



India as the Third-Largest Economy by 2030: A Feasibility Study Using GDP Data

V.T. Vasagan

Professor, Department of Management Studies, St. Joseph University, Nagaland, India.

E-mail: vasant75@ymail.com

To Cite this Article

V.T. Vasagan (2025). India as the Third-Largest Economy by 2030: A Feasibility Study Using GDP Data. *Indian Social Development Review*, 1: 2, pp. 117-145.

Abstract: The Indian economy has been increasing with an average GDP growth rate of 7%. As a result, India became the fifth-largest economy, with a GDP of \$3.6 trillion, and is expected to become the third-largest by 2030, surpassing Japan and Germany. Japan's GDP growth rate was 1.1% in 2022, but it suffers from public debt and trade issues, whereas Germany's GDP growth rate was 1.80% in 2022, but it suffered from high inflation, low purchasing power, and investment. This situation adds to India's prospects of becoming the third-largest economy. Hence, 23 years of GDP data from the USA, China, Japan, Germany, and India were analysed. It has been predicted that India has the potential to overtake Japan and Germany and become the third-largest economy, with a \$5 trillion economy, by 2030. Appropriate economic reforms, the implementation of monetary, fiscal, and physical policies, and control of poverty and unemployment help India achieve these goals.

Keywords: Gross Domestic Product, \$5 Trillion Economy, Third largest Economy, and Economic Policies.

I. Introduction

India's GDP has been growing continuously over the last 10 years at an average rate of 7 per cent, reaching \$3.6 trillion and jumping from the eighth largest to the fifth-largest economy. It is expected to further grow over the next 6 years, likely reaching \$5 trillion, making India the third-largest economy by 2030. This view was projected by S&P Global, an American company that provides financial information and analytics. Several economic initiatives, such as Goods and Services Tax (GST), Insolvency and Bankruptcy Code (IBC), and 'Make in India', undertaken

by the Government of India have improved the business environment, attracted investments, and boosted economic activity.

Japan has a high Human Development Index score, indicating a good level of health, education, and income among its population. However, Japan faces significant economic challenges, including demographic decline, economic stagnation, and fiscal sustainability. Among developed nations, Japan has the highest public debt levels, and its ageing population, economic stagnation, and deflation contribute to low growth. In 2022, the recorded GDP growth rate was 1.1%, which was lower than India's. The recovery of the economy after the COVID-19 pandemic has been uneven, and public debt stood at over 260% of GDP.

Germany has remarkable manufacturing capabilities, especially in the automobile, machinery, and chemical industries, which have made it a central export hub and a global leader in innovation and productivity. Germany has established itself as a prominent player in the global economy, with a well-diversified economy that focuses on both manufacturing and service sectors. The service sector accounts for about 70% of the country's GDP, underscoring its knowledge-based economy. However, Germany faced significant economic challenges in 2023, primarily due to the energy crisis and the conflict in Ukraine. Inflation remained relatively high, impacting purchasing power and investment. The German government's policies aimed at stimulating economic growth and addressing social challenges will be critical in navigating the current situation. The country experienced a recession in 2023, with a 0.3% contraction. The forecast for 2024 predicts a modest GDP growth of 0.3%, indicating continued economic struggles. Inflation has fallen from its peak but remains relatively high at 3.1% in January 2024, affecting purchasing power and investment. The global economic slowdown and regional tensions are expected to pose challenges for Germany's export-reliant economy in 2024.

This situation adds to India's advantage, expected to be the third-largest economy by 2030 due to consistent GDP growth, supportive geopolitics, surging market cap, continued reforms, and a strong corporate culture. Given GDP's status as a key indicator of economic development, a study examines the GDP data of the world's top five economies. As such, this study provides insight into the economic advancement of these nations. Gross Domestic Product is a measure of the total value of all goods and services produced within a country's borders over a specific period, typically annually or quarterly. According to the IMF, GDP is a measure of the monetary value of final goods and services produced in a country in a given

period (say a quarter or a year). It counts all output generated within a nation's borders. GDP is commonly used as an indicator of a country's economic health and the size of its economy. The formula for calculating GDP is:

$$\text{GDP} = \text{C} + \text{I} + \text{G} + (\text{X} - \text{M})$$

Consumption (C): This represents the total spending by households on goods and services. Investment (I): This includes spending by businesses on capital goods, construction of new homes and commercial buildings, and changes in business inventories.

Government Spending (G): This comprises expenditures by federal, state, and local governments on goods and services.

Net Exports (Exports - Imports) (X - M): This component represents the difference between exports (goods and services sold to foreign buyers) and imports (goods and services purchased from foreign sellers).

This study aims to determine whether India has the potential to achieve this goal and provide insights into India's economic prospects and the challenges it may face in achieving its financial goals. This study uses recorded GDP data for the USA, China, Japan, and India spanning 23 years from 2000 to 2022 to forecast growth trends until 2030. Based on the available data, the following objectives are established to elucidate the study:

- [1] To analyse the feasibility of India achieving a GDP of 5 trillion USD.
- [2] To examine the possibility of India becoming the third-largest economy in terms of GDP growth rate.

II. Literature Review

The review of literature serves as a foundation for new ideas, drawing on earlier studies to enable innovation. Numerous studies have examined India's GDP growth and future trends over defined periods, focusing on the multitude of economic factors that contribute to and influence GDP. A survey by Fernald and Jones (2014) delved into the prospective trajectory of US economic growth and projected a GDP growth rate of 1.95%. This trend has been seen in the present study as well. Jones (2002) had previously identified various drivers of US economic growth, positing that it could emerge as the world's foremost economy. Conversely, Murray and Nelson (2000) elucidated the pervasive uncertainty surrounding the factors shaping US GDP trends and recommended precautionary actions to mitigate risks (Aruoba

et al., 2012). The present study considered that these precautionary actions help the USA remain the world's largest economy. Regarding China's economic growth, numerous studies have examined China's GDP over different periods. Chow and Li (2002) examined China's economic expansion from 1952 to 2010, while Holz (2008) scrutinized the period from 1978 to 2025. Besides, Holz (2014) assessed the accuracy and consistency of China's GDP statistics, while Rawski (2002) analyzed recent GDP growth trends and China's global positioning. This study extends the analysis to include data up to 2030, while taking these factors into account. Several studies shed light on different aspects of Japan's economy and its GDP. Hara and Yamane (2013) estimated monthly GDP growth, although yearly data provides a more comprehensive understanding. Similarly, Urasawa (2014) forecasted real-time GDP growth, offering insights into short-term fluctuations. Chang and Huang (2010) elucidated the impact of finance on Japan's GDP growth, highlighting the challenge posed by high public debt. Hayami and Ogasawara (1999) compared the growth of the Japanese economy with that of the US, providing valuable context for understanding Japan's position in the global economy. Oliver (2015) examined how demographic factors, such as the population dividend and ageing, influence Japan's economic growth, shedding light on long-term trends.

Besides, Rosovsky (1973) explored the factors contributing to Japanese economic growth, providing foundational insights into the country's economic development. By synthesizing these studies, a comprehensive understanding of Japan's economy and its GDP can be obtained, facilitating meaningful comparisons with India's economic performance. Pfister's (2022) research analyzed Germany's economic growth from 1500 to 1850. However, the findings did not directly shed light on the country's contemporary economic landscape. Nonetheless, it lays a foundation for understanding historical economic trends.

In contrast, Wolf (2018) investigated the regional economic growth within Germany from 1895 to 2010. Although not entirely representative of the current economic situation, this study provides insights into Germany's current economic situation. Arkadievich et al. (2008) employed a dynamic panel-data approach to forecast Germany's GDP, thereby bringing the analysis closer to the current economic milieu. Their methodology and findings offer valuable insights into Germany's economic dynamics. Additionally, Berthold & Gründler's (2015) examination of the economic crisis in Germany, alongside Siebert's (2007) exploration of the underlying reasons for decline, serves as a crucial reference for understanding

past economic challenges and their implications. Integrating these studies with contemporary analyses can provide a comprehensive understanding of Germany's economic conditions over time.

