The Impact of Inflation and GDP Growth Rate on Nepal's Stock Market: An Analytical Study

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Abstract

This study explores the impact of macroeconomic variables, particularly the inflation rate and GDP growth rate, and their influence on Nepal's stock market, as measured by the NEPSE Index by using regression analysis. The NEPSE Index as a measure of economic performance, reflects market dynamics and investor sentiment, which are influenced by inflation and GDP growth rates. The regression model explains 50.78% of the variation in the NEPSE index, as indicated by the R Square value. The analysis reveals a significant negative relationship between GDP growth rate and the NEPSE index, with a coefficient of -154.43 and a p-value of 0.0258. Conversely, the inflation rate exhibits a negative but statistically insignificant impact, with a coefficient of -149.83 and a p-value of 0.0630. These findings suggest that while the GDP growth rate significantly affects stock market performance, inflation's influence may be less pronounced or mediated by other factors. The results also highlight the presence of unexplained variance, indicating the role of additional factors not captured in the model. Based on the findings, the study recommends incorporating more macroeconomic variables, increasing sample size, and conducting sectoral analyses to enhance the robustness of future research. Policymakers and investors are advised to consider broader economic and structural factors when making decisions to foster a resilient and efficient stock market in Nepal. Overall, this analysis provides essential knowledge for decision-making in investment strategies and economic policymaking.

Keywords: inflation, GDP growth rate, inflation rate, market interest rate, NEPSE index, macroeconomic factors

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Introduction

1.1 Background of the Study

The stock market plays a main role in reflecting the health and stability of an economy. In Nepal, the Nepal Stock Exchange (NEPSE) Index is the primary indicator of the nation's stock market performance. As an emerging market, Nepal's stock market is highly sensitive to macroeconomic factors, particularly inflation and GDP growth. These two fundamental variables significantly impact the NEPSE Index, shaping the investment climate, market behavior, and broader economic stability (Shrestha & Joshi, 2019). This study explores the relationship between inflation, GDP growth, and the NEPSE Index, focusing on how these macroeconomic indicators influence market dynamics in Nepal.

Inflation, is the persistent rise in the general price level of goods and services, is one of the most critical economic variables influencing stock market movements (Bordoloi & Yadav, 2020). In emerging economies like Nepal, inflation can reduce consumer purchasing power, increase the cost of capital, and ultimately affect investor sentiment (Sundaram, 2021). In countries with volatile inflation rates, stock markets tend to experience increased volatility, as high inflation typically leads to higher interest rates, which reduce corporate profits and dampen stock prices (Sharma, 2018). Conversely, low inflation is generally seen as a sign of economic stability, which can foster investor confidence and encourage investment in the stock market (Singh & Kumar, 2017).

GDP growth rate measures economic performance and indicates the overall expansion or contraction of a country's economy. As GDP grows, businesses often experience increased demand for goods and services, leading to higher earnings and, in turn, rising stock prices (Dahal, 2022). The relationship between GDP growth and stock market performance is well-documented in the literature, with studies consistently showing that periods of high economic growth tend to drive up stock market indices (Agarwal & Sharma, 2020). However, the impact of GDP growth on the NEPSE Index is not without complications, as external factors such as global economic conditions, fiscal policies, and political instability also play crucial roles in shaping market performance (Tiwari, 2020).

In the context of Nepal, the effects of inflation and GDP growth on the NEPSE Index are particularly pronounced due to the country's unique economic characteristics. Nepal's economy relies heavily on remittances from its large diaspora, agricultural output, and a growing service sector (Shrestha & Joshi, 2019). Moreover, Nepal's stock market is still developing, with limited participation from institutional investors and foreign market players, making it highly sensitive to domestic macroeconomic changes (Pokharel & Gautam, 2020). These factors create a complex interplay between inflation, GDP growth, and market performance, which needs to be carefully examined to understand the broader implications for economic policy and investment strategies.

Several studies have explored the relationship between macroeconomic indicators and stock market performance. In a study of emerging markets, Bordoloi and Yadav (2020) found that

inflation significantly influenced stock market volatility, particularly in countries with weak financial systems. Similarly, Sundaram (2021) showed that high inflation leads to increased risk in emerging markets, while low inflation typically results in more stable and predictable stock market returns. In the case of GDP growth, Agarwal and Sharma (2020) highlighted the positive relationship between GDP growth and stock market performance in South Asian economies, with increased economic output fostering investor optimism. However, the impact of these variables is not uniform across all countries, as Tiwari (2020) argued, noting that political instability and external shocks often mitigate or even reverse the positive effects of GDP growth on stock markets.

