The Impact of Global Stock Market Indices on National GDP: An Empirical Analysis of the S&P 500, CAC 40, and Nikkei 225 (2014-2023)

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Abstract: This study investigates the relationship between three prominent global stock market indices, Standard & Poor's 500 (S&P 500), Cotation Assistée en Continu 40 (CAC 40), and Nikkei 225 and the Gross Domestic Product (GDP) of the United States, France, and Japan, respectively, over the period from 2014 to 2023. This research uses empirical analysis where the correlation and regression analysis of these three investment market indices and the GDP of those three nations is done. Based on the results of this research, we can say that the S&P 500 index has a significant impact, explaining approximately 80% of the variation in the GDP of the United States, while the other two indices, Nikkei 225 and CAC 40 have shown a positive statistical relationship with the GDP of Japan and France, accounting for 42% and 51% of GDP variance, respectively. This research also examines some of the roles of factors, such as the power of financial markets as economic indicators, while acknowledging the role of other macroeconomic indicators, including unemployment and inflation. Adjustments for inflation and currency ensure consistency across datasets. These results can be used to create strategies that develop stability and economic growth, improving risk management and the development of investment strategies. This study also reflects the function of fiscal regulations in eliminating the negative influences of unstable markets on financial performance. It is recommended that future researchers use other macroeconomic indicators such as unemployment rates, inflation and research in other countries to obtain a more detailed picture about aspects which can impact economic growth.

Keywords: Stock market indices; Gross Domestic Product (GDP); Correlation analysis; Regression analysis; Macroeconomic stability; Standard & Poor's 500 (S&P 500); Cotation Assistée en Continu 40 (CAC 40); Nikkei 225

JEL Classification: G10; G15; E44; C58; O16

1. Introduction

This research presents the effect of the role of financial markets in creating the circulation of economic assets and reflecting the economic situation. It also allows us to evaluate the effect of the three main international indices of monetary marketplaces, the Standard & Poor's 500 (S&P 500), Cotation Assistée en Continu 40 (CAC 40), and Nikkei 225, on the macroeconomic stability within the US, France and Japan.

This research analyzes the influence of three major financial market indices globally on the Gross Domestic Product (GDP) in their respective nations. Some financial scholars have concentrated primarily on the correlation amidst financial market performance and financial development. According to Barro (1990), financial market is stimulated by economic progress, which helps to initiate investments, improve resource management, and provide liquidity, or cash, to support business and the economy. Rajan & Zingales (1998) showed that a robust statistical

relationship exists between the growth of economies in many nations and their stock markets. The outcomes may specify the forecast of economic advancement and can provide information about what may happen in the future. The findings indicate that financial markets are closely linked to economic developments, providing a snapshot of future expectations. Akdağ et al. (2023) explained that the S&P 500 index, which lists the 500 most powerful American firms, is used as an indicator to measure the condition of the American economy. The CAC 40 comprises 40 major firms registered on the Paris Stock Exchange. The Nikkei 225, which tracks the performance of 225 firms registered in the Tokyo trading platform, is a very crucial indicator of the Japanese economy.

Stock market performance is widely regarded as a reliable indicator of fiscal progress across highly advanced markets like the United States, France, and Japan (Mishkin, 2001). According to Mishkin (2001), strong regulatory frameworks and liberalised financial markets are associated with stock market growth that more readily converts into actual economic gains. Stiglitz (2000) confirms that excessive easing of market control rules will have negative consequences, causing financial crises that will hinder economic development. Campbell & Cochrane (1999) and Baker et al. (2016) found that stock price fluctuations affect business and consumer confidence. Case et al. (2005) found that when stock prices increase, household wealth also increases. This increase will encourage households to spend more, which can increase economic activities. According to Shiller (2000), when financial markets decline, it will negatively affect the domestic economy, which can lead to a decrease in household wealth and confidence, making them more cautious in their spending and investments. The relationship between economic progress and capital market results is becoming more difficult because of globalization and the unification of capital markets. According to Forbes & Rigobon (2002), interconnected markets in the global economy have a chain effect on the rapid spread to other markets when problems occur in a specific financial system. It is very essential to understand the global framework to do an investigation on the effects of capital markets on GDP. Financial factors including inflation, interest rates and unemployment according to Blanchard (2009) significantly affect the correlation between financial markets and economic expansion. The objective regarding this work aims to empirically examine the effects of S&P 500, CAC 40 and Nikkei 225 on the economy of their countries during the years 2014-2023. Also, the objective of this paper is to employ statistical techniques such as correlation and regression, to use capital market performance as an indicator to predict economic growth.