Mallik and Chowdhury (2001) investigated the relationship between inflation and GDP growth in Bangladesh, India, Pakistan, and Sri Lanka using cointegration and error-correction models. Saymeh et al. (2013) examined the effects of interest rates, inflation, and GDP on Jordan's economic growth from 2000 to 2010 and found a significant relationship between interest rates and inflation. In contrast, our study compares the GDP and growth rates of the five largest economies, both in monetary terms and in growth rates. Agrawal and Agarwal (2013) examined the influence of global capital flows on GDP growth rates, inflation, and exchange rates in India from 1948 to 2010, noting a significant correlation between capital flows and GDP, suggesting increased investor confidence and attractiveness. Our study explores India's potential to reach a 5-trillion-dollar economy and become the world's third-largest by 2030. Dhiraj et al. (2015) investigated factors affecting India's GDP, focusing on the manufacturing, industrial, and service sectors.

On the other hand, Fauzi and Soo (2012) examined the contributions of economic sectors to the growth of China and India. In contrast, our study extends this analysis to the USA, Japan, and Germany, comparing their growth trajectories. In comparison, Konda (2019) examined the contributions of three major sectors to India's GDP, without detailing how India might become the third-largest economy. Mankiw and Shapiro (1986) emphasized the importance of periodic revisions of GDP for understanding economic growth, while Young (1993) and Nagaraj (2017) focused on quarterly estimates of GDP, whereas our study analyses yearly GDP data.

III. Materials and Methods

This study uses the Trend Projecting Method and the Least Squares method to predict future trends in the GDP of the top five largest economies. This study has considered 23 years of data on GDP of the USA, China, Japan, Germany and India to predict future trends. Ayyoub et al. (2011) utilized Ordinary Least Squares analysis on annual time-series data from Pakistan spanning 1972-73 to 2009-10 to assess the impact of inflation on economic growth. The Trend Projection Method uses long-term GDP data series and employs the Least Squares method for data analysis. The study used Excel and SPSS to analyze the data and derive future trends.

- Trend Projection Method:** The Trend Projection Method is a widely used business forecasting technique that involves drawing a straight line through historical data points to predict future outcomes. In practice, the statistical formulas used in this method compute a slope for the trend line (represented by 'b') and the point where the line crosses the y-axis (represented by 'a'). This results in the straight-line equation:

$$Y = a + bX$$

Where X represents the values on the horizontal axis (time), and Y represents the values of GDP on the vertical axis.

- Least Square Method:** In the research conducted, the Least Square Method was employed to establish a trend line for the time series data. Statistical data was used to determine the trend of GDP. Upon plotting the data, various trends become evident. The most common types of trend equations are:

$$\text{Trend Equation: } Y = a + bx \quad 1$$

Whereas Y = GDP, X= years and a and b are constant.

Normal Equation

$$\Sigma y = na + b\Sigma x \quad 2$$

$$\Sigma xy = a\Sigma x + b\Sigma x^2 \quad 3$$

The process of trend projection involves the substitution of equations to derive the values of a and b. These values, once obtained, offer insight into the trend observed over a given time. By multiplying the resulting values by the number of years in question, the growth trend can be accurately determined.

IV. Results and Discussions

The recorded GDP of the top five largest economies countries USA, China, Japan, Germany and India was collected from World Bank National Accounts Data and OECD National Accounts Data and the GDP these countries are presented in the following Tables.

Table 1: GDP of USA, China, Japan, Germany and India (Trillions in US \$)

<i>Year/ Indicator</i>	<i>GDP of USA</i>	<i>GDP of China</i>	<i>GDP of Japan</i>	<i>GDP of Germany</i>	<i>GDP of India</i>
2000	10.25	1.21	4.97	1.95	0.468
2001	10.58	1.34	4.37	1.95	0.485
2002	10.93	1.47	4.18	2.08	0.514

Year/ Indicator	GDP of USA	GDP of China	GDP of Japan	GDP of Germany	GDP of India
2003	11.46	1.66	4.52	2.5	0.607
2004	12.22	1.96	4.89	2.81	0.709
2005	13.04	2.29	4.83	2.85	0.82
2006	13.82	2.75	4.6	2.75	0.94
2007	14.47	3.55	4.58	3.43	1.22
2008	14.77	4.59	5.11	3.75	1.2
2009	14.48	5.1	5.1	3.41	1.34
2010	15.05	6.09	5.76	3.4	1.68
2011	15.6	7.55	6.23	3.75	1.82
2012	16.25	8.53	6.27	3.53	1.83
2013	16.84	9.57	5.21	3.89	1.86
2014	17.55	10.48	4.9	3.36	2.04
2015	18.21	11.06	4.44	3.47	2.1
2016	18.7	11.23	5	3.69	2.22
2017	19.48	12.31	4.93	3.69	2.65
2018	20.53	13.89	5.04	3.97	2.7
2019	21.38	14.28	5.12	3.89	2.84
2020	21.06	14.69	5.06	3.89	2.67
2021	23.32	17.82	5.03	4.28	3.15
2022	25.44	17.96	4.26	4.08	3.42

Source: World Bank national accounts data and OECD National Accounts data: As on 29/02/2024
<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

Table 1 depicts the GDP of USA, China, Japan, Germany and India. As the average rate of growth of GDP is computed for the period of 2000 to 2022, it has been found that the GDP of USA has grown at the rate of 4.25%, China at the rate of 13.32%, Germany at the rate of 3.79% and India at the rate of 9.8%. But Japan had a negative growth of -0.34%. The GDP of USA has reached into \$25.44 Trillion in USD, the GDP of China has reached into \$17.96 Trillion in USD, the GDP of Japan has reached into \$4.26 Trillion in USD, the GDP of Germany has reached into \$4.08 Trillion in USD and the GDP of India has reached into \$3.42 Trillion in USD. This data shows that the GDP of India is very close to Germany and Japan's GDP, and the rate of growth is higher than Germany and Japan. Hence, there is a possibility for India to overtake Germany and Japan's GDP. This information is presented in the following figure-1 for better understanding.

Moreover, the trend of GDP of these countries calculated with the help of Trend Projection Method which is presented in the Table 2.

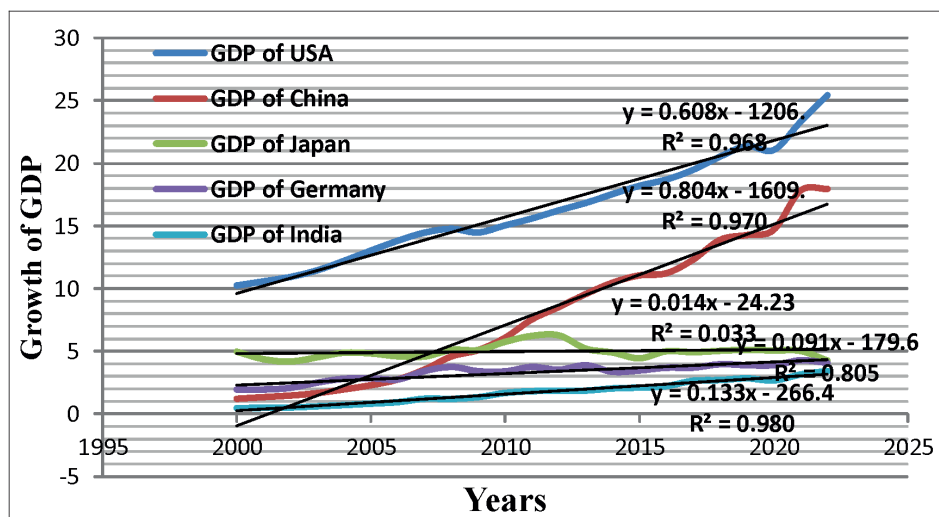


Figure 1: Growth of GDP of USA, China, Japan, Germany and India (US \$ in Trillions)

Source: Compiled from analysis of Data

Figure 1 exhibit that the GDP of USA increase constantly better than other countries, the same has been seen with China, there is fluctuation with Japan's GDP which is declined in the recent years, the Germany GDP growth is little but grow constantly. India's GDP also grow steadily. Now, the GDP of Japan, Germany and India are very close with each other. As the average rate of growth of GDP is compared, India's growth is higher than Germany and Japan. This indicates that there is a possibility for India to become the third largest economy. This is further explored statistically with the help of trend projection method for each country, and a trend line is drawn.

