Impact of Foreign Direct Investment, Inflation, and The Interest Rate on the Stock Market of Pakistan

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Abstract

This study aims to conduct an empirical examination of the influence of foreign direct investment, inflation, and interest rates on the stock market performance while exploring their interconnections. The objective is to determine whether these factors are correlated. Additionally, the research seeks to analyze the impact of foreign direct investment, inflation, and interest rates in the evolving political landscape of Pakistan's stock markets. The study utilizes the State regression method, employing annual time-series data spanning from 2000 to 2020 for Pakistan, to ascertain empirical relationships among the variables. The results reveal a positive correlation between foreign direct investment and stock market performance. Conversely, the inflation rate and interest rate exhibit insignificant relationships with stock market performance. These findings can serve as valuable insights for government policymakers, aiding in the formulation of strategies to attract foreign investors and establish a secure and lawful business environment. Furthermore, the research suggests the implementation of monetary policies to mitigate inflation and interest rates. The focus of this endeavour is exclusively on the development of the stock market in Pakistan, emphasizing the role of foreign direct investment and other variables. The study highlights a pronounced correlation between FDI and stock market performance.

Keywords: ***Stock Market KSE, Foreign Direct Investment, Inflation, Interest rate***

JEL Classification: F21, E31, E43, G10, O16

INTRODUCTION

According to scholars, macroeconomic variables exert a significant influence on the stock market. Investors commonly consider these variables, such as foreign direct investment,

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inflation, and interest rates, as crucial factors directly impacting stock market performance. Numerous studies highlight the positive correlation between foreign direct investment and stock market performance. The stock market plays a vital role in a country's financial system, contributing to its overall development and growth. Researchers emphasize the stock market's importance as a reliable predictor of business trends and its role in managing a nation's economy. The development of the stock market is integral to fostering economic improvement within a country, serving as a measure of its financial strength (Kausar et al., 2022).

The financial exchange is a key indicator of a nation's economic health, and its advancement is essential for the economic development of a country. In this context, the stock market serves as a fundamental and necessary component. For instance, in the case of the Islamic Republic of Pakistan, a nation with a gross domestic product per capita of $2400 and a population of 186 million, the development of the stock market holds particular significance in contributing to economic progress (Bank, WORLD BANK GROUP, 2020). Foreign direct investment provides multiple benefits for instance; technology, managerial skills, human capital, development of infrastructure, employment ratio of the hosted nation will rise even multiple, reduction in poverty, exports will increase, energy sector boost up, human capital will rise, and precipitate income will increase (Farid et al., 2023).

According to previous researchers, foreign direct investment is considered positive and negative for the host nation because a nation that wants to invest money through cross-border investment is also looking for long-term benefits. Their long-term benefit can create hurdles for the hosted nation in terms of disturbance in domestic markets and its production, effect on the cost of capital, domestic stock market (Raza et al., 2012).

Inflation and the stock market have consistently negative and inverse relationship with each other, whenever inflation comes to any nation it creates negativity towards the stock market of that nation and customers, low inflation always provides clarity of investors (Bui & Nguyen, 2023). When the prices level of goods and services of any nation rises therefore consumer buying power will decline, people cannot afford to buy, even if they can invest their money in the markets or portfolio because they do not have more to save and invest in the stock market (Khan, 2023).

The third independent variable of research is the interest rate. Interest is a rate different financial groups offer on deposit and investment foundations. According to a businessman, the interest rate has a negative impact on the stock market performance; most of the time, investors and researchers mentioned in their articles and research papers are opposed to each other. When the interest rate goes up, then, it creates a negative impact on the stock market. Whenever interest rates increase, then people are conscious of Investing in fixed deposit returns rather than making an investment in the stock market (Cristian et al., 2019)

PROBLEM STATEMENT

The primary focus of the discussion revolves around whether Foreign Direct Investment (FDI) positively impacts the stock market's development. An inherent relationship exists between FDI and Stock Market Development (SMD), showing an inverse correlation. Previous research findings indicate that FDI can negatively and positively affect the host nation, its economy, and the stock market. This research aims to delve deeper into the connection between foreign direct investment and stock market development. The aim is to scrutinize how FDI can generate both positive and adverse impacts on the development of the stock market. Earlier research has demonstrated that the influence of FDI on stock markets in developing economies is substantial and indispensable. It is observed that this impact is rooted in a working triangular causal relationship between FDI and stock market development.

RESEARCH GAP

As per the foundational paper, the investigator incorporated variables such as CPEC, Economic Growth, and the impact of FDI on the Stock Market, specifically focusing on the case of India. The study utilized quarterly time-series data spanning from 2000 to 2016. Additionally, the researcher proposed the inclusion of two more variables, namely Inflation and Interest Rate, in subsequent studies.