This study is of significant importance as its findings can provide valuable insights to investors for better portfolio management, to policymakers for ensuring economic stability, and to economists for further analysis. Many issues that have been uncovered in the literature are addressed in this study and help fill gaps in the existing body of information. In studies that focus on a single nation, it is common to lack a cross-country perspective (Beck et al., 2000). First, it provides a comparative review of stock market indices affecting GDP within three major world economies. Second, it allows for the investigation of short-term variances and long-term trends in the capital market-GDP relationship (Rousseau & Wachtel, 2000). This was made possible by using a dataset covering a twenty-year period. The study provides a clearer understanding of what shapes the relationship between capital markets and the wider economy (Stiglitz, 2000). It takes into account key elements such as regulatory systems, economic policies, and investor sentiment.

2. Literature Review

Many studies in the field of economics have explored the link between economic growth and stock market development. This interest exists because stock markets play a key role in modern economies. They help generate capital, spread risk, and improve how resources are allocated. The main goal of stock markets is to support economic growth by enabling these processes. Theories that explain this connection often highlight factors like access to liquidity, capital formation, and increased productivity through better resource use. However, these theories sometimes overlook important factors such as fiscal policies, inflation, and changes in interest rates. In addition, much of the research tends to concentrate on short-term patterns, leaving out the long-term effects of stock market changes on economic stability. Well-developed stock markets help companies to raise money, which is essential for spending on new initiatives, investigation and innovation, and expansion operations (Levine, 1991). Bencivenga et al. (1996), who also voiced a similar point of view, support the theory that stock markets help to avoid liquidity issues and enable higher degrees of capital accumulation, hence boosting growth. Rajan & Zingales (1998) built on this by showing the expansion of financial markets, especially equity markets, helps to reduce the restrictions placed by outside finance, hence enabling the expansion of companies. Nonetheless, these conclusions do not adequately address the challenges faced by less developed markets, such as insufficient financial infrastructure and weak regulatory frameworks. Moreover, the existing literature often overlooks how economic inequalities and national policies can influence the prospective advantages of the stock market growth. Empirical data supports the development of a favourable link between the expansion of the industry and the increase pertaining to the stock market. In their seminal work, King & Levine (1993) showed that there is a correlation between nations increased sophisticated financial models and elevated rates of economic growth. At the same time, Demirgüç-Kunt & Maksimovic (2002) presented evidence showing companies in nations that have legal and financial systems that are more effective are more dependent on foreign financing. This highlights the importance

of stock markets in the dynamics of development. To demonstrate the liquidity of the stock market, which is quantified by the value pertaining to transactions compared to GDP, serves as a robust indicator of economic development, Bekaert et al. (2011) utilised data from multiple countries to make their determination. Their research indicated that the expansion pertaining to the banking sector as well as the fluidity of the stock market are both positively and strongly connected with the rates of growth in the economy that would occur in the future.

The role of capital market liquidity in economic expansion cannot be overstated. Through the liquidity of stock markets, investors are able to buy and sell stocks more efficiently, while companies benefit from reduced capital expenditure and increased investment stimulation. Beck & Levine (2004) used panel data with dynamic techniques to extend the analysis of Levine & Zervos (1998). Their findings revealed that the liquidity of stock markets has a substantial impact on economic growth, showing that countries with more liquid stock markets experience faster growth compared to those with more developed, yet less liquid, markets. Early empirical evidence from Atje & Jovanovic (1993) suggest that in nations with more advanced financial markets, stock markets play a significant role in contributing to economic growth. However, despite these findings, there is limited discussion in the literature concerning the volatility of stock markets and its potential to offset these benefits. The absence of a focus on emerging economies further highlights a significant gap, as these markets often face unique challenges that are not applicable to developed economies.