Table 2: Trend of GDP of USA (Trillions in US \$)

Year/ Indicator	GDP of USA				Trend line
X	y	x	x^2	xy	$Y=16.32+(0.95*x)$
2000	10.25	-10	100	-102.5	6.82
2001	10.58	-9	81	-95.22	7.77
2002	10.93	-8	64	-87.44	8.72
2003	11.46	-7	49	-80.22	9.67
2004	12.22	-6	36	-73.32	10.62
2005	13.04	-5	25	-65.2	11.57
2006	13.82	-4	16	-55.28	12.52

<i>Year/ Indicator</i>	<i>GDP of USA</i>				<i>Trend line</i>
2007	14.47	-3	9	-43.41	13.47
2008	14.77	-2	4	-29.54	14.42
2009	14.48	-1	1	-14.48	15.37
2010	15.05	0	0	0	16.32
2011	15.6	1	1	15.6	17.27
2012	16.25	2	4	32.5	18.22
2013	16.84	3	9	50.52	19.17
2014	17.55	4	16	70.2	20.12
2015	18.21	5	25	91.05	21.07
2016	18.7	6	36	112.2	22.02
2017	19.48	7	49	136.36	22.97
2018	20.53	8	64	164.24	23.92
2019	21.38	9	81	192.42	24.87
2020	21.06	10	100	210.6	25.82
2021	23.32	11	121	256.52	26.77
2022	25.44	12	144	305.28	27.72
N = 23	$\Sigma y = 375.43$		$\Sigma x^2 = 1035$	$\Sigma xy = 990.88$	
2023		13			28.67
2024		14			29.62
2025		15			30.57
2026		16			31.52
2027		17			32.47
2028		18			33.42
2029		19			34.37
2030		20			35.32

Source: Compiled from analysis of Data

Table 2 is a valuable source of data that presents the calculated trend line for the United States' GDP growth. The 'a' and 'b' values of this data have been analyzed to generate a trend line that predicts the future GDP growth of the USA. Based on this analysis, the United States' GDP is estimated at \$28.67 trillion USD and is expected to grow further, reaching \$35.32 trillion by 2030. This projection is significant as it suggests that the USA will continue to maintain its position as the world's leading economy. To provide a comparative analysis of these results, they have been compared with China's GDP growth projections, presented in Table 3.

Table 3: Trend of GDP of China (Trillions in US \$)

<i>Year/ Indicator</i>	<i>GDP of China</i>				<i>Trend line</i>
<i>X</i>	<i>y</i>	<i>x</i>	<i>x</i> ²	<i>xy</i>	<i>Y=7.88+(0.96*x)</i>
2000	1.21	-10	100	-12.1	-1.72
2001	1.34	-9	81	-12.06	-0.76
2002	1.47	-8	64	-11.76	0.2
2003	1.66	-7	49	-11.62	1.16
2004	1.96	-6	36	-11.76	2.12
2005	2.29	-5	25	-11.45	3.08
2006	2.75	-4	16	-11	4.04
2007	3.55	-3	9	-10.65	5
2008	4.59	-2	4	-9.18	5.96
2009	5.1	-1	1	-5.1	6.92
2010	6.09	0	0	0	7.88
2011	7.55	1	1	7.55	8.84
2012	8.53	2	4	17.06	9.8
2013	9.57	3	9	28.71	10.76
2014	10.48	4	16	41.92	11.72
2015	11.06	5	25	55.3	12.68
2016	11.23	6	36	67.38	13.64
2017	12.31	7	49	86.17	14.6
2018	13.89	8	64	111.12	15.56
2019	14.28	9	81	128.52	16.52
2020	14.69	10	100	146.9	17.48
2021	17.82	11	121	196.02	18.44
2022	17.96	12	144	215.52	19.4
N = 23	Σy = 181.38		Σx² = 1035	Σxy = 995.49	
2023		13			20.36
2024		14			21.32
2025		15			22.28
2026		16			23.24
2027		17			24.2
2028		18			25.16
2029		19			26.12
2030		20			27.08

Source: Compiled from analysis of Data

The data in Table 3 are significant because they represent the calculated trend line for China's GDP growth. An analysis of the values of 'a' and 'b' has enabled the generation of a trend line that predicts the future GDP growth of China. According

to this analysis, China's GDP is predicted to reach \$20.36 trillion USD and grow further to \$27.08 trillion USD by 2030. China's GDP growth remains strong, and it is currently the second-largest economy in the world. Furthermore, it has been observed that China's growth rate, measured in monetary terms, is higher than that of the USA. To further compare this result, it is presented in Table 4 alongside China's results.

Table 4: Trend of GDP of Japan (Trillions in US \$)

Year/ Indicator	GDP of Japan				Trend line
X	y	x	x ²	xy	$Y=4.97+(0.12*x)$
2000	4.97	-10	100	-49.7	3.77
2001	4.37	-9	81	-39.33	3.89
2002	4.18	-8	64	-33.44	4.01
2003	4.52	-7	49	-31.64	4.13
2004	4.89	-6	36	-29.34	4.25
2005	4.83	-5	25	-24.15	4.37
2006	4.6	-4	16	-18.4	4.49
2007	4.58	-3	9	-13.74	4.61
2008	5.11	-2	4	-10.22	4.73
2009	5.1	-1	1	-5.1	4.85
2010	5.76	0	0	0	4.97
2011	6.23	1	1	6.23	5.09
2012	6.27	2	4	12.54	5.21
2013	5.21	3	9	15.63	5.33
2014	4.9	4	16	19.6	5.45
2015	4.44	5	25	22.2	5.57
2016	5	6	36	30	5.69
2017	4.93	7	49	34.51	5.81
2018	5.04	8	64	40.32	5.93
2019	5.12	9	81	46.08	6.05
2020	5.06	10	100	50.6	6.17
2021	5.03	11	121	55.33	6.29
2022	4.26	12	144	51.12	6.41
N = 23	$\Sigma y = 114.4$		$\Sigma x^2 = 1035$	$\Sigma xy = 129.1$	
2023		13			6.53
2024		14			6.65
2025		15			6.77
2026		16			6.89
2027		17			7.01
2028		18			7.13
2029		19			7.25
2030		20			7.37

Source: Compiled from analysis of Data

The data presented in Table 4 provides significant insights into the GDP growth trend of Japan. By analyzing the values of 'a' and 'b', a trend line has been generated to predict the future GDP growth of the country. According to the forecast, Japan's GDP is estimated to be \$6.53 trillion and is expected to grow further, reaching \$7.37 trillion USD in 2030. Despite a declining growth rate, Japan still maintains its position as the world's third-largest economy. However, there is a significant difference in the monetary value between the USA, China, and Japan. To compare the results with Germany, the findings are presented in Table 5.