In Nepal, the relationship between inflation and the NEPSE Index has been the subject of limited research. Studies by Shrestha and Joshi (2019) and Pokharel and Gautam (2020) suggest that inflationary pressures have led to periods of heightened volatility in the NEPSE, with investor sentiment often turning negative during times of rising prices. Similarly, while Nepal has experienced periods of strong GDP growth, the NEPSE Index has shown mixed reactions, influenced by factors such as political instability, natural disasters, and external market conditions (Sharma, 2018). As Nepal continues to integrate more fully into the global economy, understanding the relationship between inflation, GDP growth, and stock market performance will be essential for both policymakers and investors.

This paper aims to fill the gap in the existing literature by providing an in-depth analysis of how inflation and GDP growth rate specifically affect the NEPSE Index. The study will draw on historical data from the last two decades to analyze the trends and correlations between these macroeconomic factors and the stock market performance. By examining these dynamics, this study will offer valuable insights for investors seeking to navigate Nepal's stock market and policymakers aiming to foster a more resilient and stable economy.

Understanding how inflation and GDP growth influence the NEPSE Index has broader implications for emerging market economies. As global financial markets become increasingly interconnected, the economic performance of smaller markets like Nepal can have ripple effects on regional and international markets (Dahal, 2022). This study aims to provide policymakers with actionable recommendations for managing inflation and promoting sustainable economic growth, as well as for investors seeking to mitigate risk in emerging markets (Bordoloi & Yadav, 2020).

1.2 Research Questions

The study of inflation, GDP growth rate, and their impact on Nepal's stock market raises several important questions that need to be addressed for a thorough understanding of market behavior and economic performance. The following research questions guide this investigation:

I. What is the relationship between inflation and the NEPSE Index in Nepal?
II. How does the GDP growth rate influence stock market performance in Nepal?
III. What is the combined effect of inflation and GDP growth rate on the NEPSE Index?

1.3 Objectives of the Study

The primary goal of this study is to understand how macroeconomic factors, specifically inflation and GDP growth rate, influence Nepal's stock market performance. The specific objectives of the study are:

I. To analyze the relationship between inflation and the NEPSE Index.
II. To explore the effect of GDP growth rate on stock market performance.
III. To evaluate the combined impact of inflation and GDP growth on the NEPSE Index.

1.4 Hypothesis of the Study

This study proposes the following hypotheses based on the literature reviewed and the macroeconomic environment of Nepal:

H1: There is a significant relationship between inflation and the NEPSE Index.
H2: There is a significant relationship between the GDP growth rate and the NEPSE Index.
H3: Inflation and GDP growth rate together significantly affect the NEPSE Index.

Hypothesis testing is performed at a 5% significance level of ($p < 0.05$), and the results are analyzed to determine the strength and direction of the relationships.

1.5 Significations of the Study

This study is crucial for various stakeholders, including policymakers, investors, and financial analysts, as it provides valuable insights into the relationship between macroeconomic variables (inflation and GDP growth) and stock market performance in Nepal. Understanding these dynamics is essential for making informed decisions that can enhance economic stability and investment returns.

1. Importance for Policymakers. Policymakers can design and implement policies that promote a stable macroeconomic environment conducive to stock market growth. For instance, the study may inform the formulation of monetary policies to manage inflation effectively or fiscal policies that stimulate GDP growth without exacerbating inflationary pressures. Additionally, the research can assist policymakers in identifying potential vulnerabilities in the stock market that may be exacerbated by inflation or economic slowdowns, thus enabling them to take preemptive measures.
2. Importance for Investors. This study provides critical insights into how macroeconomic conditions, such as inflation and GDP growth, influence the performance of the NEPSE Index. Understanding the correlation between these variables allows investors to adjust their portfolios to better align with economic cycles.
3. Importance for Financial Analysts. This study provides analysts with empirical evidence on how these macroeconomic factors influence the NEPSE Index, helping them to make more informed recommendations for clients and stakeholders. The research also contributes to the broader literature on emerging market analysis, providing a model that can be applied to similar economies.

