

Vietnam's GDP Growth Rate in the Context of COVID-19 Impact and the Forecast of Vietnam's GDP per Capita by 2030

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Abstract: *The advent of the COVID-19 pandemic has rendered GDP forecasting more critical than ever. Despite numerous challenges, Vietnam's GDP growth rate remained positive throughout the two years of the pandemic, reflecting the resilience and concerted efforts of the Vietnamese Government and its citizens. While the post-COVID-19 economic landscape remains fraught with uncertainties, projections indicate continued stable growth over this decade. This study compiles data on GDP per capita from 1985 to 2023 to facilitate forecasts for the period from 2024 to 2030. The primary objective is to elucidate the current trajectory of Vietnam's GDP growth and to provide robust forecasts for GDP per capita over the next seven years using both linear and nonlinear regression models. Through this analysis, the study aims to propose strategic measures to bolster Vietnam's economic development in the post-COVID-19 era.*

Keywords: GDP Growth, COVID-19 Pandemic, Linear Regression, Logarithmic Regression, Inverse Regression

I. INTRODUCTION

Economic growth contributes to the enhancement of average per capita income, thereby improving the living standards of citizens and fostering sustainable poverty reduction. A commonly utilized metric to gauge economic growth at the national, regional, or local level is GDP (Nguyen Phuong Linh et al., 2022). As defined by international organizations such as the United Nations (UN), the World Bank, and the International Monetary Fund (IMF), GDP (Gross Domestic Product) represents the market value of all final goods and services produced within a specified territory (typically a country) over a designated period (usually one year).

While the examination of economic growth rates has long been a focal point for many countries, it has garnered renewed scrutiny with the emergence and rapid, uncontrollable spread of the COVID-19 pandemic. The pandemic disrupted global supply chains through widespread lockdowns and social distancing measures, precipitating heightened unemployment rates, economic recessions, and a host of other adverse effects that have significantly impaired the GDP of nations worldwide.

The period from 1985 to 2010 marked a profound transformation in Vietnam's economy. Acknowledging the deficiencies inherent in the existing centrally planned and subsidized economic model, the Party and the state enacted comprehensive economic reforms. These reforms transitioned the economy to a multi-sectoral commodity system functioning within a market mechanism, while retaining state management and a socialist orientation, a framework that persists to the present day.

Between 2010 and 2023, Vietnam's economy experienced substantial changes. In 2010, the World Bank officially classified Vietnam as a lower middle-income country, with a GDP growth rate of 6.78%, one of the highest in Southeast Asia. This period saw a robust increase in exports, particularly in the textile, footwear, electronics, and agricultural sectors. The development of transportation infrastructure, accelerated urbanization, and a significant rise in foreign direct investment (FDI), particularly in the processing, manufacturing, and service industries, created favorable conditions for Vietnam's economic development, as noted by the World Bank.

From 2010 to 2019, Vietnam's economic growth rate was consistently stable and steady, with an average annual increase of 6.05% prior to the COVID-19 pandemic. Specifically, the GDP growth rate was 6.78% (1,981 trillion VND) in

2010, 6.41% (2,537 trillion VND) in 2011, approximately 5.5% in both 2012 and 2013, around 67.6% from 2014 to 2017, 7.47% (5,542 trillion VND) in 2018, and 7.36% (6,037 trillion VND) in 2019.

Nonetheless, the COVID-19 pandemic significantly disrupted daily life and altered global economic trajectories (Suparmono, 2021). The pandemic precipitated a global economic contraction, with an average decline of -3.1% in 2020. Developed nations experienced an average GDP decrease of -4.5%, while emerging and developing countries recorded an average GDP decline of -2.1% (Ministry of Finance, 2022). Countries within the region, including Vietnam, were not immune to these impacts. The Vietnamese Government's Directive 16 imposed restrictions on trade activities, and concurrently, nations worldwide continued to implement fiscal and monetary easing policies to mitigate the effects of the pandemic, leading to economic stagnation. In 2020 and 2021, the Vietnamese Government prioritized strengthening the healthcare sector and ensuring food security to navigate the COVID-19 crisis, resulting in modest GDP growth rates of 2.87% (2020) and 2.55% (2021). Post-2021, Vietnam was among the first countries to rapidly transition to the "new normal." Consequently, the nation regained its economic growth momentum, achieving GDP growth rates of 8.12% in 2022 and 5.05% in 2023, with forecasts suggesting continued stable growth in the forthcoming years.