Building upon these recommendations, the researcher suggests conducting a follow-up study on the same topic, incorporating the newly proposed variables. This subsequent investigation would utilize secondary data sources and extend the time series data from 2000 to 2019 (Raza et al., 2012).

OBJECTIVES OF STUDY

The prime purpose of this research study to know that:

How do foreign direct investment, Inflation rate, and Interest rate impact Stock market performance?

However (Al-Delawi et al., 2023) define that foreign direct investment has an inverse relationship with the stock market; it creates a bad influence on local production through adopting or launching qualitative products in the market and creates competition for local investors or domestic brands. Foreign direct investment is also considered as debt for the hosted nation, which can anyhow bear to the hosted nation to the invested nation, so it is also a side back to the cross-border nations. Similarly, the interest rate has an inverse relationship with the stock market; both are co-related; if somehow one variable changes, it directly affects another variable.

RESEARCH QUESTION

This research study is conducted to investigate the following specific research questions:

Q 1. What is the effect of foreign direct investment on the stock market capitalization of the KSE-100 index of Pakistan?

Q 2. How does inflation create an influence on stock market capitalization?

Q 3. How do interest rates influence stock market capitalization performance?

SIGNIFICANCE OF STUDY

These are macroeconomics variables namely. Foreign Direct Investment, Inflation, and interest rates directly affect the stock market performance. According to the researchers if the stock market is strong that reacts to the interest rate and inflation variables (Bernal-Ponce et al., 2020) It is the same if performance is strong and sound in the stock market, so there will be higher chances of foreign investment in stock and country. The main benefits of this study are to an investor and businessmen because this paper will provide information about Foreign direct investment, inflation, and interest rates, which affect the stock market and will help in their decision-making.

LIMITATION OF THE STUDY

This paper relies on secondary data sources, and a notable limitation is the absence of data from the previous year. From a temporal standpoint, the constraint arises due to a tight schedule for report writing, limiting the extent to which a comprehensive report can be developed. Despite these challenges, efforts have been made to present the information in the most accurate and detailed manner possible.

Contributions

The major contribution of the research is to highlight and evaluate the actual impact of two variables, the foreign direct investment and the stock market, and other variables such as inflation and interest rate are supporting variables in this research; the research gap is to find the actual relationship between foreign direct investments on the stock market. A recent study by (Tu, 2024) stated that foreign direct investment significantly increases the direction of domestic and foreign firms to invest in research and development; the impact on research and development for both domestic and foreign firms appears to be nominal. This inference shows that foreign direct investment cannot contribute significantly to the growth of business and, therefore, to the stock market. The study of and Sohrabian, 2008) provides certain indications that foreign direct investment can parallel to the stock market development. Previous research investigates whether foreign direct investment can create financial development in countries with corrupt dominates. They found some preliminary evidence that foreign direct investment may increase financial development in developing countries.

LITERATURE REVIEW

The stock market serves as a marketplace where investors and entrepreneurs buy and sell stocks. It holds a pivotal role in the free market economy, allowing companies to share ownership with investors. Many successful businesses have evolved from small startups, with entrepreneurs progressing to become prominent figures in the business world. This progression highlights the stock market's significance in facilitating businesses' growth and success. When all the terms of markets are not find and understood properly by the investor then it would create difficult to understand the overall marketplace (Ibrahim & Alagidede, 2018).

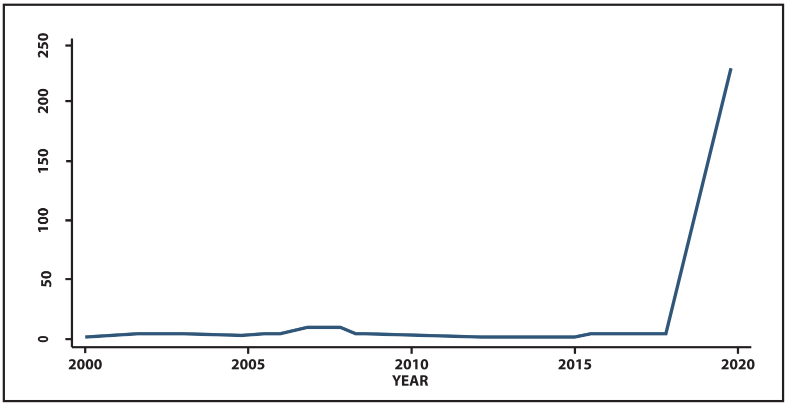
Two main variables of this research are interest rates and the stock market (Saymeh & Orabi, 2013).The connection between financing costs and stock costs: Empirical proof from created and creating nations. The motivation behind the examination is to look at loan fees and offer costs. Connections must recognize that interest rate changes clearly affect the market, so understanding this relationship is essential to limit showcase dangers and comprehend fiscal arrangements and financial approaches. It is anything but difficult to state that anybody is continually searching for a decent rate of return. Financial specialists and the securities exchange are discussed here. This exploration is configured to take a gander at how a financial specialist plays in the securities exchange and may confront these difficulties. We likewise do not limit investigations here. The venture is constantly dependent on returns and the financial exchange to which the stock has contributed. The term financial exchange is characterised as the acknowledgement of business sectors and trades where portions of usually held organizations are bought and sold. Along these lines, this implies the financial exchange is a huge market containing share exchanges (Abdul Bahri et al., 2019) numerous associations or associations are leading such exchanges. Stocks are exchanged at explicit rates and change each day. In this manner, the rate of profit likewise shifts depending on the financing cost change. A decent speculator consistently searches for a decent return rate to contribute. Shares in the financial exchange as well as bonds and different protections. It gives a protected domain to acquire a number of investors and purchasers.