4. Implications for Financial Market Development. The findings of this study have important implications for the development of Nepal's financial market. By identifying the key drivers of market performance, the research can inform efforts to enhance market efficiency and transparency. Understanding how inflation and GDP growth impact market performance may encourage better regulatory practices, increased foreign investment, and more active participation in the stock market.

1.6 Limitations of the Study

While this study provides valuable insights into the impact of inflation and GDP growth on Nepal's stock market performance, it is subject to several limitations that must be acknowledged. These limitations may affect the generalizability and robustness of the findings.

I. This study is based on the impact of GDP rate and inflation rates on the NEPSE index in Nepal. Other macroeconomic factors such as political events, natural disasters, international economic conditions, interest rates, exchange rates, government policies, foreign direct investment (FDI), and global commodity prices are not taken in this study.
II. This research is based on APA 7th edition citations and references.
III. This study is primarily based on trends analysis of the 12 fiscal years of secondary data from 2069/70 to 2080/81, which may have certain biases or inaccuracies inherent in the data sources.
IV. The econometric models used in this study rely on several assumptions, including linearity and stationarity of variables, which may not always reflect real.
V. The study period may overlap with the global economic disruptions caused by the COVID-19 pandemic. The pandemic has had unprecedented effects on the global economy, including inflationary pressures, shifts in GDP growth rates, and significant fluctuations in the stock market in Nepal.

1.7 Review of Literature

The impact of macroeconomic factors like inflation, GDP growth, and stock market performance has been widely studied across different economies. However, the unique characteristics of emerging markets, such as Nepal, necessitate a focused exploration of these links. The following review highlights key studies relevant to the current research, providing a foundation for understanding the impact of inflation and GDP growth on Nepal's stock market (NEPSE Index).

1. **Macroeconomic Variables and Stock Market Performance.** Numerous studies have demonstrated the significant impact of macroeconomic variables on stock market performance. The Fama model (1981) suggested that stock prices are influenced by changes in economic indicators such as inflation and GDP growth. These findings were supported by research from Singh and Kumar (2017), who examined the effects of inflation and GDP growth on stock markets in emerging economies, revealing that both variables significantly affect stock prices in developing countries.

2. **Inflation and Stock Market Performance.** The relationship between inflation and stock market performance has been the subject of much debate. While some studies argue that inflation hurts stock markets due to increased uncertainty and reduced purchasing power (Bordo & Landon-Lane, 2003), others suggest that moderate inflation can be beneficial to stock markets by signaling a growing economy (Thornton, 2019). In the context of Nepal, Shrestha and Joshi (2019) found that inflation has a negative effect on the NEPSE Index, primarily due to the adverse effects on consumer spending and business investment.
3. **GDP Growth and Stock Market Performance.** Several studies have examined the role of GDP growth in influencing stock market indices. Bekaert and Harvey (1997) argued that higher GDP growth rates lead to improved corporate earnings, thus boosting stock market performance. Similarly, Dhakal (2020) highlighted the positive relationship between GDP growth and stock market performance in South Asian countries, including Nepal. In contrast, Chandra (2018) found that rapid GDP growth might not always lead to higher stock market returns, particularly in developing economies, where structural issues can undermine the positive effects.
4. **The Role of Stock Market Development in Economic Growth.** The development of the stock market itself can play a significant role in shaping the relationship between macroeconomic factors and market performance. According to Pokharel and Gautam (2020), an efficient and well-regulated stock market enhances economic growth by channeling investment into productive sectors. Similarly, Tiwari (2020) emphasized that an efficient stock market in Nepal could moderate the negative effects of inflation and enhance the beneficial impacts of GDP growth on the NEPSE Index.
5. **The Effect of Inflation on Stock Markets in Emerging Economies.** Several studies have focused on the effect of inflation on stock markets in emerging economies, where inflationary pressures are often more volatile. Bordoloi and Yadav (2020) examined how inflation affects stock markets in emerging economies and found that high inflation disrupts financial markets by reducing corporate profits and increasing the cost of capital. In Nepal, the rapid fluctuations in inflation have been shown to create instability in the NEPSE Index, making it more susceptible to external shocks (Shrestha & Joshi, 2019).
6. **The Impact of Inflation and GDP on Specific Sectors.** The impact of inflation and GDP growth on different sectors of the economy, including those represented in the stock market, has also been a topic of research. Agarwal and Sharma (2020) studied how inflation and GDP growth influence specific sectors, such as finance, manufacturing, and services. Their findings indicated that while GDP growth positively affects these sectors, inflation disproportionately affects the financial and manufacturing sectors due to increased costs.
7. **Political and Institutional Factors in Nepal's Stock Market** Political instability and institutional factors can further complicate the relationship between macroeconomic variables and stock market performance in Nepal. According to Dahal (2022), political uncertainty in Nepal has often led to fluctuations in the NEPSE Index, making it difficult to isolate the effects of inflation and GDP growth on market performance. The study highlighted the need for stronger regulatory frameworks to mitigate the effects of political instability on the stock market.