Table 5: Trend of GDP of Germany (Trillions in US \$)

<i>Year/ Indicator</i>	<i>GDP of Germany</i>				<i>Trend line</i>
<i>X</i>	<i>y</i>	<i>x</i>	<i>x</i> ²	<i>xy</i>	$Y=3.32+(0.16*x)$
2000	1.95	-10	100	-19.5	1.72
2001	1.95	-9	81	-17.55	1.88
2002	2.08	-8	64	-16.64	2.04
2003	2.5	-7	49	-17.5	2.2
2004	2.81	-6	36	-16.86	2.36
2005	2.85	-5	25	-14.25	2.52
2006	2.75	-4	16	-11	2.68
2007	3.43	-3	9	-10.29	2.84
2008	3.75	-2	4	-7.5	3
2009	3.41	-1	1	-3.41	3.16
2010	3.4	0	0	0	3.32
2011	3.75	1	1	3.75	3.48
2012	3.53	2	4	7.06	3.64
2013	3.89	3	9	11.67	3.8
2014	3.36	4	16	13.44	3.96
2015	3.47	5	25	17.35	4.12
2016	3.69	6	36	22.14	4.28
2017	3.69	7	49	25.83	4.44
2018	3.97	8	64	31.76	4.6
2019	3.89	9	81	35.01	4.76
2020	3.89	10	100	38.9	4.92
2021	4.28	11	121	47.08	5.08

Year/ Indicator	GDP of Germany				Trend line
X	y	x	x ²	xy	$Y=3.32+(0.16*x)$
2022	4.08	12	144	48.96	5.24
N = 23	Σy = 76.37		Σx² = 1035	Σxy = 168.45	
2023		13			5.4
2024		14			5.56
2025		15			5.72
2026		16			5.88
2027		17			6.04
2028		18			6.2
2029		19			6.36
2030		20			6.52

Source: Compiled from analysis of Data

The data presented in Table 5 are highly significant, as they reflect the calculated trend line for Germany's GDP growth. By analysing the values of 'a' and 'b', a trend line has been generated that predicts future GDP growth for Germany. According to this analysis, Germany's GDP is forecast to reach \$5.4 trillion USD and grow further to \$6.52 trillion USD in 2030. Germany retains its position as the fourth-largest economy in the world, and this result is compared with India's and presented in Table 6 for better understanding.

Table 6: Trend of GDP of India (Trillions in US \$)

Year/ Indicator	GDP of India				Trend line
X	y	X	x ²	xy	$Y=1.70+(0.168*x)$
2000	0.468	-10	100	-4.68	0.02
2001	0.485	-9	81	-4.365	0.188
2002	0.514	-8	64	-4.112	0.356
2003	0.607	-7	49	-4.249	0.524
2004	0.709	-6	36	-4.254	0.692
2005	0.82	-5	25	-4.1	0.86
2006	0.94	-4	16	-3.76	1.028
2007	1.22	-3	9	-3.66	1.196
2008	1.2	-2	4	-2.4	1.364

<i>Year/ Indicator</i>	<i>GDP of India</i>				<i>Trend line</i>
<i>X</i>	<i>y</i>	<i>X</i>	<i>x</i> ²	<i>xy</i>	<i>Y=1.70+(0.168*x)</i>
2009	1.34	-1	1	-1.34	1.532
2010	1.68	0	0	0	1.7
2011	1.82	1	1	1.82	1.868
2012	1.83	2	4	3.66	2.036
2013	1.86	3	9	5.58	2.204
2014	2.04	4	16	8.16	2.372
2015	2.1	5	25	10.5	2.54
2016	2.22	6	36	13.32	2.708
2017	2.65	7	49	18.55	2.876
2018	2.7	8	64	21.6	3.044
2019	2.84	9	81	25.56	3.212
2020	2.67	10	100	26.7	3.38
2021	3.15	11	121	34.65	3.548
2022	3.42	12	144	41.04	3.716
N = 23	Σy = 39.283		Σx² = 1035	Σxy = 174.22	
2023		13			3.884
2024		14			4.052
2025		15			4.22
2026		16			4.388
2027		17			4.556
2028		18			4.724
2029		19			4.892
2030		20			5.06

Source: Compiled from analysis of Data

The data presented in Table 6 are instrumental in understanding the trend line of India's GDP. Through a rigorous analysis of the values of 'a' and 'b', a trend line has been generated that predicts future growth in India's GDP. Based on this analysis, it has been estimated that India's GDP will be \$3.884 trillion in 2023 USD and is expected to increase further, reaching \$ 5.06 trillion by 2030. Despite stiff competition from other countries, India remains a robust economy and currently ranks fifth globally. However, its growth rate is higher than that of countries such as

the USA, Japan, and Germany, and is second only to China. The above results are presented in Table 7 to facilitate a comparative study.

Table 7: Trend of GDP of USA, China, Japan, Germany and India (Trillions in US \$)

<i>Year/ Indicator</i>	<i>Trend line of USA</i>	<i>Trend line of China</i>	<i>Trend line of Japan</i>	<i>Trend line of Germany</i>	<i>Trend line of India</i>
X	$Y=16.32 + (0.95*X)$	$Y=7.88 + (0.96*X)$	$Y=4.97 + (0.12*X)$	$Y=3.32 + (0.16*X)$	$Y=1.70 + (0.168*X)$
2000	6.82	-1.72	3.77	1.72	0.02
2001	7.77	-0.76	3.89	1.88	0.188
2002	8.72	0.2	4.01	2.04	0.356
2003	9.67	1.16	4.13	2.2	0.524
2004	10.62	2.12	4.25	2.36	0.692
2005	11.57	3.08	4.37	2.52	0.86
2006	12.52	4.04	4.49	2.68	1.028
2007	13.47	5	4.61	2.84	1.196
2008	14.42	5.96	4.73	3	1.364
2009	15.37	6.92	4.85	3.16	1.532
2010	16.32	7.88	4.97	3.32	1.7
2011	17.27	8.84	5.09	3.48	1.868
2012	18.22	9.8	5.21	3.64	2.036
2013	19.17	10.76	5.33	3.8	2.204
2014	20.12	11.72	5.45	3.96	2.372
2015	21.07	12.68	5.57	4.12	2.54
2016	22.02	13.64	5.69	4.28	2.708
2017	22.97	14.6	5.81	4.44	2.876
2018	23.92	15.56	5.93	4.6	3.044
2019	24.87	16.52	6.05	4.76	3.212
2020	25.82	17.48	6.17	4.92	3.38
2021	26.77	18.44	6.29	5.08	3.548
2022	27.72	19.4	6.41	5.24	3.716
2023	28.67	20.36	6.53	5.4	3.884
2024	29.62	21.32	6.65	5.56	4.052
2025	30.57	22.28	6.77	5.72	4.22
2026	31.52	23.24	6.89	5.88	4.388
2027	32.47	24.2	7.01	6.04	4.556
2028	33.42	25.16	7.13	6.2	4.724
2029	34.37	26.12	7.25	6.36	4.892
2030	35.32	27.08	7.37	6.52	5.06

Source: Compiled from analysis of Data

Table 7 presents the computed trend line for the gross domestic product (GDP) of the United States, China, Japan, Germany, and India. Based on the analysis, it is projected that the GDP of the United States will amount to \$28.67 trillion USD and is expected to grow further, reaching \$35.32 trillion USD by 2030. Meanwhile, the GDP of China is expected to reach \$20.36 trillion USD and grow further, amounting to \$27.08 trillion USD by 2030. The GDP of Japan, on the other hand, is expected to amount to \$6.53 trillion USD, with projected growth to \$7.37 trillion USD by 2030. In addition, the GDP of Germany is expected to reach \$5.4 trillion USD and grow further to \$6.52 trillion USD by 2030. Finally, the GDP of India is projected to amount to \$3.884 trillion USD, with an expected growth to \$5.06 trillion USD by 2030. All these results are illustrated in Figure 2.