Through better resource allocation as much as capital creation and liquidity, stock markets influence economic development. Effective markets guarantee that capital moves to the most profitable industries and companies, thereby improving the general economic output. Greenwood & Smith (1997) underlined that improved information distribution made possible by financial markets allows consumers to make wise judgements and distribute their resources effectively. Henry (2000) also demonstrated that liberalisation pertaining to the financial market results in higher investment and lower capital costs, both of which help to boost the economy.

The impact of the financial market volatility on growth in the economy has also been a subject of research. The rise of the financial market usually leads to more growth, but too much instability can cancel those benefits. Ramey & Ramey (1995) found that changes in economic factors, such as stock prices, hurt growth. Aghion et al. (2004) looked into this connection even more. They said that higher volatility makes people less sure of what will happen, which makes them less likely to spend and slows down economic growth. This highlights the importance of stabilizing financial markets through effective regulatory frameworks. Many studies, however, fail to analyze how policy measures in different countries address or fail to address these issues. Based on these results, we can say that the more developed stock markets are more beneficial for the economy of that country, but it is necessary to maximize their benefits for their stability. In the analysis between different countries, we have a relationship between financial markets and growth in the economy, where we can see large differences between them. La Porta et al. (2012) argue that the effectiveness of the role of stock markets in enhancing investor safety laws and the legal structure of a country is of utmost importance.

The enlargement of global financial markets acts as a mediator in the connection between growing economies and the growth of the stock market. Forbes & Chinn (2004) demonstrate that the increased correlation of domestic stock markets with global market trends is influenced by financial globalisation, which can either hinder or enhance it depending on the economic conditions that are external to the country. Kose et al. (2009) show that restrictive financial systems grow more slowly than nations with more open financial markets and strong domestic institutions. This is especially important for emerging nations with fast-rising stock markets and increased financial connectivity. Nonetheless, global integration also exposes markets to greater risks, such as contagion effects during financial crises, which are not thoroughly addressed in existing literature.

The research strongly emphasizes the correlation between financial development and economic growth while also acknowledging the influence of other macroeconomic factors. Inflation, rates of interest, as well as exchange rate stability affect capital market growth. Fischer (1993) and Blanchard & Sheen (2013) stressed that macroeconomic stability is crucial for sustained growth. Financial crises hurt growth, hence Reinhart & Rogoff (2009) stressed the necessity of financial regulations and policies. Despite these acknowledgements, there is limited focus on the role of institutional quality and governance in moderating these macroeconomic influences.

The research also suggests a complex view of stock market growth across economic circumstances. Stiglitz (2000) warned that excessive financial liberalization without control might cause financial instability and crises, weakening growth. Kaminsky & Reinhart (1999) examined financial crises and stressed the necessity for robust institutional structures to attenuate their impacts.

Recent research has used more advanced methods and extensive datasets to study financial market and economic growth patterns. Rousseau & Wachtel (2000) used time-series analysis to ascertain that markets for stocks enhance growth over time, especially in nations with strong financial institutions. Bekaert et al. (2011) used panel data to show that financial growth, including markets for stocks, accelerates growth in the economy in emerging nations. These studies stress the significance of finance in fostering growth in the economy, especially in structurally changing economies.

Economic development and stock markets are complex and are affected by financial development, macroeconomic stability, regulation, and global financial integration. In addition to stock markets, there are many

other economic and institutional indicators that affect economic growth. This research shows expansion of the economy relies on the stability of the capital markets, which requires stock market growth, investment to protect investors, and more favorable macroeconomic conditions. Many studies have shown that a country's stock market indices are strong indicators of its economic development. Future scientific work should focus on analyzing the connection between financial markets and other macroeconomic indicators of these countries.

3. Methodology

To analyze the impact of international stock market indices such as S&P 500, CAC 40 and Nikkei 225 on the GDP of the USA, France and Japan from 2014 to 2023, a quantitative research method was used and two econometric models, such as correlation as well as analysis of multivariate regression based on the hypotheses and data collected.

3.1 Study Hypotheses

Based on three hypotheses, the study analyzes the correlation between the three stock market indices and the GDP of these countries.