8. **Global Economic Trends and Their Impact on Nepal** Nepal's stock market is not isolated from global economic trends. Bordoloi and Yadav (2020) noted that global inflation and GDP growth rates significantly affect emerging markets like Nepal. The authors argue that while domestic factors are important, the global economic environment also plays a pivotal role in shaping stock market performance. The findings suggest that Nepal's stock market reacts not only to local macroeconomic conditions but also to global market trends, including commodity price fluctuations and changes in global interest rates.
9. **Stock Market Volatility and Macroeconomic Indicators** Studies have also focused on the volatility of stock markets and its correlation with macroeconomic indicators. Thornton (2019) highlighted the role of inflation in increasing stock market volatility, particularly in economies with fragile monetary systems. Similarly, in Nepal, studies by Gautam and Pokharel (2020) found that inflation and GDP growth were correlated with higher volatility in the NEPSE Index, reflecting investor uncertainty.
10. **Empirical Studies on Nepal's Stock Market** In the context of Nepal, several empirical studies have been conducted to understand the specific impacts of inflation and GDP growth on the NEPSE Index. For example, a study by Shrestha (2019) explored how inflation and GDP growth interact with stock market movements in Nepal. The study found a significant inverse relationship between inflation and the NEPSE Index, while GDP growth was positively associated with stock market performance, though the effect was weaker compared to inflation.

Materials and Methods

The materials and methods used to conduct the study, detailing the data sources, tools for analysis, and the techniques employed to assess the relationship between inflation, GDP growth rate, and the NEPSE Index.

2.1 Data Sources

The study is based on secondary data. Data is extracted from publicly available reports of NRB, NEPSE, and SEBON's publications databases, ensuring the credibility and accuracy of the information.

1. GDP Growth Rates and Inflation Rates: Data on inflation is sourced from the Nepal Rastra Bank (NRB), which publishes annual inflation statistics for Nepal.
2. NEPSE Index: Data on the performance of the Nepal Stock Exchange (NEPSE) Index is sourced from the Nepal Stock Exchange and the Securities Board of Nepal (SEBON). This data includes historical NEPSE Index values on an annual basis.

2.2 Research Design

The study adopts an empirical research design that combines descriptive and correlational approaches to examine the relationships between macroeconomic factors (inflation and GDP growth rate) and stock market performance, specifically the NEPSE Index.

1. Sampling Strategy
   The study employs a purposive sampling strategy to select data for the analysis.
2. AnalyticalToolsandTechniques
   The study employs a combination of statistical analysis tools and econometric models for data examination such as.

   a. Descriptive Statistics: Descriptive statistics such as means, standard deviations, coefficient of variation, and trends over time are calculated to summarize the data for inflation rates, GDP growth, and the NEPSE Index.
   b. Correlation Analysis: The study utilizes Pearson's correlation coefficient to measure the strength and direction of the relationship between inflation, GDP growth, and the NEPSE Index. This analysis helps to determine if there is a positive or negative correlation between these macroeconomic factors and stock market performance.
   c. Multiple Regression Analysis: The study uses multiple regression analysis to evaluate the combined effect of inflation and GDP growth on the NEPSE Index. The regression model estimates how changes in inflation and GDP growth rates influence stock market performance.
   d. Software Tools: The data analysis is conducted using Excel, a commonly used software tool for econometric analysis. These programs help in performing correlation and regression analysis efficiently and accurately.