The objective of this paper is to analyze the trajectory of Vietnam's GDP growth from 1985 to 2023 and to project Vietnam's GDP per capita for the subsequent seven years, from 2024 to 2030, utilizing both linear and nonlinear regression models.

II. CURRENT STATE OF VIETNAM'S GDP GROWTH FROM 1985 TO 2023

2.1 Period from 1985 to 2010

Since 1985, Vietnam has transitioned to a new economic model, achieving numerous notable milestones. From 1986 to 2000, the Party's renovation policies garnered widespread support across various social strata, stimulating and unleashing the potential and creativity of different economic sectors. This led to increased production, job creation, and a rise in social products. The average annual GDP growth rate during this period was 6.51%, a commendable achievement compared to the centrally planned economies of Eastern Europe and the Soviet Union at that time (General Statistics Office, 2020).

Due to the socio-economic development strategy implemented from 2001 to 2010, Vietnam achieved a relatively high GDP growth rate, averaging 7.26% annually during this period. In 2008, Vietnam transitioned from the group of low-income countries and territories to the group of lower-middle-income countries and territories, successfully shedding its status as a less developed country. This transition represents a significant milestone in the nation's construction and development efforts during this era.

2.2 Period from 2010 to 2015

In 2010, the economic, political, and social landscape of Vietnam showed signs of stabilization after a year marked by severe high inflation and the global economic recession. This year was also a pivotal moment as Vietnam was recognized by the World Bank as a lower-middle-income country. This recognition elevated Vietnam's international standing, attracted foreign investment, and spurred economic and institutional reforms. In 2011, Vietnam commenced a new five-year economic plan for 2011-2015, setting the foundation for sustained economic development in the ensuing years. During the 2010-2015 period, the GDP growth rate averaged approximately 6.28%, and the average GDP per capita rose from 31.47 million VND in 2010 to 58.51 million VND in 2015. These developments indicate a significant improvement in the living standards of the population, reflecting gradual and steady progress over the years.

2.3 The period from 2016 to 2019 (before the COVID-19 pandemic)

During this period, Vietnam's GDP growth rate averaged approximately 7.12%, with 2018 achieving a peak of 7.47%, the highest increase since 2010. This reflects the effectiveness and timeliness of the government's measures, as well as the focused and decisive directives from various ministries and agencies. In 2018, the agriculture, forestry, and fisheries sectors reached their highest growth rates from 2012 to 2018, driven by stable product prices and expanded export markets, which buoyed the spirits of those in these industries (General Statistics Office, 2018). However, in 2019, the GDP growth rate slightly decreased to 7.36%, still ranking as the second highest in the 2010-2019 period. This decline was due to the slowdown in global economic and social conditions, particularly the escalating tensions between the United States and China, and other political issues that exacerbated global trade instability. Additionally, fluctuations in the currency market and oil prices adversely affected the Vietnamese economy. Domestically, the outbreak of African swine fever impacted 63 provinces and cities, significantly reducing the output of the agriculture, forestry, and fisheries sectors. This, in turn, slowed the export of certain goods and resulted in investment disbursements falling short of planned targets.

2.4 The period from 2020 to 2023 (post-COVID-19)

Following 2019, COVID-19 began to penetrate Vietnam, profoundly impacting the period from 2020 to 2023. The GDP growth rate accelerated significantly during this time, particularly in 2021 compared to 2020, soaring from 6,293 trillion VND to 8,480 trillion VND. The year 2021 witnessed substantial growth in the service sector, especially in healthcare, as countries worldwide implemented lockdown policies that paralyzed their economies, prompting the state to prioritize healthcare, food security, and disease prevention measures. The healthcare sector accounted for the largest share of the economic structure at 40.95%, followed by the industrial and construction sectors at 37.86%, and the agriculture, forestry, and fisheries sectors at 12.36%. These sectors also experienced significant growth in livestock, fisheries, and agricultural exports, contributing to GDP growth in 2021, with product taxes minus subsidies comprising 8.83%.

