

**Research Question:**

How can the human capital investment in India be channelled to reap the benefits of a high population to achieve economic growth?

**Hypothesis:** Increased Government spending on human capital will contribute to long-term economic growth leading the economy, provided the other macroeconomic objective of a low and stable rate of inflation is countered

**Preface:**

My compassion for the less fortunate population around my regional area (Assam being a remote state in the eastern part of India) ignited my curiosity to explore the correlation between investment in human capital and its effect on economic growth and standard of living. My experiences through the association with the local schools and their needs for my personal charity projects gave me a glimpse of the underutilised human potential in the country. Despite boasting the largest population, I realised that India's shortcomings in human capital investments (education and healthcare) hinder its economic progress. This sparked my interest in how the effective allocation and distribution of human capital resources in the economy lead to higher economic growth in the country.

**Limitations:** the research is based on secondary sources and there were limitations in the timeline of availability of the sources. As I am an IBDP economics (grade 12) student the depth of my understanding and perspective may be biased as per my current knowledge and understanding.

**Introduction:**

Education and economic growth go hand in hand, with education playing a crucial role in driving economic development. Merit good provision is an important interventionist supply-side policy aimed at increasing potential economic growth and economic

development. Education is an important driver of increasing real per capita GDP and a tool to enhance the quality of life by raising income and thereby standard of living.

The India Skills Report 2020 displays a positive correlation between skill development and labour outcomes in the country. The report mentions the effectiveness of skill development on job opportunities: it claims that skilled workers are more likely to acquire jobs and better wages than unskilled workers.

Economic growth of a country depends on a multitude of factors, including natural resources, human resources, physical capital, technological advancements and the socio-political environment. This research paper will investigate the critical role of human capital accumulation in driving economic growth in India. India is currently positioned as the 5th largest economy by nominal GDP and the 3rd largest by purchasing power parity (World Bank). As per the World Bank data the contribution of various sectors to the GDP in India, with the service sector being the major contributor to the country's GDP. Currently, the tertiary sector is accountable for 60% of the contribution towards the GDP, whereas the secondary sector is accountable for 28% and the primary sector for the remaining 12%. Additionally, some major industries in India include textiles, chemicals, food processing, steel etc. India has also experienced a GDP growth rate of 7.6% in the Financial Year 2023-2024, with the first quarter seeing a high growth rate of 7.8%. Consequently, India is seen to be one of the fastest-growing economies in the world. However, India's GINI Index lies at 32.8, indicating income inequality in the country. Furthermore, the HCI value of India is at 0.5, showcasing the lack of contribution of education and healthcare towards the productivity of the next generation. Thus, through the focus on human capital, this paper will explore the underlying problems in the Indian Economy while displaying the necessity for

investment towards human capital. In keeping with the SDGs, the paper's focus of analysis will also be based on the SDG goals: Good Health and Wellbeing (SDG 3), Quality Education (SDG 4) and Gender Equality (SDG 5). Literature showcases that with the optimal allocation of resources towards the country's human capital, India can exponentially increase efficiency and productivity in the country.

### **Literature Review**

Investment towards human capital as a merit good is an interventionist supply-side policy, which aims to increase the quality of human capital in the long run (LR) and increase the potential output. Time lag always follows the implementation of such policies as it takes time for the output to actually be produced through years of training and schooling. Albeit it has implications on the fiscal budget as it requires government investment in the provision of merit goods in the form of educational institutions and healthcare facilities. This may adversely impact the government budget and lead to a budget deficit. India already has a significant fiscal deficit (₹ 1613312 crores (indiabudget) and since it is a developing country, there has to be a judicious allocation of the scarce finances available. The current allocation as per the 2024-2025 budget for education is 4.56% (Education) of total government expenditure. Another obstacle India faces is the vast geographical difference. The remote areas within the country need a more focused development plan for investment in human capital with a more intensive and inclusive plan for government investment in human and physical capital. The regional disparity in the development implies rural-to-rural-to-urban migration. The typical underserved Indian family views their child to be an earning hand at the age of 10; daughters are given the responsibility to take care of the other siblings, while the sons are incentivised to participate in physical labour. Thus, the implementation of existing rules of compulsory education is the problem here too.

Human capital has been extensively studied, with significant contributions from the US economy. The American economy has been successful in showcasing the importance of human capital accumulation in driving economic growth. With high occupational mobility and a monthly job turnover rate of about 4 per cent (Baily, Bosworth and Kennedy), out of which two-thirds of labour turnover is considered voluntary, the American economy allows for a rapid reallocation of labour in response to the demand.