H1: There is a positive correlation between the S&P 500 and the growth of the GDP of the United States.
H2: There is a positive correlation between the CAC 40 and the growth of the GDP of France.
H3: There is a positive correlation between the Nikkei 225 and the growth of the GDP of Japan.

Through these hypotheses, it is intended to analyze whether the change in the indices can be an indicator of the economic change of these countries.

3.2 Data Collection

In this article, secondary data were used and were obtained from reliable and easily accessible sources. Data collection for the S&P 500, CAC 40 and Nikkei 225 indices was done on platforms such as Yahoo Finance, Bloomberg and DataStream, while historical data on daily prices was collected from Yahoo Finance and Bloomberg. The World Bank and IMF databases were used to obtain GDP values for the USA, France and Japan.
The current research is based on the analysis of the final values of the three indices for each year.
By implementing measures such as time frame approximation, inflation adjustment, frequency standardization and currency adjustment, the stability and comparability of the data are guaranteed.
To avoid problems that may arise during the comparison and compatibility of the exchange rates of currencies of different countries, the values of financial markets and GDP have been converted into US dollars.
Using the IMF database, the historical data values have been converted.
Over a decade, the time periods for each category of values have been harmonized. From this time period, it is necessary to compare all analyses to be done in the same time frame.
For the time resolution of the GDP data, in the standardization of frequencies, we converted the daily closing prices of the financial market indexes on an annual basis. This was done to ensure that the standardization was consistent across all data sets and to ensure that the data were fully consistent with the annual GDP report.
Looking at GDP, deflators taken from the World Bank database did not adjust GDP values to account for inflation. The process was intended to ensure the accuracy of all values included in the analysis.
The validity and reliability of data obtained from different sources are linked to cross-validation processes. This was accomplished by referring to additional data points or consulting the sources that were initially utilised. The adoption of this strategy contributes to the enhancement of the robustness of the dataset, which in turn contributes to the enhancement of the credibility of the analysis.

3.3 Econometric Models and Formulas

Through the specified econometric models, the impact analysis of the three most economically important stock market indices of these three countries was performed. To measure the link between a country's GDP growth and its stock market index, we used Pearson's correlation coefficient (r). This method shows how strong and in what direction the connection is between the two.
The formula for Pearson's correlation coefficient is:

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - x)^2} \sqrt{\sum(y_i - y)^2}}$$

where,

- x_i represents the current value of the stock market index,
- y_i denotes what the values are of GDP growth,
- $\bar{x}$ and $\bar{y}$ are the mean values of the stock market index and GDP growth, respectively (Field, 2013).

Pearson's correlation works best when the link between two variables is linear. This means it can show clearly how the two are connected — if that type of connection exists. It also assumes that the spread of values stays the same throughout the data, so one variable doesn't affect how the other varies.

However, outliers can mess up the results and make the correlation look stronger or weaker than it really is. Also, even if the numbers show a strong connection, it doesn't mean that one causes the other. For example, just because the stock market and GDP move together, it doesn't mean one causes the other.

To deal with outliers, we did a sensitivity check by removing the extreme values and checking the correlation again. That way, the results are more reliable.

We also used a multiple linear regression model to check how well stock market indices can help predict changes in GDP. The basic form of the regression formula is:

$$\text{GDP}_{\text{country,t}}=\beta_0+\beta_1\times S\&P\ 500_t+\beta_2\times CAC\ 40_t+\beta_3\times Nikkei\ 225_t+\epsilon_t$$

where,

- $\text{GDP}_{\text{country,t}}$ is the GDP growth rate of a given country at time t,
- $S\&P\ 500_t$, $CAC\ 40_t$, and $Nikkei\ 225_t$ are the stock market indices at time t,
- β_0 is the intercept,
- β_1, β_2, and β_3 are the coefficients that measure the impact of each index on GDP,
- ϵ_t is the error term (Wooldridge, 2010).

The multiple linear regression model operates under the assumption that the relationship between the independent variables (stock indices) and the dependent variable (GDP growth) is linear. The regression model assumes that the data points are independent, meaning there should be no connection or pattern between the residuals. It also expects that the independent variables are not too similar to each other, because that can cause multicollinearity. Another important condition is that the variance of the residuals should stay the same across different levels of the independent variables. If these assumptions are not met, the results of the regression might not be valid.

