Zahid, Ather and Anam (2011) studied the effects of stock market development in case of Pakistan and Bangladesh economic development. Their deduced results proved stock market development leaded to economic growth. However, market capitalization in Pakistan was found stronger as compared to Bangladesh's stock.

Sudharshan and Rakesh (2011) determined the causal link between stock market performance and economic growth. Findings of their study strongly proved economic growth impact on stock market performance.

Tobias and Danson (2011) concluded causality between stock market performance and economic growth factors. Their results justified principal role of stock markets in determining economic activities.

Alajekwu, Udoka, Achugbu and Austin (2012) studied the role of stock market development on economic growth. Their results showed a very strong relationship of stock market turnover ratio with economic growth.

Nomfundo (2013)empirically examined the impact of stock market development on economic growth in South Africa. He concluded that stock market development

is pivotal for economic growth. His overall study confirmed a weak link between stock market development and economic growth.

Ugochukwu and Eleanya (2014) empirically examined the relationship between stock market performance and economic growth in Nigeria and their results showed positive relationship of stock market variables with economic growth.

Boopen, Rojid, Vinesh and Binesh(2015) focused on 27 developing countries and examined banking sector development, stock market development, and economic growth in a unified framework. Their analysis proved stock market development an important ingredient of growth.

Ólan, Nilss,(2017) and Jonathan examined the relationship between stock returns and growth rate. Their results revealed positive and significant relationship and stock returns information useful in forecasting output.

Matadeen, Seetanah, Sookia and Gonpot(2017) empirically investigated the causal links between stock market development and economic growth in Mauritius. Their findings reinforced the link between stock market development and economic growth through policy recommendations.

Christoph and Marc (2014) scrutinized the role of capital markets in Europe. Their study provided evidence writ increased capital market size positive impact on economic growth. They also found that equity markets had prime importance for economic development. They argued that long term capital markets policy development ensured sustainable economic development.

Murtala, Suraya and Zunaidah (2015) did theoretical as well as the empirical literature review of the stock-market based financial development and economic growth in Nigeria.

SECTION 3:
3.1: RESEARCH DESIGN

3.1.1: Variable Selection

This research project is primarily focused on the stock market performance and its impact upon country's economic growth. The growth of a stock market can easily be measured by following three variables:

- Market Capitalization over GDP
- Turnover
- Value of Stock Traded

As stated above, these are usually prodigious in a developed economy, thus galvanizing strong economic growth.It is therefore following variables have been selected for this research project:

3.1.2: Dependent Variable: GDP per Ca-pita Growth (% annual)
3.1.3: Independent Variables: i) Market Capitalization ii) Total Stock Traded Value iii) Stock Turnover Ratio

3.2: Role of GDP per Capital Growth

GDP per capital is defined as gross domestic product by midyear population value. GDP can be narrated as the sum of gross values added by all producers in the economy including product taxes and excluding the subsidies (that were not included in products values).It is generally calculated without deducting depreciation values of assets or depletion and degradation of natural resources.

3.3: Role of Market Capitalization

Market capitalization (also known as market value) is referred as the share price times the number of outstanding shares.

3.4: Role of Total Stock Traded Value

Stocks traded are referred as total value of shares that were traded in a certain time period. This is the financial indicator that adorns market capitalization ratio by screening market size matching by trading.

3.5: Role of Stock Turnover Ratio

Turnover ratio is defined as total value of shares traded in a certain time period divided by average market capitalization. However, average market capitalization can be calculated by taking average of end-of-period values of current period and previous period.

3.6: Effects of Market Capitalization on GDP Growth

The economy obviously has a significant role in any society and therefore touches a multitude of sectors within a country. Common sources of economic growth are population, industry, the stock market, as well as politics. The market capitalization over GDP ratio relatively portrays stock market growth with GDP. It is conceptualized that market capitalization to GDP ratio and turnover to market capitalization ratio are usually higher in higher income countries. Therefore, higher income countries have more developed financial institutions, thus generally experiencing more growth.

SECTION 4:

4.1: RESEARCH METHODOLOGY

4.1.1: Project Audience

This study will be helpful for financiers , industrialists, stock market share holders as well as government officials directly interacting with stock markets and financial institutions. This will give them in-depth review so that their decision making related to investment could be quicker and simplified. This study will also be beneficial for inland firms and financial institutions as the review of this study will make management capable of taking strong company decisions at the level of capital structure, turnover ratio, and trading value. Despite, this research work will act as a platform study for many student fellows in conducting their research work in similar fields.

4.1.2: Target Industry

This study investigates and examines the determinants of financial performance of stock market. Therefore, the research is designed to use the quantitative research method and collecting the secondary data of stock market's financial information.