The expertise looks at whether foreign direct investment can animate cash-related improvement in countries with degenerate dominants (Abdul Bahri et al., 2019). They found some groundwork confirmation that foreign direct investment may commence budgetary progression in making countries. Foreign direct investment cannot overcome the political situation; it found bidirectional causality between foreign direct investment and the stock market. The stock market is one of the most important instruments for growing their economy and GDP. Most of the researchers said that if the stock market performs in a good way, it will be better for the country's financial system. Another factor which is most important for the country is the interest rate which is the most important element for the country's growth. If the interest rate is high, that will create a negative influence on the stock market performance. Because banks give you a good profit on your investment without any risk. So, investors like this business because most of the investors cannot take a risk on their investment. So, in this way, the Interest rate is the most important element of the business. According to the history of Pakistan interest rate and the exchange rate have the most impact on the stock market performance (Albulescu et al., 2017). In the previous research findings, the exchange rate highly impacts inventory return with a 10% alpha result. If inflation rate, then contemporary inflation has an inverse relationship with stock market development. Inflation has an additionally fearsome relationship stock market, whilst popular expenses if correct will increase the buying energy of people will move lower while buying power goes down, corporate profit will decrease due to better entry price, in this case, company starts thinking for a future balance and hiring (Siraj, 2023). Individual investor gets confuse about how to spend money on the market even as facing inflation in the country (Albulescu et al., 2017).

CONCEPT AND DEFINITION

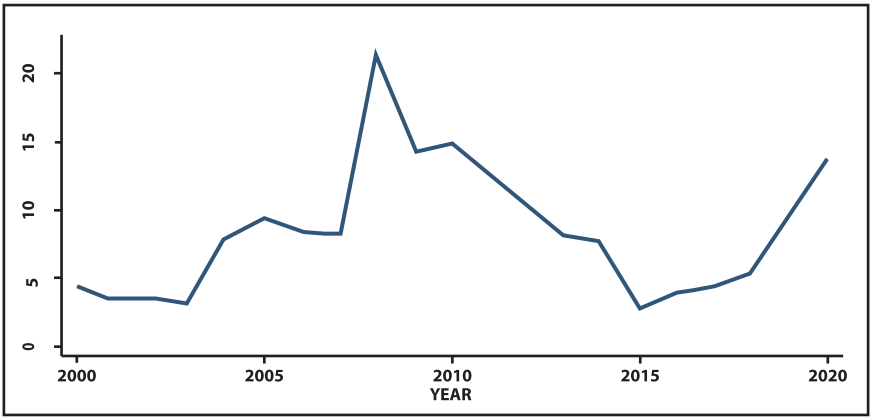
Foreign Direct Investment

The most important source of investment inflow in developing countries is Foreign Direct investment. Foreign Direct Investment is to boost growth, provide new technology and management skills, and create a new job in the host country. According to the history of successful countries, the reason for Foreign Direct Investment, because foreign investors or countries who support the economy of countries (Nawaz et al., 2021). Most of the researcher defines foreign investors as investing their money for their own profit. However, the literature review demonstrates the mixed behavior of foreign direct investment in economic improvement. Most of the scholars show a positive impact on stock market performance and economic growth in their theoretical work. Most of the scholars give firm positive information regarding the stock market, further saying that the stock market plays a vital role in economic growth. According to the (Alfaro et al., 2004) articles, Foreign direct investment is a fundamental part of the economy and can have a negative effect on growth. There is a positive relationship if the investment is made by the manufactured sector. FDI is a considerable wellspring of protection trade improvement (SMD). It can, in like manner, add to growing private save assets in the country by making business openings and extending development. Without remote direct theory, getting such a ton of capital through the country to make home speculation finances yourself is difficult. Found a positive and truthfully strong association between FDI and the money-related trade headway (SMD). Remote direct enthusiasm for the specifying economy is used as, by and large, addition (current US $). The flow of foreign direct investment helps in recording the value of transactions made across the border in the given duration, i.e. a year. Budgetary streams are generally founded on the obligation exchanges of intercompany value exchanges and the reinvestment of gaining. However, the FDI contribute firmly to the growth. Foreign Direct investment is made by businessmen or firms who invest their money or business in other countries. Generally, most businessman spends their business in other countries. So, most of the investors use this source for investment (Atique et al., 2004).