Despite the peak of the pandemic in 2021, affecting all 63 provinces and cities, Vietnam's economy exhibited commendable resilience, ensuring the smooth circulation of goods and achieving a GDP growth rate of 2.55%, equivalent to 8,480 trillion VND. This demonstrates Vietnam's substantial efforts to sustain economic development during the pandemic, successfully positioning itself among the highest growth countries globally at that time.

In 2022 and 2023, while growth continued, it decelerated compared to 2021, with GDP reaching 9,549 trillion VND in 2022 and 10,222 trillion VND in 2023. Post-pandemic, Vietnam's economy encountered fluctuations, with a growth rate of only 5.05% (a decrease of 3.07%) compared to 2022. This slowdown was attributed to the industrial and construction sectors confronting numerous challenges due to the global downturn, with these sectors growing by only 3.02% in 2023, the lowest rate since 2011. The processing and mineral extraction industries also declined compared to previous years, impacting the annual GDP growth rate.

In the first quarter of 2024, the economy is estimated to grow by 5.66% compared to the same period the previous year. Within this, the agriculture, forestry, and fisheries sectors grew by 2.98%, contributing 6.09% to the overall increase in gross value added; the industrial and construction sectors grew by 6.28%, contributing 41.68%; and the service sector grew by 6.12%, contributing 52.23% (General Statistics Office, 2023).

2.5 Conclusion on the period from 1985 to 2023

From 1985 to 2010, Vietnam achieved significant milestones in fostering GDP growth, particularly by enhancing creativity and diversifying business types within its socialist-oriented market economy. This led to a steady increase in GDP growth rates: 4.4% annually during 1986-1990, an average of 8.2% annually during 1991-1995, an average of 7% annually during 1996-2000, an average of 7.5% annually during 2001-2005, and an average of 7% annually during 2006-2010 (Do Thi Thao & Nguyen Thi Phong Lan, 2013). Throughout this period, Vietnam's GDP showed initial improvements and sustained development.

Despite some fluctuations in GDP growth rates, from 2010 to 2023, and extending into the first quarter of 2024, GDP consistently exhibited growth. From 1,981 trillion VND in 2010, GDP rose to 10,222 trillion VND by 2023. This growth reflects a corresponding positive impact on GDP per capita, which increased significantly. In 2010, GDP per capita was 1,614 USD per person, equivalent to 31.473 million VND per person; by 2023, this figure had escalated to 4,284 USD per person, equivalent to 104.615 million VND per person. This growth trajectory underscores a marked improvement in income and living standards for the Vietnamese population over the past 14 years.

It is notable that the USD exchange rate in Vietnam is higher than in the United States and several other Southeast Asian and Asian countries. This exchange rate dynamic renders Vietnamese exports more competitively priced relative to those from other countries in the region, thereby enhancing their attractiveness to markets in the Americas and Europe, where Vietnam maintains a strong export surplus. Concurrently, the significant trade deficit with Asian markets such as China, Japan, and South Korea has contributed to the increase in Vietnam's GDP per capita over the years. These data highlight the relentless efforts of the entire political system, the government, and the Vietnamese populace to elevate the national economy to be on par with those of other countries in the region and globally.

III. LITERATURE REVIEW

GDP is a crucial economic indicator anticipated to exhibit growth across various nations. The growth of GDP serves as a reflection of a country's economic development. Consequently, forecasting GDP trends is a subject of significant interest in numerous studies. Each study employs different methodologies to predict this growth

Suparmono's (2021) study analyzes the impact of the COVID-19 pandemic on the economy of Kulon Progo Regency across various economic sectors and forecasts economic growth for 2024 and subsequent years. The study employs both linear and nonlinear regression methods and indicates that certain sectors are expected to grow alongside the

stabilization of social conditions and the operation of infrastructure projects. Some sectors, such as transportation and warehousing, are anticipated to experience growth due to the normal activities at Yogyakarta International Airport.