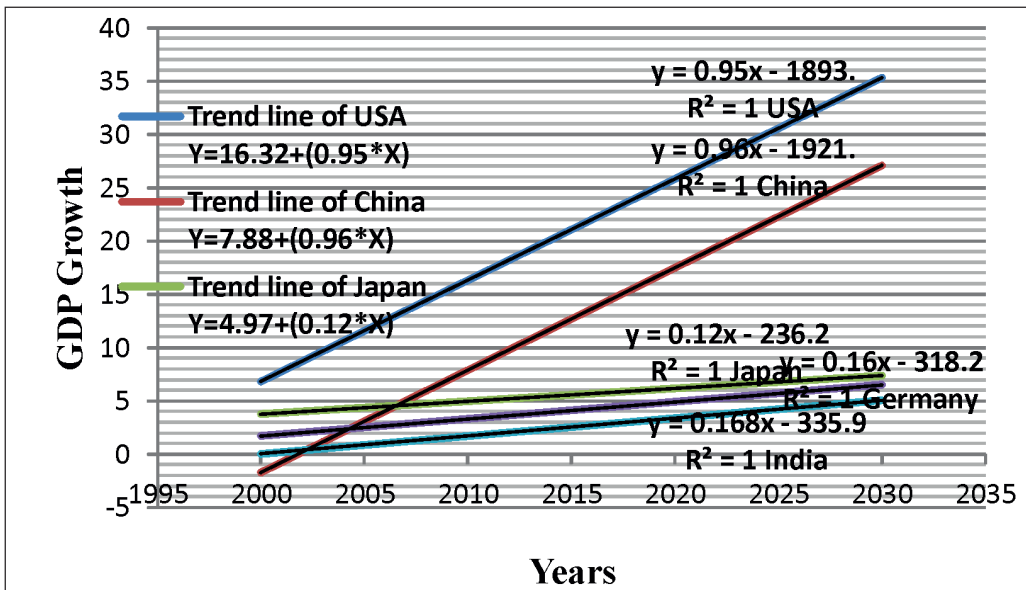


Figure 2: Trend of GDP Growth of USA, China, Japan, Germany and India

Source: Compiled from analysis of Data

The graph in Figure 2 showcases the trend line of GDP growth for five prominent countries- USA, China, Japan, Germany, and India. As per the graph, the trend line of USA and China's GDP growth is moving upwards. It suggests that both these countries will continue to experience economic growth in the future. On the other hand, the trend line for the GDP growth of Japan, Germany, and India is nearly identical. It indicates that India's GDP is quite like Japan and Germany's GDP. To

gain a more comprehensive understanding of the GDP growth trend, the rate of growth of the GDP of these five nations is further analyzed and presented in Table 8.

Table 8: Rate of Growth of GDP of USA, China, Japan, Germany and India Since 2000

<i>Year/ Indicator</i>	<i>Rate of Growth of GDP of USA</i>	<i>Rate of Growth of GDP of China</i>	<i>Rate of Growth of GDP of Japan</i>	<i>Rate of Growth of GDP of Germany</i>	<i>Rate of Growth of GDP of India</i>
2000	4.077159479	8.490093404	2.764647551	2.912502964	3.840991157
2001	0.954338729	8.335733476	0.386103426	1.681468481	4.823966266
2002	1.695942923	9.13363079	0.041962499	-0.197973835	3.803975321
2003	2.796209101	10.0380308	1.535125499	-0.700116686	7.860381476
2004	3.852552601	10.11362138	2.186115694	1.175088132	7.922936613
2005	3.48322032	11.39459181	1.803900872	0.731707164	7.923430621
2006	2.782810626	2.72095566	1.372350128	3.816441913	8.060732572
2007	2.010507552	14.23086093	1.483969412	2.976455131	7.660815066
2008	0.122188443	9.650678918	1.224289001	0.959879134	3.08669806
2009	2.599888351	9.398725632	-5.693236359	-5.693836336	7.861888832
2010	2.708856694	10.63587107	4.097917919	4.179882499	8.497584702
2011	1.54989495	9.550832179	0.023809524	3.925192705	5.241315002
2012	2.280687603	7.863736448	1.374750999	0.418497594	5.456388753
2013	1.841875395	7.766150097	2.005100177	0.437591303	6.386106401
2014	2.287775933	7.425763656	0.296205514	2.209543431	7.410227601
2015	2.706369582	7.041328879	1.560626697	1.491931528	7.99625379
2016	1.667472076	6.848762204	0.753826746	2.229999868	8.256305499
2017	2.241921216	6.947200793	1.675331752	2.680231114	6.795383423
2018	2.945384831	6.749773833	0.643391023	0.981232606	6.453851341
2019	2.294439078	5.950500754	0.402169201	1.075471636	3.871436939
2020	2.767802511	2.238638357	4.278603688	-3.826768716	5.831053221
2021	5.945484761	8.448469416	2.142487369	3.163819942	9.050277909
2022	1.935634592	2.989084086	1.028624866	1.806208967	7.239693281

Source: World Bank national accounts data and OECD National Accounts data: As on 29/02/2024
<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

Table 8 above provides an overview of the recorded growth rates of the Gross Domestic Product (GDP) of five major economies: the USA, China, Japan, Germany, and India. The data show that in 2000, the USA's GDP growth rate was 4.07%, China's 8.49%, Japan's 2.76%, Germany's 2.91%, and India's 3.84%. According to the latest available data, the growth rates of GDP for the USA, China, Japan, Germany, and India are 1.93%, 2.98%, 1.02%, 1.80%, and 7.23%, respectively. It is worth noting that the GDP growth rates of the USA, Japan, and Germany have declined, while

China's rate has remained consistent. India, on the other hand, has been recording higher GDP growth rates than other countries. To make it easier to understand, the data has been graphically represented in a diagram.

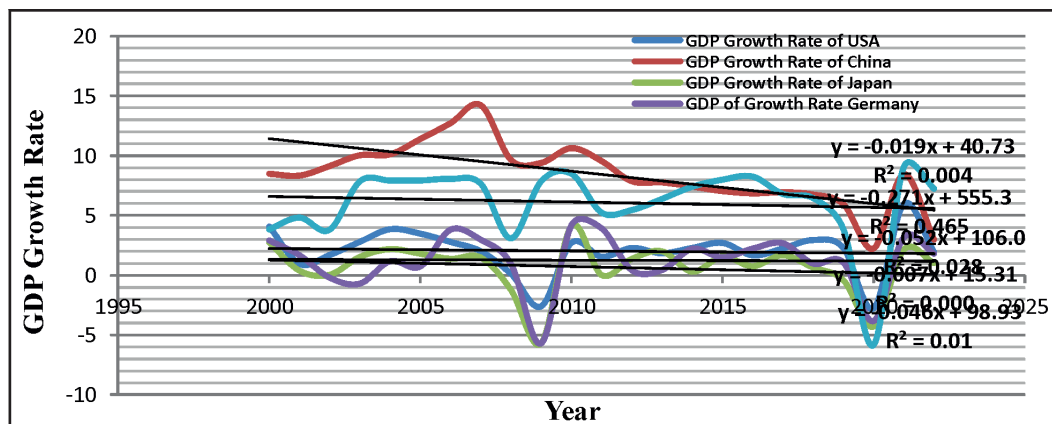


Figure 3: Rate of Growth of GDP of USA, China, Japan, Germany and India

Source: Compiled from analysis of Data

The visual above shows the growth rates of the Gross Domestic Product (GDP) curves for five major nations: the USA, China, Japan, Germany, and India. The graph indicates that the GDP curves for the USA, Japan, and Germany are downward sloping, suggesting that their GDPs are declining. On the other hand, China's GDP curve appears to be parallel to the x-axis, indicating that the GDP growth rate is consistent. Meanwhile, India's GDP growth rate is expected to move upward, suggesting the country's economy is growing faster. The future growth trends in GDP for these countries are presented in the following tables.

Table 9: Trend of rate of growth of GDP of USA

Year/ Indicator	GDP of USA				Trend line
X	y	x	x^2	xy	$Y=2.03+(0.026*x)$
2000	4.077159479	-10	100	-40.772	1.77
2001	0.954338729	-9	81	-8.589	1.796
2002	1.695942923	-8	64	-13.568	1.822
2003	2.796209101	-7	49	-19.573	1.848
2004	3.852552601	-6	36	-23.115	1.874
2005	3.48322032	-5	25	-17.416	1.9

Year/ Indicator	GDP of USA				Trend line
X	y	x	x ²	xy	Y=2.03+(0.026*x)
2006	2.782810626	-4	16	-11.131	1.926
2007	2.010507552	-3	9	-6.0315	1.952
2008	0.122188443	-2	4	-0.2444	1.978
2009	-2.599888351	-1	1	2.59989	2.004
2010	2.708856694	0	0	0	2.03
2011	1.54989495	1	1	1.54989	2.056
2012	2.280687603	2	4	4.56138	2.082
2013	1.841875395	3	9	5.52563	2.108
2014	2.287775933	4	16	9.1511	2.134
2015	2.706369582	5	25	13.5318	2.16
2016	1.667472076	6	36	10.0048	2.186
2017	2.241921216	7	49	15.6934	2.212
2018	2.945384831	8	64	23.5631	2.238
2019	2.294439078	9	81	20.65	2.264
2020	-2.767802511	10	100	-27.678	2.29
2021	5.945484761	11	121	65.4003	2.316
2022	1.935634592	12	144	23.2276	2.342
N=23	Σy = 46.81303562		Σx² = 1035	Σxy = 27.3408	
2023		13			2.368
2024		14			2.394
2025		15			2.42
2026		16			2.446
2027		17			2.472
2028		18			2.498
2029		19			2.524
2030		20			2.55

Source: Compiled from analysis of Data

Table 9 presents an in-depth analysis of the growth trend of the US GDP from 2000 to the present, covering a period of 23 years. The table offers a prediction of the future growth of the US GDP based on the observed data. The analysis shows that the trend of the US GDP growth will remain constant, increasing at an average rate of 2.16%, and is expected to reach a growth rate of 2.55% by 2030. These findings indicate that the US economy will continue to grow at a steady pace in the years to come, with no significant fluctuations in the growth rate.

Table 10: Trend of rate of growth of GDP of China

<i>Year/ Indicator</i>	<i>GDP of China</i>				<i>Trend line</i>
X	y	x	x ²	xy	Y=8.43+(-0.078*x)
2000	8.490093404	-10	100	-84.901	9.21
2001	8.335733476	-9	81	-75.022	9.132
2002	9.13363079	-8	64	-73.069	9.054
2003	10.03803048	-7	49	-70.266	8.976
2004	10.11362138	-6	36	-60.682	8.898
2005	11.39459181	-5	25	-56.973	8.82
2006	12.72095566	-4	16	-50.884	8.742
2007	14.23086093	-3	9	-42.693	8.664
2008	9.650678918	-2	4	-19.301	8.586
2009	9.398725632	-1	1	-9.3987	8.508
2010	10.63587107	0	0	0	8.43
2011	9.550832179	1	1	9.55083	8.352
2012	7.863736448	2	4	15.7275	8.274
2013	7.766150097	3	9	23.2985	8.196
2014	7.425763656	4	16	29.7031	8.118
2015	7.041328879	5	25	35.2066	8.04
2016	6.848762204	6	36	41.0926	7.962
2017	6.947200793	7	49	48.6304	7.884
2018	6.749773833	8	64	53.9982	7.806
2019	5.950500754	9	81	53.5545	7.728
2020	2.238638357	10	100	22.3864	7.65
2021	8.448469416	11	121	92.9332	7.572
2022	2.989084086	12	144	35.869	7.494
N = 23	Σy = 193.9630343		Σx² = 1035	Σxy = -81.238	
2023		13			7.416
2024		14			7.338
2025		15			7.26
2026		16			7.182
2027		17			7.104
2028		18			7.026
2029		19			6.948
2030		20			6.87

Source: Compiled from analysis of Data

Table 10 provides a comprehensive breakdown of China's Gross Domestic Product (GDP) growth from 2000 to date, spanning 23 years. The table employs the observed data to forecast the future trajectory of China's GDP growth. Notably, the

data highlights a gradual decline in China's GDP growth rate since 2000, and it is expected to reach 6.89% by 2030.

Table 11: Trend of rate of growth of GDP of Japan

Year/ Indicator	GDP of Japan				Trend line
X	y	x	x ²	xy	Y=0.677- (0.361*x)
2000	2.764647551	-10	100	-27.646	4.287
2001	0.386103426	-9	81	-3.4749	3.926
2002	0.041962499	-8	64	-0.3357	3.565
2003	1.535125499	-7	49	-10.746	3.204
2004	2.186115694	-6	36	-13.117	2.843
2005	1.803900872	-5	25	-9.0195	2.482
2006	1.372350128	-4	16	-5.4894	2.121
2007	1.483969412	-3	9	-4.4519	1.76
2008	1.224289001	-2	4	2.44858	1.399
2009	5.693236359	-1	1	5.69324	1.038
2010	4.097917919	0	0	0	0.677
2011	0.023809524	1	1	0.02381	0.316
2012	1.374750999	2	4	2.7495	-0.045
2013	2.005100177	3	9	6.0153	-0.406
2014	0.296205514	4	16	1.18482	-0.767
2015	1.560626697	5	25	7.80313	-1.128
2016	0.753826746	6	36	4.52296	-1.489
2017	1.675331752	7	49	11.7273	-1.85
2018	0.643391023	8	64	5.14713	-2.211
2019	0.402169201	9	81	-3.6195	-2.572
2020	4.278603688	10	100	-42.786	-2.933
2021	2.142487369	11	121	23.5674	-3.294
2022	1.028624866	12	144	12.3435	-3.655
N = 23	$\Sigma y = 15.57794942$		$\Sigma x^2 = 1035$	$\Sigma xy = -37.459$	
2023		13			-4.016
2024		14			-4.377
2025		15			-4.738
2026		16			-5.099
2027		17			-5.46
2028		18			-5.821
2029		19			-6.182
2030		20			-6.543

Source: Compiled from analysis of Data

Table 11 provides a meticulous analysis of the trend in Japan's Gross Domestic Product (GDP) growth from 2000 to the present, spanning over 23 years. The table confidently predicts the future growth of Japan's GDP based on the observed data. Significantly, the data indicates that Japan's GDP growth rate has consistently remained around 1.5%, and there is a high degree of certainty that this trend will continue to decline in the future.

Table 12: Trend of rate of growth of GDP of Germany

<i>Year/ Indicator</i>	<i>GDP of Germany</i>				<i>Trend line</i>
<i>X</i>	<i>y</i>	<i>x</i>	<i>x²</i>	<i>xy</i>	$Y=1.23+(0.02*x)$
2000	2.912502964	-10	100	-29.125	1.03
2001	1.681468481	-9	81	-15.133	1.05
2002	0.197973835	-8	64	1.58379	1.07
2003	0.700116686	-7	49	4.90082	1.09
2004	1.175088132	-6	36	-7.0505	1.11
2005	0.731707164	-5	25	-3.6585	1.13
2006	3.816441913	-4	16	-15.266	1.15
2007	2.976455131	-3	9	-8.9294	1.17
2008	0.959879134	-2	4	-1.9198	1.19
2009	-5.693836336	-1	1	5.69384	1.21
2010	4.179882499	0	0	0	1.23
2011	3.925192705	1	1	3.92519	1.25
2012	0.418497594	2	4	0.837	1.27
2013	0.437591303	3	9	1.31277	1.29
2014	2.209543431	4	16	8.83817	1.31
2015	1.491931528	5	25	7.45966	1.33
2016	2.229999868	6	36	13.38	1.35
2017	2.680231114	7	49	18.7616	1.37
2018	0.981232606	8	64	7.84986	1.39
2019	1.075471636	9	81	9.67924	1.41
2020	3.826768716	10	100	-38.268	1.43
2021	3.163819942	11	121	34.802	1.45
2022	1.806208967	12	144	21.6745	1.47
N = 23	$\Sigma y = 28.43445054$		$\Sigma x^2 = 1035$	$\Sigma xy = 21.3486$	

<i>Year/ Indicator</i>	<i>GDP of Germany</i>				<i>Trend line</i>
<i>X</i>	<i>y</i>	<i>x</i>	<i>x</i> ²	<i>xy</i>	$Y=1.23+(0.02*x)$
2023		13			1.49
2024		14			1.51
2025		15			1.53
2026		16			1.55
2027		17			1.57
2028		18			1.59
2029		19			1.61
2030		20			1.63

Source: Compiled from analysis of Data

Table 12 presents a comprehensive analysis of the growth trend in Germany's Gross Domestic Product (GDP) from 2000 to the present, covering 23 years. The data presented in the table are based on observed trends and are intended to predict future growth in German GDP. Upon close analysis of the data, it is noteworthy that the trend of GDP growth in Germany is expected to remain consistent, growing at an average rate of 1.5%. The data also indicates that by 2030, Germany's GDP growth rate is expected to reach a new high of 1.63%, signalling a steady, stable economic outlook for Germany in the years to come.

Table 13: Trend of rate of growth of GDP of India

<i>Year/ Indicator</i>	<i>GDP of India</i>				<i>Trend line</i>
<i>X</i>	<i>y</i>	<i>x</i>	<i>x</i> ²	<i>xy</i>	$Y=6.07+(0.089*x)$
2000	3.840991157	-10	100	-38.41	5.18
2001	4.823966266	-9	81	-43.416	5.269
2002	3.803975321	-8	64	-30.432	5.358
2003	7.860381476	-7	49	-55.023	5.447
2004	7.922936613	-6	36	-47.538	5.536
2005	7.923430621	-5	25	-39.617	5.625
2006	8.060732572	-4	16	-32.243	5.714
2007	7.660815066	-3	9	-22.982	5.803
2008	3.08669806	-2	4	-6.1734	5.892
2009	7.861888832	-1	1	-7.8619	5.981
2010	8.497584702	0	0	0	6.07
2011	5.241315002	1	1	5.24132	6.159
2012	5.456388753	2	4	10.9128	6.248

Year/ Indicator	GDP of India				Trend line
X	y	x	x ²	xy	Y=6.07+(0.089*x)
2013	6.386106401	3	9	19.1583	6.337
2014	7.410227601	4	16	29.6409	6.426
2015	7.99625379	5	25	39.9813	6.515
2016	8.256305499	6	36	49.5378	6.604
2017	6.795383423	7	49	47.5677	6.693
2018	6.453851341	8	64	51.6308	6.782
2019	3.871436939	9	81	34.8429	6.871
2020	-5.83105322	10	100	-58.311	6.96
2021	9.050277909	11	121	99.5531	7.049
2022	7.239693281	12	144	86.8763	7.138
N = 23	$\Sigma y =$ 139.6695874		$\Sigma x^2 =$ 1035	$\Sigma xy =$ 92.9372	
2023		13			7.227
2024		14			7.316
2025		15			7.405
2026		16			7.494
2027		17			7.583
2028		18			7.672
2029		19			7.761
2030		20			7.85

Source: Compiled from analysis of Data

Table 13 provides a comprehensive analysis of India's GDP growth from 2000 to the present, spanning 23 years. Based on the data gathered, this table provides predictions for India's future GDP growth. The analysis highlights a significant observation: India's GDP is growing at a steady 6.1% and is expected to reach 7.85% by 2030. The data presented in Table 14 is a compilation of all the information extracted from this meticulous study.

Table 14: Trend of rate of growth of GDP of USA, China, Japan, Germany and India

Year/ Indicator	Trend line of USA	Trend line of China	Trend line of Japan	Trend line of Germany	Trend line of India
X	Y=2.03 + (0.026*X)	Y=8.43+(-0.078*X)	Y=0.677-(0.361*X)	Y=1.23 + (0.02*X)	Y=6.07 + (0.089*X)
2000	1.77	9.21	4.287	1.03	5.18
2001	1.796	9.132	3.926	1.05	5.269
2002	1.822	9.054	3.565	1.07	5.358

<i>Year/ Indicator</i>	<i>Trend line of USA</i>	<i>Trend line of China</i>	<i>Trend line of Japan</i>	<i>Trend line of Germany</i>	<i>Trend line of India</i>
2003	1.848	8.976	3.204	1.09	5.447
2004	1.874	8.898	2.843	1.11	5.536
2005	1.9	8.82	2.482	1.13	5.625
2006	1.926	8.742	2.121	1.15	5.714
2007	1.952	8.664	1.76	1.17	5.803
2008	1.978	8.586	1.399	1.19	5.892
2009	2.004	8.508	1.038	1.21	5.981
2010	2.03	8.43	0.677	1.23	6.07
2011	2.056	8.352	0.316	1.25	6.159
2012	2.082	8.274	-0.045	1.27	6.248
2013	2.108	8.196	-0.406	1.29	6.337
2014	2.134	8.118	-0.767	1.31	6.426
2015	2.16	8.04	-1.128	1.33	6.515
2016	2.186	7.962	-1.489	1.35	6.604
2017	2.212	7.884	-1.85	1.37	6.693
2018	2.238	7.806	-2.211	1.39	6.782
2019	2.264	7.728	-2.572	1.41	6.871
2020	2.29	7.65	-2.933	1.43	6.96
2021	2.316	7.572	-3.294	1.45	7.049
2022	2.342	7.494	-3.655	1.47	7.138
2023	2.368	7.416	-4.016	1.49	7.227
2024	2.394	7.338	-4.377	1.51	7.316
2025	2.42	7.26	-4.738	1.53	7.405
2026	2.446	7.182	-5.099	1.55	7.494
2027	2.472	7.104	-5.46	1.57	7.583
2028	2.498	7.026	-5.821	1.59	7.672
2029	2.524	6.948	-6.182	1.61	7.761
2030	2.55	6.87	-6.543	1.63	7.85

Source: Compiled from analysis of Data

Table 14 shows that the United States' Gross Domestic Product (GDP) growth rate in 2022 was 1.93%. The trend projection analysis predicts that USA will attain a growth rate of 2.5% in 2030 and further increase to 2.55%. Similarly, China's GDP growth rate was 2.98% in 2022, and based on trend projection analysis, it is expected to grow at 7% and reach 6.87% in 2030. However, unlike the United States and China, Japan's GDP growth rate in 2022 was 1.02%, but trend projection analysis indicates it may experience negative growth of -6.543% in 2030. Germany's GDP growth rate in 2022 was 1.80%, and it is expected to grow at 1.5% in 2023 and 1.63%

in 2030. Finally, India's GDP growth rate in 2022 was an impressive 7.23%, and it is anticipated to grow at 7% and reach 7.85% in 2030. For better comprehension, Figure 4 presents a graphical representation of the analyzed data.

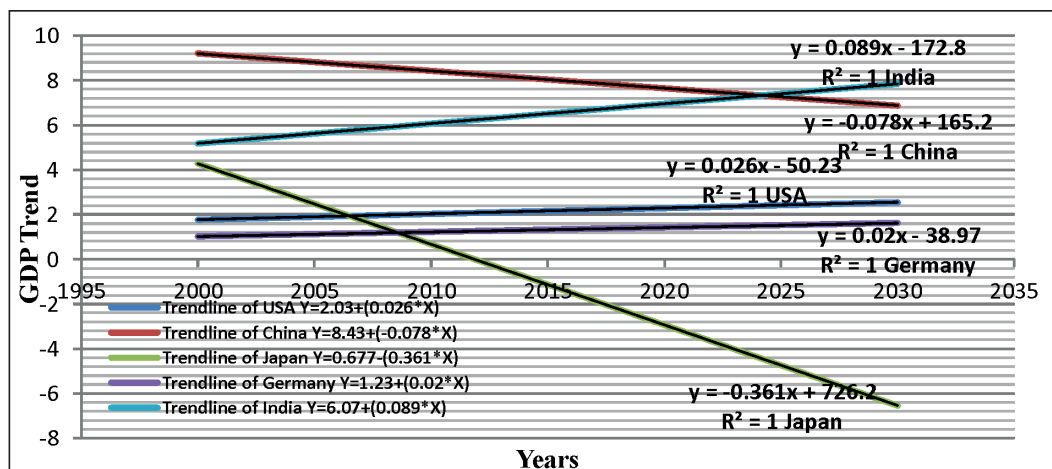


Figure 4: Trend of GDP Growth Rate of USA, China, Japan, Germany and India

Source: Compiled from analysis of Data

The chart in Figure 4 shows the trend lines for GDP growth rates in the USA, China, Japan, Germany, and India. Upon closer observation, the trend line for the USA shows a slight decline in GDP growth, while that for China indicates a positive upward trend. The trend line for Japan is negative, suggesting a decline in GDP growth. However, the trend lines for Germany and India indicate promising upward GDP growth. It is noteworthy that among these five countries, India's trend line is particularly high, suggesting the potential for India to become the world's third-largest economy by 2030.

