



# Comparative analysis of human development in India and the United Arab Emirates: insights, progress, and policy lessons

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## Abstract

This study presents a comparative analysis of human development in the United Arab Emirates (UAE) and India, two nations that have pursued distinctly different development trajectories since 1990. Using data from the United Nations Development Programme (UNDP), this research evaluates the evolution of the Human Development Index (HDI) in both countries. The analysis employs the UNDP's HDI framework, which integrates indicators of health (life expectancy), education (mean and expected years of schooling), and standard of living (gross national income per capita, adjusted for purchasing power parity).

The findings reveal that the UAE, leveraging its oil wealth and centralized governance, has rapidly advanced into the Very High Human Development category, ranking 17th globally with a HDI score of 0.937 in 2022. Its success is attributed to strategic economic diversification, significant investments in healthcare and education, and efficient policy implementation. In contrast, India, ranking 134th with a HDI score of 0.644, has experienced steady, albeit slower, improvements driven by post-liberalization economic reforms, expansion of social welfare programs, and grassroots delivery of healthcare and education services. However, India continues to face challenges of income inequality, regional disparities, and access to quality public services.

The paper concludes that while India can learn from the UAE's strategic vision and policy efficiency, the UAE could draw lessons from India's inclusive, bottom-up approaches to social development. The study offers policy recommendations aimed at enhancing human development outcomes in both countries and provides critical insights for other emerging and resource-rich economies seeking to balance growth with equity and sustainability.

**Keywords:** Human Development Index, Policy comparison, Education and Health, Economic development, UAE, India

## 1. Introduction

### 1.1 Background and significance of human development as a research theme

In the contemporary discourse on development economics, the measurement of progress has shifted significantly from an exclusive focus on economic growth to a more comprehensive assessment of human well-being. Traditional indicators such as Gross Domestic Product (GDP) are increasingly viewed as insufficient to capture the complexities of human welfare. The concept of *human development*, as institutionalized by the United Nations Development Programme (UNDP) through the Human Development Index (HDI), presents a multidimensional approach that combines health, education, and income indicators to provide a holistic understanding of people's quality of life (UNDP, 2023) <sup>[20]</sup>. Since its inception in 1990, the HDI has become an essential tool for evaluating national development beyond purely economic achievements (UNDP, n.d.).

The importance of studying human development lies in its ability to inform policy that enhances people's capabilities and freedoms, as conceptualized by Amartya Sen (Sen, 1999) <sup>[18]</sup>. As economies evolve, it becomes critical to understand how economic transformations impact human well-being across

different socio-political and demographic contexts. This study thus addresses the need for comparative research on human development performance across countries at varying stages of development.

### 1.2 Relevance of comparing India and UAE

The selection of India and the United Arab Emirates (UAE) for this comparative analysis offers a compelling contrast. India, the world's most populous country, represents an emerging economy with significant demographic diversity, a complex federal governance system, and persistent regional disparities in income, education, and health outcomes (Wiesen, 2024; Times of India, 2023) <sup>[22, 19]</sup>. In contrast, the UAE, though small in population and geographical size, has achieved remarkable levels of human development through strategic governance, centralized policy implementation, and substantial investments in infrastructure, education, and healthcare, primarily financed by oil revenues and subsequent economic diversification (Emirates News Agency, 2023; Delgado, n.d.) <sup>[10]</sup>.

The divergent developmental paths of these two nations—India's democratic, decentralized, and market-oriented approach versus the UAE's more centralized and resource-driven model—offer rich insights into the determinants and

dynamics of human development. India's journey from colonial exploitation to market liberalization and rapid industrial growth (Maddison, 2001) <sup>[15]</sup> contrasts sharply with the UAE's trajectory from pre-oil subsistence economy to global economic powerhouse (Al Abed & Hellyer, 2001) <sup>[1]</sup>. Therefore, comparing their HDI trends not only highlights how different economic strategies translate into human development but also uncovers lessons for policy formulation in other developing and emerging nations.

