PalArch's Journal of Archaeology of Egypt / Egyptology

India's Evolving Structure: Miles to go Before 2025

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Madhumita Das, Debaraj Rana, Swarna Prabha Jena: India's Evolving Structure: Miles to go before 2025 -- Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(9). ISSN 1567-214x

Keywords: s- India, GDP, SDG, inclusive growth

ABSTRACT

Post Industrial Revolution, the major macroeconomic goals of the countries have been to attain a high growth of income, high employment, and stability in prices and balance of payments. Among the BRICS countries, China and India achieved a significant economic development in the last three decades. However, with Chinese economy is slowing down recently, open up new avenues for India. At present, India is the fifth largest economy in the world in 2019 and aspiring to be the third largest by 2025. India has to take strategic policies regarding better education system, efficient health care facilities and reduced carbon emissions. To make the country achieve the Sustainable Development Goals (SDG) target or the 5 trillion dollar economy aspiration, the country has to fasten its pace of inclusive growth. The country has come a long way after independence and has also surpassed the problem of Hindu Rate of growth. But with the onset of the present pandemic, when the growth rates are coming down with higher unemployment, price volatility, high fiscal deficit, the policy makers need to devise rigorous strategies to convert growth faster and also inclusive one so as to become the superpower in 2025.

1. Introduction

Post Industrial Revolution, the major macroeconomic goals of the countries have been to attain a high growth of income, high employment, and stability in prices and balance of payments. There have been short-term business cycles.

But advanced economies have displayed a stable and high economic growth. It has been reflected in terms of real GDP and also an improvement in standard of living. If we seek an answer to the question why the countries are in the race of higher GDP, it is because stable and high economic growth has empowered advanced industrial countries not only economically, but also socially and environmentally. These countries are able to provide more resources to their citizens—better food and homes, improved medical care and pollution control, quality education for children, better security, transfer payments like public pensions for retirees.

Countries such as Britain and the United States are now considered as ideals for almost all developing countries seeking the path to prosperity. Even though there is difference in their strategies, but most of the rapidly growing countries share certain mutual traits. The same fundamental process of economic growth and development that assisted Britain and Japan is showing path to developing countries like China and India.

Among the BRICS countries, China and India achieved a significant economic development in the last three decades (**Figure 1**). As per the data of World Bank, the gross domestic product (GDP) of these two countries jointly account for 15% of the global GDP. Since the 1990s, the growth rates of these two countries have been considered to be among the fastest in the world [1, 2] estimated that by 2050, China will become the largest economy in the world, with India the third, Russia and Brazil fifth and sixth respectively. Surprisingly their growth rates will surpass that of Japan.

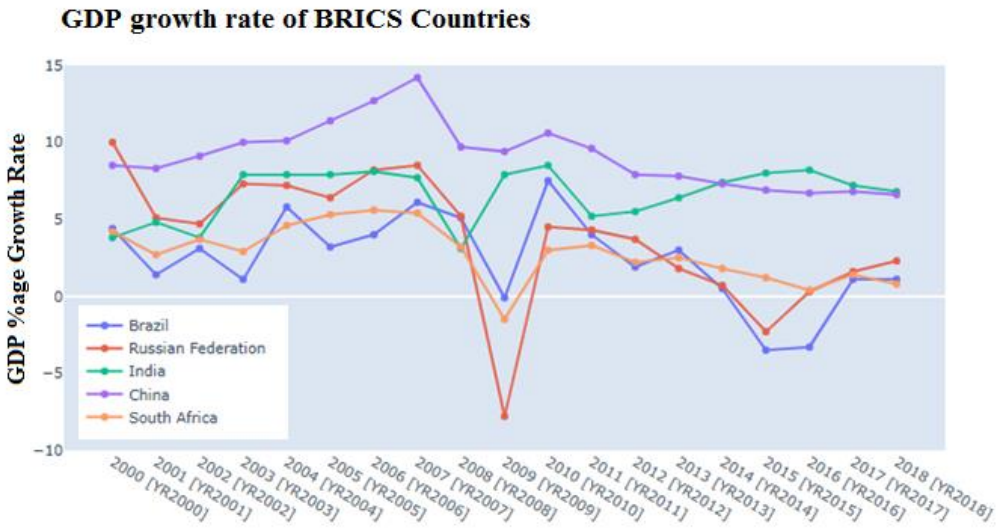

Figure 1: Growth Rates of BRICS Countries from 2000-2018

The crucial question is, does the growth rate of India is inclusive one? The present article attempts to examine the growth rate of India and examine whether the growth has a trickledown effect or not. The article is divided into 4 sections. Section 1 is introductory followed by review of literature in Section 2. Section 3 analyzes the data and Section 4 concludes.

2. Review of Literature

As per the census report 2011, India is the second largest country in the world in terms of population, next to China. However, the attention of the world economy is on China because off as test growth rate [3]. But it has been surprising that Chinese economy is slowing down recently [4]. As Fingar [5] highlights India has attracted Foreign Direct Investment (FDI) with a total of US$ 63bn surpassing China for 2015 by a US$6.4bn margin and this is the world's highest.

According to economic historian Angus Maddison's book titled "The World Economy: A Millennial Per-spective, India" till 17th century AD India was the richest country in the world. With the development of western civilization and the introduction of industrial revolution, the world scenario changed completely. Close to 1870, Europe became the leading country and India GDP started decelerating [6]. After 1947, i.e. post-independence, the economic growth of the country has more or less hanged around 3.5 percent for almost three decades. Poddar and Yi consider that the growth rate has been so low mainly because of state-intervening policies during this period [7]. Raj Krishna an Indian economist considered this as "Hindu rate of growth" which reflected India's low rate of GDP growth between the 1950s and 1980s.

After the introduction of several economic reforms in 1991 known as LPG Model, Indian Economy has progressively been moving towards the higher growth path [6]. GDP after surpassing the long term Hindu Growth Ratehas moved to the all praising high growth rate of about 7 per cent to 9 per cent during 2015 to 2016.This has made our country recognized as one of the fastest growing countries in the globe [8].

Noted economists like Samuelson & Nordhau consider that the economic progress must be governed by four factors irrespective of the type of country [9]. These factors are: 1) human resources (labor supply, education and skills); 2) natural resources (land, minerals, fuels, environmental quality); 3) capital (factories, machinery, roads, intellectual property); 4) technological change and innovation (science, engineering, management, entrepreneurship). The biggest advantage for India is that country is endowed with human resources and also natural resources. With these two resources, the country is attempting to fasten the growth rate by investing on capital formation and innovation.

Several economists consider that India's growth has a different story to tell. For example Kumar [8] considers that the country's growth rate has mainly been driven by service sector. But the problem is that such growth rate is basically job terminating. Thus, this service sector driven growth process has led tothe increase in both absolute and relative inequality in the distribution of income. In turn there is growth and also inequality and poverty.

Moreover, as time passes, economists consider that GDP is not the only yardstick of development. For example Froyen have emphasized that GDP is not a measure of welfare or even of material well-being because it measures production of goods and services [10]. Moreover Froyen also highlights that GDP also fails to ignore welfare costs of production. For example, if production of electricity causes acid rain, and thereby water pollution and

dying forests, the production of electricity in GDP is considered ignoring the economic loss from the pollution.

The present study therefore takes insight from such criticisms. The broad objective of the articles to examine whether the benefit of economic growth has percolated amongst all sections of people irrespective of region, religion and castes etc. Specifically, the paper tires to examine (1) the impact of higher growth on health, education and environment (2) what does the country need to learn to make the growth an inclusive one.

3. Research Methodology

First, The study is exploratory in nature. Secondary data has been duly collected from various sources available online. Most of the data have been taken from World Bank, MOSPI and other government sources.The study has attempted for visualization of the data to gain deeper insights. It has used Python to visualize the data and draw insights from it.

4. Result and Discussion

India is the fifth largest economy in the world in 2019. By 2025, the country is aspiring to be the third largest (Economic Survey, 2019-20). Comparing the data of the world, India occupies the fifth rank in terms of Gross Domestic Product (GDP) in current US$ (Figure 2) with the size of US$ 2.9 trillion in 2019 (World Bank). The United States ranks 1st followed by China, Japan, Germany.

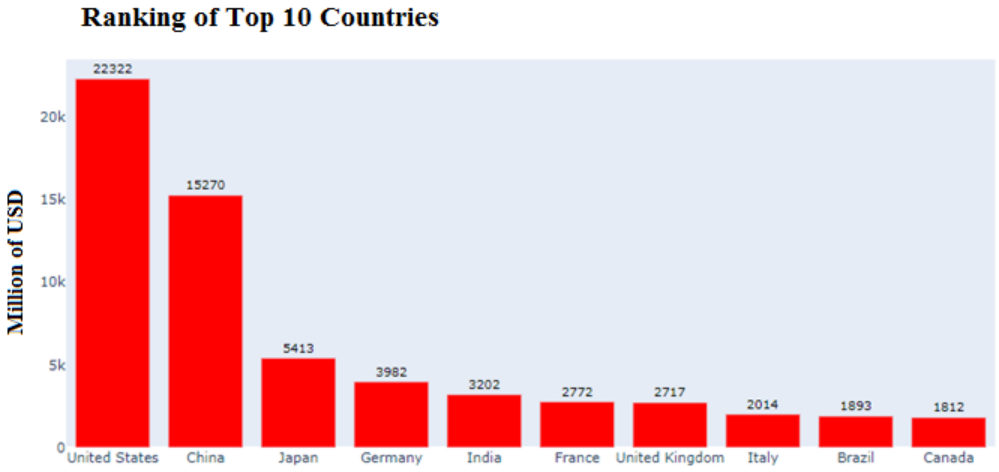

Figure 2: Top Ten Economies of the World Measured in terms of Gross Domestic Product (GDP) in current US$ (2019)
Source: World Bank

As per the Economic Survey, 2018-19 the average growth rate of India measured in terms of GDP was higher than China's during 2014-15 to 2017-18. This growth rate was also higher than that of top economies of the world. But subsequently, growth of the Indian economy came down in 2018-19 with a growth of 6.8 per cent, slightly lower than 7.2 per cent in 2017-18 (Economic

Survey, 2019-20). Yet, India maintained its position in the world economy. It maintained macroeconomic stability by containing inflation within 4 per cent and by maintaining a manageable current account deficit to GDP ratio. The table below (Table 1) provides the details of some macroeconomic indicators.

Table 1: Annual Growth Rates of Gross National Income and Net National Income

Year	(percent)					
	Gross national income		Net national income		Per capita net national income	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
2012-13	13.5	5.1	13.2	4.5	11.9	3.3
2013-14	12.9	6.3	12.9	6.0	11.5	4.6
2014-15	11.1	7.5	10.9	7.5	9.5	6.2
2015-16	10.5	8.0	10.8	8.0	9.4	6.7
2016-17 (2nd RE)	11.6	8.2	11.8	8.1	10.4	6.8
2017-18 (1st RE)	11.4	7.2	11.3	7.0	9.8	5.7
2018-19 (PE)	11.3	6.9	11.3	6.9	10.0	5.6
2019-20 (1st AE)	7.6	5.0	7.6	5.0	6.8	4.3

Source: Economic Survey 2019-20

With ups and downs and its effort in maintain macro -economic stability, India's missionis to become the US$ 5 trillion economy. Table 2 provides how Indian economy is evolving over the period of time (Table 2).

Table 2: size of the Indian Economy (GDP at current US$)

Year	US$ Trillion
2011	1.82
2012	1.82
2013	1.85
2014	2.03
2015	2.10
2016	2.29
2017	2.65
2018	2.71
2019	2.9

Source: Economic Survey 2019-20

Considering, human resources as one of the most important engines of economic growth, health and education has been top priorities of countries irrespective of their development. Let us look at some important indicators of some selected countries in terms of health and education.

Table 3: Indicators of Health and Education of some selected Countries (Year-2018)

Countries	Life Expectancy at Birth, total (years)	Fertility rate, total (births per woman)	Mortality rate, under-5 (per 1,000 live births)	GDP per capita (current US$)	Current health expenditure per capita (current US$)	Government expenditure on health, total (% of GDP)	Government expenditure on education, total (% of GDP)
India	69	2.2	37	2009.978857	71.5685123	3.56	5.32
Australia	83	1.7	4	57373.68668	5236.3654	9.12	6.32
UK	81	1.7	4	43943.90227	4000.325	9.10	7.32
Belgium	82	1.7	4	47518.63604	5000.36545	10.52	6.98
Canada	82	1.5	5	46232.98962	6054.23658	13.09	6.32
Denmark	81	1.8	4	61350.34791	7025.36987	11.45	8.98
Finland	82	1.5	2	50152.34014	5036.2356	10.04	7.32
Germany	81	1.6	4	47603.02763	5698.2547	11.97	6.32
Kuwait	75	2.1	8	33994.40657	1256.56897	3.69	3.32
Netherland	82	1.6	4	53024.05921	6547.2356	12.34	4.23
Singapore	83	1.1	3	64581.94402	1989.235	3.08	5.32
Slovenia	81	1.6	2	26123.97387	2985.23	11.42	5.96
Switzerland	84	1.5	4	82796.54716	9658.23	11.66	5.96

Source: World Bank

Inspite of the fact that India is now one of the fastest growing economies of the world, its expenditure as a % of GDP on health and education is still worrisome. While only 5% of GDP is invested for health of the citizens, for education the figure stands at only around 3%. Looking specifically for education, country wide literacy rate is only 73 percent (As per 2011 census report). There exists wide scale disparity among the state. Some states doing better compared to national average (Table 4), 14 states are lagging behind the national average. While the literacy rate of Kerela is 94%, only 65. 4 % are literates in Arunachal Pradesh. Figure 3 provides a complete picture of the performance of all the states and Union territories of India in providing quality and universal education to all.

Table 4: Performer States in terms of literacy Rate in 2001 and 2011

States	2001	2011
Gujarat	69.1	78.0
Haryana	67.9	75.6
Himachal Pradesh	76.5	82.8
Karnataka	66.6	75.4
Kerala	90.9	94.0
Maharashtra	76.9	82.3
Manipura	70.5	76.9
Meghalaya	62.6	74.4

Mizoram	88.8	91.3
Nagaland	66.6	79.6
Odisha	63.1	72.9
Punjab	69.7	75.8
Sikkim	68.8	81.4
Tamil Nadu	73.5	80.1
Tripura	73.2	87.2
Uttarakhand	71.6	78.8
West Bengal	68.6	76.3
India	64.8	73.0

Source: Economic Survey 2019-20

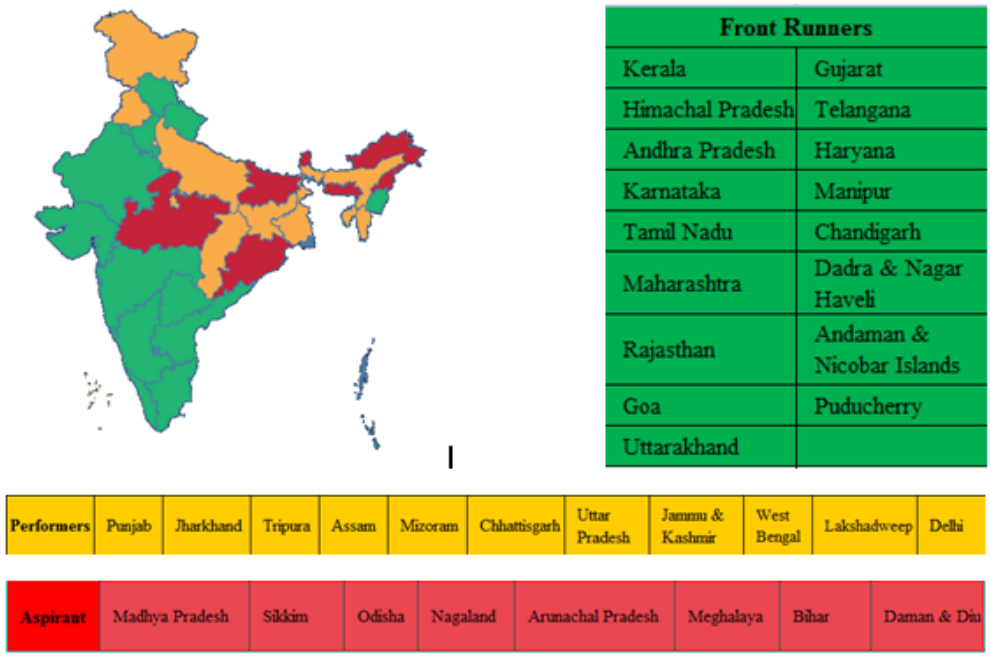

Figure 3: Performance of States and Union Territories in Providing Quality Education to All

The performance as depicted in Figure 3 shows disparity in provision of education to the citizens. While the country has progressed in terms of enrollment in Primary and secondary education, but it has a lot to learn from countries like Finland to achieve SDG-4-Quality education for all. Table 5 shows the Gross Enrollment ratio of students in Pre-Primary, Primary and Secondary education. The performance is the worst in enrollment of pre-primary education.

Different programs related to education like Sarva Shiksha Abhiyan, Mid-day Meal, Mahila Samakhya, Strengthening for providing quality Education in Madrassas for elementary education, Rashtriya Madhyamik Shiksha Abhiyan, Girls' Hostel Scheme, National Scheme of Incentives to Girls for Secondary Education, Inclusive Education for Disabled at Secondary Stage, Scheme of

Vocational Education, National Merit-cum-Means Scholarship Scheme, Scheme for construction and running of Girls' Hostel for students of secondary and higher secondary schools, Scholarship schemes for Minority students, National Scholarships for secondary education etc. have helped the country in moving forward.

Table 5: Gross enrollment Ratio

Types	2012	2013	2014	2015	2016	2017
Pre primary education						
Total	7.89	9.62	11.77	12.31	13.03	13.74
Male	7.7	9.14	11.3	11.83	12.53	13.15
Female	8.07	10.05	12.19	12.75	13.48	14.28
Primary Education						
Total	109.76	110.58	107.86	108.49	114.54	112.96
Male	111.97	117.12	114.02	114.78	123.56	121.13
Female	107.79	104.75	102.36	102.83	106.42	105.58
Secondary Education						
Total	69.01	68.76	74.14	73.87	75.09	73.48
Male	67.64	69.48	75.04	74.69	76.04	74.06
Female	70.24	68.12	73.34	73.14	74.25	72.96

Source: http://uis.unesco.org/en/country/in

Case 1: Finland's Pre Primary Education System

Finland has introduced an all new educational system. The country in an attempt to male learning universal has completely revolutionized their educational system. Surprisingly, Finland's education system outrankseven the United States, the largest economy of the world. Some major revolutionsthat make Finland's education system the best in the world are:

- Absence of standardized testing
- Cooperation of the stakeholders
- Emphasis on the basic education
- Encouraging toddlers to have elementary education at home
- Provisions of professional degrees in a larger scale
- Quality teachers with better incentives to the teachers
- Flexible and Relaxed atmosphere
- Less homework

Source: https://www.weforum.org/agenda/2018/09/10-reasons-why-finlands-education-system-is-the-best-in-the-world

Thus India can learn how to make education quality oriented from Finland. A holistic program with development on pedagogy, teachers, curriculum, and flexible environment can help India reach its SDG 4 within the stipulated time.
Now, let us concentrate on the health system of the country. India has made some progress in achieving SDG 4-Good health and well-being. For example under-five mortality rate which represents death of children under 5 per thousand born has come down to 50 in 2015-16 from 125 per 1,000 live births

in 1990. Even maternal mortality rate has reached to 167 in 2013which was 212 per 100,000 live births in 2007-09.

India has also made significant effort in reducing the occurrence of critical diseases such as HIV and AIDS. However, a quarter of global TB cases occur in India where nearly 2.1 million people live with the disease, and an estimated 423,000 die annually as a result. The front runner states in providing good health and well-being to its residents are depicted in figure 4.

Front Runner	
Kerala	Andra Pradesh
Tamil Nadu	Manipur
Telangana	West Bengal
Punjab	Goa
Karnataka	Puduchery

Performer	
Himachal Pradesh	Tripura
Maharastra	Gujrat
Haryana	Meghalaya
Odisha	Sikkim
Jammu & Kashmir	Lakshadweep
Mizoram	Andaman & Nicobar Islands

Aspirant	
Rajasthan	Nagaland
Chhattisgarh	Assam
Bihar	Uttar Pradesh
Jharkhand	Daman & Diu
Arunachal Pradesh	Delhi
Madhya Pradesh	Dadra & Nagar Haveli
Uttarakhand	Chandigarh

Figure 4: Front runner States and Union Territories in health and wellbeing

The country has a lot to achieve if its wants to achieve SDG 4. Rigorous policy measures need to be introduced. The recent Pandemic COVID-19 is an example where people are dying because of lack of medical facilities. India can learn a lot from Singapore.

Case 2: Singapore's Health Care System

Singapore's healthcare system was considered as the model system by the Obama administration's healthcare team. In 2000, Singapore's healthcare system was ranked by the World Health Organization (WHO) as the best in Asia. Singapore outweighed the performance of Hong Kong and even the model country Japan. The reasons of its top class health care system are:

- Wide Healthcare Facilities by both government and private hospitals
- Healthcare Coverage
- Unique value-proposition for major illness

Source:https://www.guidemesingapore.com/business-guides/immigration/get-to-know-singapore/healthcare-in-singapore

Concurrent with the growth of the country, there is the problem of increase in carbon emissions. Despite the importance on sustainability, India is a front runner in carbon emissions. Figure 5 displays the top ten emitting countries and India occupies the 4th position in the world.

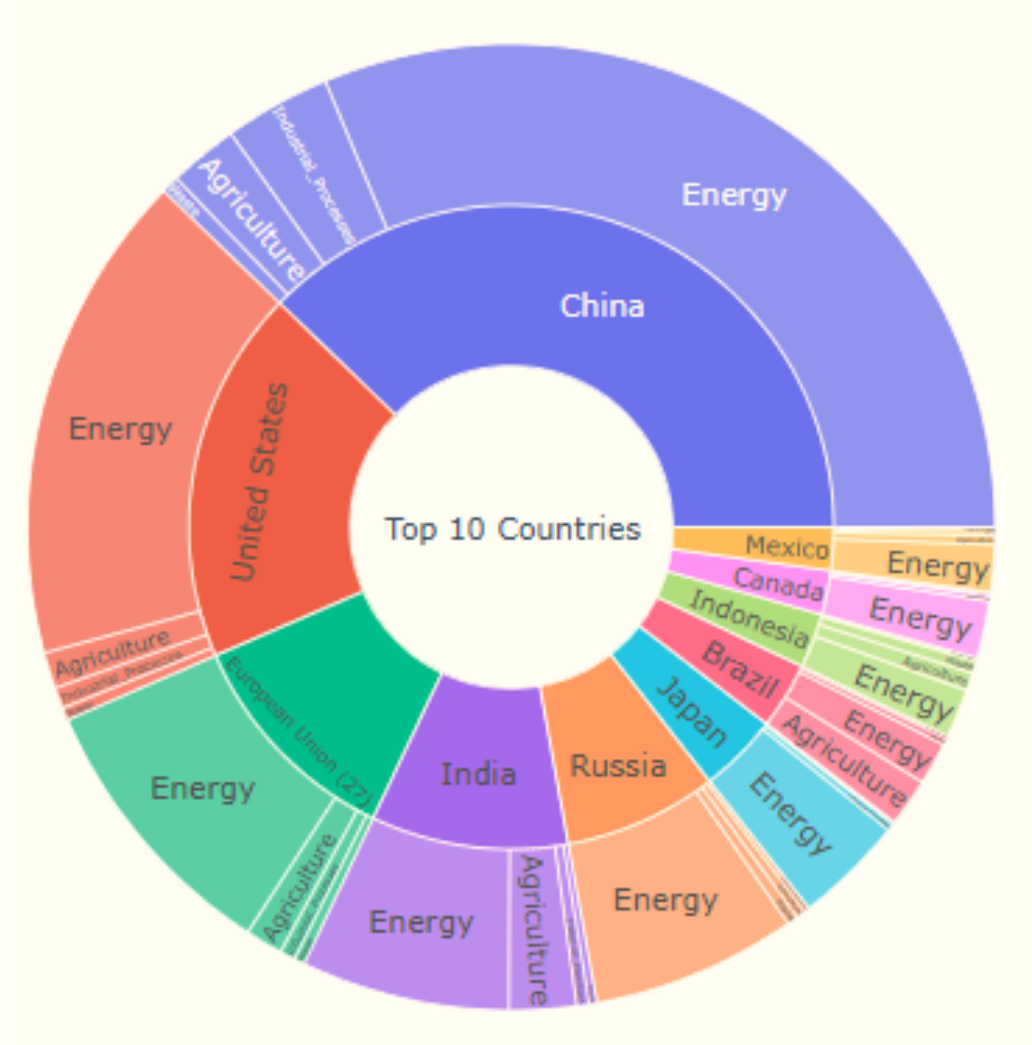

Figure 5: Top emitters of the World

India is often referred to as the next development superpower and is widely seen as a potential destination for largescale manufacturing hubs. The problem comes as India requires double the amount of energy to produce the same output as China [3]. For example Figure 5 shows, major pollution come from energy. With emphasis on climate change, global warming, sustainability, the country need to devise strategies to reduce its carbon emissions. India has to learn how growth can be decoupled from emissions from countries like Denmark, Finland etc. (Table 6).

Table 6: Top 21 Countries with Low Emissions

Countries	Change in CO2 (2000-2014) %	Change in Real GDP (2000-2014)
Austria	-3%	21%
Belgium	-12%	21%
Bulgaria	-5%	62%
Czech Republic	-14%	40%
Denmark	-30%	8%
Finland	-18%	18%
France	-19%	16%
Germany	-12%	16%
Hungary	-24%	29%
Ireland	-16%	47%
Netherlands	-8%	15%
Portugal	-23%	1%
Romania	-22%	65%
Slovakia	-22%	75%
Spain	-14%	20%
Sweden	-8%	31%
Switzerland	-10%	28%
Ukraine	-29%	49%
United Kingdom	-20%	27%
United States	-6%	28%
Uzbekistan	-2%	28%

Sources: BP Statistical Review of World Energy 2015; World Bank World Development Indicators

5. Conclusion

Despite the fastest growing country in the world, India has to take strategic policies regarding better education system, efficient health care facilities and reduced carbon emissions. To make the country achieve the SDG target or the 5 trillion dollar economy aspiration, the country has to fasten its pace of inclusive growth. The country has come a long way after independence and has also surpassed the problem of Hindu Rate of growth. But with the onset of the present pandemic, when the growth rates are coming down with higher unemployment, price volatility, high fiscal deficit, the policy makers need to devise rigorous strategies to convert growth faster and also inclusive one.

6. Acknowledgment

We would like to express our gratitude to the team members of the Python Data Visualization Group, Centurion University of Technology and Management, for their support to collection, analysis of data and presentation through graph for this case study.

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