2.3 Research Model

A multiple regression model is used to study the impact of the GDP rate and inflation rate on the market index i.e.

NEPSE Index = $\beta 0 + \beta 1 \cdot$ Inflation + $\beta 2 \cdot$ GDP Growth

Where

α or $\beta 0$ = It is the intercept.

$\beta 1$ and $\beta 2$ = Beta are the regression coefficients for inflation and GDP growth, respectively.

2.4 Variables

The market index (NEPSE Index) is the dependent variable and two macroeconomic variables like gross domestic product (GDP) rate and inflation rate are independent variables.

Result and Discussion (Finding)

The outcomes of the study are examined with the study objectives as under.

Table 1

Mean, Standard Deviation, and Coefficient of Variation

SN	Fiscal Years	NEPSE Index	GDP Rate	Inflation Rate
1	2069/70	518.33	3.8	9.9
2	2070/71	1036.11	5.7	9.1
3	2071/72	961.23	2.32	7.2
4	2072/73	1718.15	0.01	9.9
5	2073/74	1582.7	7.5	4.5
6	2074/75	1212.36	6.66	4.2
7	2075/76	1259.01	6.7	4.6
8	2076/77	1362.34	2.3	6.2
9	2077/78	2883.38	0	3.6
10	2078/79	2009.46	0	6.3
11	2079/80	2097.09	2.22	7.74
12	2080/81	2240.41	3.3	8.19
	Total	18362.24	36.71	71.53
	Mean	1669.29	3.34	6.50
	SD	590.12	2.86	2.11
	CV	0.35	0.86	0.32

Note: Appendix

Table 1 provides data on the NEPSE Index, GDP growth rate, and inflation rate over the past 12 fiscal years, along with their statistical metrics (mean, standard deviation, and coefficient of variation). The detailed interpretation is as under.

NEPSE Index

Trend Analysis:

- The NEPSE index shows significant fluctuations over the years, with a low of 518.33 in 2069/70 and a high of 2,883.38 in 2077/78.
- The index generally trends upward after fiscal year 2075/76, indicating growing investor confidence or favorable market conditions.
- The sharp increase in 2077/78 may reflect speculative activity or external stimuli (e.g., monetary policies, and economic recovery).

Statistical Metrics:

- Mean: The average NEPSE index is 1,669.29, showing a moderate level of stock market performance during the period.
- Standard Deviation (SD): 590.12, reflecting significant variability in stock market performance over time.
- Coefficient of Variation (CV): 0.35, indicating moderate relative variability in the NEPSE index.

GDP Growth Rate

Trend Analysis:

- The GDP growth rate fluctuates substantially, ranging from a high of 7.5% in 2073/74 to a low of 0% in 2077/78 and 2078/79.
- Low or stagnant growth periods (e.g., 2072/73, 2077/78, 2078/79) may reflect economic challenges such as political instability, natural disasters, or global financial downturns.
- The high growth in 2073/74 (7.5%) may indicate recovery from previous economic challenges or favorable policy interventions.

Statistical Metrics:

- Mean: The average GDP growth rate is 3.34%, suggesting moderate economic performance during the period.
- SD: 2.86, showing significant year-to-year fluctuations in GDP growth.
- CV: 0.86, indicating high relative variability in economic growth, reflective of Nepal's vulnerability to external and internal shocks.

Inflation Rate

Trend Analysis:

- Inflation rates are relatively stable compared to GDP growth, ranging from a low of 3.6% in 2077/78 to a high of 9.9% in 2069/70 and 2072/73.
- High inflation periods (e.g., 2069/70, 2072/73) could be linked to supply chain disruptions, external shocks, or other economic pressures.
- Lower inflation in 2077/78 (3.6%) aligns with low economic growth, possibly due to reduced demand or effective monetary policies.

Statistical Metrics:

- Mean: The average inflation rate is 6.50%, indicating a moderate level of inflation during the period.
- SD: 2.11, showing less variability compared to GDP growth.
- CV: 0.32, suggesting relatively stable inflation over the years.