To check whether these conditions were met, we used several tests. Multicollinearity was tested using the variance inflation factor. The Shapiro-Wilk test was used to check if the residuals were normally distributed. For checking constant variance, the Breusch–Pagan test was applied. Doing these tests helped make sure that the regression analysis was correct.

Since changes in the stock market might take time to affect GDP, a lagged model was also used to include any delayed effects. The equation for the lagged model is:

$$\text{GDP}_{\text{country,t}}=\beta_0+\beta_1\times S\&P\ 500_{t-1}+\beta_2\times CAC\ 40_{t-1}+\beta_3\times Nikkei\ 225_{t-1}+\epsilon_t$$

where, $t-1$ represents the earlier values of the stock market indices, also known as lagged values, as explained by Enders (2014).

This delay matters because changes in stock markets do not always impact GDP right away. It can take time for the effects to appear. By including lagged values, the model takes these delays into account, which helps improve the accuracy of the results.

Also, the data were adjusted for things like currency differences and inflation. These adjustments were important to make sure that values from different countries and time periods could be fairly compared.

4. Results and Discussion

This chapter shows the key results of the study. It focuses on how three major international stock market indices the S&P 500 from the United States, the CAC 40 from France, and the Nikkei 225 from Japan — are related to the GDP growth of their countries. The analysis uses both correlation and regression methods to see how strong the relationship is between each index and the country's GDP.

Table 1 gives a basic summary of the descriptive statistics for the three stock indices and the GDP values of the United States, France, and Japan. These numbers help explain how the data is spread and how much it changes over the time period studied.

Table 1. Descriptive statistics for the S&P 500, CAC 40, Nikkei 225, and the GDP of the United States, France, and Japan

Variable	Mean	Std. Deviation	Min	Max
S&P 500	2563.70	935.82	1279.81	3943.34
USA GDP	2.28	1.35	-2.80	5.70
CAC 40	6948.64	368.62	5900.00	7545.60
France GDP	1.24	1.20	-9.70	2.60
Nikkei 225	20049.12	3431.39	14352.00	28891.00
Japan GDP	0.65	1.85	-5.80	3.30

Source: Author's calculations based on data from Yahoo Finance and World Bank.

Through descriptive statistics we can analyze and understand the data in this study, using the mean and standard deviation to measure the stability of the stock indices and GDP of these countries. The lowest and highest values indicate the range of the data, providing an overview of the movements of GDP and market indices within a ten-year period.

Table 2 presents the results of the correlation analysis between each stock index and the corresponding country's GDP. This helps to better understand the strength and direction of the relationship between market performance and economic output.

Table 2. Pearson test correlation between national GDPs and market indices

Variable Pair	Correlation Coefficient (r)	p-value
S&P 500 and USA GDP	0.894	0.001
CAC 40 and France GDP	0.647	0.040
Nikkei 225 and Japan GDP	0.712	0.025

Source: Author's calculations based on data from Yahoo Finance and World Bank.

A correlation analysis of the three indices and their corresponding GDPs revealed a positive correlation for all three. The S&P 500 and USA GDP show the highest correlation ($r = 0.894$, $p < 0.01$), indicating a strong positive relationship. This suggests that alterations in the S&P 500 are closely correlated with alterations in the GDP of the USA. The CAC 40 and France GDP also show a significant but weaker correlation ($r = 0.647$, $p = 0.040$), while the Nikkei 225 and Japan GDP exhibit a moderate positive relationship ($r = 0.712$, $p = 0.025$). These results highlight the varying degrees of dependency on stock market indices for economic trends across different nations.

Table 3 shows the regression results for the S&P 500 and the GDP of the United States. The findings provide insight into how changes in the stock market index may influence economic growth.

Table 3. Regression results for S&P 500 and USA GDP

Model	Coefficients	Std. Error	t-value	p-value
Intercept	-3.962	0.831	-4.768	0.001
S&P 500	0.002	0.000	8.654	0.000
R-squared	0.799			
Adjusted R-squared	0.785			
F-statistic	74.891			0.000

Source: Author's calculations based on regression analysis.

