

## Private and Social Returns of Investing in Education

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### Abstract

Capital refers to the wealth, i.e. assets or money that a company owns and which is used to either commence a new business venture or invest in an existing one. Capital is the life force of any corporation; it helps a business to maintain its liquidity while growing in stature. Generally, capital is referred to the physical assets in a company. However, a new concept of human capital has been introduced as well. Physical capital refers to a wealth that is tangible like, inputs, i.e. factors of production or human-made items that are owned by the business like machinery, properties, buildings, furniture, electronic items, and others which are used to convert raw materials into finished goods. On the other hand, the concept of human capital is new. It implies the personal abilities that an employee brings to his/her organization. It is in the form of skills, knowledge, experience, expertise, intelligence, attitude, professionalism, value, and ethics, etc. It implies the skills, abilities, and knowledge of individual employees, which is used by companies to meet their future goals. The company does not own this type of capital. Instead, they avail it by paying adequate returns. While the value of human capital in terms of money is not easy to measure, the influence of investments in it can be calculated and analyzed. As a result, employees are considered as assets whose value can be augmented via further training and development. Investments in both types of capitals lead to fundamental improvements in a business and better chances of achieving long-term goals

**Keywords:** Human capital, investment, Private returns, social returns, education, health, growth

### Introduction

Human capital refers to the intrinsic productive capabilities of human beings. These capabilities can be increased through investment in things such as education, on-the-job training, and health. The idea of placing a value on the characteristics of employees and looking at how making investments into employees can improve a business has been around since the 1800s. Famed economist Adam Smith proposed that one of the best ways for a society to improve and grow is to invest in the people who live in it. Whether it was through formal education or through employers training and teaching employees valuable skills, Smith proposed that investments in people lead to a higher functioning society as a whole. Adam Smith in *The Wealth of Nations* (Smith, 1776) set the stage for the study of human capital. Although he does not use the phrase human capital, he

identifies the acquired and useful abilities of individuals as a fundamental source of wealth and economic progress of a country. Writing more than a century later, Alfred Marshall notes in his *Principles of Economics* (Marshall, 1920) the long-term nature of investments in human capital and the family's role in undertaking them. Additionally, Marshall expands the notion of returns on human capital to include nonmonetary considerations. However, Marshall is also credited with delaying the study of human capital due to his reluctance to put it on the same footing as physical capital. The modern study of human capital coincides with two developments in economics. The first was a resurgent interest in understanding why economies grow. It was apparent to researchers that national output was growing at a much faster rate than the rates of growth of inputs – land, labor, and physical capital (Denison, 1962). The second development was large datasets of worker productivity and earnings and how they related to characteristics such as the years of education and age. The data revealed that the higher levels of education might explain rising productivity and wages. Three authors, Jacob Mincer (1958) who stimulated a vast literature measuring the returns to education, using census data, Theodore Schultz who analyzed the role of education and general investments in human capital in the increased productivity of labor and, Gary Becker (1964) who organized the emerging threads of empirical and theoretical work into a guidebook for future research, did a particularly commendable work in this field. E.R. Eide, M.H. Showalter, Human Capital, International Encyclopedia of Education (Third Edition), 2010. <sup>1</sup>

**Objectives of the study:**

To review literature on concept of human capital.

To understand the difference between physical capital and human capital.

To understand private returns of investing in education.

To understand the social returns of investing in education.

Adam Smith spent a lot of time studying the idea of human capital, but it wasn't until the 1960s that another economist, named Theodore Schultz, came up with the actual term. Smith viewed human capital on a higher level, as a benefit to society, the overall economy, and even to culture and values. Schultz, on the other hand, proposed that human capital could be viewed the same as any other factor of production, like raw materials or machinery. Investments made in employee training, education, retention, and recruitment would increase the production output of the company. The biggest takeaway from Adam Smith's work on human capital was the effect that investment in employees had on the betterment of society and the country overall. Investment in

people isn't finite and lasts well beyond the initial action, such as when a company pays an employee to earn a master's degree or important certifications. Even if the employee leaves after ten years, the general economy will still benefit as long as that employee works somewhere within the economy and contributes those skills obtained at. In the 1950s and early 1960s, Nobel Prize winners and University of Chicago economists Gary Becker and Theodore Schultz were among those primarily responsible for the development of the theory of human capital. Becker realized the investment in workers was no different than investing in capital equipment, which is another factor of production. Both are assets that yield income and other outputs. Becker differentiated between general and specific human capital.<sup>2</sup>

**Specific human capital:** Training or education that benefits only one company

**General human capital:** Training or qualities that benefit the individual at any company

Becker found that companies were more likely to pay for specific human capital while individuals paid for general human capital investments. Firms were less interested in investing in workers who might then be poached by competitors. Human capital includes any human quality or value that can improve economic output and productivity. Because these are intangible assets that cannot be separated from individual workers, quantifying them can be difficult. However, they consistently lead to increased economic performance.