The average growth rate of GDP, computed for the period 2000 to 2022, indicates that the USA grew at 4.25%, China at 13.32%, Germany at 3.79%, and India at 9.8%. But Japan had a negative growth of -0.34%.

The GDP of USA has reached into \$25.44 Trillion USD, the China \$17.96 Trillion USD, Japan \$4.26 Trillion USD, Germany \$4.08 Trillion USD and India \$3.42 Trillion USD in 2022 and is expected to be \$35.32 Trillion USD for USA, \$27.08 Trillion USD for China, \$7.37 Trillion USD for Japan, \$6.52 Trillion USD for Germany and \$5.06 Trillion USD for India. According to analysis, India may achieve a \$5.06 trillion economy by 2030.

The recorded growth rates of GDP in the USA, China, Japan, Germany, and India were 1.93%, 2.98%, 1.02%, 1.80%, and 7.23%, respectively, in 2022. It is predicted that the USA will attain a 2.55% rate of growth, China 6.87% rate of growth, Japan 6.543% rate of growth, Germany 1.63% rate of growth, and finally, India 7.85% rate of growth in 2030. According to the analysis, India's GDP growth rate is higher than those of the USA, China, Japan, and Germany. Hence, India has the potential to become the third-largest economy by 2030.

V. Conclusions

This analysis highlights the remarkable potential for India's economy to emerge as a significant global player by 2030, potentially securing its position as the world's third-largest economy. With a projected growth rate surpassing that of major economies like Japan, and Germany, India stands poised to achieve substantial economic milestones. However, realising this potential requires a concerted effort to implement strategic economic reforms to address poverty and unemployment and foster sustainable growth. By adopting effective policies and embracing necessary reforms, India can create an environment conducive to prosperity, benefiting its citizens and contributing positively to the global economy. Therefore, India must focus on comprehensive economic strategies that foster innovation and create opportunities for all segments of society, ensuring inclusive growth and long-term prosperity.

Acknowledgment

I express my sincere gratitude to the World Bank national accounts and the OECD National Accounts for providing data on open sources and authors mentioned in the references made it possible to complete this paper successfully.

References

- Agrawal, R., & Agarawal, T. J. (2013). Global Capital Flows and its Impact on Macroeconomic Variables—Evidence from India. *Macro theme Review: A Multidisciplinary Journal of Global Macro Trends*, 2(4), 66-86.
- Arkadievich Kholodilin, K., Siliverstovs, B., & Kooths, S. (2008). A dynamic panel data approach to the forecasting of the GDP of German Länder. *Spatial Economic Analysis*, 3(2), 195-207.
- Aruoba, S. B., Diebold, F. X., Nalewaik, J., Schorfheide, F., & Song, D. (2012). Improving US GDP measurement: A forecast combination perspective. In *Recent Advances and Future*

- Directions in Causality, Prediction, and Specification Analysis: Essays in Honor of Halbert L. White Jr (pp. 1-25). New York, NY: Springer New York.
- Ayyoub, Sharif Chaudhary, Farooq. (2011). Does inflation affect economic growth? The case of Pakistan. *Pakistan Journal of social sciences*, 31(1), 51-64.
- Berthold, N., & Gründler, K. (2015). The growth crisis of Germany: A blueprint of the developed economies. *International Economic Journal*, 29(2), 195-229.
- Chang, S. H., & Huang, L. C. (2010). The nexus of finance and GDP growth in Japan: Do real interest rates matter? *Japan and the World Economy*, 22(4), 235-242.
- Chow, G.C., & Li, K.W. (2002). China's economic growth: 1952–2010. *Economic Development and Cultural Change*, 51(1), 247-256.
- Dhiraj Jain, K. Sanal Nair, Vaishali Jain. Factors (2015). Affecting GDP (Manufacturing, Services and Industry): An Indian Perspective, Annual Research Journal of Symbiosis Centre for Management Studies, Pune. 3.38–56.
- Hussin, Fauzi & Yik, Soo. (2012). The Contribution of Economic Sectors to Economic Growth: The Cases of China and India. *Research in Applied Economics*. 4. 38 - 53.
- Fernald, J. G., & Jones, C. I. (2014). The future of US economic growth. *American economic review*, 104(5), 44-49.
- Hara, N., & Yamane, S. (2013). New monthly estimation approach for Now casting GDP growth: the case of Japan (No. 13-E-14). Bank of Japan.
- Hayami, Y., & Ogasawara, J. (1999). Changes in the sources of modern economic growth: Japan compared with the United States. *Journal of the Japanese and International Economies*, 13(1), 1-21.
- Holz, C. A. (2008). China's economic growth 1978–2025: what we know today about China's economic growth tomorrow. *World Development*, 36(10), 1665-1691.
- Holz, C. A. (2014). The quality of China's GDP statistics. *China Economic Review*, 30, 309-338.
- Jones, C. I. (2002). Sources of US economic growth in a world of ideas. *American economic review*, 92(1), 220-239.
- Konda Hari Prasad Reddy (2019), Analysis and comparison of overall GDP depending on three major sectors in Indian economy, 1(1), 1-17.
- Mallik, G., & Chowdhury, A. (2001). Inflation and economic growth: evidence from four south Asian countries. *Asia-Pacific development journal*, 8(1), 123-135.
- Mankiw, N. and Shapiro, M. D. (1986). News or noise: An analysis of GNP revisions. *Survey of Current Business*, (66), 20–25.
- Murray, C. J., & Nelson, C. R. (2000). The uncertain trend in US GDP. *Journal of Monetary Economics*, 46(1), 79-95.

- Nagaraj, R. (2017). Quarterly GDP estimation: Can it pick up de-monetization impact? *Economic and Political Weekly*, 52(10), 10–11.
- Oliver, M. (2015). Population ageing and economic growth in Japan. *International Journal of Sociology and Social Policy*, 35(11/12), 841-863.
- Pfister, U. (2022). Economic growth in Germany, 1500–1850. *The Journal of Economic History*, 82(4), 1071-1107.
- Rawski, T. G. (2002). Measuring China's recent GDP growth: where do we stand. *China Economic Quarterly*, 2(1), 53-62.
- Rosovsky, H. (1973). Japanese economic growth: Trend acceleration in the twentieth century. Stanford University Press.
- Saymeh, A. A. F., & Orabi, M. M. A. (2013). The effect of interest rate, inflation rate, GDP, on real economic growth rate in Jordan. *Asian Economic and financial review*, 3(3), 341.
- Siebert, H. (2007). *Global View on the World Economy: A Global Analysis*. Routledge.
- Urasawa, S. (2014). Real-time GDP forecasting for Japan: A dynamic factor model approach. *Journal of the Japanese and International Economies*, 34, 116-134.
- Wolf, Nikolaus. (2018). Regional economic growth in Germany, 1895–2010. 10.4324/9780429449789-8.
- Young, A. H. (1993). Reliability and accuracy of the quarterly estimates of GDP. *Survey of Current Business*, (73), 29–43.