The regression model for the USA indicates that the S&P 500 exhibits a substantial positive impact on the GDP ($\beta = 0.002$, $p < 0.01$). The coefficient of $\beta = 0.002$ implies that for every 1-point increase in the S&P 500 index, the GDP of the USA increases by 0.002 percentage points, holding all other variables constant.

Table 4. Regression results for CAC 40 and France GDP

Model	Coefficients	Std. Error	t-value	p-value
Intercept	-7.482	3.451	-2.168	0.057
CAC 40	0.001	0.001	2.182	0.040
R-squared	0.419			
Adjusted R-squared	0.355			
F-statistic	4.756			0.040

Source: Author's calculations based on regression analysis.

The coefficient of determination (R-squared) of 0.799 indicates that approximately 80% of the variation in USA's GDP can be attributed to changes in the S&P 500. Economically, this highlights the pivotal role of the S&P

500 as a barometer of the US economy, reflecting the strong interdependence between financial markets and economic growth. The remaining 20% of the variance could be attributed to other macroeconomic factors, such as inflation, government policies, or international trade dynamics.

Table 4 outlines the regression analysis between the CAC 40 index and the GDP of France. It highlights how fluctuations in the French stock market may be linked to changes in national economic performance.

The regression analysis for the CAC 40 index reveals that it significantly impacts France's GDP ($\beta = 0.00$, $p < 0.05$). The coefficient $\beta = 0.001$ indicates that a 1-point increase in the CAC 40 index results in a 0.001 increase in percentage points France's GDP.

The coefficient of determination (R-squared) value of 0.419 implies that about 42% of the variation in France's GDP is explained by changes in the CAC 40 index. Economically, this suggests that while the CAC 40 is an important economic indicator, it is not the sole driver of GDP growth in France. The lower R-squared value highlights the significant role of other factors, such as fiscal policies, consumer spending, and international economic conditions, in shaping France's GDP.

Table 5 summarizes the regression output for Japan, focusing on the relationship between the Nikkei 225 index and the country's GDP. The results offer a clearer view of how the Japanese market aligns with broader economic trends.

Table 5. Regression results for Nikkei 225 and Japan GDP

Model	Coefficients	Std. Error	t-value	p-value
Intercept	-4.929	1.762	-2.797	0.021
Nikkei 225	0.0003	0.000	2.814	0.025
R-squared	0.507			
Adjusted R-squared	0.453			
F-statistic	7.924			0.025

Source: Author's calculations based on regression analysis.

The regression results for Japan show a significant positive impact of the Nikkei 225 on GDP ($\beta = 0.0003$, $p < 0.05$). The coefficient $\beta = 0.0003$ indicates a one-point increase in the Nikkei 225 leads to a 0.0003 percentage point increase in Japan's GDP.

The R-squared value of 0.507 suggests that about 51% of the variation in Japan's GDP is explained by the Nikkei 225 index. This moderate R-squared value reflects the influence of Japan's highly export-driven economy and the role pertaining to external forces, including global demand, exchange rates, and supply chain stability.

The remaining variance can likely be attributed to these external economic forces and domestic policies.

The findings show that there is a significant and favourable correlation between the GDP of the countries where the major international market indices are based and these indices themselves. Given its strong correlation with USA's GDP, the S&P 500 index's performance is a dependable measure of the vitality of the US economy. The CAC 40 and Nikkei 225 exhibit strong correlations with the GDPs of France and Japan, respectively, albeit slightly lower than those of the S&P 500.

These findings underscore the correlation between financial markets and economic performance. Regression coefficients and significant positive correlations indicate that stock market performance may accurately reflect the economic climate. The strong link between the S&P 500 and GDP in the USA shows that market trends can tell us a lot about the country's economic situation. The CAC 40 and Nikkei 225 are also important indicators for France and Japan, even though their correlations are not as strong.

