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A Study of India's GDP Growth Rate in Relation to GDP Growth Rate of Major Economies of the World

Reena Nigam
Research Scholar
Department of Economics
Mahatma Gandhi Kashi Vidyapith, Varanasi, U.P., India

Abstract

The present study analysed India's GDP growth rate in relation to GDP growth rate of major Economies of the World. These major economies are, UK,USA, China, Germany, Italy and France. The objectives is to study the association of India's GDP growth rate with the GDP growth rates of other countries and to measure the significance of correlation coefficient between the growth rates of other countries with India. To analyse the association of India's GDP growth rate with the GDP growth rate of major Economies the data from 1991 to 2021 has been taken. Ithas been analysed by using SPSS software. The data has been taken from the World Bank for analysis. India's GDP growth rate has been found to have the highest association with the growth rate of the UK and has the least association with the growth rate of Germany. The correlation coefficient between India's GDP growth rate and UK's GDP growth rate is .687 which is significant at 0.01 level at df = 29. The correlation coefficient between India's GDP growth rate and Germany'sGDP growth rate is. 321 which is not significant.

Keywords: India's GDP growth rate, association with major economies growth rate, correlation analysis

JEL Code : C80, E00, E20, E60

Introduction

India's GDP growth rate has shown significant trends in recent years, positioning it as a key playeramong major global economies. The literature on India's GDP growth rate in relation to the GDPgrowth rates of major economies reveals a multifaceted narrative that underscores the complexitiesof economic development. The foundational work by Daga, Das, and Maheshwari (Raj Daga et al., 2004) establishes the significance of GDP as a measure of a country's economic activities, emphasizing the importance of accurate data representation through monetary values.

Their analysis highlights the impact of economic reforms initiated by the Indian government, which aimed to enhance GDP growth via liberalized trade practices. This early exploration sets the stage for understanding how the structural changes in India's economy have influenced its GDP trajectory over the years.

Building upon this groundwork, Motkuri (Motkuri, 2011) provides an insightful examination of India's accelerated economic growth, noting a shift from historical stagnation to a robust growth rate of 6-9% during the early 21st century. This article points out that the Indian

economy has not only surpassed its previous growth rates but has also outpaced many developed and developing nations. Motkuri's analysis of the 11th Five Year Plan's focus on 'inclusive growth' highlights the disparities between sectors, particularly the slow growth of agriculture compared to the burgeoning non-agricultural sector. This shift is crucial in understanding the broader implications of GDP growth on living conditions and economic equity in India.

Furthering the discourse, Shahbaz et al. (Shahbaz et al., 2017) delve into the drivers behind India's GDP growth, particularly emphasizing the roles of globalization and financial development. Theirfindings suggest a positive correlation between financial development and economic growth, indicating that as India has embraced globalization, its GDP growth has been significantly bolstered. This relationship contrasts with the situation in China, where globalization has had a detrimental effect on economic growth. The interdependence between financial development andeconomic growth in India, as highlighted by Shahbaz et al., adds a layer of complexity to the understanding of how external and internal factors converge to shape the nation's economic landscape.

Literature Review

India's GDP growth has been robust, with estimates around 6% to 7% annually (Rodrik & Subramanian, 2004). Factors such as total factor productivity (TFP) improvements and human capital development have significantly contributed to this growth (Gupta, 2010).

India is now the world's fourth-largest economy by purchasing power parity, indicating its rising influence (Thakur, 2007). Analysts predict that India will continue to grow at a rate comparable toor exceeding that of other major economies, such as China and the USA (Rodrik & Subramanian,2004).

Siddiqui (Siddiqui, 2010) offers a critical review of neo-liberal reforms, asserting that India's growth acceleration is largely attributable to shifts in governmental attitudes towards business and export orientation that began in the early 1980s. This perspective challenges the conventional wisdom that attributes growth primarily to the reforms initiated in the 1990s, thereby providing anuanced view of the timeline and nature of India's economic transformation.

Incaltarau (Incaltarau, 2010) further contextualizes India's rise in the global economy, questioningthe sustainability of high growth rates and positioning India as a significant player in internationalrelations. By comparing India's economic trajectory with that of other Asian economies, the articleunderscores the necessity of understanding the broader implications of globalization on India's economic prospects.

The analysis of macroeconomic variables by Sinha, Gupta, and Randev (Sinha et al., 2010) delvesinto the complexities of India's economic performance, particularly in light of the global financialcrisis. Their findings highlight the interdependencies between GDP growth, inflation, and government policies, reinforcing the idea that India's growth is not only a product of domestic reforms but also of global economic conditions.

Costantiello and Leogrande (Costantiello & Leogrande, 2024) conclude the literature review by examining the effects of the COVID-19 pandemic on GDP growth predictions, emphasizing the challenges of accurately forecasting economic trends in the face of unprecedented global disruptions. Their analysis provides a critical lens through which to evaluate the resilience and adaptability of India's economy in the post-pandemic world.