One of the countries with a complex COVID-19 situation is China. Therefore, Gunay et al. (2021) examined the impact of the pandemic on the global financial crisis (GFC) and its effect on China's GDP. The authors relied on indicators such as exports, exchange rates, and China's foreign exchange reserves, using the mixed data sampling (MIDAS) regression analysis method and employing different frequencies in the regression model to account for economic growth. The study revealed that COVID-19 had a more negative impact on China's GDP growth rate compared to the GFC. The actual GDP growth rate in the first quarter of 2020 was -5.02%, with an expected recovery in the second quarter of 2020.

Also in 2021, Jena et al. (2021) used GDP data from the second quarter (April to June) of 2020 from eight countries – namely, the United States, Mexico, Germany, Italy, Spain, France, India, and Japan – to forecast GDP growth. Using the artificial neural network model, the findings indicated that the period from April to June 2020 would witness a significant decline in economic growth rates across all eight countries. The annual GDP growth projections revealed an even greater impact, with most countries expected to experience double-digit negative economic growth.

In 2022, following the wave of the Covid-19 pandemic, Vietnam's economy underwent a significant transformation. The service sectors experienced a notable resurgence, and the agriculture, forestry, and fisheries industries began exporting to other countries due to the implementation of reopening policies. The study conducted by Phuong Linh et al. (2022) provides a comprehensive overview of Vietnam's economic growth from 2019, the onset of the Covid-19 pandemic, employing qualitative research methods through a literature review. This study presents various solutions to sustain positive GDP growth, thereby facilitating the country's sustainable development even during the most challenging phases of the pandemic, up to the current period of partial control over the disease. By examining Vietnam's economic indicators and comparing them with those of other countries in the region and globally, the study highlights the critical importance of economic growth for any nation. Economic growth is identified as a paramount concern for governments, as it serves as a fundamental material condition for job creation, reducing unemployment rates, increasing citizens' incomes, and alleviating poverty.

Gagnon et al. (2023) employed a panel data regression model to scrutinize GDP growth rates during the pandemic and assess the contributions of various explanatory variables in examining the global impact of the pandemic on real GDP development. Utilizing quarterly real GDP data alongside pandemic-related data from 90 countries, this study elucidated the relationships between virus proliferation, lockdown measures, and real GDP. Additionally, the analysis explored GDP growth under the dual impact of domestic pandemic conditions and global trade disruptions induced by Covid-19.

The research conducted by Vrontos et al. (2023) provided an effective assessment of the severe impact of the Covid-19 pandemic on aggregate economic activity in Greece, seven other Eurozone economies, three Scandinavian countries, and the United States. Utilizing the class of linear and quantile predictive regression models for real GDP analysis and employing a Bayesian method for model selection, the study concluded that the pandemic's progression had a profound impact on the economies examined. The findings revealed that different anticipated variables could elucidate varying analyses of underlying real GDP growth for the countries studied. Moreover, the research demonstrated that the analytical model setup significantly enhances the explanatory power of real GDP series, surpassing the standard conditional mean approaches, which typically account only for the average level of the relationship between real GDP and various anticipated variables.

The study utilized Mixed Data Sampling (MIDAS) and Mixed-Frequency Vector Autoregression (MF-VAR) models to forecast Vietnam's GDP growth based on data collected from 2006 to 2020 (Le Mai et al., 2022). The fundamental MIDAS models, employing Almon weights, demonstrated a high degree of accuracy in forecasting Vietnam's quarterly GDP growth, with an average absolute error of less than 1% compared to the actual published GDP. These models effectively predicted significant fluctuations in GDP growth rates. Among the forecasting models, MIDAS2 and MIDAS3 provided the most precise forecasts, with a maximum error of less than 3%, underscoring the critical role of the predictive variables incorporated into the models. The study found that the higher the frequency of the independent variables (weekly, monthly, quarterly), the more robust the forecasting performance and outcomes. The results highlight Vietnam's impressive economic development over the past 15 years, evidenced by an average quarterly GDP growth rate of 6.4% during this period.