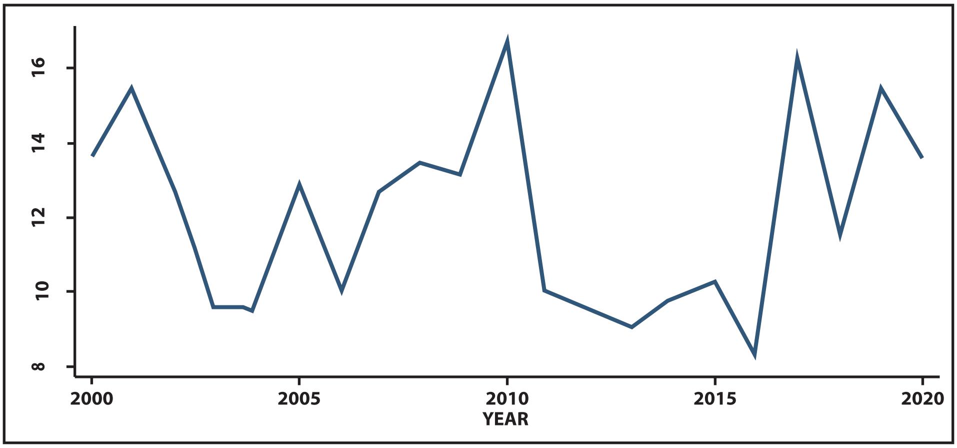
Inflation

According to the authors still, there is no accepted definition of inflation. Most of the authors define the inflation term who said inflation as a term which shows the price level of goods and services. If the Price is high, that directly impacts the economy and puts inflation at a high level. Another concept when purchasing power is greater than the price/amount of tangible and intangible things. (Atique et al., 2004) According to the consumer perspective, low inflation is better than high inflation because consumers purchase more quantitative goods and services for the home. Generally, when increasing the currency volumes automatic inflation is high. The authors said that inflation creates a negative impact on business because when inflation is high, the purchasing power will be decreased. According to the thinkers, inflation is not decent for the financial system, and corporations in most countries are faced with this crisis. According to the business perspective, when the inflation rate is high, they purchase raw materials at a high cost, so the extra money is paid for their raw materials, and businessmen put the extra amount into the goods and services. So that is the reason for less purchasing power (Aslam, 2023).



Interest Rate

Researchers said that in their article regarding interest rates, most of the scholars said that there is an inverse relation with the stock market. The interest rate creates a negative impact on the performance of the stock market. (El Fakiri & Cherkaoui, 2024) The interest rate is the price of purchasing and, from the business point of view, is used for the discount rate to discount the coming time cash flow of the financial assets. Increase in interest rate than decrease in the stock market. Because most businessman thinks about their profit, if the bank or other firm gives you profit more than the stock market business and with secured investment, there is no up and down situation. If the Interest rate is lower than other businesses the investor purchases a stock for the business. The government is controlled on interest rates easily with the help of monetary policy (Nocoń, 2023). The interest rate is tax for the deployment of advantages of finance, where any individual borrows from a financial institution like a bank. The loan rate is commonly noted on a yearly premise known as the yearly rate (APR). The benefits obtained could incorporate money, buyer products, or enormous resources, for example, a vehicle or building. (Aliyu, 2012) Investors always think about profit, so when the interest rate is high in Pakistan, investors automatically invest.

