

# AN ECONOMIC ANALYSIS OF HUMAN DEVELOPMENT INDEX IN TAMIL NADU AND TIRUNELVELI DISTRICT

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## Abstract

The integral factors contributing to human development encompass health, education, and income. The cumulative impact of diverse elements of human development is observed in the representation through the Human Development Index, serving as an aggregate measure. The index aims to assess a nation's accomplishments in advancing human development, as manifested in its constituent parts. The Human Development Index was developed by UNDP in its first Human Development Report published in 1990. In this paper, analysis human developments index all the district of Tamil Nadu. The secondary data were used to analysis the human development index. The secondary data were collected from the Tamil Nadu Human Development Report and Tirunelveli Human Development Report.

**Keywords:** Human development, education, income, health, disparity between gender.

## 1. INTRODUCTION

Human development is characterized as the expansion of individuals' choices regarding knowledge, health, longevity, and income levels. At all developmental stages, three fundamental choices are emphasized:

- Gaining knowledge
- Leading a long and healthy life
- Maintaining a decent standard of living

These are considered fundamental choices, while others are deemed additional choices. Highly valued supplementary choices range from political, economic, and social freedom to opportunities for creativity, productivity, self-respect, and the assurance of human rights. The concept of human development extends beyond traditional economic development theories. While income generation is essential, it does not encompass the entirety of human lives. Development should broaden the array of choices available to people, encompassing not only

income and employment but also health, education, environment, human dignity, and freedom. Human development is, therefore, perceived as a people-centered strategy rather than a production-centered one. The objective of human development is to enable people to establish institutions that facilitate and promote participation.

The vital components of human development—health, education, and income—create a combined impact that is reflected in the Human Development Index, serving as an overall measure. The index endeavors to gauge a country's accomplishments in enhancing human development, as manifested in its constituent elements. The United Nations Development Programme (UNDP) formulated the Human Development Index in its inaugural Human Development Report in 1990. The report computed the human development index as an assessment of a nation's education, health, and income. Although the fundamental structure of the index has remained consistent over the years, it has undergone various modifications to better reflect human development.

### **1.1. Human Development in Tamil Nadu**

#### **Education**

Tamil Nadu has made significant strides in education with a high literacy rate. The state government has implemented various schemes to improve school infrastructure, provide quality education, and increase enrollment rates.

#### **Healthcare**

The state has a well-established healthcare system with a network of hospitals and healthcare centers. Initiatives such as the Tamil Nadu Health Systems Project aim to enhance healthcare delivery and infrastructure.

#### **Economic Development**

Tamil Nadu is one of the leading states in India in terms of industrialization and economic development. Cities like Chennai are major hubs for IT and manufacturing industries, contributing to job opportunities and economic growth.

#### **Social Welfare Programs**

The state government has implemented several social welfare programs to address poverty, provide housing, and support marginalized communities.

#### **Infrastructure**

Tamil Nadu has invested in infrastructure development, including roads, transport, and urban amenities. This contributes to overall accessibility and connectivity within the state.

### **1.2. Human Development in Tirunelveli District:**

#### **Agriculture**

Tirunelveli is an agrarian district with a focus on crops like paddy, millets, and pulses. The government has introduced schemes to support farmers, improve irrigation facilities, and enhance agricultural productivity.

### **Education in Tirunelveli**

The district has schools and colleges to cater to the educational needs of the population. Initiatives may include improving the quality of education and ensuring better access to educational institutions.

### **Healthcare Facilities**

Healthcare services are provided through government hospitals and primary health centers. Specialized healthcare initiatives may be implemented to address specific health challenges in the region.

### **Rural Development**

Tirunelveli, like many other districts in India, may witness ongoing efforts for rural development, focusing on infrastructure, employment generation, and poverty alleviation.

### **Cultural Heritage**

Tirunelveli is known for its cultural heritage, including temples and traditional art forms. Preserving and promoting cultural identity is an integral part of human development.