A strong positive correlation exists between FDI and GDP growth in India, suggesting that increased investment can enhance economic performance (Talwar & Srivastava, 2018). The service sector's growth has shown a negative correlation with GDP growth, indicating a need for a balanced industrial focus (Nayyar, 2014). India's growth patterns differ from those of China andthe USA, with India benefiting from a demographic dividend and democratic governance, while China exhibits stronger fundamental economic variables (Yadav & Jameel, 2020).

India's GDP growth is intertwined with other major economies, particularly within the G6 group of Asian countries, indicating regional economic interdependencies (Valadkhani & Harvie, 2010).

Objectives of the study

- To study the association of India's GDP growth rate with the GDP growth rates of othercountries.
- To measure the significance of correlation coefficient between the growth rates of othercountries with India

Null Hypothesis

1. The correlation between India’s GDP growth rate and UK's GDP growth rate is not significant
2. The correlation between India’s GDP growth rate and China's GDP growth rate is notsignificant
3. The correlation between India’s GDP growth rate and US's GDP growth rate is not significant
4. The correlation between India's GDP growth rate and Germany's GDP growth rate is notsignificant
5. The correlation between India's GDP growth rate and France's GDP growth rate is notsignificant
6. The correlation between India's GDP growth rate and Italy's GDP growth rate is notsignificant.

Methodology of the Study

The following study is analytical and descriptive in nature. To carry out the following study the secondary sources of data have been used to collect data. The data has been collected from variousnational and international governmental, inter-governmental and private agencies. A number of previous studies has taken into consideration as well. To analyse the association of India's GDP growth rate with the GDP growth rate of major Economies the data from 1991 to

2021 has been taken. It has been analysed by using SPSS software. The data has been taken from the World Bankfor analysis.

Results and Discussion

Table 1: Correlations Coefficients

		UK_Growth_Rate	Chaina_Growth_Rate	US_Growth_Rate	Germany_Growth_Rate	France_Growth_Rate	Italy_Growth_Rate	India_Growth_Rate
UK_Growth_Rate	Pearson Correlation	1	.335	.894**	.612**	.900**	.868**	.687**
	Sig. (2-tailed)		.066	.000	.000	.000	.000	.000
Chaina_Growth_Rate	Pearson Correlation	.335	1	.319	.269	.305	.341	.412*
	Sig. (2-tailed)	.066		.080	.143	.096	.060	.021
US_Growth_Rate	Pearson Correlation	.894**	.319	1	.548**	.842**	.793**	.591**
	Sig. (2-tailed)	.000	.080		.001	.000	.000	.000
Germany_Growth_Rate	Pearson Correlation	.612**	.269	.548**	1	.743**	.782**	.321
	Sig. (2-tailed)	.000	.143	.001		.000	.000	.079
France_Growth_Rate	Pearson Correlation	.900**	.305	.842**	.743**	1	.949**	.644**
	Sig. (2-tailed)	.000	.096	.000	.000		.000	.000
Italy_Growth_Rate	Pearson Correlation	.868**	.341	.793**	.782**	.949**	1	.568**

	Sig. (2-tailed)	.000	.060	.000	.000	.000		.001
India _Growth_ Rate	Pearson Correlation	.687**	.412*	.591**	.321	.644**	.568**	1
	Sig. (2-tailed)	.000	.021	.000	.079	.000	.001	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
(Calculate by author)

The Variable Used for data Analysis; GDP growth: Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

From Table 1, it can be seen that, firstly, the correlation coefficient between India's GDP growth rate and UK's GDP growth rate is .687 which is significant at 0.01 level at df = 29. Thus, the nullhypothesis (1) is rejected. Secondly, the correlation coefficient between India's GDP growth rate and China's GDP growth rate is .412 which is significant at 0.05 level at df = 29. Thus, the null hypothesis (2) is rejected. Thirdly, the correlation coefficient between India's GDP growth rate andUS's GDP growth rate is .591 which is significant at 0.01 level at df = 29. Thus, the null hypothesis (3) is rejected. Fourthly, the correlation coefficient between India's GDP growth rate and Germany's GDP growth rate is. 321 which is not significant. Thus, the null hypothesis (4) cannot be rejected. Fifthly, the correlation coefficient between India's GDP growth rate and France's GDPgrowth rate is .644 which is significant at 0.01 level at df = 29. Thus, the null hypothesis (5) is rejected. Sixthly, the correlation coefficient between India's GDP growth rate and Italy's GDP growth rate is .568 which is significant at 0.01 level at df = 29. Thus, the null hypothesis (6) is rejected.

Conclusion

The objective of the study was to study the association of India's GDP growth rate with the GDP growth rates of other countries and to measure the significance of correlation coefficient betweenthe growth rates of other countries with India. To carry out the following study the secondary sources of data have been used to collect data. To analyse the association of India's GDP growth rate with the GDP growth rate of major Economies the data from 1991 to 2021 has been taken. Ithas been analysed by using SPSS software.

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17. Reena Nigam, Research Scholar, Department of Economics, Mahatma Gandhi kashi Vidyapith, Varanasi, , Varanasi, U.P., India , email-nigamshanti6@gmail.com