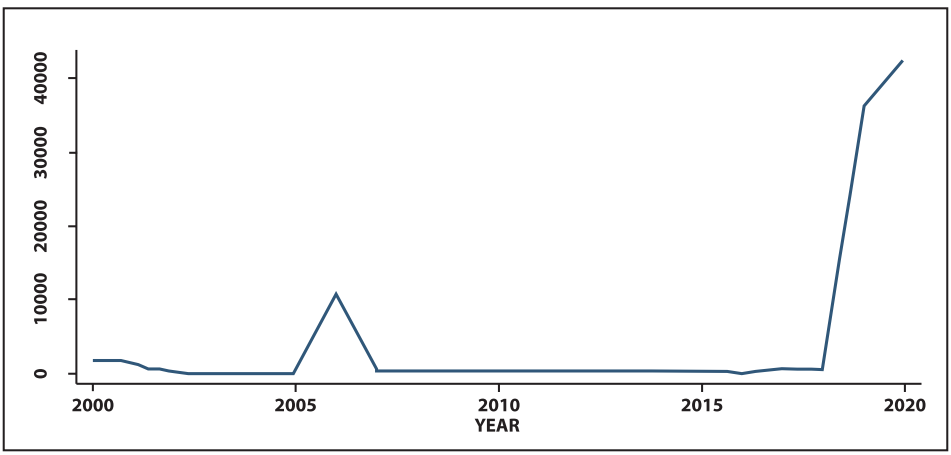


Bank Interest Rate

People approach banks for the credit with the ultimate objective of business, and individual venture, or some other need. The bank has its own method for the different sorts of credit rates. This pace of premium does not seek after the hold of any treasury money-related store. Along these lines, it has moreover been another factor or intensity of financing cost. (Jilenga et al., 2016) The inverse relationship between interest rates shows a clear picture and will discuss the powers deciding financing costs in the market. The most significant is the Federal Reserve Funds rate. A Reserve Bank or Central Bank gets from different banks to acquire cash this loan cost. In this way, the national bank assumes a controlling job here. If the securities exchange is encountering high paces of stock costs and the pace of ascend in stocks has diminished, the national bank controls in a roundabout way to adjust this circumstance. The bank has scaled down the cash supply to another bank by raising the hold finance costs. Therefore, the monetary organization raises financing costs for its clients. Reasonable clients do not get cash with high loan costs. The higher the stock inventory and the lower the interest for the stock, the lower the cost of the stock

Stock Market KSE Pakistan

According to the researchers, the stock market is the most important part of the financial systems of the country. And, strong financial systems are the assurance of the country's financial development (Fleckner & Hopt, 2012). As per studies in different articles regarding the stock market, scholars have said that this type of market is safe for the businessman who easily invests money and does their business without any doubt. Because most of the business market is not responsible for the money return and there are a lot of problems with businessmen because they are more likely to lose money. So that is why most of the businessmen agree to invest in this market. With the help of stock market data, businessmen can easily predict future activities, and the stock market helps to measure economic strength. Most of the development of the country is dependent on the stock market position. If the stock market is vital, it suits the country's development. Because through the vital stock market, we do business at the global level without any doubt. The Islamic Republic of Pakistan country is in South Asia developing countries and lower-middle-income countries. With a GDP per capita of $314.6 and a total population of 212.2 million. Karachi Stock Market was the first stock market in Pakistan and was established in 1947. Another stock market was established in 1974-1997 after KSE, which is the (LSE) and (ISE). According to the previous study, about 80 to 90% of turnovers come about at KSE, and the average daily turnover is 180 million shares. (Mirza, 2013)



IMPACT OF INDEPENDENT VARIABLE ON DEPENDENT VARIABLE

Impact of Foreign Direct Investment on The Stock Market

According to regression and co-relational results, foreign direct investment positively impacts the stock market. Increase the foreign direct investment in host countries than increase the performance of the KSE market performance. Given previous studies, here is a significant result b/w FDI and the KSE Stock market performance. A Foreign investor invests their money in another country for profit. However, the main thing is that the host country has a stable political system and a safer business environment than those with more foreign investment.

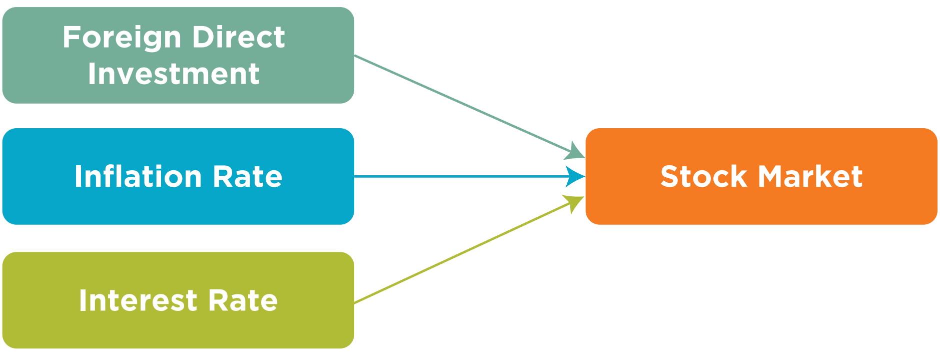
Impact of Inflation on The Stock Market

According to regression and co-relational results and this independent variable, inflation has a negative impact on the stock market. An increase in the inflation rate will decrease the stock market performance. Everything in the price will increase, and investors will avoid the market because the inflation rate and the stock market position are low.

Impact of Interest Rate on The Stock Market

According to regression and co-relational results, this independent variable interest rate has a negative impact on the stock market. If the interest rate is high, it will decrease the stock market performance. Sample the bank gives you more profit with no risk. So why do investors invest their money in the stock market with risk? So that is why there is an insignificant relationship between the interest rate and the stock market.

