



# Human Capital Management in Indian Power Generation Sector-A Case Study of TSGENCO

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## Abstract

In the global scenario, regardless of industry, the competitor controls the companies. The fiercely competitive market has imprinted competitive advantage on the companies. Human capital is the distinctive competitive advantage of the business. Human capital plays an important role in enhancing the performance of an organisation. Now is the time for firms to improve their human capital by providing training and development programmes to increase their employees' skills, abilities, and knowledge. In addition, it analyses the mentality of the employees and provides great achievement in workforce planning. An employee is a company's most valuable resource and offers the tangible foundation required to achieve long-term profitability and sustained success. Therefore, the study establishes the significance of human capital investment in the Indian Power Generation industry.

**Keywords:** Human Capital, Investment in Human Capital, Power Generation Sector

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## I. INTRODUCTION

### "Employees are an organization's lifeblood"

Human capital, like other economic ideas, has economic origins. Thus, it is not well defined. In his hypothesis, Becker (1962) found it impossible to determine human capital. From the literature review, we present the human capital definition intuition. The most authoritative definition of human capital states, "Human capital consists of knowledge, skills, attitude, experience, and other traits that contribute to the organization's production and productivity." (Goode, 1959).

According to the book Roos & Roos (1997), human capital is a collection of intangible assets acquired by the organization's employees. There are three sorts of intangible assets: competences, attitudes, and intellectual abilities and knowledge.

Laroche et al. (1999) define human capital as eight distinct components of the broad understanding and give special attention to those that are analysed as human capital consists of an innate and an acquired component that is not marketable but may be gained through formal and informal channels. The qualitative and quantitative dimensions of human capital may be either unique or general. Humans do not fully utilise their acquired knowledge and skills in all areas. However, human capital may be affected by external variables.

Human capital is defined by Chen et al. (2004) as a combination of people's competencies, attitudes, and inventiveness. Individual knowledge and abilities, as well as talent, are also mentioned as contributing to the organization's value. According to Litschka et al. (2006), human capital is a collection of elements consisting of an individual's skills, knowledge, and ability to work, which includes both psychological and bodily characteristics. These resources are used to help the company grow and improve its performance, but they do not belong to the company.

## **II. HUMAN CAPITAL SIGNIFICANCE**

Physical capital contributed in a significant way to the industrial revolution. From this vantage point, how will the creation of wealth in knowledge-based businesses change during the information age? This can be accomplished through human capital. In 1995, the World Bank undertook a study to determine the global wealth of 192 countries and concluded that global wealth provides 16 percent of physical capital, 20 percent of natural capital, and 64 percent of human and social capital. According to Nafukho et al. (2004), the development of the individual, the organisation, and the nation can be attained through investing in education and training, which creates human capital.

Weathelrly (2003) indicates that human capital management is the new paradigm in the information age. A person must make a quick decision to carry out the necessary activities. Johnson (2002) reveals the significance of human capital and asserts that all innovations are human innovations. The people maintain the economy and commercial system. According to this theory, without humans, there is no structural or intellectual capital. Lucas's research from 1988 shows that human capital has a big effect on how fast a country grows.

## **III. INVESTMENT IN HUMAN CAPITAL**

According to Mincer, Schultz, and Becker, a clear analysis of human capital investment is provided. Schultz (1971) concluded that human capital investment can be divided into five categories. Invest in education (schooling and higher education), upgrading skills and knowledge (on-the-job training), migration, and health and economic information. The author thought that individuals could invest as they saw fit in their own development.

This is the way to improve social and national well-being. According to Becker's (1962) forecast, organisational development is achievable with particular skills, knowledge, and competence, as well as a willingness to invest in human capital, which will increase productivity. When an organisation desires to develop broad skills but encounters difficulties due to employee turnover, the expense of general skills must be borne by workers who receive lower compensation.

## **IV. SIGNIFICANCE OF HUMAN CAPITAL INVESTMENT**

Human capital investment in industrialised nations such as the United States has increased dramatically. In his article, Schultz (1962) discovered that investment in human capital greatly modifies the inequality determinants in individual income distribution. In Becker et al. (1990), human capital investment was highlighted as a growth determinant. The author asserts that by expanding investments in human capital, the country will achieve a condition of equilibrium. Lee et al. (1994) stated that the progressive development of human capital has a substantial impact on Taiwan's output growth and income disparity reduction. The empirical work offered evidence for the accumulation of human capital and the process of continuous learning, which are responsible for the emergence of phenomena in industrial economies such as Taiwan and Korea and lead to investments in human capital. In their investigations, Schultz, Blinder, and Liu hypothesised that investment in human capital leads to improvements in education, social mobility, and employee productivity. The theories are provided in a paper from the World Bank and supported by a study from Taiwan.

