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Status of Human Development Index with Reference to Nepal

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Abstract

This paper is based on 'the status of Human Development Index (HDI)'since 1990 to 2022. Even though the term "human development" is frequently used, its meaning varies depending on the region. The first time Human Development Report (HDR) was introduced in 1990s and new approach and indices for advancing human flourishing in the different time interval. The mainpurpose of this paper is to track the trends in national human development indices and to observe the circumstances surrounding human development. Primary source of secondary data used for meta-analysis of human development reports and related materials. The HDR emphases on a distinct issue that effect on measuring the multi-dimensional human development. HDI is getting popular to measure the development of a country with related to socio-economic status. It combines three critical indicators namely; education, life expectancy and standard of living. Nepal's HDI position is 143 rdranked, among 191 countries in 2021. HDI reports shows in 2022 puts the 0.602value. So, Nepal is Medium human development category. Between 1990 and 2022, Nepal's HDI value changed from 0.399 to 0.602, a change of 50.9 percent. Bagmati province scores the highest HDI value with (0.669) and Kathmandu valley has the highest HDI score with 0.622 values. In comparison with rural areas, urban regions have a higher score, but the gap narrows for the rural areas. So, the Nepalese's Human Development Indicators are increasing trends

Keywords: Human development index, life expectancy, Education, Income and Inequality.

Introduction

The United Nations Development Programme (UNDP) formally accepted the idea of human development in the late 1980s and early 1990s. The first Human Development Report, published in 1990, used the HDI to gauge the status of each nation. The notion of human development was put into reality with the help of renowned South Asian economists Mahbub Ul Haq and Amartya Sen (UlHaq, 1995).

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The UNDP revolutionized development theory, measurement, and policy in 1990 when it released its first annual HDR and introduced the HDI. According to Shanton (2007), the Human Development Report (1990) defined "Human Development" as the advancement of human well-being and offered statistics at the national level for evaluating states' positions in relation to well-being indicators. The UNDP's efforts to publish the HDR increased our shared understanding of development and made measurement and comparison tools more accessible to governments, NGOs, and researchers. Three indicators were employed in the report: one from the social, one from the economic, and one from the health sectors (Dhungel, 2018).

Human development is a process of enlarging the range of people's choices. Thus, enlarging range of people's choices is the most significant aspect of human development. People's choices may involve a host of other issues but, living a long and healthy life, being educated and have access to resources needed for a decent standard of living including political freedom, guaranteed human rights and personal self-respect are considered some of the non-negotiable aspects of the human development. It is a process of enlarging the range of people's choices, increasing their opportunities for education, health care, income, empowerment and covering the full range of human choices from a sound physical environment to economic, social and political freedom (Izhar Ahmad, 2023).

Human Development Theory has roots in ancient philosophy and early economic theory. Aristotle noted that "Wealth is evidently not the good are seeking, for it is merely useful for something else". Adam Smith and Karl Marx were concerned with human capabilities. The theory grew in importance in the 1980s with the work of Amartya Sen and his Human Capabilities perspective, which played a role in his receiving the 1998 'Nobel Prize in Economics'. Then Sen's book, *Commodities and Capabilities*, came out in 1985 and a further study called *The Standard of Living*, came out in 1987, and based on his 1985 Cambridge lectures. His publications included *Development as Freedom*. Notable early active economists who formulated the modern concept of human development theory were Mahbub ul Haq, Üner Kirdar, and Amartya Sen. The Human Development Index developed for the United Nations Development Programme (UNDP) stems from this early research. In 2000, Sen and Sudhir Anand published a notable development of the theory to address issues in sustainability (Anand S.& Sen A, 2000).