Shifting jobs is not accompanied by high social or economic costs in the US. Instead, job changes are perceived as a step towards career and skill set development for an individual. This fluidity is tied to the minimal support an individual receives in terms of employment protection and unemployment benefits, pushing individuals to develop the necessary skills required to be hired. The emphasis on skill accumulation through secondary and primary institutions, paired with vocational training programs allows for further flexibility and higher occupational mobility in the labour market. (Baily, Bosworth and Kennedy)

In contrast, the Indian Economy struggles with low occupation mobility, giving cause to high structural unemployment and labour market rigidities. Suffering from the lack of labour flexibility, the Indian Economy is hindered by rapid economic adaptation and development which is evident in the American Economy.

Moreover, the lack of unionization and labour-management corporations in the American Economy boasts an adversarial labour-management relationship. This lack of resistance allows firms to hire and fire workers with ease, encouraging them to hire freely without any long-term commitments (Baily, Bosworth and Kennedy).

India can draw lessons from the US economy, and implement policies that push the extent to which the diverse and vast resources in the economy can optimally be utilised. By fostering an environment that focuses on skill development through effective education, the economy can gradually tackle the problems that give rise to low occupational mobility in the labour market. Furthermore, by implementing regulations that facilitate smoother transitions in the labour market, India can help reduce structural unemployment and become the origin of a dynamic workforce. Thus, investment in human capital here remains a crucial aspect of a positive change in the economy

*Fig1: USA vs India comparative ratio of Human capital and Physical capital investment*

Government expenditure on education, total (% of GDP) - India, United States

	<b>USA</b>	<b>India</b>
<b>2019</b>	5	3.9
<b>2020</b>	5.4	4.3
<b>2021</b>	5.6	4.6

Domestic general government health expenditure (% of GDP) - India

	<b>USA</b>	<b>India</b>
<b>2019</b>	8.63	1.04

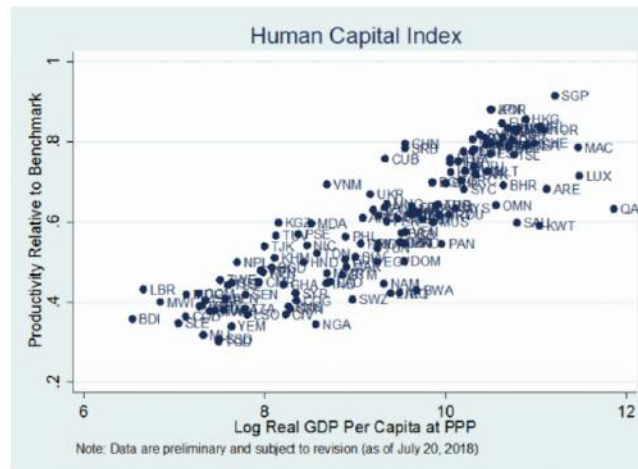
<b>2020</b>	10.69	1.21
<b>2021</b>	9.62	1.12

*As per the available data up to 2021*

Collin and Weil have studied the correlation between the effect of increasing human capital investment on economic growth and poverty: simulation exercise. In this review, I shall focus on the correlation between human capital investment and economic growth. They have observed a stark gap in the large investment in human capital investment among countries, thus they have tried to establish a mathematical relationship between a percentage increase in human capital investment and a corresponding increase in economic growth.

Human Capital Index (HCI) is a term coined by the World Bank Project (Kraay 2019) and it measures the flow rate of human capital investment across countries, this helps us understand the significance of human capital investment and wage earnings. HCI is based on the provision of merit goods and its importance in secondary education completion and skill development. The standard metrics usually used are school attendance rate and highest grade completed but other qualitative aspects of quality education are required to assess the skill development in the labour force for comparison purposes across countries and these are test scores, recently included (some more not yet identified are probably curriculum and pedagogy which should be considered).

Figure 1: The human capital index



Source: Kraay (2019)

The existing correlation between the HCI and the GDP per capita is comprehensively displayed through the use of a diagram by Collin and Weil. Figure 1 displays the positive relationship between the high-investing countries and HCI values (ranging from 0.8 to 0.9), and the displaying the negative relationship between the low-investing countries and HCI values (ranging from 0.3 to 0.4). However, outliers remain as countries like China display higher than expected HCI values and oil-producing countries display lower than expected HCI values.

Projections for the growth in HCI were measured in the median country in three different scenarios. The first scenario included the constant investment towards human capital in a certain economy as the other median countries did over the past decade. The second scenario included the economy experiencing a gradual increase towards investment - similar to the top 25 per cent of the economies. Lastly, the third scenario assumes each new economy's 20-24 age group has the human capital of one. The first scenario projected a growth of 0.12 in HCI



over 35 years (2015 - 2050). The second scenario projected a growth of 9% over every 5 years. The third scenario was illustrated to be a practically unachievable and overly optimistic scenario.