4.1.3: Population

The study population consisted of different countries for the period of 2004 to 2020. Data for only 6 different countries has been taken as the sample for deducting results of the study.

SECTION 5:

5.1: RESEARCH DESIGN

This research study mainly examines the impact of stock market performance on economic growth of the country. For this purpose, three parameters (i.e. market capitalization, total value of stock traded and stock turnover ratio) having significant play in stock market have been used in relation to a dependent variable (GDP per capital growth). The following interactive research model has been used for the analysis:
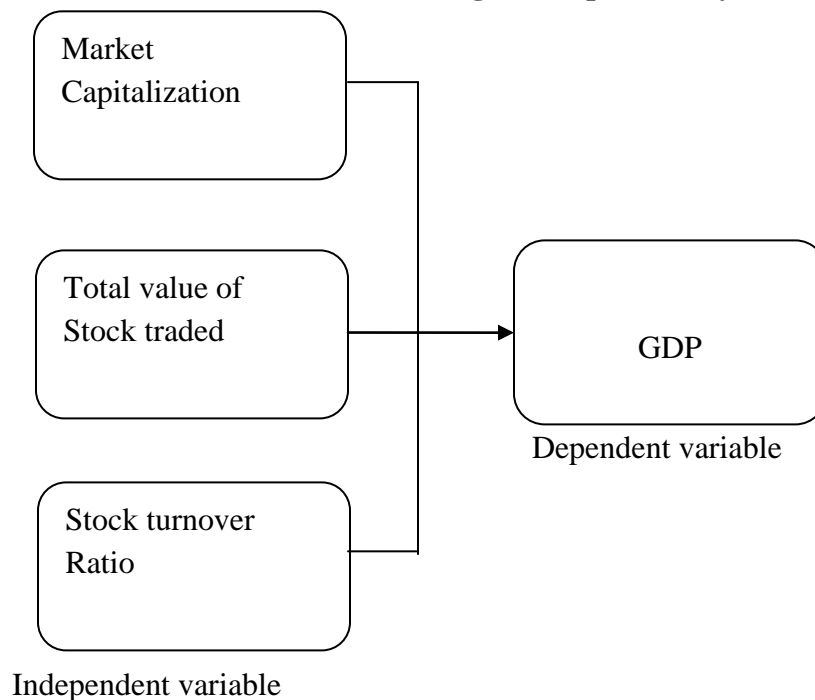
Fig 1: Adopted Study Model

Market Capitalization

Total value of Stock traded

GDP

Dependent variable

Stock turnover Ratio

Independent variable

Table 1: Descriptive Statistics

Data Analysis and Result

PARTICULARS	GDP	MC	TV	TR
MEAN	3.237	19.930	13.405	57.263
MEDIAN	3.054	14.830	2.595	20.151
MAXIMUM	10.785	146.855	128.760	497.402
MINIMUM	-7.757	0.868	0.009	1.016
STD. DEV.	2.515	19.967	24.608	90.283
SKEWNESS	-0.203	2.938	2.431	2.748
KURTOSIS	5.327	15.476	8.556	11.005

5.1.1: Data Analysis and Result

Descriptive Statistics

Descriptive statistics has been used for describing the data collected from historical record or from survey etc. It includes mean, median, maximum value, minimum value and distribution of sample. The sample statistics has been measured by newness and kurtosis. In table 1 above, descriptive statistics has been reported for 6 countries like (US,japan,china,Germany,Malaysia,Pakistan) for period of 16 years from 2004 to 2020. The mean and median values are within the maximum

and minimum values so this series shows a high level of consistency. Due to very small deviation of actual data from the mean value most of the series of the data indicate low standard deviation.

The result of this descriptive study shows that the data has not normal deviation. Moreover, the kurtosis is high in case of all variables (market capitalization, total value of stock traded and turnover ratio) showing less deviation in data calculation to standard deviation.

The mean and median has also less deviation. The result shows that data has lesser differences between mean and median. The GDP has negative skewness whereas other variables have positive kurtosis.

The information about symmetry of probability distribution and also thickness of the tails is provided by the skewness and from kurtosis. From table 1, it has been observed that there is positively skewed series and positively skewed series has long right tail. Kurtosis measured the weakness and flatness of the distribution. In table 1, it has been shown that there is narcoleptic series. In this study, three independent variables i.e. market capitalization, turnover ratio, and total trading values have been used. From table 1, it has been learn that market capitalization value on average is 19.930%, turnover ratio is 57.263% and total trading value is 13.405%. In this study, there is only one dependent variable – the GDP. From table 1, it has also been deduced that GDP on average is 3.237% and have a minimum value of -7.757% and some countries have a GDP of maximum 10.785%.