RESEARCH FRAMEWORK



This theoretical framework has three independent variables and one dependent variable. FDI “Foreign direct investment, INF inflation, and the IR interest rate have been considered independent variables. However, Pakistan's Stock Market has been considered a dependent variable.

ECONOMETRIC MODEL

The study's main objective is to identify and investigate the impact of foreign direct investment, inflation INF, and IR interest rates on the KSE stock market performance. This research uses this model because the study aims to investigate the impact of IV on DV.

$$\ln(SMP) = \beta 0 + \beta 1 \ln(FDI) + \beta 2 \ln(INF) + \beta 3 \ln(IR) + U$$

Where SMP= Stock Market Performance.

FDI= Foreign Direct Investment

INF=Inflation rate

IR= Interest Rate

HYPOTHESES

The following are the research hypotheses of this study:

H1: Stock exchange directly and positively impacts higher foreign direct investment.

H2: The stock exchange has a negative impact on the higher inflation rate.

H3: The stock exchange has a negative impact on the higher interest rates.

METHODOLOGY

RESEARCH METHOD

The primary purpose of applying multiple regressions is to know the relationship between several independent and dependent variables. The study aims to examine the impact of the independent variable on the dependent variable. This research will find the actual impact of FDI on the stock market and similarly will find how inflation and interest rates have an indirect relationship with stock market development.

RESEARCH DESIGN

Research design provides the blueprint for data gathering, data measurement, and data evaluation. Qualitative and quantitative methods have been used for conducting the thesis for the solution of the problem. This research paper has been based on a quantitative approach because secondary data has been used in it.

RESEARCH NATURE

Causal research has been used in this research because this research explains the cause-and-effect relationship between variables.

PROPOSED DATA COLLECTION PROCEDURE

This study collected research data from various sources, such as reports, articles, and websites. According to the theoretical framework and its variables foreign direct investment, inflation, Interest rate, and the stock market, most of the researchers use secondary source data in this paper topic or articles. A large portion of the information on the considerable number of factors is drawn from the "Financial Aspects Survey of Pakistan", "State Bank of Pakistan" (SBP), and the Pakistan Stock Exchange (PSX). For example, outside direct speculation, which is information for the chosen time, will acquired from the main site of Pakistan's leading body of previous research studies, Daily Jang Business Magazine.

PROPOSED DATA ANALYSIS

After gathering the data and using different analysis tests with the help of STATA software, the most important tests are descriptive, correlation, unit root test and linear regression to identify the magnitude of the relationship between foreign direct investment, inflation, interest rate and stock market KSE Pakistan. In this research, the research analysis technique will be regression, and the purpose is to find out whether the stock market, foreign direct investment, inflation, and interest rate have a positive relationship with each other or have an inverse relationship. Regression analysis is a statistical tool for widely estimating and forecasting the relationship between dependent variables and independent variables. This statistical tool will identify how the independent variable influences the dependent variable and the outcome after-testing through regression analysis.

TYPE OF STUDY

This study is predictive and causal in nature and intends to explore the impact of foreign direct investment, Inflation and interest rates on the stock market

TYPE OF DATA STRUCTURE AND TIME HORIZON

This research paper uses time series data because time series data is a collection of observations made sequentially in time, and the duration of data collection time is 2000 to 2019.

INSTRUMENT DEVELOPMENT/SELECTION

Secondary data on foreign direct investment, inflation, interest rate and stock market KSE has been used for this study.

	Mean	St. Dev	Min	Max	Skewness	Kurtosis
KSE	4516.307	11834.29	19.719	42526.75	2.635	8.267
FDI	17.681	52.451	.308	223.1	3.314	12.823
INF	7.98	4.587	2.529	20.286	.921	3.49
IR	12.095	2.58	8.52	16.83	.323	1.865

DATA ANALYSIS AND RESULTS

Analysis

The researcher put their collected and downloaded data for the analysis in this chapter. Use Stata software and use different techniques for data analysis, and those tactics are mentioned in the methodology. Most of the scholars said that in their studies, before entering the data, please check it and prepare it in sequence; if you use annual time series data for the analysis, all the data variables do not change (monthly, quarterly,). It is a rule and principle for effective results.

Before entering any time series data into regression analysis, it is necessary to check that the data is stationary (I.e. its mean and variance are not time-variant).

Y_t=a+ β_1 X_t+ ε_t

Table 1

DESCRIPTIVE ANALYSIS

The study's objective is to investigate the impact of foreign direct investment, inflation, and interest rates on stock market performance. For this purpose, the stock market is taken as the dependent variable, while the other variables are taken as independent variables. The descriptive statistics of the dependent and independent variables are reported in Table 4.1.