Shaobo Lu (2021) introduced an innovative approach for GDP forecasting by integrating artificial neural networks with the ARIMA model. In this methodology, the ARIMA model is employed to manage the linear components of GDP time series data. Subsequently, a BP neural network is utilized to address the nonlinear and residual elements of the ARIMA model, culminating in a hybrid model with enhanced predictive accuracy. The study's results demonstrate that

the amalgamation of the ARIMA model and BP neural networks constitutes an effective strategy for GDP forecasting, particularly in scenarios characterized by nonlinear data and numerous influencing factors.

Hafawati Mohd Radzi and Abu Sufian Abu Bakar (2022) employed ARIMA and VAR models to forecast the GDP and CPI of Malaysia from 1960 to 2021, aiming to analyze the economic conditions in the future. The results indicate that both GDP and CPI show an upward trend during the period of 2022-2026, with GDP increasing from 415.35 billion USD to 586.81 billion USD and CPI rising from 125.20 to 132.14. The study also identifies a stronger relationship of GDP to CPI (31%) compared to CPI to GDP (6%), emphasizing the significance of these indicators in formulating effective economic policies.

Yao Ma (2024) employed the ARIMA model to forecast China's GDP from 1978 to 2022 and project GDP trends from 2023 to 2027. The findings revealed that the ARIMA (0, 2, 0) model exhibited high accuracy, predicting that China's GDP will sustain steady growth over the next five years. The author proposes several measures to bolster China's economic development, including attracting talent, optimizing the industrial structure, promoting innovation, and enhancing international economic cooperation.

Overall, numerous studies have utilized various models and GDP data from different perspectives to analyze and forecast the GDP growth of countries or regions in the near future. Furthermore, these studies have offered recommendations to aid these nations or regions in formulating their economic strategies. However, there remains a notable paucity of research focusing on the in-depth analysis and forecasting of GDP in Vietnam for the forthcoming years. Such research would provide scholars and policymakers with a more comprehensive understanding of the country's economic development in the subsequent period.

IV. RESEARCH METHODS AND RESULTS

4.1 Research Methods

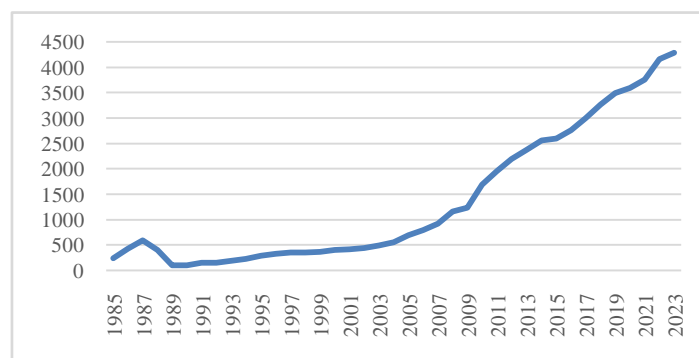
4.1.1 Data collection

The data utilized in this study are primary data sourced from the World Bank. Vietnam's per capita GDP, calculated in current US dollars to exclude the inflation factor, spans from 1985 to 2023, encompassing 39 observations. This dataset is sufficiently large (over 30 observations) to employ time series analysis using regression models, ensuring accurate forecasting (Jame D. Hamilton, 1954).

4.1.2 Time Series Forecasting Analysis Using Regression Models

The selection of a method for time series forecasting analysis is contingent upon the characteristics of the data. In this study, Vietnam's annual per capita GDP data demonstrates a clear non-stationary trend over time. Moreover, the data exhibits both linear (consistent rate of change) and nonlinear (variable rate of change over time) patterns at various points. Consequently, the application of three regression models – linear regression, logarithmic regression, and inverse regression – is deemed appropriate for accurate forecasting.