### 1.3 Research objectives and structure of the paper

The primary objective of this paper is to undertake a comprehensive comparative analysis of the Human Development Index (HDI) of India and the UAE over the period 1990 to 2023. By utilizing internationally comparable data from UNDP and other global institutions, this study aims to:

- Examine and contrast the progress made by both nations in life expectancy, educational attainment, and income levels.
- Evaluate the policy strategies and institutional frameworks that have driven these developmental outcomes.
- Provide actionable recommendations for enhancing human development, drawing mutual lessons from each country's experience.

The paper is structured as follows: following this introduction, Section 2 presents the conceptual framework of human development and the HDI. Section 3 outlines the methodological approach and data sources. Section 4 provides an overview of the historical and economic backgrounds of India and the UAE. Section 5 delivers a detailed comparative analysis of HDI performance and its components. Section 6 analyses policy interventions and mutual lessons. Section 7 discusses broader implications of the findings. Section 8 concludes with a summary and policy recommendations.

## 2. Conceptual framework

### 2.1 Defining Human Development and the Human Development Index (HDI)

The concept of human development represents a paradigm shift from the traditional economic growth-centric model of development. As articulated by Sen (1999) <sup>[18]</sup>, human development focuses on expanding people's choices and enhancing their freedoms to lead lives they value. The United Nations Development Programme (UNDP) operationalized this concept through the creation of the Human Development Index (HDI) in 1990. The HDI aims to provide a more comprehensive assessment of human well-being by measuring achievements across critical dimensions of human life rather than relying solely on income metrics (UNDP, 2023) <sup>[20]</sup>.

The HDI is a composite index designed to measure the average attainment of a population in three fundamental dimensions of human development: health, education, and standard of living (UNDP, n.d.). It offers an internationally standardized tool to facilitate cross-country comparisons of development outcomes. By integrating both social and economic indicators, the HDI provides valuable insights into how effectively countries

convert economic wealth into broader human welfare (Klugman, Rodríguez, & Choi, 2011) <sup>[14]</sup>.

### 2.2 HDI dimensions: health, education, and standard of living

The HDI framework comprises three equally weighted components:

- **Health dimension:** Health is measured by life expectancy at birth, which serves as a proxy for the overall health and longevity of a population. It reflects the impact of healthcare infrastructure, nutritional standards, public health policies, and social stability (UNDP, 2023) <sup>[20]</sup>.
- **Education dimension:** The education index is calculated as the geometric mean of two sub-indicators: expected years of schooling for children entering the education system and mean years of schooling for adults aged 25 and older. These measures provide insight into both current educational access and historical educational attainment (UNDP, 2023) <sup>[20]</sup>.
- **Standard of living dimension:** The standard of living is represented by Gross National Income (GNI) per capita, adjusted for purchasing power parity (PPP). This measure captures a nation's material prosperity and economic productivity, while the PPP adjustment accounts for differences in the cost of living across countries (UNDP, 2023) <sup>[20]</sup>.

The HDI values range between 0 and 1, with higher scores indicating better human development performance. The methodology involves normalization of data within predetermined goalposts to ensure comparability across countries and over time.

### 2.3 Theoretical relevance of HDI for emerging vs. developed economies

The theoretical significance of the HDI lies in its capacity to bridge the analytical gap between developed and emerging economies. Developed countries often score high across all three HDI dimensions, reflecting mature healthcare, education, and economic systems (Emirates News Agency, 2023) <sup>[10]</sup>. In contrast, emerging economies like India exhibit a mixed performance, often characterized by strong economic growth juxtaposed with persistent inequalities in health and education (Wiesen, 2024) <sup>[22]</sup>.

For emerging economies, the HDI acts as both a diagnostic and a policy tool. It highlights specific areas requiring attention, such as reducing infant mortality, improving access to quality education, and addressing income disparities (Times of India, 2023) <sup>[19]</sup>. In the case of developed economies like the UAE, which have transitioned from resource-dependent models to knowledge-based societies, the HDI is used to track the effectiveness of policy interventions aimed at sustaining high human development levels (Delgado, n.d.; Al Abed & Hellyer, 2001) <sup>[1]</sup>.