It's important to note that the specifics of human development can vary within different regions of Tamil Nadu and Tirunelveli district. For the most current and detailed information, it is recommended to refer to recent reports, government publications, or academic studies related to human development in these areas.

## **2. REVIEW OF LITERATURE**

**Dasgupta et al. (2009)** investigated whether satisfaction data could serve as a reliable indicator of quality. Using satisfaction data from the 2006 second round of the Governance and Decentralization survey in Indonesia regarding health and education, they employed an expectation disconfirmation model. This model measured user satisfaction with improved facilities and the positive difference between the actual quality of the facility and the user's expected level of quality. The study fitted a two-stage Heckman selection model separately for health and school facilities satisfaction. The results indicated that factors beyond facility quality significantly influenced household satisfaction. Public school satisfaction was notably associated with household location and satisfaction levels in poor districts.

**Filmer (2008)** built upon previous studies by analyzing data from 14 household surveys conducted in 13 developing countries. The study revealed that 1-2% of the population faced disabilities, and a notable association existed between lower educational achievement and disabled adults. Filmer aimed to explore the connection between disability, household economic status among youth aged 6 to 17, and the relationship among disability, poverty, and educational achievement among adults. The results indicated that disabled children resided in both richer and poorer households, while disabled adults were predominantly in poorer households with lower educational attainments. Children with disabilities were less likely to initiate school attendance, and in some countries, they exhibited lower transition rates. The study highlighted the association between disability and long-term poverty in developing countries, emphasizing the need to increase the enrollment of children and youth with disabilities.

**Nayak Purosottam (2007)** has concentrated on the "Human Development Approach to The Status of Development in North East Karnataka." The study disclosed that despite possessing a rapidly growing economy and diligently pursuing liberalization and globalization policies, the region has not achieved substantial progress in terms of human development and welfare. The Human Development Index is below six for the country and even lower in the eastern region. Noteworthy rural-urban disparities, gender imbalances, and UN human development discrepancies across states in the region are observed. The author highlights the concerning trend of increasing gender disparities in Nagaland and the widening rural-urban gap.

**Purohit (2007)** explored the relationship between human development and income by analyzing data from three Indian states: Orissa, Karnataka, and Maharashtra, representing poor, middle-income, and high-income states, respectively. Through a comparative analysis of different state levels, he observed that in richer states, the development of poor districts had been overlooked. Purohit conducted linear regression and log-linear regression analyses for each state to assess the inadequacy of social sector interventions, highlighting the sensitivity differences of human development among the selected states. His findings underscored the significance of education, health, and economic foundation planning policies for human development in these states. Purohit confirmed the findings of Haan and Dubey (2005), suggesting that adopting a more suitable development strategy could enhance the income of a state. The study emphasized the variations in duration and parameters between rich and poor states, proposing that implementing social and economic infrastructure policies at the district level over an extended period could minimize inequality.

**Santhosh Mehrotra (2005)** scrutinized the formation of human capital and fundamental issues associated with calculating the Human Development Index. While finding the theory lacking as a paradigm for education and development, it acknowledges its significance for structural work in education and health by international financial institutions. The paper outlines historical problems with World Bank lending in the education sector, some stemming from the human capital theory, while others arise from a broader neoliberal agenda. It concludes by delineating the foundational elements of an alternative knowledge paradigm for education based on the capability approach and its extension.

**Shamim and Ahmad (2007)** expanded on the preceding research by examining consumption patterns in households in both rural and urban settings. They utilized data from the Household Integrated Expenditure Survey (HIES) for the year 2001-2002, focusing on 18 commodity groups and estimating Engle curves through a quadratic spline expenditure system. The study delved into the influence of age and gender on household consumption patterns. The findings indicated that, in urban areas, certain consumption categories such as vegetables, fruits, spices, and footwear were regarded as necessities, while housing and health were considered luxuries. In contrast, in rural areas, food, electricity, entertainment, transport, education, textiles, durables, and other non-food items were perceived as luxuries. Interestingly, low-income groups in urban areas considered items like vegetables, fruits, fuel and lighting, and clothing as luxuries, whereas high-income groups in urban areas considered them as necessities.