Figure 1: GDP per capita from 1985 to 2023



Unit: USD at current prices

Source: World Bank

A. Linear Regression:

To identify the trend of per capita GDP growth over time, the hypothesis posits that per capita GDP increases over time. Therefore, the linear regression analysis method is applied for forecasting. This method helps determine the percentage of GDP variation that can be explained by the variable Year. The variable Year will be considered the independent variable, and the GDP variable will be the dependent variable. The linear regression model will take the following form:

$$\hat{Y}_i = \alpha + \beta * X_i + \epsilon$$

In this context, Y_i represents the i -th predicted value of the dependent variable (GDP), X_i denotes the i -th value of the independent variable (Year), α is the intercept coefficient that determines the point on the y -axis where the regression line crosses, and β is the regression coefficient of the independent variable (Year). The coefficient β indicates the degree of change (increase or decrease) in the dependent variable when the independent variable increases by one unit. The equation describes the linear relationship between the independent variable and the dependent variable.

The commonly employed method for regression is Ordinary Least Squares (OLS). This method is based on the vertical distances of data points from the predicted regression line, minimizing the total sum of the squared errors ϵ . Each vertical distance is the difference between the observed value for the dependent variable Y and the fitted value \hat{Y} for the corresponding value on the x -axis. These vertical distances between the observed and fitted values are referred to as errors (ϵ).

B. Non-linear Regression:

To ensure higher accuracy in predicting the annual per capita GDP, align with the characteristics of the data, and maintain objectivity in the research, the authors conducted nonlinear regression analyses.

Two nonlinear regression models applied for forecasting the time series data in this study are Logarithmic Regression and Inverse Regression.

▪ **Logarithmic Regression**

Logarithmic regression is a type of regression that represents the relationship between the independent variable (X) and the dependent variable (Y) using a logarithmic function. This form of regression is employed when the relationship between X and Y is nonlinear, particularly when the rate of change of Y decreases as X increases. The formula for logarithmic regression is as follows:

$$\hat{Y}_i = \alpha + \beta * \log(X_i) + \epsilon$$

In this context, Y_i represents the i -th predicted value of the dependent variable (GDP), X_i denotes the i -th value of the independent variable (Year), α is the intercept coefficient that determines the point on the y -axis where the regression line crosses, and β is the regression coefficient of the log of independent variable, $\log(\text{Year})$. This coefficient explains the percentage change in the dependent variable (Y) when the independent variable (X) changes by one unit, making it suitable for studies on the growth rate of GDP over the years.

▪ **Inverse Regression**

Inverse regression is a type of regression where the relationship between the independent variable (X) and the dependent variable (Y) is represented as an inverse function. This means that the relationship between X and Y is inverse; as X increases, Y decreases, and the rate of change tends to diminish over time. The formula for inverse regression is as follows:

$$\hat{Y}_i = \alpha + \beta * \frac{1}{X_i} + \epsilon$$

In this context, Y_i represents the i -th predicted value of the dependent variable (GDP), X_i denotes the i -th value of the independent variable (Year), α is the intercept coefficient that determines the point on the y -axis where the regression line crosses, and β is the regression coefficient of the inverse of independent variable, $\frac{1}{\text{Year}}$. This coefficient explains the percentage change in the dependent variable (Y) when the inverse of independent variable ($\frac{1}{X}$) changes by one unit.

4.2 Results:

Table 1. Summary of Regression Results

	Linear	Logarithmic	Inverse
Adj. R ²	81.8%	81.61%	81.42%
P_value	1.792 e ⁻¹⁵	2.174 e ⁻¹⁵	2.635 e ⁻¹⁵
Intercept coefficient (α)	-211800 ***	-1617083 ***	213984 ***
Regression coefficient (β)	106.3 ***	212872 ***	-426091152 ***

Source: Authors

All three regression models exhibit high adjusted R² values (approximately 81%), indicating a strong fit for each model. The independent variable (Year) accounts for approximately 81% of the variation in the dependent variable (per capita GDP). Among the three models, the linear regression model demonstrates the highest degree of fit (as evidenced

by the highest R^2 value), thereby making it the most suitable model for forecasting per capita GDP in Vietnam for future years, if the annual growth of per capita GDP follows a linear trend.