Khan (2005) stated that a country's development may be sustained by maintaining a healthy environment and a trained labour force, which will increase productivity through the investment of human capital. The preceding discussion highlights the significance of human capital and investment to the economic prosperity of nations. Bontis (2004) came to the conclusion that the growth and development of the global economy and the creation of national value depend on intellectual capital.

## **V. HUMAN CAPITAL MANAGEMENT IN INDIA**

The significance of human capital in India's economic progress has been recognised for a long time. According to the seventh five-year plan, human capital development plays a crucial part in strategy development by providing education and training to the country's enormous population. It increases economic expansion and modifies the situation as planned. It is extremely difficult to show a causal relationship between human capital expansion and economic growth. Each sector's growth has an effect on the growth of other sectors.

### ***A. Understanding India's human capital***

In 2019, India ranked 115th out of 157 countries. India ranks 116th out of 174 countries in 2020. In contrast, India's score increased from 0.44 in 2018 to 0.49 in 2020. According to the World Economic Forum, the human capital index report for 2016 details the development and deployment of human capital in 130 nations. The Indian ranks 105 with a score of 57.73, a decline of 5 positions compared to the previous year, 2015. In the South Asian region, India lags well behind Sri Lanka and Bhutan, is about on par with Bangladesh, but is superior to Nepal and Pakistan. Sri Lanka owns the 50th place with a score of 71.69, while Bhutan holds the 91st position with a score of 61.83 and Bangladesh maintains the position above India. Literacy is

approximately 90%, and educational attainment has increased across all age groups. Nonetheless, it placed 103rd globally among emerging markets.

India ranked 121 out of 130 nations for its inability to boost labour force participation and employment generation. India's primary schools are falling behind due to their low enrolment rate and poor quality. The youth literacy rate, on the other hand, is 89 percent. India's educational performance at the tertiary level is higher than that of university graduates. This means that academic specialisation is limited and has a substantial impact on gender inequalities in the workplace. It has difficulty producing qualified staff. In the case of competent personnel in India, a score of 55.71 and a ranking of 45 are typical. Our neighbouring countries, Pakistan and Bangladesh, have respective scores of 44.05 and 43.44 and rank 93 and 97. With a score of 53.24, India ranked 39th in terms of the quality of its educational system. These indicators contribute to skilled employees ranking 45th and staff training ranking 46th, which creates a platform for enhancing and increasing their educational and career prospects.

India, with about 78 million tertiary degree holders, holds the greatest proportion in the global distribution of university degree holders. In comparison to China, India ranks second in terms of STEM graduates with 2.5 million. About 65% of the talented people in the world make the most of their education, skill development, and lifelong employment.

According to the 2014 global innovation index study, India fell 10 positions from its current position to 76th rank. This was jointly published by Cornell University and the world intellectual property organisation. According to Soumitra Dutta, India should prioritise human capital investment and STEM research. In the past five years, India has not implemented many innovation programmes. India must focus on several elements for the country's development. Due to corruption, scandals, and retroactive taxation, India has a diminished competitive advantage in other areas. These actions will not encourage investment in our nation. In this setting, India's competitive edge for foreign investment is deteriorating.

In India, industries assigned research and development spending a lower priority than was necessary. To attract more foreign investment and avoid corruption and scandals, they must enhance their education, infrastructure, and healthy environment. According to the most recent five-year study on the worldwide situation, India is three times behind China in terms of investment in human resources and research. So many IIMs and IITs are being established in India without adequate facilities and qualified faculty.

Very little investment has been made in universities. Since only the branding of the institution but not sufficient infrastructure, it is now time to take on difficulties to enhance the institution's quality.

The Indian organisation has not invested sufficiently in the research and development section. The connection between Indian companies and universities is tenuous. In the business sector, the mentality and shifting circumstances are innovatively driven.

All corporate entities must adopt new measures to remain competitive. To take advantage of India's demographic advantage, the public should invest in human capital, such as health, education, and skill development. According to the economic analysis, there is a correlation between investments in maternal health, nutrition, and economic growth. India needs to take steps to increase its number of young people and attract more of them if it wants to invest in human capital.

### ***B. Pumping Investment to better India's human capital***

According to the economic survey, the quality of education in both sectors (public and private) must be identified and determined in order to encourage private investment in social sectors. India has spent over 4% of its GDP on education, falling short of its long-standing goal of 6%. The Indian education industry is the largest in the world, with over 1,4 million schools, 45,000 colleges, and over 700 universities. The quality of our education system is our greatest shortcoming. With the assistance of human capital advantages, over 300 million pupils have the chance to contribute to the nation. In India, social infrastructure like education, health, and housing services is lacking. The specific growth of India depends on its educational output and population health improvement.

India's labour force will reach 249 million between 2015 and 2050, whereas China's will decline to 166 million over the same period. India has the manpower capacity to achieve economic development and surpass China by 2030. This is possible when policymakers take human capital into account. Between 2030 and 2050, the portion of the population entering the labour force will have the most opportunities.