Human capital can include qualities like:

- (i) Education
- (ii) Technical or on-the-job training
- (iii) Health
- (iv) Mental and emotional well-being
- (v) Punctuality
- (vi) Problem-solving
- (vii) People management
- (viii) Communication skills

Investment in these qualities improves the abilities of the labor force. The result is greater output for the economy and higher income for the individual. Investment in human capital takes place over the course of people's lives in a wide range of settings – including in the family, at school and at work. The quantity of human capital investment can most readily be measured through two resources devoted to learning: money and time. The amount of money spent by individuals,

companies and governments on training and education, and the time spent by participants in courses of study, serve as useful approximations of human capital formation. In practice, the concepts of time and money investments overlap, since forgone earnings can be an important element of the cost of learning that takes place beyond compulsory schooling. Such measures can, however, provide some idea of how different countries structure human capital investment, in terms of type, level and duration. A country may have a relatively low level of human capital stock as measured by years of schooling or educational attainment, for example, but nevertheless make large investments in each student, or have a relatively high level of participation in learning beyond schooling, including job-related training<sup>3</sup>

Becker's research focused on education. Becker pointed out that the cost of education is an investment that introduced issues of opportunity cost in terms of time and money. Pursuing an education means that students lost the opportunity to work, travel, or have children. People only pursued an education if the potential income gain was greater than the cost. Human capital investment confers benefits on individuals, enterprises and societies.<sup>4</sup> These benefits may be economic in nature and accrue in the form of additional earnings, productivity or economic growth. Human capital investment can also give rise to a wide range of non-economic benefits including greater social cohesion, lower crime and better health.<sup>5</sup>

human capital is the main reason for the accelerated growth and expansion for many countries that provide investment in human capital. This gives the best advantages to these countries for providing the best situations for work and lifestyles. A significant advantage in generating a stable environment for growth is that the nation has the expanded high-quality human capital in fields like health, science, management, education, and other fields. Here, the main components of human capital are definitely human beings, but presently, the principal component is a creative, educated, and enterprising person with a high level of professionalism.

Human capital in the economy manages the central portion of the national wealth. Hence, all researchers consider that human capital is the most important resource of the community, which is more powerful than nature or wealth.

### **Role of human capital on economic growth**

In most countries, human capital determines the rate of development, economic, technological, and scientific progress.

(i) Inventions, innovations, and technological improvement

1. Human capital leads to more innovations in the areas of production and other related activities.
2. Innovation leads to more growth.
3. Human capital also creates the ability to absorb new technologies.

(ii) Higher productivity of physical capital

1. Human capital increases labour productivity.
2. Trained workers will use the physical capital (like machines) more efficiently.

(iii) Raises production

1. The formation of human capital raises production levels and leads to economic growth by adding to the GDP.
2. Knowledgeable and skilled workers can make better use of resources at their disposal.

(iv) High rate of participation and equality

1. By improving the productive measures of the labour force, the formation of human capital increases excellent employment.
2. This leads to a high rate of participation in the labour force.
3. It reduces the gap between the poor and the rich.

(v) Improves the quality of life

1. Quality of life is indicated by income and health.
2. Income and health depend upon the level of education, skill formation, etc.
3. The formation of human capital increases these skills and improves the quality of life of the masses.
4. Better quality of population means more economic growth

### **Private and Social Return to education**

Like any other investment decision, investing in human capital through education entails costs that are borne in the short term with the expectation that benefits will be captured in the long term. Since the returns to education will not accrue for some time, the theory predicts that present-oriented individuals are less likely to invest in education than forward-looking individuals and that younger individuals will be more likely to invest than older individuals.

The question of whether returns to education are high enough to justify the costs of additional education is an important question, not only for individuals but also for policymakers. It is often argued that government policies can improve the economic well-being of the poor by subsidizing their education, offering loans for college students, and imposing minimum education levels.

There is a strong consensus among economists that education is one of the key determinants of people's earnings. According to the human capital theory, education is an investment that increases the market skills and productivity of individuals who undertake it. Consequently, these individuals earn higher wages in the labor market for their higher skills and productivity. While monetary returns to education take the form of higher earnings that people command in the labor market, there may also be non-monetary returns since higher education is often associated with psychic gains, such as increased respect from others.

It is important to make the distinction between the private and social rate of returns to education. The private rate of returns to education is the increase in the earnings from an additional year of education for an individual who makes the investment decision on education, while the social rate of returns to education measures the increase in national income resulting from the same year of education<sup>6</sup> (Borjas 2004). It is often the social rate of returns to education that provides a basis for government programs, such as scholarships and education loans that are aimed at increasing the levels of education of individuals. Return to education is a topic largely present in economic literature. Whether the returns to education increase productivity is of interest to economists and policymakers, because this issue has substantial implications regarding government subsidies for education and economic growth. It is evidenced that investment in human capital has a positive return, in fact, the average difference between the wages of a university graduate and a high school graduate is significant in most countries. Not only workers with a high level of schooling are paid more, but also this difference in earnings reflects the benefits of education and not a product of selection. In other words, this difference can be interpreted as the change of productivity that education leads to individuals. Most researches on the returns to education have tried to find whether the social return to education may exceed the private return. Different

explanations have been offered for spillovers from an individual to another. For example, the sharing of knowledge and skills through formal and informal interaction may generate positive externalities across workers.

Private returns of investing in education

- i. Pecuniary returns like increase in income and factors affecting increase in additional income like abilities, working conditions, working hours etc.
- ii. Impact of education on personal health, capacity to enjoy leisure and efficiency in making a variety of personal choices
- iii. It creates an urge for proceeding up the education ladder.
- iv. Increased opportunities of employability and choices among professions.
- v. Insurance against odds like structural changes in the times of economic upheavals.
- vi. Imputed returns like teaching one's own children, filing one's own income tax return etc.

Social returns of investing in education:

- i. