



Sustainable Development Goals and India Focused on First Five Goals

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Abstract:

The concept of sustainable development was articulated in the 1978 Brandland Report on "Our Common Future" by the United Nations World Commission for the Environment and Development. This concept has aims to create a sustainable society and a sustainable future, one in which there is perfect balance and coordination of human-human and human-nature relations and in which environmental protection, economic efficiency and social equality are maintained. The Millennium summit of the United Nations in 2000 had committed to fulfil the Millennium Development Goals which declared by the United Nation. There are 17 Sustainable Development Goals are targeted to achieve over next 15 years. This research paper mainly focuses on the stand of India in context of first five Sustainable Development Goals. The linear regression model has been applied on available data on Sustainable Development Goals related to poverty, hunger, health, education and gender equality. It is observed that after the committed to the Millennium Development Goals, India has significant achieved SDGs pertaining to poverty, hunger, health, education and gender equality. However, still more efforts required for go near to targeted sustainable development goals.

Keywords: SDGs, Poverty, India

1. Introduction

The importance of sustainable development has grown in the literature of economic growth and development in recent years, as seen in the 1978 Brandland Report on "Our Common Future" by the United Nations World Commission for the Environment and Development. However, this concept was also present in the previous decade. The significance of this report lies in its being the first to involve social scientists. The Brandland Report and other philosophers have highlighted the declining water and land resources in underdeveloped countries, stressing the need to reevaluate the rate of economic growth in relation to such diminishing natural resources.

Sustainable development aims to create a sustainable society and future, where there is harmony and cooperation between humans and nature, and where environmental protection, economic efficiency, and social equality are maintained. This concept rejects policies and practices that exhaust natural resources to sustain the living standards of the current population. As the World Commission on Environment and Development stated in 1987, "sustainable growth means meeting the needs of the present without compromising the ability of future generations to meet their own needs."

2. Dimensions of Sustainable Development

- The idea of sustainable development can be divided into three main aspects environmental, social, and economic sustainability. Achieving sustainable development requires balancing these three dimensions.

- The preservation of the environment, its resources, and the maintenance of environmental quality are all essential components of environmental sustainability. This concept is focused on ensuring that these resources will be available for future generations to come.
- Social sustainability involves ensuring social equity, maintaining cultural identity, promoting equality in human rights, and fostering social well-being and inclusion for all people.
- Economic sustainability refers to the capacity of the economy to support the economic well-being of its people and sustain economic production over time.

3. Sustainable Development Goals

The United Nations Millennium Summit in 2000 committed to achieving the Millennium Development Goals, which were declared by the organization. In 2016, the Sustainable Development Goals (SDGs) were introduced and accepted by 193 nations as an expansion of the Millennium Development Goals. There are 17 SDGs that aim to be accomplished over the next 15 years. The three dimensions mentioned above are aligned with the following 17 sustainable development goals

4. Seventeen (17) Sustainable Development Goals¹

SDG 1 No poverty End poverty in all its forms everywhere

SDG 2 Zero hunger End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SDG 3 Good health and well-being Ensure healthy lives and promote well-being for all at all ages

SDG 4 Quality education. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

SDG 5 Gender equality Achieve gender equality and empower all women and girls Demand for family planning satisfied by modern methods (% of females aged 15 to 49)

SDG 6 Clean water and sanitation Ensure availability and sustainable management of water and sanitation for all

SDG 7 Affordable and clean energy Ensure access to affordable, reliable, sustainable and modern energy for all

SDG 8 Decent work and economic growth Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

SDG 9 Industry, innovation and infrastructure Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

SDG 10 Reduced inequalities Reduce inequality within and among countries

SDG 11 Sustainable cities and communities Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 12 Responsible Consumption and production Ensure sustainable consumption and production patterns

SDG 13 Climate action Take urgent action to combat climate change and its impacts

SDG 14 Life below water Conserve and sustainably use the oceans, seas and marine resources for sustainable development

SDG 15 Life and Land Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

SDG 16 Peace, justice and Strong Institutions Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

SDG 17 Partnerships for the goals Strengthen the means of implementation and revitalize the global partnership for sustainable development

¹ <https://sdgs.un.org/goals>

5. Review of Literature

Rajesh Panda et.al. have examined the current state of the Sustainable Development Goals (SDGs) in India by utilizing recent data. The study is based on information gathered from various sources for every state in the country, with each SDG being assigned a variable that signifies its specific status. Preliminary findings indicate that India has made significant progress in several basic parameters over the past 15 years and is on track to achieve its goals, but a closer look at the state-wise data reveals a significant disparity between states. Some parameters that appear acceptable overall are driven by a few select states, while other states are significantly lagging behind. The paper aims to rank each state based on the SDG Index, which highlights the need for tailored policies at the state level rather than a one-size-fits-all approach on a national level. The index also sheds light on the key areas where policy makers should focus their attention to achieve uniform success across all states. Overall, the analysis suggests that there is a considerable gap between the states in India, and more efforts are needed to ensure that all states achieve the SDGs.

The study of Fukuda-Parr et.al. makes challenges the common method for assessing progress in achieving the Millennium Development Goals (MDGs), which focuses on whether the targets are likely to be met. This approach is inappropriate because the MDGs were not intended as planning targets, but rather as political commitments made by world leaders to establish priorities within a normative framework. In this context, the more relevant question is whether efforts are being made to fulfill these commitments, resulting in faster progress. We propose a new methodology and analysis that uses this perspective, revealing significant differences in our assessment of "progress" compared to the traditional approach. For instance, while access to safe water is often hailed as an MDG success, only a third of countries have improved at a faster rate. Overall, progress has not accelerated in most indicators and countries.

The research undertaken by P. Ravi Kiran et.al. had employed bibliometric analysis and the ADO-TCM framework to evaluate the SDG-related well-being of indigenous communities in India. Through an analysis of 74 high-impact journals, the study provides insights into the alignment of these communities with sustainable development objectives. The study highlights the significance of implementing the SDGs to enhance the well-being of tribal populations in India. By utilizing existing scholarly articles and the ADO-TCM framework, the research examines the well-being of indigenous communities in relation to the SDGs.

5. Objectives of the Study

The primary goal of this study is to determine India's standing with regard to the first five of the 17 United Nations goals, as well as to compare it with some of its neighbouring countries. Additionally, this study will recommend measures to be taken in the near future in order to more effectively achieve the targets.

6. Data and Methodology

The present study is descriptive in nature. Secondary data has been used to achieve the objectives of the study. An attempt has been made to assess the percentage change from the time series data of important indicators in the context of the SDGs. In addition, an attempt has been made to estimate the expected values of these important indicators by using time series data. The secondary data has been collected from official website <https://dashboards.sdgindex.org>.

7. India's Status in Sustainable Development Goals of 1 to 5

As mentioned above, there are 17 sustainable development goals with 169 targets are put on forward again world to sustain human life in natural, social and economic environments. In this assignment, first five SDGs are discussed and position of India is evaluated.

7.1 SDG 1 No poverty and India End poverty in all its forms everywhere

Poverty headcount ratio: Poverty headcount ratio at \$1.90 a day is the percentage of the population living on less than \$1.90 a day.

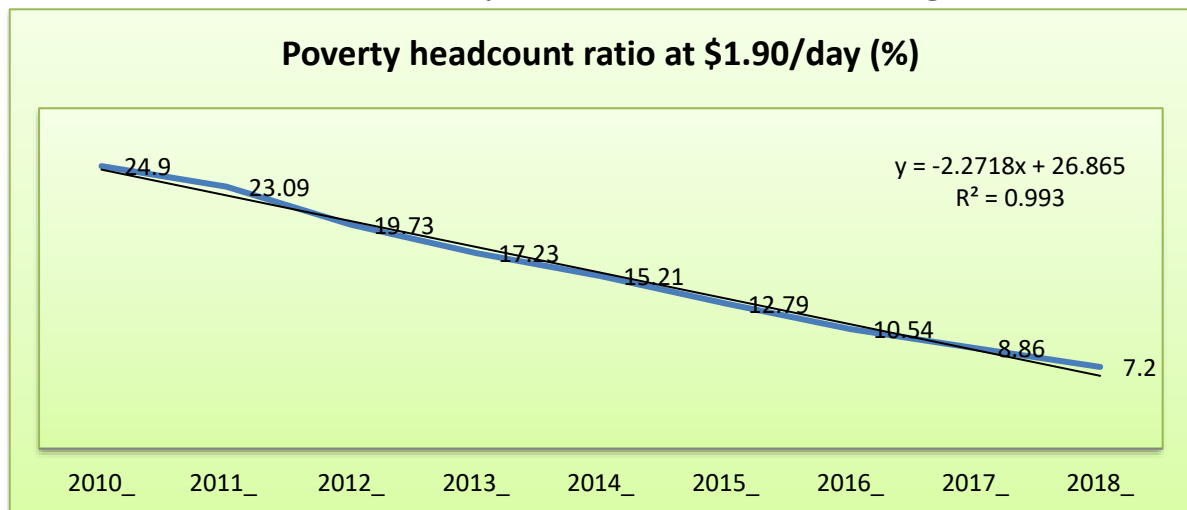
Table-1 Poverty Headcount Ratio at \$1.90/day (%) of selected countries of World and India

Country	2010	2018	Change
Bangladesh	20.38	5.14	-15.24
Brazil	5.43	3.94	-1.49
China	9.62	0.15	-9.47
India	24.9	6.24	-18.66
Indonesia	14.44	2.42	-12.02
Mexico	3.78	1.54	-2.24
Nigeria	36.67	42.83	6.16
Pakistan	9.39	1.99	-7.4
Russian Federation	0	0.01	0.01
United States	0.47	0.38	-0.09

Source <https://dashboards.sdgindex.org/profiles/india>

On the basis of above table, it can say that there is significant declined in the poverty head count ratio during 2010 to 2018 (i.e. 24.9% to 6.24%). However, it is still required to improvement to stand with Neighbour counties like China and Pakistan.

Chart-1 Trend Line of Poverty headcount ratio of India during 2010 to 2018



On the basis of above linear trend line, it can be say every one year there is 2.27% declined in poverty head count ratio. The value of R square is also found to be quite high, which implies 92% changes in poverty head count ratio is significant with change in time.

7.2 SDG 2 Zero hunger and India End hunger, achieve food security and improved nutrition and promote sustainable agriculture

The prevalence of undernourishment the prevalence of under-nourishment (poU) is an estimate of the proportion of the population whose habitual food consumption is insufficient to provide the dietary energy levels that are required to maintain a normal active and healthy life. It is expressed as a percentage. – United Nation Statistical Division.

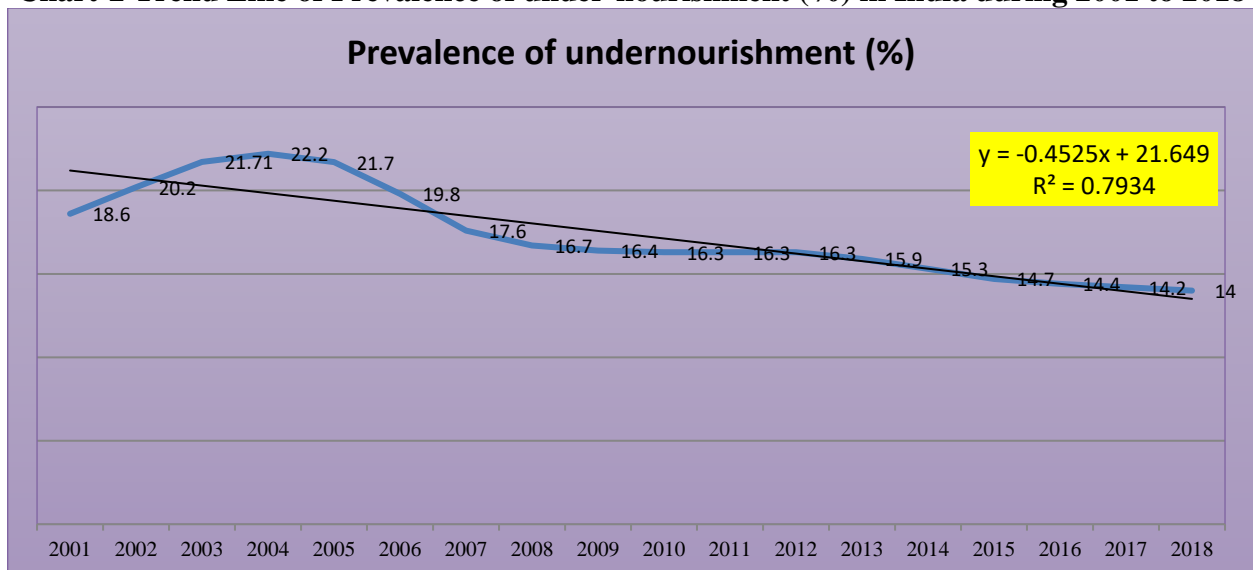
Table-2 Prevalence of under-nourishment (%) in Selected Countries of the World and India

Country	2001	2018	Change
Bangladesh	16	13	-3
Brazil	10.1	2.5	-7.6
China	10.6	2.5	-8.1
India	18.6	14	-4.6
Indonesia	19.3	9	-10.3
Mexico	3.3	7.1	3.8
Nigeria	9.1	12.6	3.5
Pakistan	21.2	12.3	-8.9
Russian Federation	4.1	2.5	-1.6
United States	2.5	2.5	0

Source <https://dashboards.sdginde.org/profiles/india>

The proportion of the population whose habitual food consumption is insufficient to provide the dietary energy levels that are required to maintain a normal active and healthy life was 18.6% in 2001, which reduced and comedown to 14.0%. however, still 14% population is under-nourishment.

Chart-2 Trend Line of Prevalence of under-nourishment (%) in India during 2001 to 2018



The trend line estimation clearly shows that, declining trend of prevalence of under-nourishment is predicted to declined by 0.45% over a period of time.

7.3 SDG 3 Good health and well-being and India Ensure healthy lives and promote well-being for all at all ages

Maternal mortality rate (per 100,000 live births): The maternal mortality ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births during the same time period. It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth. Maternal deaths. (WHO).

Table-3 Maternal mortality rate (per 100,000 live births) in Selected Countries of the World and India

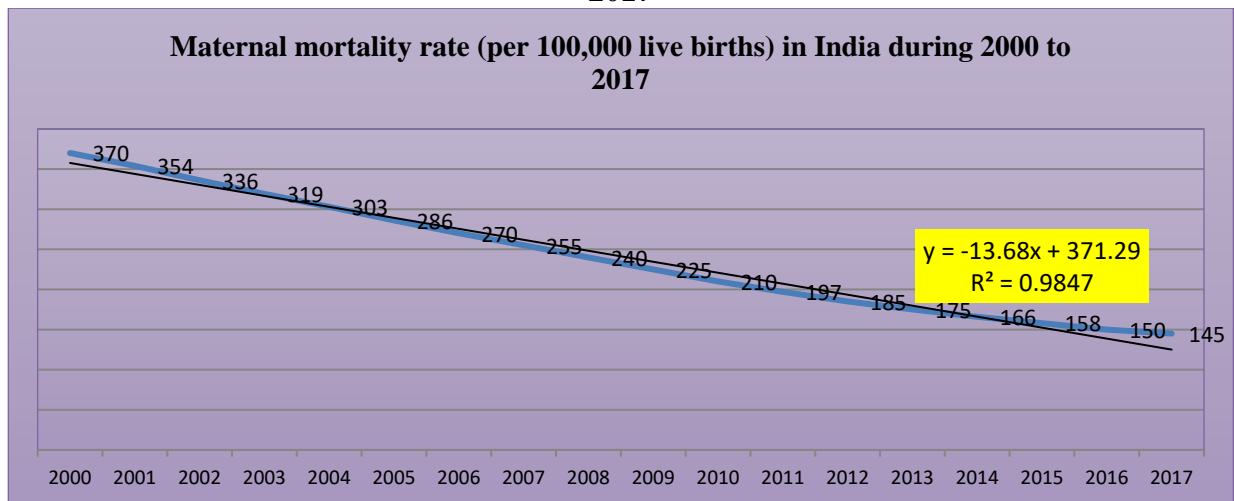
Country	2000	2017	Change
Bangladesh	434	173	-261
Brazil	69	60	-9
China	59	29	-30

Country	2000	2017	Change
India	370	145	-225
Indonesia	272	177	-95
Mexico	55	33	-22
Nigeria	1200	917	-283
Pakistan	286	140	-146
Russian Federation	56	17	-39
United States	12	19	7

Source <https://dashboards.sdginde.org/profiles/india>

The MMR was 370 per lack live birth, which was declined comedown to 145 per lakh live birth. So ther is significant declined in the MMR (225%) followed by the reduction in Nigeria (283%) and Bangladesh (265%). But the status of MMR is still quite high as compared to many Asian countries such as Brazil (60), China (29), Mexico (33).

Chart-3 Trend Line of Maternal mortality rate (per 100,000 live births) in India during 2000 to 2017



7.4 SDG 4 Quality education and India. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Net primary enrollment rate (%) Number of children of official primary school age who are enrolled in primary education as a percentage of the total children of the official school age population. The enrolment of the same age-group at secondary level is also included. (UNESCO)

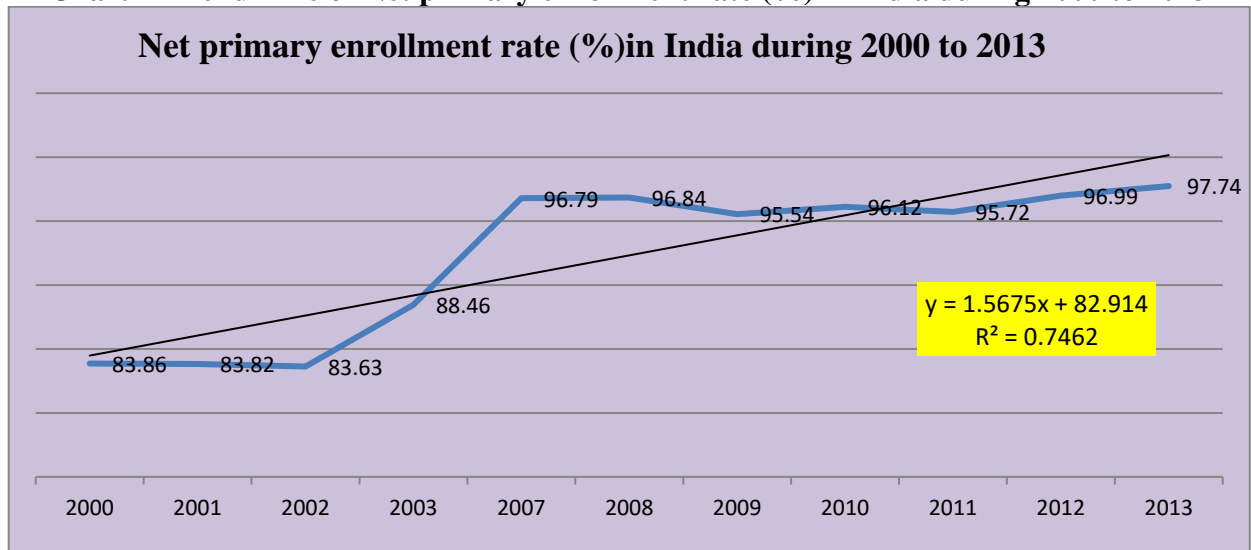
Table-4 Net primary enrollment rate (%) in Selected Countries of the World and India

Country	2000	2018	Change
Bangladesh	(2005) 97.24	(2010) 94.99	-2.25
Brazil	(2001) 98.86	(2018) 99.48	0.62
India	83.86	(2013) 97.74	13.88
Indonesia	(2001) 96.15	(2018) 94.38	-1.77
Mexico	99.98	(2018) 99.30	-0.68
Nigeria	66.18	(2010) 65.98	-0.2
Russian Federation	(2006) 92.78	(2018) 99.84	7.06
United States	97.71	(2018) 99.43	1.72

Source <https://dashboards.sdginde.org/profiles/india>

Above table clearly implies that in the matter of primary enrolment, India is stand in good position as compared to beginning to independence era. In 2000, Net Primary Enrollment Rate was 83.86%, which rose to 97.74% in 2013 (i.e. 13.88% growth).

Chart-4 Trend Line of Net primary enrollment rate (%) in India during 2000 to 2013



The trendline of Net Primary Enrollment Rate (%) clearly implies that there is upward trend during the period of 2000 to 2013. The coefficient of the time regressor is reported to be 1.57 with higher R square value of 0.75. hence, there is significant increases in the Net Primary Enrollment Ratio In India.

7.5 SDG 5 Gender equality and India Achieve gender equality and empower all women and girls

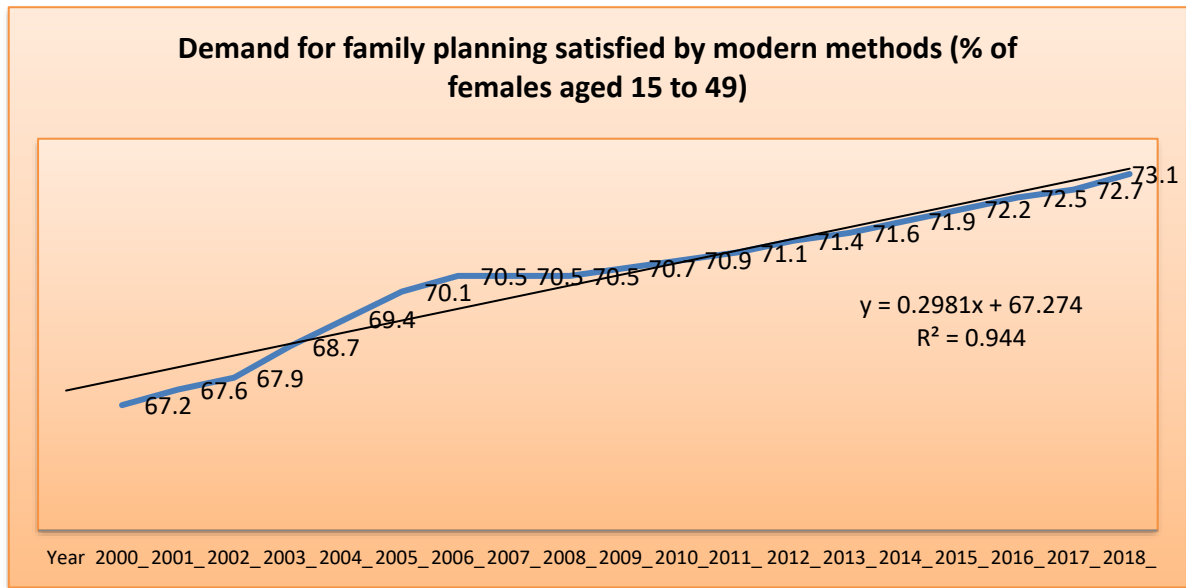
Table-5 Demand for family planning satisfied by modern methods (% of females aged 15 to 49) in Selected Countries of the World and India

Country	2000	2018	Change
Bangladesh	61.6	74.7	13.1
Brazil	82.8	88.8	6
China	92.2	91.3	-0.9
India	67.2	73.7	6.5
Indonesia	77	80.9	3.9
Mexico	76.2	81.4	5.2
Nigeria	28.8	40.2	11.4
Pakistan	36.8	50.9	14.1
Russian Federation	63.9	74.9	11
United States	80.4	82.5	2.1

Source <https://dashboards.sdgindex.org/profiles/india>

Gender equality is core concept to measure gender empowerment in enjoying all well being and human rights. The fifth goal of the SDGs is Gender Equality, under this goal the first target is insight to know the used of modern method of method of family planning by the women aged 15 to 49. The above table clearly shows that as compared to the year of 200, in 2018 there is increased of 6.5% in this matter. Now, about 73.7% of women adopted modern method of family planning. Still India is lacking to achieved the goal of 100% adoption of modern method of family planning by women.

Chart-5 Demand for family planning satisfied by modern methods (% of females aged 15 to 49) in India during 2000 to 2018

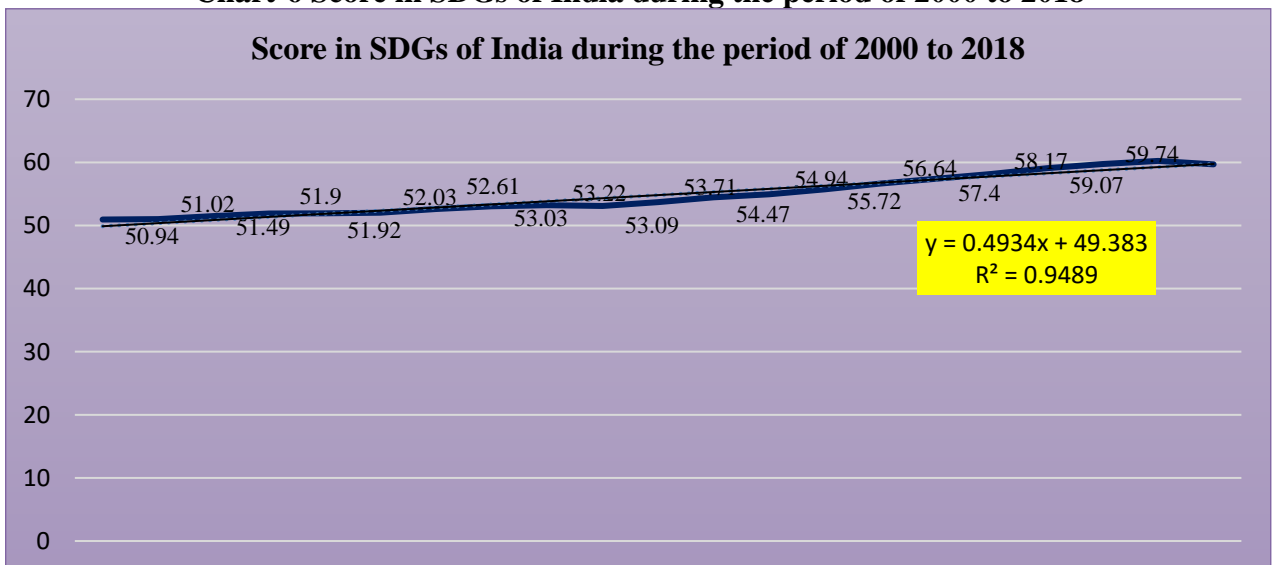


The predication made by the trend line drawn for data during the period of 2000 to 2018 clearly implies that there is significant increase in the demand for family planning satisfied by modern method by the women aged 15 years to 49 years. The value if R square reported to be quit high which indicates proportion of change in demand for family planning satisfied by the modern method by women with time changing.

7.6 Recent Rank of India in SDGs and Score of SGDs

According to Sustainable Development Report-2018, India stood on 120 ranks among the 165 partner nations. The rank of India in SDGs Index clearly suggest that, numbers of effective and actionable measures should require for sustainable development of the nation. The following chart shows the score achieved by the India during the period of 2000 to 2018 in matter of Sustainable Development.

Chart-6 Score in SDGs of India during the period of 2000 to 2018



The above trend line of Sustainable Development Score achieved by the India shows that over a period of time the score of the nation in Sustainable Development will be predicted to increase by 0.49 points.

The value of R square reported to 0.95 which implies that time period has significant impact of improvement in the score.

8. Conclusions

There has been a substantial decrease in the poverty head count ratio from 2010 to 2018, dropping from 19.10% to 7.2%. However, in order to be on par with neighboring countries such as China, Sri Lanka, and Pakistan, further improvements are still necessary. The findings of the linear regression analysis indicate that the poverty head count ratio decreases by 0.84% annually. In 2001, the proportion of the population that struggled with insufficient dietary energy intake to maintain an active and healthy life was 18.6%, which decreased to 16.3% by 2018. The trend line estimation suggests that the decline in the prevalence of under-nourishment is expected to continue at a rate of 0.40% over time. The Maternal Mortality Rate (MMR) was 384 per 100,000 live births in the past, but this number decreased to 103 per 100,000 live births in 2018, representing a significant decline of 73.18%. This reduction is similar to the improvement seen in Bangladesh (72.11%) and Nepal (65.48%). However, India's MMR is still relatively high compared to neighboring countries such as China (23) and Sri Lanka (29). Nonetheless, India has made great progress since gaining independence, with the Net Primary Enrollment Rate increasing from 84.86% in 2000 to 97.74% in 2013, a rise of 25.49 basis points. This ratio is also relatively high compared to Sri Lanka and China. Additionally, the ratio of female to male mean years of education received has been consistently increasing since 2005, reaching 86% in 2018. It is expected that this ratio will continue to increase by 1.67% annually. According to the MDGs, about 4.50 crore people live below the poverty line out of the total population of the country. So, the government and all the people of the country have to take steps to further reduce this rate of poverty as determined at the international level. Poverty and hunger are positively correlated with each other. However, it is inevitable that the consumption patterns of people in India will also change with respect to the poverty criteria suggested by the SDGs.

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