Table 2: Correlation Matrix

PARTICULARS	MC	GDP	TV	TR
MARKET CAPITALIZATION	1			
GDP	0.3434	1		
STOCKS TRADE TOTAL VALUE	0.6399	0.2258	1	
TURNOVER RATIO	0.1778	0.0224	0.7473	1

5.1.2: Correlation Matrix

Correlation matrix of independent variable has been used to examine the association between the variables. The result of table 2 shows that market capitalization is positively correlated with GDP, turnover ratio, and stock trading value. It means that when market capitalization increase stock trading volume and turnover ratio increase which ultimately has a positive impact on GDP and as a result GDP also increases.

Correlation matrix shows the correlation among the variable, the correlation between GDP and market capitalization is low. However, the chances of multi-co-linearity among the trade value and turnover ratio is high which is correlated to

stock trade value and market capitalization. The stock trade value and market capitalization are also multi-col-linear based on market capitalization.

Table 3: Fixed Effect Model

Dependent Variable: GDP

VARIABLES	COEFFICIENT	STD. ERROR	T-STATISTIC	PROB
C	2.204	0.288	7.631	0.000
MARKET CAPITALIZATION	0.036	0.015	2.416	0.0170
STOCK TRADE VALUE	0.016	0.017	0.930	0.353
TURNOVER RATIO	0.0014	0.0030	0.475	0.6351

5.1.3: Fixed Effect Model

Fixed Effect Model shows that GDP has positive effect on market capitalization with significance. "C" is also significant showing that there are many other variables that affect GDP. R-Squared is 37% showing that 37% GDP dependent on this market base independent factor and it also shows the dependency among variables and Durban-Watson stat shows that there is no auto correlation among residual and independent variables.

R-SQUARED	0.377	DURBAN- WATSON STAT	1.603
ADJUSTED R-SQUARED	0.340		
PROB (F- STATISTIC)	0.000		

Table 4: Random Effect Model

VARIABLES	COEFFICIENT	STD. ERROR	T-STATISTIC	PROB
C	2.370	0.583	4.063	0.0001
MARKET CAPITALIZATION	0.032	0.015	2.055	0.041
STOCK TRADE VALUE	0.019	0.018	1.050	0.2951
TURNOVER RATIO	-0.0007	0.0045	-0.1812	0.8564

5.1.4: Random Effect Model

Random effect model shows that GDP has positive effect on market capitalization with significance. However, other variables are insignificant showing that market capitalization has negative effect on GDP. "C" is also significant showing that there are many other variables that affect GDP. R-Squared is 10.8% showing that 10.8% GDP dependent on this market base independent factor and it also shows the dependency among variables and Dubbin-Watson stat shows that there is no auto correlation among residual and independent variables.

R-SQUARED	0.108	DURBAN- WATSON STAT	1.547
ADJUSTED R-SQUARED	0.089		
PROB (F- STATISTIC)	0.0010		

Table 5: Housman Test

TEST SUMMARRY	Chi- Sq Statistic	Chi- Squid	PROB
CROSS SECTION RANDOM	2.080	3	0.555

5.1.5: Housman Test:

It has been concluded that random effect model has better results than fixed effect model.

SECTION 6:

CONCLUSION

The increasing importance of financial markets has reinforced the researchers to study the impact of stock market performance on economic growth. The present study is an attempt to investigate this relationship by taking GDP as independent variable. The impact of this variable has been tested on market capitalization, turnover, total stock traded as dependant variables of economic growth for the period of 1989 to 2012 using panel data methodology. The performance of stock markets is highly important in sustaining a better economic growth. However, size of the market, as measured by market capitalization, has a stronger influence on economic growth and it has been found to have stronger and positive influence. The same is evident from the results achieved showing positive signs of market capitalization. Analysis of the results also shows that other two dependent variables (i.e. turnover and total stock traded) have not positive relationship on GDP.

SECTION 7:
SUGGESTIONS AND LIMITATIONS

As a result, there are some implications proposed to the financial regulators and economic specialists of Pakistan by the present study. Although the stock markets of Pakistan are growing and developing during the last few years, this growth in the stock markets should, however, be accompanied with the industrial and manufacturing growth of the country. There exists a strong need for implementing the efficient monitory regulations that could contribute to the transparency and effectiveness of stock markets. Furthermore, the integration of three domestic stock exchanges (that is, Karachi, Lahore and Islamabad) might prove to be a viable option for economic development and sustainable growth in Pakistan.

Finally, there are some limitations in the present study. The study used the annual data of the stock market capitalization, turnover and total stock traded market for the purpose of the analysis. However, the results could be more refined if the shorter intervals of the data could be used and some scientific and modern measures of data analysis, which could not be possible due to limitation of available resources and data could be applied.

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