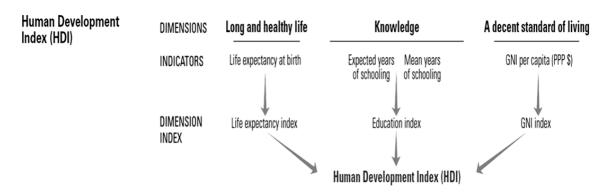
Most important things there were a series of North-South Roundtables organized by Uner Kirdar, and Khadija and Mahbub ul Haq, in the 1980s used the term 'human development'

referring to a subset of issues, not an overall approach. The human development approach, developed by the economist Mahbub Ul Haq, is anchored in Amartya Sen's work on human capabilities, often framed in terms of whether people are able to "be" and "do" desirable things in life (Klikemann Hans Dieter, 2003).

Freedom of choice is central: someone choosing to be hungry (during a religious fast say is quite different to someone who is hungry because they cannot afford to buy food. As the international community seeks to define a new development agenda post-2015, the human development approach remains useful to articulating the objectives of development and improving people's well-being by ensuring an equitable, sustainable and stable planet (HDR, 2015).

The debates that erupted around the world in the second half of the 20th century about the connections between economic growth and development gave rise to human development. At the beginning of the 1960s, there were growing cries to "dethrone" GDP because, although GDP was never meant to be a gauge of well-being, economic growth had become a key goal and an indicator of national advancement in many nations. During the 1970s and 1980s, there was discussion about alternative development focuses that went beyond GDP. These included emphasizing employment more than GDP, then redistribution with growth, and finally, whether or not people had their basic needs met (Kennedy & Robert, 1968).

A well-known example of a social indicator of development is the Human Development Index (HDI), which combines one economic indicator (Gross National Income) with two social indicators: life expectancy and years of schooling into one score and ranks countries accordingly. It is a composite index focusing on three basic dimensions of human development: the ability to lead a long and healthy life, measured by life expectancy at birth; the ability to acquire knowledge, measured by mean years of schooling and expected years of schooling; and the ability to achieve a decent standard of living, measured by gross national income per capita. Each of the components is normalized to scale between 0 and 1, and then the geometric mean of the three components is calculated (Rasure, 2023).



The HDI determines the lowest and highest value for each dimension, sometimes known as "goalposts," and then shows the position of each country with respect to these objectives. For every dimension, the index value is computed on a 0–1 scale, where 0 represents the lowest value and 1 the maximum value assigned to the corresponding indication. The HDI value of a nation rises as human development level does.

Measures

Life expectancy at birth: The life expectancy index helps determine the likelihood of a long and healthy life. For instance, the life expectancy index (LEI) is 1 at birth for people who are 85 years old, and 0 for people who are 20 years old.

Expected years of schooling & Mean years of schooling: It comes under the knowledge dimension of the HDI index. Acquired knowledge through **mean** and predicted years of education is measured through the education index. The two Knowledge indicator values are first normalized using a minimum value of 0 and a maximum value of 15 for the mean years spent in school and 18 for the expected number of years.

per capita (PPP \$): The GNI index is used in this technique to gauge a respectable standard of living. PPP's low minimum value of \$100 is used. There is a maximum value of PPP \$75,000.Since a poor performance on any index would immediately reflect in the entire HDI, a good performance on the UN Human Development Index would require a good performance on all dimensions. The values stated are based on the 2014 goal post.

HDI Formula

By using this formula, we can calculate the HDI values in the world. The Human Development Index calculation involves multiple steps and formulas. It starts with calculating the index values: Life Expectancy Index (LEI), Education Index (EI), and Income Index (II). Finally, HDI is the **geometric mean** of the three normalized indices.

1. Life Expectancy Index (LEI) =
$$\frac{LE-20}{85-20}$$

LE: Life expectancy at birth

2. Education Index (EI) =
$$\frac{MYSI + EYSI}{2}$$

MYSI:

Mean Years of Schooling Index =
$$\frac{MYS \text{ (Mean Years of Schooling)}}{15}$$

EYSI:

Expected Years of Schooling Index =
$$\frac{EYS (Expected Years of Schooling)}{18}$$

3. Income Index (II) =
$$\frac{\ln(\text{GNIpc}) - \ln(100)}{\ln(75,000) - \ln(100)}$$

GNIpc: Gross national income at purchasing power parity per capita

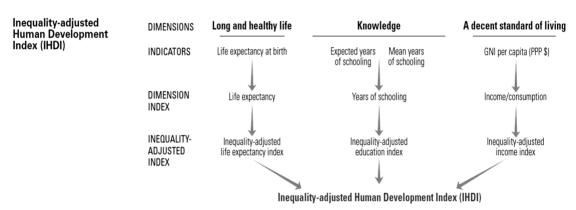
$$HDI = \sqrt[3]{LEI \cdot EI \cdot II}.$$

Source: (Vaidya, 2022).