The KSE has a mean value is 4516.307 which means the 20-year average performance of the stock market. The maximum value has been reported as 42526.75, While the minimum value is 19.719 is our simple stock market. The mean can deviate from 11834.29 on the high side and low side ratio. The Kurtosis and skewness tell us about the shape of the data. The required value for kurtosis is 3(Mesokurtic), while skewness should be zero. KSE show highly leptokurtic behavior (8.2) with some positive skewness. Almost near similar statics for the stock market have been reported by (Raza et al., 2012). All maximum and minimum values are within expected ranges, and the data is clean enough to be used for further analysis. Skewness is acceptable in between +1 and -1. All the variables are in the given limit, so it can be used in the regression analysis. Kurtosis is acceptable in the range between +3 and -3. All the variables are within the prescribed limits to be used in the regression analysis.

Table 1
Pairwise correlations

Variables	(KSE)	(FDI)	(INF)	(IR)
(1) KSE	1.0000			
(2) FDI	0.9477*	1.0000		
(3) INF	-0.2191	0.2681	1.0000	
(4) IR	-0.2723	0.2511	0.2227	1.0000

* shows significance at the .05 level

CORRELATION ANALYSIS

The correlation analysis has been performed to see the relationship between the dependent and independent variables. The correlation coefficient has been reported for this purpose for each variable in Table 2.

A significant positive relationship exists between KSE and FDI with a strength of 0.94. It means that increases in foreign direct investment in the host country will automatically increase the stock market performance according to regression results.

There is also an insignificant relationship between the stock market and inflation and interest, with the strength of -0.219 and -0.272, respectively. This means that any increasing inflation and interest rate will lead to a decrease in stock market performance. The relationship between the dependent and other independent variables is insignificant.

DICKEY-FULLER UNIT ROOT TEST

During the analysis of the data, another term is being used called the unit roots test. Because this paper uses time-series data. So, check that the variable is non-stationary and stationary. According to the research procedure, the null hypothesis must be rejected. In this static check, the IV and DV variables of the unit root test. The result is reported in the below tables.

Table 4

Unit root test

Number of obs =20

Interpolated Dickey-Fuller

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
KSE Z(t)	0.084	-3.750	-3.000	-2.630

Mackinnon approximate *p-value for Z(t) = 0.9650*

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
FDI Z(t)	4.385	-3.750	-3.000	-2.630

Mackinnon approximate *p-value for Z(t) = 1.0000*

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
INF Z(t)	-1.933	-3.750	-3.000	-2.630

Mackinnon approximate *p-value for Z(t) = 0.3167*

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
IR Z(t)	-3.664	-3.750	-3.000	-2.630

Mackinnon approximate *p-value for Z(t) = 0.998*

Table 5
STOCK MARKET *Regression Results*

SROCK MARKET	Coef.	St. Err.	t-value	p-value	Sig
FDI	214.042	18.241	11.73	0.000	***
INF	-116.056	207.085	-0.56	0.583	
IR	-201.557	365.553	-0.55	0.589	
Constant	-780.614	4462.280	-0.17	0.863	

Mean dependent var	4516.307	SD dependent var	11834.289
R-squared	0.901	Number of obs	21.000
F-test	51.663	Prob > F	0.000
Akaike crit. (AIC)	411.880	Bayesian crit. (BIC)	416.058

*** p<0.01, ** p<0.05, * p<0.1

Table 5
Regression Analysis

The Study examines the impact of foreign direct investment, inflation and interest on the stock market. The linear regression analysis has been reported for this purpose for each independent variable in Table 5.

According to the result, work has been done in this paper to recognize macroeconomic independent variables with certain Foreign Direct investments affecting KSE stock market performance. Use time-series data from 2000 to 2020. The value of R2 is relatively high (0.901) and it means there is no problem with autocorrelation. According to the regression table result, the result of FDI shows a significant relationship with the stock market (Coeffi, 214.042, p<0.05). The result of the inflation rate shows an insignificant relationship with the stock market (Coeffi, -116.056, p< -0.56) with a negative impact on the Stock market, according to a previous literature review. The result of the interest rate shows an insignificant relationship with the stock market (Coeffi, -201.557, p<-0.55). Lastly, the interest rate shows an insignificant relationship with the stock market. Its mean interest rate has no significant relationship with the Stock market, and this result is somehow expected in this study because when banks give high interest in your investment so, why do investors take risks by investing in the stock market with minimum profit with higher risk?

Hypotheses of this study

H1: Foreign Direct investment having a positive impact on Stock market performance has been accepted in correlation and regression analysis. In correlation analysis I, FDI is positively related to the stock market and has been proven highly significant with a magnitude of 0.9477*. In regression analysis, it has been proved that there exists a significant relationship between FDI and the Stock market, which indicates that increases in FDI increase the performance of the stock market and vice versa.