Moreover, the HDI enables a comparative framework to understand how different development strategies and governance models influence outcomes. It facilitates the identification of best practices that can be adapted by countries

at different stages of development to promote inclusive growth and well-being (Klugman *et al.*, 2011) <sup>[14]</sup>.

### 3. Methodology

#### 3.1 Data sources

The analysis presented in this study relies on secondary data obtained from globally recognized and standardized datasets. The primary source of human development indicators is the *United Nations Development Programme (UNDP)*, which publishes annual *Human Development Reports* and country-specific HDI values (UNDP, 2023) <sup>[20]</sup>. Additional supporting economic and demographic data are drawn from the *World Bank*, *International Monetary Fund (IMF)*, *Federal Competitiveness and Statistics Centre (FCSC) of the UAE*, and *Ministry of Statistics and Programme Implementation (MoSPI) of India*. The comprehensive and systematic reporting by these organizations ensures the comparability and reliability of the data used for the cross-country analysis between India and the UAE.

Historical data spanning from 1990 to 2023 has been used to examine long-term trends and evaluate the evolution of human development indicators over time (World Bank, 2023; IMF, n.d.; FCSC, n.d.) <sup>[23]</sup>. This multi-source approach not only corroborates findings but also provides robustness to the statistical analysis conducted.

#### 3.2 Methodological approach for computing and comparing HDI

The Human Development Index (HDI) is computed using a three-dimensional model as developed and refined by the UNDP (UNDP, 2023) <sup>[20]</sup>. It includes the following components:

- **Health:** Measured by life expectancy at birth, reflecting the general health and longevity of the population.
- **Education:** Represented by the geometric mean of (a) expected years of schooling for children of school-entry age and (b) mean years of schooling for adults aged 25 years and above.
- **Standard of living:** Measured by Gross National Income (GNI) per capita (PPP adjusted, constant 2011 international dollars).

The HDI value is calculated by normalizing these indicators on a scale from 0 to 1 using fixed goalposts (Table 1). The formula for each component is as follows:

##### Health Index

$$\text{Health Index} = \frac{\text{Life Expectancy} - 20}{85 - 20}$$

##### Education Index

$$\text{Education Index} = \sqrt{\left(\frac{\text{Mean Years of Schooling}}{15}\right) \times \left(\frac{\text{Expected Years of Schooling}}{18}\right)}$$

##### Income Index

$$\text{Income Index} = \frac{\ln(\text{GNI per capita}) - \ln(100)}{\ln(75,000) - \ln(100)}$$

This standardized methodology facilitates direct comparison of HDI levels across nations and over time (Klugman, Rodríguez, & Choi, 2011) <sup>[14]</sup>. For this paper, HDI values for both India and the UAE have been extracted from the annual UNDP datasets and corroborated using national-level sources to enhance accuracy.

#### 3.3 Limitations and strengths of the HDI methodology for cross-country comparison

The HDI provides an accessible, standardized tool for assessing human development across countries; however, it is not without limitations. One of the primary critiques relates to its simplicity and the exclusion of critical factors such as inequality, gender disparity, environmental sustainability, and political freedoms (Klugman *et al.*, 2011) <sup>[14]</sup>. The aggregation of complex social phenomena into a single index, while convenient, may mask intra-country disparities, especially in large, diverse nations like India (Wiesen, 2024) <sup>[22]</sup>.

Another limitation is the assumption of equal weighting of the three dimensions, which may not reflect country-specific development priorities (Sen, 1999) <sup>[18]</sup>. Moreover, the use of national averages ignores significant sub-national differences. In India, for instance, regional disparities in education and healthcare remain vast despite overall national improvements (Times of India, 2023) <sup>[19]</sup>. For the UAE, the HDI does not account for the unique demographic structure dominated by expatriate labour, which presents a skewed representation of national human development (Emirates News Agency, 2023) <sup>[10]</sup>.

Despite these shortcomings, the HDI remains a valuable comparative tool due to its global acceptance, ease of computation, and its capacity to track progress over time. Its strength lies in highlighting broad trends and enabling policymakers to identify and address priority areas for improving human well-being (UNDP, 2023) <sup>[20]</sup>.

### 4. Historical and economic contexts

The present human development status of both the United Arab Emirates (UAE) and India is deeply rooted in their unique historical trajectories and economic transformations. This section provides an overview of the historical backgrounds and key economic milestones that have shaped their HDI outcomes.

#### 4.1 Historical evolution and economic development of the UAE

The UAE's historical journey began with its unification on 2 December 1971, when seven emirates—Abu Dhabi, Dubai, Sharjah, Ajman, Fujairah, Ras Al Khaimah, and Umm Al Quwain—joined to form a federation (Al Abed & Hellyer, 2001) <sup>[1]</sup>. Prior to this, the region known as the Trucial States was characterized by a subsistence economy reliant on fishing, date farming, and pearl diving (Ghanem, 2001) <sup>[12]</sup>. The discovery of oil in Abu Dhabi (1958) and Dubai (1969) was the pivotal turning point, transforming the UAE from an underdeveloped desert society to a modern state with immense financial wealth (Peck, 2001) <sup>[17]</sup>.

Sheikh Zayed bin Sultan Al Nahyan, the founding father, used the newfound oil revenues to drive infrastructure development, healthcare, education, and social welfare (Al Abed & Hellyer, 2001) <sup>[1]</sup>. The UAE’s Gross Domestic Product (GDP) growth accelerated during the 1970s and 1980s, underpinned by rising oil prices (FCSC, n.d.). Recognizing the risks of oil dependency, the UAE initiated economic diversification in the mid-1980s. By 2020, 83% of the country’s GDP was attributed to non-oil sectors, including tourism, real estate, finance, and manufacturing (FCSC, n.d.).

The development of Masdar City, a zero-carbon urban development, and free trade zones like Jebel Ali are examples of strategic diversification efforts (Delgado, n.d.). By 2023, the UAE had become the third-largest economy in the Middle East, with a GDP of US\$509 billion, supported by a population of nearly 10 million and a highly globalized workforce (Emirates News Agency, 2023) <sup>[10]</sup>.

4.2 Historical evolution and economic development of India

India’s economic history dates back to the Indus Valley Civilization (3500–1800 BCE), recognized for its advanced urban planning, agriculture, and trade networks. For centuries, India was among the world’s wealthiest economies, controlling approximately 24% of global GDP during the Mughal Empire’s peak (1526–1858), largely due to its dominance in textiles, spices, and precious stones (Maddison, 2001) <sup>[15]</sup>.

British colonial rule (1757–1947) marked a period of severe economic decline, as India’s share of world GDP plummeted from 27% in 1700 to just 3% in 1947 due to resource extraction and colonial exploitation (Maddison, 2001) <sup>[15]</sup>. At independence, India was left with high poverty, food insecurity, poor health outcomes, and low literacy levels. Post-1947, India adopted a socialist-inspired, centrally planned economy under the Five-Year Plan system designed to promote industrialization and self-reliance (MoSPI, n.d.). However, between the 1950s and the 1970s, growth remained sluggish, averaging just 3-4% annually. The turning point came with the 1991 economic liberalization reforms, which liberalized trade, opened markets to foreign investment, and deregulated industries (Maddison, 2001) <sup>[15]</sup>. These reforms catalyzed rapid economic expansion, with annual GDP growth rates of 6–8% in subsequent decades. India’s economy became increasingly diversified with strengths in information technology, pharmaceuticals, manufacturing, and services sectors. Today, India ranks among the world’s largest economies by GDP, yet its HDI remains constrained by demographic challenges, poverty, income inequality, and uneven regional development (UNDP, 2023) <sup>[20]</sup>.