Politicians play a crucial role in persuading young people to enter politics or to graduate. India has demographic advantages that influence policymakers' decisions, as well as the slogans "Make in India" and "Think in India." If this concept is adopted, India's reputation can be preserved and a knowledge-based economy may be developed with an ample supply of human capital. India has a highly trained labour force, but our policymakers are distracted by other concerns. Investment in businesses and investment in human capital should have a strong relationship in a knowledge-based economy for economic progress. However, these relationships are poor in India.

Insufficient investments have been made in human capital and business, according to the country's economic requirements, according to the economic survey report. Nonetheless, vibrant service and manufacturing sectors have contributed to robust economic growth.

## **VI. INDIAN POWER GENERATION SECTOR**

Power is one of the most important aspects of infrastructure, as it is essential for the economic development and wellbeing of nations. The existence and expansion of a suitable electricity infrastructure are necessary for sustainable economic growth in India. The guiding idea of India's power industry has been to ensure universal, sustainable access to affordable power. The Ministry of Power has been working hard over the past few years to turn a country with a power deficit into one with a surplus. They have done this by creating a single national grid, improving the distribution network, and making sure that every home has electricity.

The electricity industry in India is one of the most diverse in the world. Conventional sources include coal, lignite, natural gas, oil, hydropower, and nuclear power, while possible non-conventional sources include wind, solar, agricultural, and municipal waste. It is anticipated that the country's electricity demand will continue to climb in the coming years. To meet the rising demand for power in the country, the existing producing capacity must be significantly increased.

India is the third largest producer and consumer of electricity in the world as of July 31, 2022. It has 404.13 GW of installed power capacity.

As of July 31, 2022, India's installed renewable energy capacity (including hydro) amounted to 161.29 GW, or 39.91% of the country's total installed power capacity. Solar energy is anticipated to contribute 57.97 GW, followed by wind power at 40.89 GW, biomass at 10.68 GW, small hydropower at 4.89 GW, and hydropower at 46.85 GW.

The non-hydro renewable energy capacity addition during the first three months of FY23 was 4.2 GW, compared to 2.66 GW for the same period in FY22.

India's power generation (including renewable sources) increased by 16.79% year-over-year to 430.97 BU in the first quarter of FY23. According to data from the Ministry of Power, India's power consumption rose 3.8% year-over-year to 128.38 BU in July 2022.

### **A. Human Capital in TSGENCO**

The Telangana State Electricity Board is a part of the Telangana State Power Generation Corporation Limited. It is responsible for generating electricity in Telangana. As a result of the foundation of the Telangana state, it has discontinued power trading and retained control over the system operations of power generation. Telangana State Power Generation Corporation Limited was founded under the 2013 Companies Act on May 19, 2014, and began operations on June 2, 2014. The former Andhra Pradesh State Energy Board, which was established in 1959, was responsible for electricity generation, transmission, and distribution. In accordance with the Electricity Sector Reforms initiative, the government of Andhra Pradesh enacted the Andhra Pradesh Electricity Reforms Act in 1998. As part of the reform process, the former APSEB was split into one producing company (APGENCO), one transmission company (APTRANSCO), and four distribution businesses (APDISCOMs).

Later, on June 2, 2014, when the state was divided, APGENCO allocated all assets, liabilities, and power plants to both states, and Telangana Power Generation Corporation (TSGENCO) was founded for the newly formed Telangana state, while APGENCO remained for Andhra Pradesh. Telangana Genco was given thermal, hydroelectric, and solar power plants in the Telangana area "as is, where is."

## **VII. CONCLUSION**

According to Ila Patnaik, India will become the nation with the youngest labour force in the world. She emphasised the importance of a healthy workforce in the coming years. There has been a tremendous increase in the literacy rate, and around 70% of the workforce is now literate. We hear that India is second only to China in terms of economic growth. We also hear that job creation, investment, and bank credit are declining. How the two narratives coexist is a mystery. The first is about India's potential long-term growth, while the second is about the growth we are witnessing currently. "The nation has three primary economic advantages: increasing human capital, rising capital stocks, and multiple microeconomic productivity drivers. According to the data published by the National Survey of India, India's literacy rate in 2022 will be 77.7 percent. In 2011, the literacy rate was 73%. The rapid increase in literacy will increase the quantity and quality of labour. In the next ten years, everyone entering the workforce will be literate, and 20% of new entrants will hold a college degree. India is also expected to achieve a 100-percent female literacy rate. India enjoys a competitive advantage in the global scientific and technical labour market. The slowdown in industrial production is inconsistent with India's expected high growth rate. The net sales of companies remain sluggish. In addition, there is a decline in bank

loans to the commercial sector and stalled projects. This demonstrates the lack of significant investments in the country.

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