Relationships

1. NEPSE Index and GDP Growth Rate:
    - Despite high GDP growth in some years (e.g., 7.5% in 2073/74), the NEPSE index does not show consistent alignment with economic growth, reflecting inefficiencies in translating GDP growth into market performance.
    - Stagnant or low GDP growth (e.g., 0% in 2077/78 and 2078/79) coincides with relatively high NEPSE levels, indicating other factors, such as investor sentiment, speculation, or liquidity, influencing the stock market.
2. NEPSE Index and Inflation Rate:
    - High inflation years (e.g., 2069/70, 2072/73) correspond to lower NEPSE levels, suggesting inflation's negative impact on stock market performance. However, this

relationship is inconsistent, as moderate inflation (e.g., 8.19% in 2080/81) coexists with high NEPSE levels.

Table 2

Correlation Matrix

	GDP Rate	Inflation Rate	NEPSE Index
GDP Rate	1		
Inflation Rate	-0.2611	1	
NEPSE Index	-0.51174	-0.34509	1

Note: Appendix

Table 2 represents the correlation matrix, which quantifies the relationships between the GDP Rate, the Inflation Rate, and the NEPSE Index.

1. GDP Rate and NEPSE Index: The correlation coefficient is -0.5117, indicating a moderate negative relationship. This suggests that the NEPSE Index tends to decline as GDP growth increases, and vice versa.
2. Inflation Rate and NEPSE Index: The correlation coefficient is -0.3451, which shows a weak negative relationship. It suggests that higher inflation is generally associated with a lower NEPSE Index, but the relationship is not strong.
3. GDP Rate and Inflation Rate: The correlation coefficient is -0.2611, showing a weak negative relationship. This indicates that periods of higher GDP growth are weakly associated with lower inflation rates.

Table 3

Regression Statistics

Regression Statistics	
Multiple R	0.712614845
R Square	0.507819917
Adjusted R Square	0.398446565
Standard Error	506.8023432
Observations	12

Note: Appendix

Table 3 represents the regression statistics as follows:

Multiple R (0.7126).

- This value represents the correlation between the predicted and actual market indexes.
- A correlation coefficient of 0.7126 indicates a moderately strong positive linear relationship between the stock market index and the combined effect of inflation and GDP growth rate.
- This suggests that the inflation and GDP growth rate changes have a noticeable, but not perfect, influence on Nepal's stock market index.

R Square (0.5078).

- The R Square value of 0.5078 (50.78%) means that the combined influence of inflation and GDP growth rate can explain 50.78% of the variability in Nepal's stock market index.
- This suggests that while these two variables are significant predictors, nearly 49.22% of the variability in the stock market index is caused by other factors not included in the model, such as political stability, market sentiment, or other macroeconomic variables.

Adjusted R Square (0.3984).

- The Adjusted R Square of 39.84% accounts for the small sample size and the number of predictors (inflation and GDP growth rate).
- This reduction from R Square (50.78%) indicates that some variability might be due to chance or that the relationship between the predictors and the market index is not as strong once adjustments are made.

Standard Error (506.8023).

- This value measures the average distance between the observed stock market index and the values predicted by the model.
- A standard error of 506.8023 suggests a relatively high level of deviation, meaning the predictions of the model may not be very precise. This could reflect the need for additional predictors or a larger sample size.

Observations (12):

- The regression analysis is based on only 12 data points**.**
- A small sample size reduces the statistical power of the model, potentially leading to less reliable and less generalizable results.

Table 4

ANOVA

		Df	*SS*	*MS*	*F*	*Significance F*
Regression	2		2385093.628	1192546.8	4.642994916	0.041167847
Residual	9		2311637.536	256848.62		
Total	11		4696731.163			

Note: Appendix

Table 4 provides the breakdown of the variability in the dependent variable (NEPSE index) into components explained by the regression model and those due to residual (error) variance.

Degrees of Freedom (df).

- Regression (2): This represents the number of predictors in the model (Inflation and GDP growth rate).

- Residual (9): Degrees of freedom for the error term, calculated as n-2.
- Total (11): Total degrees of freedom, equal to n-1.

Sum of Squares (SS).

- Regression SS (2385093.628): Represents the variation in the dependent variable (market index) explained by the independent variables (Inflation and GDP growth rate).
- Residual SS (2311637.536): Represents the unexplained variation in the dependent variable.
- Total SS (4696731.163): The total variation in the dependent variable, equal to the sum of Regression SS and Residual SS.