4.3 Key milestones influencing current HDI Trends in both countries

The following key milestones have directly contributed to the current HDI trajectories of the UAE and India:

Milestone	UAE	India
Foundational Event	Federation established (1971)	Independence from British rule (1947)
Resource Discovery	Oil discovery in Abu Dhabi (1958) and Dubai (1969)	Natural resource base but heavily exploited during colonial era
Economic Model	Resource-driven economy transformed into diversified sectors post-1985	Centrally planned economy (1950s–1980s) followed by market liberalization (1991)
Major Social Investments	Health, education, infrastructure development funded by oil wealth; Vision 2021 for diversification	Expansion of education and health services; rural poverty alleviation; large-scale social programmes (MGNREGA, RTE)
Population Dynamics	Small population (~10 million), expatriate majority	Large, diverse population (~1.4 billion), creating governance and delivery challenges
HDI Trajectory	Rapid rise into Very High Human Development category	Gradual rise from Low to Medium Human Development category

Sources: UNDP (2023) <sup>[20]</sup>; Emirates News Agency (2023) <sup>[10]</sup>; Al Abed & Hellyer (2001) <sup>[1]</sup>; Maddison (2001) <sup>[15]</sup>

5. Comparative analysis of human development

The Human Development Index (HDI) is a crucial tool for assessing and comparing human development across countries, providing a composite measure based on life expectancy, education, and Gross National Income (GNI) per capita. This

comparative analysis explores the HDI performance of the (UAE) and India as presented in the 2022/23 Human Development Report, focusing on their overall HDI values and individual indicators.

Table 1: Trends in human development indicators: UAE and India (1990-2022)

Year	UAE				India			
	PCY (\$) based on PPP	Life expectancy	MYS	EYS	PCY (\$) based on PPP	Life expectancy	MYS	EYS
1990-91	97331.0	71.9	5.8	9.7	1795.9	58.7	2.8	8.0
2000-01	98871.5	74.4	8.5	11.0	2545.2	62.7	4.1	8.2
2005-06	97835.5	76.7	9.0	11.6	3203.0	65.0	4.5	9.5
2010-11	54658.8	78.3	9.8	12.1	4167.9	66.9	5.1	10.5
2015-16	68400.7	79.2	10.7	12.6	5349.6	69.6	5.7	11.8
2020-21	67353.4	78.9	12.7	17.2	6089.7	70.2	6.5	11.7
2022-23	74103.7	79.2	12.8	17.2	6950.5	67.7	6.6	12.6



### Overall HDI value comparison

- **UAE:** With a HDI score of 0.937, the UAE ranks 17th globally in 2023, advancing nine places from the previous report. It is categorized as a country with "Very High Human Development" and is the only Arab country to feature in the top 20 globally.
- **India:** India, on the other hand, has a HDI score of 0.644, ranking 134th globally in 2023, showing a slight improvement from 135th in 2022. India falls into the "Medium Human Development" category.

The wide gap between the two countries in HDI rankings underscores significant disparities in development outcomes, driven primarily by differences in economic capacity, health, and education systems.

#### a) Life expectancy at birth

- **UAE:** The UAE's life expectancy at birth stands at 79.2 years, which aligns with its emphasis on healthcare infrastructure and social development programs. This high life expectancy also reflects the country's efforts to meet the Sustainable Development Goal (SDG) of Good Health and Well-being.
- **India:** India's life expectancy at birth is 67.7 years as of 2022, reflecting a steady increase over the years. India has made substantial progress in improving healthcare access and outcomes, but it still lags behind the UAE due to challenges related to healthcare quality, rural healthcare access, and nutritional deficits.

#### b) Education indicators

- **UAE**
  - **Expected Years of Schooling:** 17.2 years.
  - **Mean Years of Schooling:** 12.8 years

These education indicators reflect the UAE's substantial investment in education, aligned with its Quality Education agenda under the SDGs. The nation's focus on developing a knowledge-based economy has led to significant improvements in both access to and quality of education.

- **India**

- **Expected Years of Schooling:** 12.6 years.
- **Mean Years of Schooling:** 6.7 years.

India has made notable progress in expanding educational access, with programs aimed at improving enrolment rates and reducing dropout levels. However, the disparity between expected and mean years of schooling reflects challenges in educational retention, quality, and infrastructure, particularly in rural areas.