Table 2. Summary of Forecast Results

Unit: USD at current prices

Year	Linear	Logarithmic	Inverse
2024	3483.911	3474.295	3464.656
2025	3590.256	3579.443	3568.616
2026	3696.602	3684.539	3672.474
2027	3802.948	3789.583	3776.229
2028	3909.293	3894.575	3879.882
2029	4015.639	3999.515	3983.432
2030	4121.984	4104.404	4086.881

Source: Authors

All three regression models forecast that Vietnam's per capita GDP will grow steadily from 2024 to 2030 without significant fluctuations, reflecting stable macroeconomic development in the near future. The linear regression model projects higher growth compared to the logarithmic and inverse regression models, although the differences are not substantial. The forecasted values of Vietnam's per capita GDP from 2024 to 2029 are expected to increase from 3,464 USD per person (approximately 88 million VND per person at current prices) to 4,121 USD per person (approximately 104.7 million VND per person at current prices), corresponding to an annual growth rate of per capita GDP ranging from 2.6% to 3.05%. Integrating all three regression models will provide a more comprehensive forecast, as each model offers different perspectives on the economic future.

V. SOLUTIONS TO PROMOTE GDP GROWTH IN VIETNAM

The world has recently endured the Covid-19 pandemic, which has inflicted significant economic damage on most countries. As a developing nation, Vietnam faced numerous substantial challenges, particularly in the trade and services sectors, which were severely impacted by lockdown measures and social distancing. The manufacturing and processing sectors also suffered due to the repercussions from major economies like the United States and China. In this context, to stimulate GDP growth in the post-Covid-19 era, Vietnam must undertake two primary tasks: economic recovery and economic development enhancement.

At the beginning of 2022, the Government issued Resolution No. 01/NQ-CP on January 8, 2022, concerning key tasks and solutions for implementing the Socio-Economic Development Plan and executing Resolution No. 43/2022/QH15 of the National Assembly on fiscal and monetary policies to support the socio-economic recovery and development program. Among these, several measures promise substantial benefits for the economy, including:

- Develop industries and sectors sustainably, focusing on green growth through innovation and strongly promoting the transition to clean energy, digital transformation, and the enhanced application of science and technology.
- Encourage information technology enterprises to expand their investments in digital content across various industries and services, such as electronics industry, information technology industry, and cybersecurity industry.
- Establish support funds for tax relief, healthcare, and investment in transportation and tourism infrastructure.

Additionally, the government should focus on developing existing potential to boost the economy and GDP growth. Tourism has a significant impact on economic growth, as evidenced by numerous studies. In Spain, tourism has spurred economic growth (Balaguer & Cantavella-Jordá, 2002), provided income in Greece (Dritsakis, 2004), and improved living standards in Southern European countries (Proença & Soukiazis, 2008). Investing in tourism could be an appropriate choice for Vietnam, given its favorable geography, climate, and cultural heritage.

Furthermore, the government should place greater emphasis on policies that encourage foreign enterprise investment. Foreign direct investment (FDI) is a crucial tool for technology transfer and contributes more significantly to economic growth than domestic investment (Borensztein et al., 1998). In an era of rapid technological advancement, this assertion holds particularly true for developing countries like Vietnam. The recent establishment of factories by major technology companies in Vietnam is a positive sign, indicating their interest in the Vietnamese labor market and creating opportunities to accelerate technology transfer, especially in the fields of network and mobile equipment.

In summary, to stimulate post-Covid-19 economic growth, Vietnam must implement various measures such as sustainable development, encouraging technology enterprises, and establishing support funds. Additionally, boosting

investment, developing the tourism industry, and attracting FDI are crucial economic strategies for a country with significant potential like Vietnam.

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