Mean Squares (SS/df) (MS).

- Regression MS (1192546.814): Represents the average variation explained by each predictor.
- Residual MS (256848.6151): Represents the average unexplained variation (error).

F-Statistic (4.6429) (Regression MS/Residual MS). Measures the ratio of explained variance to unexplained variance. A higher F-value indicates a better model fit.

Significance F (0.0412).

- This is the p-value associated with the F-statistic.
- A p-value less than the significance level (commonly 0.05) indicates that the overall regression model is statistically significant.

Table 5

Regression Coefficient Table

	Coefficients	Standard Error	T-Stat	P-value	Lower 95%	Upper 95%
Intercept	3111.3967	581.7551	5.3483	0.0005	1795.3752	4427.4182
GDP Rate	-154.4283	57.9216	-2.6662	0.0258	-285.4560	-23.4006
Inflation Rate	-149.8256	70.6502	-2.1207	0.0630	-309.6474	9.9962

Note: Appendix

Table 5 represents the regression analysis evaluating the relationship between the NEPSE Index and GDP growth rate and inflation rate. The values listed for each predictor (Intercept, GDP rate, and Inflation rate) include the coefficient, standard error, t-statistic, p-value, and confidence intervals as under.

1. Intercept (3111.40).

Coefficient (3111.40). The intercept represents the expected value of the NEPSE index when both the GDP growth rate and inflation rate are zero. In this case, the baseline NEPSE index value would be 3111.40 points when there is no GDP growth and no inflation. This is a starting point for the model, and while it is not directly interpretable in isolation, it provides a reference for the overall regression.

Standard Error (581.76). The standard error indicates the precision of the estimated intercept coefficient. A lower value would suggest greater precision, meaning that the estimate of 3111.40 is relatively precise.

T-Stat (5.35). The t-statistic tests whether the intercept coefficient is significantly different from zero. A t-statistic of 5.35 is large, suggesting that the intercept is significantly different from zero.

P-Value (0.000463). A p-value of 0.000463 is significantly less than 0.05, indicating that the intercept is statistically significant at the 5% significance level. This suggests that the baseline value of the NEPSE index is a meaningful part of the regression model.

Confidence Interval (1795.38, 4427.42): The 95% confidence interval for the intercept coefficient is between 1795.38 and 4427.42, meaning we can be 95% confident that the true value of the intercept falls within this range. The wide interval indicates some uncertainty, but the intercept is still significant.

2. GDP Rate (-154.43)

Coefficient (-154.43). The coefficient for the GDP growth rate suggests that for every 1% increase in GDP growth, the NEPSE index decreases by approximately 154.43 points. This indicates a negative relationship between GDP growth and the NEPSE index. When the GDP grows, it might lead to economic conditions (such as inflation or interest rates) that negatively affect the stock market.

Standard Error (57.92). The standard error of 57.92 suggests that the estimate for the GDP growth coefficient is relatively precise. A larger standard error would indicate less confidence in the coefficient's accuracy.

T-Stat (-2.67). The t-statistic of -2.67 indicates that the coefficient is significantly different from zero. Since the absolute value of the t-stat is greater than 2, it suggests statistical significance at the 5% level.

P-Value (0.0258). The p-value for the GDP rate coefficient is 0.0258, which is less than 0.05. This confirms that the GDP growth rate has a statistically significant negative effect on the NEPSE index, meaning that as GDP grows, the NEPSE index tends to decrease.

Confidence Interval (-285.46, -23.40): The 95% confidence interval for the GDP coefficient suggests that we are 95% confident the true effect of GDP growth on the NEPSE index lies between a decrease of 285.46 and 23.40 points. This range implies that the effect is significant and negative, but the magnitude of the effect varies between these two values.

3. Inflation Rate (-149.83)

Coefficient (-149.83). The coefficient for the inflation rate shows a negative relationship with the NEPSE index. For every 1% increase in the inflation rate, the NEPSE index is expected to decrease by approximately 149.83 points. This suggests that rising inflation might lead to reduced stock market performance due to higher uncertainty and lower investor confidence.

Standard Error (70.65). The standard error of 70.65 indicates some variability in the estimate of the inflation rate's effect on the NEPSE index. A larger standard error would indicate greater uncertainty in the coefficient estimate.