#### c) Gross National Income (GNI) per capita

- **UAE:** The UAE has a GNI per capita of \$74,104, reflecting its high-income status, driven primarily by a diversified economy that leverages not only oil wealth but also sectors like finance, tourism, and technology. The country's economic diversification efforts contribute to its high standard of living.
- **India:** India's GNI per capita is \$6951, significantly lower than the UAE. While India's GNI has grown by approximately 287% since 1990, reflecting strong economic growth, it still remains constrained by widespread poverty, income inequality, and slow development in certain sectors.

The UAE's high HDI score is a reflection of its successful policies on economic diversification, particularly in reducing reliance on oil and investing in sectors like health, education, and technology. Government initiatives aimed at improving social welfare, healthcare systems, and education have played a key role in enhancing the overall quality of life. While, India's progress, though commendable, is hindered by systemic issues such as income inequality, inconsistent healthcare infrastructure, and challenges in providing quality education across its vast population. However, India's consistent improvements in HDI, coupled with its significant GNI growth and educational progress, reflect a nation on the path toward higher human development, albeit at a slower pace than the UAE.

**Table 2:** Comparative analysis of HDI and its indicators (1990-2022)

Year	UAE				India			
	Income index	Health index	Education index	HDI	Income index	Health index	Education index	HDI
1990-91	1.039	0.798	0.463	0.727	0.436	0.595	0.316	0.434
2000-01	1.042	0.837	0.589	0.801	0.489	0.657	0.364	0.489
2005-06	1.040	0.872	0.622	0.826	0.524	0.692	0.414	0.531
2010-11	0.952	0.897	0.663	0.827	0.563	0.722	0.462	0.537
2015-16	0.986	0.911	0.707	0.859	0.601	0.763	0.518	0.691
2020-21	0.984	0.906	0.901	0.930	0.621	0.772	0.542	0.638
2022-23	0.998	0.911	0.904	0.937	0.641	0.734	0.570	0.645

**Source:** Authors self estimation from the undp data

### 6. Policy analysis and mutual lessons

The comparative human development performance of the UAE and India offers valuable insights into how different models of governance, resource allocation, and strategic policymaking

influence human well-being. This section analyses the key lessons that each country can draw from the other's experiences, while also critically evaluating the contextual constraints of policy transfer.

## 6.1 What India can learn from the UAE model

Sector	UAE practice	Potential application for India
Healthcare	Significant investment in healthcare infrastructure and services, public-private partnerships, universal healthcare access (Emirates News Agency, 2023) <sup>[10]</sup>	Increase public health spending, expand healthcare infrastructure in rural areas, promote preventive healthcare and primary health services (Wiesen, 2024) <sup>[22]</sup>
Education	Vision-led education strategy with global partnerships, integration of technology, and international curricula (Delgado, n.d.)	Enhance quality of education by integrating digital learning, modernizing curricula, expanding vocational training, and addressing rural-urban disparities (Times of India, 2023) <sup>[19]</sup>
Governance	Centralized and efficient policy execution; alignment between vision documents (e.g., Vision 2021) and actual delivery (FCSC, n.d.)	Strengthen coordination between central and state governments; improve accountability and monitoring in implementation of flagship programs
Economic Diversification	Early move to diversify away from oil into finance, logistics, tourism, and clean energy (FCSC, n.d.)	Further diversification into manufacturing, renewable energy, digital economy, and infrastructure sectors to reduce dependency on services and agriculture (Maddison, 2001) <sup>[15]</sup>

India's federal structure poses additional governance challenges compared to the UAE's centralized model. However, adopting UAE's approach to focused long-term

planning and efficient execution of national missions could improve India's human development outcomes.