### 3. OBJECTIVE OF THE STUDY

For the current investigation, the researcher has established the following goals.

- To analyze the Human Development Index in Tamil Nadu
- To assess the Human Development Index in Tirunelveli district
- To provide recommendations for achieving equitable human development.

### 4. METHODOLOGY

The research utilized secondary data collected from various sources including the Tamil Nadu Human Development Report 2017, Tirunelveli Human Development Report 2017, published books, journals, internet sources, and other relevant materials. The researcher used the ANOVA tool to ascertain the Human Development Index in the Tirunelveli district.

#### 4.1. Human Development in Tamil Nadu

In this segment, an effort has been made to examine the discrepancies in human development across the districts of Tamil Nadu. Presently, the state of Tamil Nadu comprises thirty-eight districts; however, data is accessible only for thirty-two districts. The human development index values have been extracted from the Tamil Nadu Human Development Report 2017. This section also encompasses an analysis of variations in income, health, and education among all the districts of Tamil Nadu. The ensuing test outcomes furnish comparative insights into human development across all the districts of Tamil Nadu. Employing Cohort analysis, the districts have been categorized into three groups, specifically high, medium, and low, based on human development values for the year 2017.

**Table 1.1**  
**Human Development in Tamil Nadu**

S.No	District	2017	Level of HDI
		HDI Index Value	
1	Ariyalur	0.282	Low
2	Chennai	0.847	High
3	Coimbatore	0.844	High
4	Cuddalor	0.719	High
5	Dharmapuri	0.644	Medium
6	Dindigul	0.691	Medium
7	Erode	0.616	Medium
8	Kancheepuram	0.845	High
9	Kanyakumari	0.944	High
10	Karur	0.668	Medium
11	Krishnagiri	0.788	High
12	Madurai	0.689	Medium
13	Nagapattinam	0.601	Medium
14	Nammakkal	0.738	High
15	Nilgiri	0.624	Medium
16	Pudukottai	0.631	Medium

17	Perambalur	0.447	Low
18	Ramanathapuram	0.653	Medium
19	Salem	0.669	Medium
20	Sivagangai	0.671	Medium
21	Thanjavur	0.655	Medium
22	Theni	0.801	High
23	Thiruvallur	0.801	High
24	Thiruvarur	0.568	Low
25	Thoothukudi	0.852	High
26	Tirunelveli	0.802	High
27	Thiruppur	0.627	Medium
28	Thiruvannamalai	0.596	Low
29	Trichy	0.774	Medium
30	Vellore	0.742	Medium
31	Villupuram	0.561	Low
32	Virudhunagar	0.855	High
	<b>Average</b>	<b>0.695</b>	
	<b>Standard Deviation</b>	<b>0.132</b>	

**Source: Tamil Nadu Human Development report 2017**

The presented table offers a comparative overview of human development across the districts of Tamil Nadu for the year 2017. The average human development for Tamil Nadu was recorded at 0.695, with a standard deviation of 0.132. Categories of high, medium, and low were determined based on the average and standard deviation. It is evident from the table that Chennai, Coimbatore, Cuddalomb, Kancheepuram, Kanyakumari, Krishnagiri, Nammakkal, Theni, Tirunelveli, and Virudhunagar districts exhibited high-level human development among all the districts of Tamil Nadu. Meanwhile, districts such as Ariyalur, Perambalur, Thiruvarur, Thiruvannamalai, and Villupuram were characterized by low-level human development. The remaining fifteen districts demonstrated a medium level of human development.

**Table 1.2**

**Comparison of Human Development among the Districts of Tamil Nadu**

Groups	Sum of Square	Df	Mean Square	F	Sig
Between Groups	0.410	2	0.205	43.498	0.000
Within Groups	0.137	29	0.005		
Total	0.546	31			

Significant at Five Percent Level

The ANOVA outcome indicates variations among the groups concerning human development values. The test verifies that the observed distinctions among the high, medium, and low groups are statistically significant at a five percent level. Consequently, the districts in Tamil Nadu do not share the same level of human development.