H2: that inflation has a negative impact on the stock market performance, has been accepted in correlation and regression analysis. In correlation analysis I, Inflation is negatively impacted related to the stock market and has been proving highly insignificant with a magnitude of -0.219. In regression analysis, it has been proved that there exists an insignificant relationship b/w Inflation and the stock market. This indicates an inflation rate increase and will decrease the stock market performance.

H3: The interest rate having a negative impact on the stock market performance has been accepted in correlation and regression analysis. In correlation analysis I, the Interest rate is negatively related to the stock market and has been proving highly insignificant with the magnitude of. -0.2723 In regression analysis, it has been proved that there exists an insignificant relationship b/w and the stock market. This indicates an interest rate increase and will decrease the stock market performance.

DISCUSSION

This Study aims to investigate the impact of foreign direct investment, Inflation, and Interest rate impact on the stock market. The results demonstrate a strong favorable correlation between FDI and stock market success. A significant increase in the stock market is correlated with every 1% increase in FDI. This is consistent with previous research, which highlights how FDI can boost stock market performance through knowledge transfer, better management techniques, and capital provision (Alfaro et al., 2004). Therefore, measures aimed at attracting foreign capital could greatly improve the Karachi Stock Exchange KSE.

The results of the analysis show a negligible negative correlation between inflation and stock market performance, which is in line with earlier findings that show inflation reduces the true worth of financial assets. The lack of relevance could be attributed to investors having already factored in inflation expectations or to Pakistan's comparatively low and consistent inflation rates over the study period. (Albulescu et al., 2017)

Additionally, there is a negligible inverse correlation between interest rates and stock market performance. This validates the theoretical prediction that rising interest rates raise the cost of borrowing, which lowers stock prices and company earnings. (Osei & Kim, 2020) The lack of relevance raises the possibility that other variables, such as investors' mood or macroeconomic stability, are more important in determining Pakistan's stock market success.

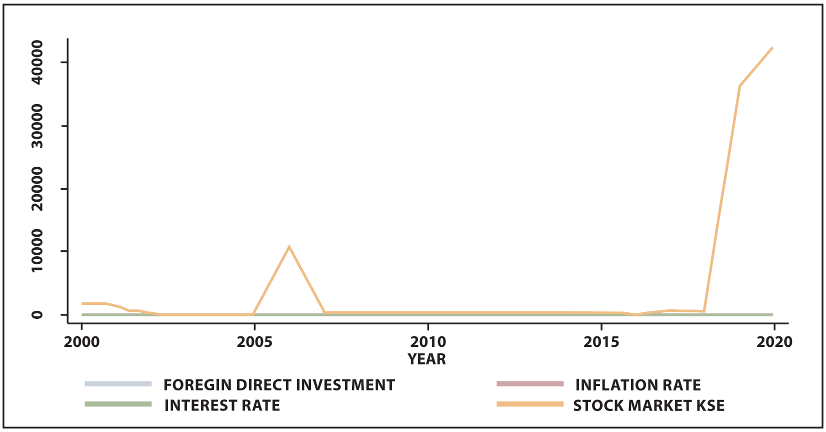
CONCLUSION

This study explores the influence of foreign direct investment on the performance of the KSE stock market. Additionally, the investigation seeks to establish the interrelation between three key variables and stock market performance. Including other significant macroeconomic factors, namely inflation rate and interest rate, further enhances the comprehensive analysis. The study utilizes annual time series data spanning from 2000 to 2020 and employs STATA for analysis.

The findings reveal a positive and statistically significant impact of foreign direct investment on the stock market performance in Pakistan. Specifically, a 1% increase in foreign direct investment correlates with an approximate 70% boost in stock market performance. In contrast, the study indicates that inflation has an insignificant impact on stock market performance, while interest rates exhibit a negative and significant influence.

These results align with our initial expectations. Accordingly, the study suggests that the government should formulate policies conducive to a business-friendly environment. This includes ensuring a legal and financial framework that instils confidence in both local and foreign investors. Key recommendations involve prioritizing political stability, enacting laws to safeguard the interests of foreign investors against abrupt policy shifts, and enhancing infrastructure to attract foreign investment.

The study underscores the importance of effective monetary policies to control inflation and interest rates, given their adverse effects on stock market performance. Failure to address



these variables may compromise the overall health of the stock market. The study's insights emphasize the need for strategic governmental interventions to create an environment that encourages foreign investment, fosters technological advancements, generates employment opportunities, and facilitates savings for future planning.

FURTHER STUDIES

This research can be further amplified into more wide-ranging results, inclusive of the length of a time period, more macroeconomic variables and control variables can be added, plus it can be done in various sectors or the whole financial sector of Pakistan. Thus, for further research we can investigate various other macroeconomic variables and control variables which can influence the GDP growth rates, economic policy uncertainty and crude oil volatility and the impact of local stock markets and how it can be minimized.

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