Figure 1 shows the relationship between the HCI and GDP per capita. Values of HCI range from between 0.8 and 0.9 in the highest investing countries to between 0.3 and 0.4 in the lowest. Not surprisingly, there is a tight correlation between income and human capital investment. There are also some interesting outliers: China, Cuba, and Vietnam all have unexpectedly high HCI given their levels of income, while several oil producers have unexpectedly low levels.

### **Government policies to discourage school dropout rates in India.**

#### **Mid-Day Meal Programme**

A survey conducted by the National Statistical Office showed that 12.6% of students dropout of school in India, 19.8% discontinued education at the secondary level, and 17.5% dropped out at the primary level. The mid-day meal programme aims to increase enrolment and discourage dropouts from school education. It reassures the family that food and nutrition will be taken care of and without giving the children a livelihood to sustain. In low-income families, a child is considered an additional hand to earn and thus parents prefer them to work than attend school, the mid-day meal programme helps the families in feeding the children and simultaneously creates an incentive to attend school, this in the long run results in a better-skilled workforce.

#### **India's Right to Education Act**

‘The Right to Education’ (RTE) Act of 2009 is a significant effort of the government to implement free and compulsory education for children in the age group of 6- 14 years (Chauhan and Talegonkar (2009)). The RTE helps to ensure that children from marginalised communities and girls have access to schools and are not prohibited on any discriminatory basis from gaining admission to an educational institution. Thus RTE helps increase the potential of human capital development. It also helps ensure the inclusion and enhancement of girls education (SDG 5), thus developing the neglected 50% of the population and contributing to human capital development.

### **Beti Bachao Beti Padhao**

In the spirit of addressing concerns regarding gender discrimination and women's empowerment in the country, the Indian Government established the “Beti Bachao Beti Padhao” scheme. Directly translating to “Save the girl child, educate the girl child”, the program aimed to educate the general population about gender bias and the lack of efficacy in the welfare services for girls. The scheme’s objective included educating the girl child, whilst simultaneously increasing their participation in the educational institutes of the country; it was an inclusive policy aiming at decreasing the gender disparity in the labour force. (SDG 5)

### **National Education Policy**

The National Education Policy, established in 2020, aimed to make education accessible, and equitable whilst promising quality to all students, addressing the country’s current and future needs. The policy emphasises the critical role of education in driving national development and fostering social equity among the Indian population. The policy includes the reconfiguration of the educational system to align with the Sustainable Development Goals.

The programme stresses the need of a more holistic curriculum that brings together subjects such as arts, and humanities with other traditional subjects such as Math and Lab Sciences to foster critical thinking and creativity in the students. The policy further aims for a special emphasis on the provision of education to historically marginalised communities.

### **Evaluation:**

The government has policies and legislation in place, whether this will help in human capital development will depend on the actual implementation. There are some challenges on the ground level. Teacher absenteeism and lack of infrastructure especially in the rural public schools is a challenge which needs to be addressed. The disparity in access of technology (online learning especially observed during the COVID lockdown) posed a serious gap in the education of the rural population. The systematic challenges of teacher quality, absenteeism and infrastructural challenges deter the people from sending their children to government schools and thus those who can afford to, opt for private schools. The lack of adequate primary and secondary schools in rural areas and remote parts of the country is another challenge the government needs to address for the effective implementation of education policies aiming at human capital investment. According to the available data for 2021 (ourworldindata.org), the per capita expenditure on healthcare is a meagre USD 190.74. This may be seen as a major reason for low productivity. The budget allocation for education as a percentage of GDP is shown in Fig. This may be attributed to the huge budget deficit India faces. The solution may lie in some public-private partnerships for improving human capital investment. Labour productivity is dependent on education and healthcare and investment in qualitative improvement of manpower requires funds and implementation of existing legislation.

**Conclusion:**

Thus effective human capital development is possible with additional support from the government to overcome the problems of regional disparity and access to technology. In the initiative to reap the benefits of an increasing population for a long-term increase in potential and actual economic growth, the government needs to support human capital investment by further improving rural development to restrict urban migration. India's commitment to investment in human capital is ongoing but there are significant challenges like budget deficit, regional disparity, mass urban migration, infrastructure challenges and the need for continuous upskilling which need to be addressed to harness the benefits of human capital development initiatives for achieving the goal of economic growth and development.

Thus with a balanced skill development and balanced regional growth and development, the rising population in India can contribute to higher actual and potential economic growth.

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