#### 4.2. Human Development in Tirunelveli District:

In this segment, an effort has been made to examine the inequalities in human development across the districts of Tirunelveli. The study encompasses 19 blocks and a corporation within Tirunelveli district. Notably, Tenkasi is considered as a block in this study because it has recently been separated as a district. Due to this reason, human development data is unavailable for the Tenkasi district, and the human development index values have been extracted from the 2017 Human Development Report. This section also involves an analysis of disparities in income, health, and education within the Tirunelveli district.

**Table 1.3**  
**Human Development in Tirunelveli District**

S.No	District	2017	Level of HDI
		HDI Index Value	
1	Alangulam	0.53	Medium
2	Ambasamudram	0.45	Medium
3	Cheranmahadevi	0.47	Medium
4	Kadayam	0.45	Medium
5	Kadayanallur	0.60	High
6	Kalakadu	0.67	High
7	Keelapavoor	0.61	High
8	Kuruvikulam	0.41	Low
9	Manur	0.41	Low
10	Melaneelithanallur	0.38	Low
11	Nanguneri	0.53	Medium
12	Palayamkottai	0.60	High
13	Pappakudi	0.42	Low
14	Radhapuram	0.58	Medium
15	Sankarankoil	0.52	Medium
16	Shencottai	0.57	Medium
17	Tenkasi	0.75	High
18	Valliyoor	0.69	High
19	Vasudevanallur	0.61	High
20	Corporation	0.88	High
	<b>Average</b>	<b>0.556</b>	
	<b>Standard Deviation</b>	<b>0.127</b>	

**Source: Tirunelveli District Human Development Report 2017**

In 2017, the human development in the chosen blocks of Tirunelveli district exhibited an average Human Development Index of 0.556 and a standard deviation of 0.127. Categories denoting high, medium, and low levels of human development were established based on these

average and standard deviation values. The provided table distinctly indicates that Tenkasi, Valliyoor, Kalakadu, Vasudevanallur, Keelapavoor, Palayamkottai, and Kadayanallur blocks are characterized by a high level of Human Development Index. Conversely, Pappakudi, Kuruvikulam, Manur, and Melaneelithanallur blocks demonstrate a low level of Human Development Index. The remaining blocks exhibit a medium level of Human Development Index among the selected blocks of Tirunelveli district.

**Table 1.4**  
**Comparison of Human Development in Tirunelveli district**

Groups	Sum of Square	Df	Mean Square	F	Sig
Between Groups	0.222	2	0.111	21.782	0.000
Within Groups	0.087	17	0.005		
Total	0.309	19			

The ANOVA table provided above furnishes details regarding the comparison of Human Development Index values among selected blocks of Tirunelveli district in the year 2017. The P-value associated with the variable Human Development Index 2017 is below 0.05. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted. This leads to the conclusion that the blocks and the corporation within Tirunelveli district did not share the same level of human development in the year 2017.

## 5. SUGGESTIONS

- ❖ To promote the gathering and examination of statistics, the government should assume the responsibility of producing Human Development Reports at the state level, annually. Some initiatives in this direction have already been observed.
- ❖ Apart from the indicators identified and utilized in constructing the fundamental set of composite indices, there are always issues and concerns directly impacting the welfare of people at the local level. These must be incorporated into any meaningful framework for assessing development, encompassing social environments that influence individual and collective well-being.
- ❖ The computation of HDI could be enhanced by incorporating dietary and nutritional indicators, as well as assigning weights for females and males in calculating the life expectancy index and education index.

## 6. CONCLUSION

An effort to examine the Human Development Index conceptually, methodologically, and empirically was undertaken in the preceding discourse. Conceptually, several alterations were observed in the methodology used to formulate the Human Development Index. These methodological adjustments render the process of comparison quite challenging. The empirical outcomes, as a result, are not readily comparable. Some recommendations are provided to enhance human development.



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