## 6.2 What the UAE can learn from India's grassroots policies and inclusive development strategies

Area	India's Experience	Potential Application for UAE
Inclusive Growth	Large-scale poverty alleviation programs such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Mid-Day Meal Scheme, and Ayushman Bharat (Wiesen, 2024) <sup>[22]</sup>	Expand social protection measures for the large expatriate workforce and lower-income groups to improve inclusivity (Emirates News Agency, 2023) <sup>[10]</sup>
Education Access	Universal elementary education under the Right to Education Act; large enrolments in rural and semi-urban areas (Times of India, 2023) <sup>[19]</sup>	Scale vocational and technical education to build a highly skilled domestic workforce beyond expatriate labour
Healthcare Delivery	Successful delivery of health services at scale through community health workers and grassroots networks (Wiesen, 2024) <sup>[22]</sup>	Develop community-based preventive healthcare systems and strengthen maternal and child health interventions
Sustainable Development	Leadership in renewable energy and commitment to Sustainable Development Goals (SDGs) through initiatives such as the International Solar Alliance (UNDP, 2023)	UAE can expand investments in clean energy, sustainable cities, and circular economy practices beyond flagship projects like Masdar City

The UAE's strong fiscal capacity provides an opportunity to broaden social safety nets, while India's experience demonstrates how scale and inclusivity can be achieved through grassroots-level engagement even in resource-constrained settings.

of high initial oil revenues which provided the fiscal space for rapid infrastructure development and social investments. India's post-colonial starting point involved severe fiscal constraints and widespread poverty (Maddison, 2001) <sup>[15]</sup>.

## 6.3 Critical assessment of transferable policies and contextual limitations

While the comparative analysis offers valuable mutual learning opportunities, a critical assessment reveals key limitations in directly transferring policies between India and the UAE:

- **Structural differences:** India's vast population of over 1.4 billion (MoSPI, n.d.) poses administrative and fiscal challenges that the UAE, with a population under 10 million, does not encounter.
- **Governance systems:** India's multi-tiered federal system involves complex negotiation between national and sub-national entities, unlike the UAE's relatively centralized governance (FCSC, n.d.; Al Abed & Hellyer, 2001) <sup>[1]</sup>.
- **Socio-cultural contexts:** Social stratification, linguistic diversity, and regional disparities make uniform policy implementation more difficult in India (Wiesen, 2024) <sup>[22]</sup>.
- **Economic starting points:** The UAE had the advantage

## 7. Discussion

This section critically interprets the key findings of the comparative analysis of human development in the United Arab Emirates (UAE) and India. It also explores the broader implications for global development discourse, emphasizing the importance of effective policy design, robust institutional frameworks, international cooperation, and the sustainability of development models.

### 7.1 Interpretation of key findings in the global development context

The comparative evidence reveals that both the UAE and India have made significant yet divergent progress in human development since 1990. The UAE's rapid ascent to the Very High Human Development category, with a global HDI rank of 17th in 2022 (UNDP, 2023) <sup>[20]</sup>, exemplifies the successful deployment of natural resource wealth into sustained social

investments (FCSC, n.d.). In contrast, India, while still classified in the Medium Human Development group at 134th rank, has demonstrated notable improvements through its expansive and complex democratic governance model (Wiesen, 2024) <sup>[22]</sup>.

This divergence highlights two key lessons relevant to global development:

- Resource endowment alone is not sufficient; it requires visionary leadership, targeted policy frameworks, and institutional capacity, as shown by the UAE's transition from oil dependency to a diversified economy (Delgado, n.d.; Emirates News Agency, 2023) <sup>[10]</sup>.
- Structural reforms and grassroots interventions can also yield substantial human development gains, despite fiscal and demographic constraints, as illustrated by India's progress since economic liberalization in 1991 (Maddison, 2001; UNDP, 2023) <sup>[15, 20]</sup>.

The experiences of the UAE and India reinforce the principle that sustainable human development is context-dependent and must balance economic growth with social equity.