The specific indicators which institutions such as the World Bank and United Nations use to measure how 'developed' a country is, and the main indices are used to compare the levels of development of different countries. Human Development is described as the process of enhancing human potential in terms of skills and rights. It believes that good health and education are important for an individual's total development because they enable them to make decisions that will result in a happy and secure lifestyle. So, it is a comparably broader concept. UNDP had an innovative concept that defines development as the expansion of choices by enhancing capabilities. The Global Human Development

Reports (HDR) is an annual publication released by the UNDP's Human Development Report Office and contains the Human Development Index Within global HDR there are four main indexes: Human Development Index, Gender-related Development Index, Gender Empowerment Measure and the Human Poverty Index (UNDP, 2010).

The 2010 Human Development Report introduced the IHDI, which takes into account inequality in all three dimensions of the HDI by 'discounting' each dimension's average value according to its level of inequality. The IHDI is basically the HDI discounted for inequalities. The 'loss' in human development due to inequality is given by the difference between the HDI and the IHDI, and can be expressed as a percentage. As the inequality in a country increases, the loss in human development also increases (HDR, 2010).



UNDP published Human Development Report (HDR) in every year with countries ranked values. HDI is one of the best tools to keep track of the level of development of a country, as it combines all major social and economic indicators that are responsible for economic development. The index is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living (The Economic Times, 2023).

Nepal has been publishing the Nepal Human Development Report since 1998, with the focus shifting considering the needs of the country. In the 1990-2021 period, Nepal's human development index score rose from 0.380 to 0.602 HDI value. So the Nepalese's Human Development Indicators are increasing trends.

Objectives

- To identify the Status of Human Development Index with Reference to Nepal since 1990-2022.

Methodology

This is paper completely based on secondary data. It has used meta-analysis of human development reports, government reports, historical documents archives, statistics and national planning commission reports, journals and articles. The HDI is calculated from existing data of UNDP, that provide data. It is an attempt to explore the situation of human development by nations, province, rural-urban etc. This article is expected to encourage researcher, academics, policy maker and development partners to initiate discourse from the perspective of development indicators. The findings may help for planning producing development strategy.

Results and Discussion

Situation of Human Development Index Rank in the World

The first Human Development Report was printed in 1990 by the Pakistani economist Mahbub ul Haq and the distinguished laureate of India, Amartya Sen. the Human Development Index is a ranking system used by the United Nations to assess the wellbeing of countries and measure their progress in multiple dimensions. The rankings are based on various measurements such as life expectancy at birth, education levels, Gross Domestic Product (GDP), poverty rates and Gender Inequality Index (GII). Countries are ranked on a scale from 0 to 1 with 1 being the highest level of development. In 2021, Switzerland, Norway, and Iceland all topped the HDI with a score of 0.96. Switzerland – 0.962, Norway – 0.961, Iceland – 0.959, Hong Kong – 0.952, Australia – 0.951, Denmark – 0.948, Sweden – 0.947, Ireland – 0.945, Germany – 0.942, Netherlands – 0.941 (World Population Review, 2023).

In contrast to this are the world's least-developed countries (LDCs), which tend to have HDI scores below 0.55, in the "low human development" category. LDCs face unstable governments, widespread poverty, lack of access to healthcare, and poor education. Additionally, these countries have low income and low life expectancies, coupled with high birth rates. The countries of low human development index are South Sudan 0.385, Chad 0.394, Niger 0.400, Central African Republic 0. 404, Burundi 0.426, Mali 0.428, Mozambique 0.446, Burkina Faso 0.449, Yemen 0.455, Guinea 0.465 (World Population Review, 2023). This illustrates the fundamental purpose of the HDI: to help the United Nations determine which countries (especially which least-developed countries) are most in need of assistance.

In the context of South Asian countries, the average HDI value is 0.632. South Asian countries, do not figure the first category of very high human development in the world. Sri Lanka has been placed under the high development category with the HDI value of 0.782 with a rank of 73, being the highest among the South Asian countries. Countries such as India, Bhutan, Bangladesh, Myanmar and Afghanistan have attained a ranking lower than their previous year's rankings (Panwar ,2022). Sri Lanka **HDI** value of 0.782 andMaldives score with 0.747 are two countries that are categorized under high human development, while India 0.633, Bangladesh 0.661, Nepal 0.602, Bhutan 0.666 and Myanmar 0.585 are under medium human development category. On the other hand, Pakistan 0.544 and Afghanistan 0.478 are under the low human development category. In contrast, countries such as Sri Lanka, Maldives, and Nepal have achieved higher ranks than their previous year's ranks (Panwar, 2022).

Progress of HDI rank in Nepal

Nepal has been publishing the Nepal Human Development Report since 1998, with the emphasis shifting based on the country's needs. Despite this, the country rose one spot in the rankings. HDR Nepal's HDI value trend had been increasing until the country was hit by the pandemic. The country's HDI value was as low as 0.399 in 1990, but it has steadily increased in subsequent years, reaching 0.611 in 2019. However, the Pandemic year took away scores with 0.604 in 2020 and continued the trend with an HDI value of 0.602 in 2021 (The Kathmandu Post, 2022). The 2021 female Human Development Index value for Nepal is 0.584 in contrast with 0.621 for males, resulting in a Gender Development Index value of 0.942, placing it into Group 3, which consists of countries with medium equality in Human Development Index achievements between women and men. Report 2022 puts the country in the Medium human development category (The Kathmandu Post, 2022).

Nepal's life expectancy at birth changed by 13.6 years, mean years of schooling changed by 2.8 years and expected years of schooling changed by 5.4 years. Nepal's GNI per capita changed by about 146.0 percent between 1990 and 2021. The IHDI fell to 0.446 a 25.9 percent decrease, after being adjusted for inequity. This shows that as inequality increases, the human development decreases (Bajracharya, 2021). Developing and least developed countries like Nepal suffer more than developed countries in terms of human development, due to climate change and other disasters caused by the non-stop exploitation of the planet.

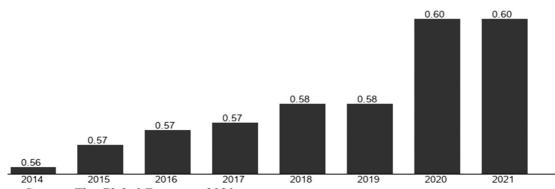
Table 1: Nepal's HDI trends based on consistent time series data and new goalposts

Time	Life expectancy at birth	Expected years of	Mean years of schooling	GNI per capita (PPP\$)	HDI value
		schooling			
1990	54.4	7.5	2.0	1,372	0.387
1995	58.6	8.1	2.2	1,553	0.419
2000	62.3	9.0	2.4	1,793	0.453
2005	65.3	9.5	2.8	1,993	0.482
2010	67.6	11.9	3.3	23,72	0.573
2015	69.5	12.7	4.7	29,57	0.583
2016	69.8	12.6	4.9	29,46	0.586
2017	70.2	12.6	4.7	31,35	0.588
2018	70.5	12.8	4.9	32,76	0.596
2019	70.8	12.8	5.0	34,57	0.587
2022	71.45	12.9	5.1	38,77	0.602

Source: Human Development Report (UNDP, 2022)