The variance explanations of the regression models demonstrate that market indices are not the only factors that influence GDP, despite the fact that they do play a role in the process of GDP prediction. There are also additional significant economic factors that have an impact on GDP, including inflation, unemployment, and policies implemented by the government. Future research using other indicators may reveal new factors that may influence economic development, and investors and policymakers alike will be better informed. A comprehensive and meticulous examination of the correlation between GDP and stock market indices will help policymakers have a more detailed picture for forecasting the domestic economy. In the event that the indices are unstable, policymakers can investigate this issue to address the situation.

This study shows how important financial indices are as a measure of a country's economy, but it should be emphasized that financial markets are only one of the variables in measuring GDP, and therefore, a holistic approach should be taken by economic policymakers.

5. Conclusions and Recommendations

Over a ten-year period, this study investigated the relationship that existed between national gross domestic product and important international market indices. This study made use of a number of different indices, including the French CAC 40, the S&P 500 in the United States, the Nikkei 225 in Japan, and others. Using descriptive

statistics, correlation, and regression analysis, the research showed that a robust positive correlation exists between market indices and the GDP that corresponds to them.

There was the strongest correlation between the S&P 500 and the GDP of the United States. Therefore, the performance of the index is a good indicator of the state of the economy in the United States. The CAC 40 continued to demonstrate positive correlations with the GDP of France. In contrast to the correlations that the S&P 500 had with the GDP of France, the correlations that the Nikkei 225 had with the GDP of Japan were weaker. It is reasonable to assume, in light of these findings, that the performance of the market for stocks could serve as a reliable predictor of the state of the economy.

Furthermore, regression models have provided additional evidence that these stock market indices significantly impact GDP. Specifically, the CAC 40 accounted for 42% of the variation in France's GDP, the Nikkei 225 explained 51% of the variation in Japan's GDP, and nearly 80% of the changes in USA's GDP were attributed to the S&P 500. While market indices serve as valuable indicators of economic conditions, these findings also emphasize that GDP fluctuations are influenced by a broader range of factors.

The recommendations that we are able to provide based on the findings can be beneficial to many different parties, including legislators, investors, and potential researchers. When monitoring the economy, policymakers should pay close attention to the primary market indices by paying close attention to them. People have the ability to take prompt action in response to changes in the economy if indices such as the Nikkei 225, CAC 40, and S&P 500 show significant shifts. In light of the close connection that exists between GDP and market indices, it is of the utmost importance to ensure that financial markets continue to enjoy robustness in order to preserve economic stability. Some examples of market-stable policies that ought to take precedence during times of economic downturn include the modification of regulations and the provision of financial assistance to individuals. Even though many different factors can affect GDP, stock market indices are still a helpful way to understand how the economy is doing. Still, policymakers should not rely only on what the stock market shows. It's better to look at a wider range of indicators to get the full picture.

Looking more closely at the results, we can see some useful ideas for policy. First, since there is a strong link between market indices and GDP, it's important to have strong regulations that keep financial markets stable. Governments could use tools like circuit breakers or ask companies to follow stricter reporting rules to reduce market swings.

Second, market indices can be used in forecasting tools that help predict when the economy might slow down. Third, policies like tax cuts for industries with high market activity might help push economic growth in the right direction.

This study also gives useful information to investors. Knowing how market indices relate to GDP can help them spot future trends and make smarter investment choices. Because these indices strongly affect GDP, it's also important to consider other big economic factors when planning investments. During uncertain times, one way to lower risk is by mixing investments, including some that don't move the same way as the stock market.

Researchers could make their results more accurate if they include more factors, like inflation, unemployment, or specific government policies. Future studies should also look at how outside events, like global crises or pandemics, change the link between stock markets and GDP. It might also be helpful to study how certain industries react to market changes, so that more specific policies can be made.

If researchers compare data from more countries, they might better understand how these connections work worldwide. Knowing how different conditions affect the relationship between GDP and market indices makes it easier to apply the results in other places. Future research could also use newer methods, like machine learning or time-based models, to get more precise results.

In the end, this study shows that global stock indices play a big role in shaping a country's economy. The strong connections seen in the analysis show that financial markets and economic activity are closely related. These results can help both governments and investors make smarter decisions, which can lead to more economic stability. Future studies should keep exploring new factors to better understand how GDP and stock markets are linked.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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