## 7.2 Role of policy design, institutional frameworks, and international cooperation

Both countries demonstrate that coherent policy design and capable institutional frameworks are fundamental for human development progress:

Country	Emerging challenges	Sustainability considerations
UAE	Reliance on expatriate workforce; rising environmental pressures; need for further social inclusion of migrant workers (FCSC, n.d.)	Continued diversification into knowledge-based and green economies; development of national talent; expansion of social protection
India	Population pressures; regional inequality; income disparity; healthcare and education access gaps (Wiesen, 2024; Times of India, 2023) <sup>[22, 19]</sup>	Strengthening federal coordination; investing in human capital; scaling up digital infrastructure; promoting environmental resilience

Both countries face a critical need to integrate environmental sustainability with human development. While the UAE has pioneered eco-initiatives such as Masdar City and clean energy investments, scaling these approaches across sectors remains essential (Delgado, n.d.). India's grassroots focus provides valuable experience in inclusive delivery mechanisms, but must be complemented by improvements in quality and efficiency.

## 8. Conclusion and policy recommendations

This study has conducted a detailed comparative analysis of the Human Development Index (HDI) performance of the United Arab Emirates (UAE) and India from 1990 to 2023. The findings offer valuable insights for both countries and for the global development community.

### 8.1 Summary of comparative findings

The analysis confirms that the UAE and India have followed contrasting developmental trajectories shaped by their distinct historical, economic, and governance contexts.

- In the UAE, national strategies such as Vision 2021 and subsequent long-term planning frameworks created strong alignment between government agencies and measurable development outcomes (FCSC, n.d.).
- India's rights-based policy approach, including the Right to Education Act, Ayushman Bharat health insurance, and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), reflects how legislative instruments can be powerful tools for addressing socio-economic disparities (Wiesen, 2024) <sup>[22]</sup>.

International cooperation has also played a critical role. The UAE has actively attracted foreign direct investment and partnered with global academic and healthcare institutions (Emirates News Agency, 2023) <sup>[10]</sup>. India has emerged as a global leader in information technology and pharmaceuticals and has participated in multilateral initiatives such as the International Solar Alliance, promoting South-South cooperation and renewable energy leadership (UNDP, 2023) <sup>[20]</sup>.

## 7.3 Long-term sustainability of the development models of both countries

The long-term sustainability of the UAE and India's human development models depends on how effectively each country addresses emerging challenges:

The UAE has leveraged its natural resource wealth and efficient governance to achieve a HDI score of 0.937 in 2022, ranking 17th globally in the Very High Human Development category (UNDP, 2023). Strategic economic diversification, significant social investments, and alignment of national policies such as Vision 2021 have translated into exceptional improvements in life expectancy, education, and standard of living (FCSC, n.d.; Emirates News Agency, 2023) <sup>[10]</sup>.

Conversely, India has progressed from a historically low HDI baseline to a Medium Human Development category with a HDI score of 0.644 and global ranking of 134th (UNDP, 2023). India's democratic structure, large and diverse population, and post-1991 market liberalization reforms have enabled steady but uneven human development gains (Wiesen, 2024; Times of India, 2023) <sup>[22, 19]</sup>.

The UAE's rapid and centralized progress contrasts with India's gradual but inclusive approach, which emphasizes social safety nets, legal rights, and grassroots-level delivery systems (Maddison, 2001) <sup>[15]</sup>.

## 8.2 Recommendations for India and UAE to improve HDI further

Country	Policy Recommendations
India	<p>Increase public spending on health and education, particularly in rural areas (Wiesen, 2024) <sup>[22]</sup>.</p> <p>Expand quality vocational training and higher education opportunities.</p> <p>Strengthen monitoring and coordination between central and state governments for more effective service delivery.</p> <p>Foster economic diversification to reduce dependence on agriculture and services sectors.</p> <p>Enhance gender equality and reduce regional disparities in HDI indicators.</p>
UAE	<p>Further integrate expatriate populations into healthcare, education, and social protection systems (Emirates News Agency, 2023) <sup>[10]</sup>.</p> <p>Strengthen national workforce participation through vocational training and local talent development.</p> <p>Increase focus on environmental sustainability and accelerate clean energy transition beyond flagship initiatives like Masdar City (Delgado, n.d.).</p> <p>Expand community-based healthcare and social services, particularly for marginalized groups.</p>

Both countries can benefit from enhancing international cooperation and knowledge-sharing to strengthen their development models.

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