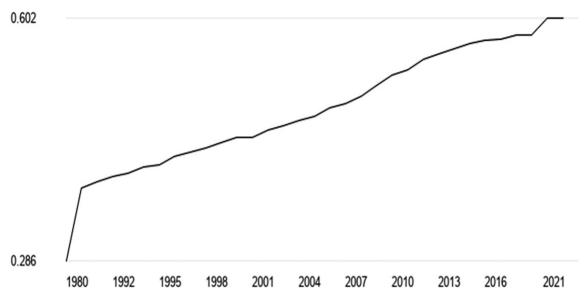
We offer data for Nepal from 1980 to 2021 for that indicator. With a minimum of 0.286 points in 1980 and a maximum of 0.602 points in 2020, Nepal's average score over that time was 0.483 points. The most recent figure is 0.602 points from 2021. In contrast, based on 184 countries, the global average in 2021 is 0.724 points. View the indicator's global rankings or compare trends over time using the country comparator.

Figure-1: Global rankings for that indicators or use the country comparator to compare trends over time.



Source: The Global Economy, 2021.

Figure-2: Historical chart



Source: The Global Economy, 2021.

Nepal continues to remain among the lowest-ranked countries in South Asia in terms of human development even though the country has made rapid progress in the last few decades, a United Nations report says. In 2021, Nepal's human development index (HDI) value was 0.602, ranking third worst after war-torn Afghanistan and Pakistan, which has also recently experienced an economic crisis. These findings was comes from the United Nations Development Programme (UNDP) report titled "Making our future: New directions for human development in Asia and the Pacific" (The Post in Kathmandu, 2023).

Socio-economic well-being is a crucial indicator of development. It is also the ultimate goal of every country. Financial inclusion is a way of improving the well-being of people on the social and economic well-being of the households. The table shows the social indicators Nepal.

Table 2: Human Development Indicators and Indices in Nepal, 2020

SN	Indices	Indicators	Score
1	Health	Life expectancy at birth	70.8 Years
2	Education	Expected years of schooling (years)	12.8
3	Income	Gross national income (GNI) per capita&PPP\$	3,877
4	Inequality	Inequality-adjusted HDI (IHDI)	0.446
5	Gender	Gender Development Index (GDI)	0.933
6	Poverty	Population in multidimensional poverty, headcount (%)	34.0
7	Work, employment and vulnerability	Employment to population ratio (% ages 15 and older)	82.6
8	Human Security	Homicide rate (per 100,000 people)	2.3
9	Trade an Financial Flows	Exports and imports (% of GDP)	54.9
10	Mobility and Communication	Internet users, total (% of population)	34.0
11	Environmental sustainability	Carbon dioxide emissions, production emissions per capita (tonnes)	0.3
12	Demography	Total population (millions) (Data refers to 2030)	33.4
13	Socio-economic sustainability	Skilled labour force (% of labour force)	41.9

Source: HDR, 2020.

Table 2 shows that Nepal is progressing in the human development index and ranking, but still required to work hard for future progress. Government needs to invest in the areas of education, health, renewable energy, agriculture to build a resilient Nepal. The government has been investing in increasing people's access to health services in the villages. The government is making special efforts to maximize the use of locally produced electricity, including by providing free electricity to the poor and exporting excess energy to other countries.

Human Development Index (HDR) 1998, mentions the national and local life such as the societal structures, the trend of the polity and the economy that help to understand Nepal. It provides a glimpse of past development and the concept and components of human development based on the literature and the potentiality of human development in order to harness in the future. Besides, inequalities by caste and ethnicity are also included in it (UNDP-Nepal, 1998).

Human Development Index according to new formed Provinces of Nepal

Nepal's sub-national governing units are restructured into 753 local units with renewed mandate, which is further classified into 6 Metropolis, 9 Sub-metropolis, 258 municipalities, 458 Rural Municipalities. Nepal's national HDI score stood at 0.602 in 2022, which puts the country in the medium human development category. Its score in urban areas (0.647) surpasses that of rural areas (0.561) with a large urban-rural gap. Higher per capita income and better access to education and health services in urban areas explain such striking disparities.

The HDI value also varies across provinces. As expected, Bagmati province scores the highest (0.669), followed by Gandaki province (0.621). Koshi Pradesh, 0.580 and Lumbini 0.563, Sudur Paschim 0.547, Karnali 0.538. Province 2 scores the lowest (0.519) followed by Karnali (0.538). This indicates the uneven distribution of development outcomes across different parts of the country (UNDP 2019).

Table 3: Human Development Index according to Provinces of Nepal:

SN	Province	HDI Score			
Medium Human Development					
1	Bagmati province	0.669			
2	Gandaki province	0.621			
3	Koshi Pradesh	0.580			
4	Lumbini	0.563			
Low Human Development					
5	Sudur Paschim	0.547			
6	Karnali	0.538			
7	Province 2	0.519			
Sub National Level					
8	Mountain	0.564			
9	Terai	0.563			
10	Hill	0.623			
11	Rural	0.561			
12	Urban	0.647			
13	Nepal	0.602			

Source: UNDP; 2019

This indicates the uneven distribution of development outcomes across different parts of the country. Among the ecological regions, areas defined as the hills continue to surpass mountain areas and the Tarai, a pattern similar to findings in previous Nepal Human Development Reports regardless of methodological differences. Contrary to the common perception that people in the mountains are poorer than those in the Tarai, these two regions score at the same level on the HDI (0.56) and lag behind the hills (UNDP, 2019).

The regional perspective of HDI—which is largely measured on the basis of life expectancy, education and income—has improved in the areas that have made strides in literacy and education such as Western Hills and Western Mountains. From the regional perspective, the Kathmandu valley has the highest HDI score with 0.622, stemming largely from high scores for educational attainment and level of per capita income. Kathmandu, Lalitpur and Bhaktapur are at the top of the four highest-ranking HDI districts. This is the first time in a decade that the HDI has been provided for all the 75 districts. Bajura, Bajhang, Kalikot, Humla and Achham have the lowest HDI for 2011 (HDR 2014).

In comparison with rural areas, urban regions have a higher score, but the gap narrows for the period 2006-2011. Urban HDI values remained constant over the period but they have improved in the case of rural areas. "Remarkably, the difference in life expectancy rates between rural and urban areas has narrowed considerably. From the point of view of caste and ethnicity, Brahmins and Chhetris take the top spot in HDI values compared to three other groups—Janajatis, Dalits and Muslims. The pattern was similar in 2006. Hill Brahmins have the highest HDI (0.557) while Madhesi Dalits have the lowest. Brahmin and Chhetris also have the highest per capita income followed by Janajatis and Dalits.

"Differences in educational attainment largely explain the inequality between high and low HDI values for caste and ethnic groups," said the HDR report,2014. Although disparities persist between males and females, political participation, economic participation and power over economic resources have improved over the last decade. The gender empowerment measures value has risen across all ecological and development regions, notability in the Tarai, during 2006-2011 (The Kathmandu post, 2014).

Conclusions

The HDI measures overall human development, including factors such as life expectancy, literacy, and GDP per capita in a country. The difference in HDI performance basically depends on level of socio-economic development of the particular area. The differential performance does not follow uniform trend because of socio-economic stricter of the area. Some Provinces performing better in one indicator while rest in other indicators. The HDI value increased from 0.320 (1996) to 0.522 (2011) by a margin of 63.85 percent.

Nepal has been placed under the medium development category with an HDI score of 0.602 with a rank of 143 in world human development ranking in 2022. The HDI value can be attributed to the life expectancy at birth of 68.4 years. Nepal's expected years of schooling stand at 12.9 years and the mean years of schooling are at 5.1 years and GNI per capita income is 3, 877 Rupees.

Nepal continues to incur a substantive loss in human development due to persisting inequalities, according to UNDP. "Nepal continued to lose over 25 percent in human development due to inequalities across gender, caste, geographic regions and other categories". The economic sector's performance was relatively low. But the foreign employments also have significant contribution for this change. The contribution of health sector in overall improvement of HDI is also notably changed. While increasing access of people to economic resources and opportunities, expansion of market activities improvement in education/social sector, civic awareness, democracy practices and government investment on health, education and economic development form a base for this improvement.

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