T-Stat (-2.12). The t-statistic for inflation is -2.12, which is significant, as it exceeds the critical value of 2 for a 5% significance level. This indicates that the inflation rate's effect on the NEPSE index is statistically significant at the 5% level.

P-Value (0.063). The p-value of 0.063 is slightly above the 0.05 threshold but still below 0.10. This suggests that the effect of inflation on the NEPSE index is weakly significant at the 10% level. Although it is not statistically significant at the 5% level, the result still points to a possible relationship.

Confidence Interval (-309.65, 9.99). The 95% confidence interval for the inflation coefficient spans from -309.65 to 9.99, which means that while the true effect could be negative (a significant decrease in the NEPSE index), there is also some possibility that inflation has no effect or even a positive effect. This wide interval suggests uncertainty in the true effect, reflecting the fact that inflation's influence on the NEPSE index is not as consistent as that of GDP.

Conclusion

From this study, the research can conclude the following way.

- The NEPSE index shows moderate variability and an upward trend. Still, it is not strongly aligned with GDP growth or inflation rates, indicating the influence of additional factors such as investor sentiment, monetary policies, global economic conditions, etc.
- GDP growth is highly volatile, reflecting Nepal's economic vulnerability to shocks and challenges.
- Inflation is relatively stable, but its impact on stock market performance appears inconsistent, possibly due to mitigating factors like market maturity or monetary interventions.
- Inflation and GDP growth rate collectively have a statistically significant impact on the NEPSE index (p-value = 0.0412), explaining 50.78% of the variability in the stock market index. Nearly half of the variability in the NEPSE index remains unexplained, pointing to the influence of other factors not included in the model. These findings suggest that macroeconomic variables like GDP growth and inflation play a role in shaping stock market trends in Nepal.
- suggest that Nepal’s stock market perform
- The adjusted R Square highlights that the relationship is not straightforward or highly robust. Inflation and GDP growth rates are not fully sufficient to explain the fluctuations in Nepal’s stock market index.
- The GDP growth rate significantly negatively influences the NEPSE index, while inflation shows a negative but statistically insignificant relationship. These findings suggest that

Nepal's stock market performance is not directly aligned with macroeconomic indicators like GDP growth and inflation in Nepal. The stock market appears to be influenced by structural inefficiencies and other external factors.

Recommendations/Implications

1. Include additional predictors. Future research should include other macroeconomic factors such as interest rates, exchange rates, trade balances, and market sentiment to capture a more comprehensive view of the determinants of NEPSE index performance.
2. Address precision issues. A high standard error suggests the need for more accurate predictions. Refining the model or collecting more data may help reduce this error.
3. Increase sample size and data robustness. This study's small sample size limits its generalizability. Expanding the dataset to include more years or quarterly data would provide more reliable and robust results.
4. Policy implications. Policymakers should recognize the potential adverse effects of high GDP growth on the stock market, possibly due to structural inefficiencies. Efforts should be made to align economic growth with market performance by improving market efficiency and reducing blockages.
5. Inflation's impact should be closely monitored, especially during periods of high volatility, to mitigate potential risks to investor confidence.
6. Enhance investor awareness. Given the inverse relationship between GDP growth and the NEPSE index, investors should consider broader economic conditions and market-specific factors when making investment decisions.
7. Sectoral Analysis. Conduct sector-specific analyses to determine whether certain industries respond differently to inflation and GDP growth, enabling a more detailed understanding of the stock market dynamics in Nepal.
8. By addressing these recommendations, future studies and policymaking can enhance the understanding and performance of Nepal's stock market, creating a more resilient and investor-friendly financial environment.

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Appendix

Fiscal Years	GDP Rate	Inflation Rate	NEPSE Index
2069/70	3.8	9.9	518.33
2070/71	5.7	9.1	1036.11
2071/72	2.32	7.2	961.23
2072/73	0.01	9.9	1718.15
2073/74	7.5	4.5	1582.7
2074/75	6.66	4.2	1212.36
2075/76	6.7	4.6	1259.01
2076/77	2.3	6.2	1362.34
2077/78	0	3.6	2883.38
2078/79	0	6.3	2009.46
2079/80	2.22	7.74	2097.09
2080/81	3.3	8.19	2240.41

Note: Annual Report of NRB and SEBON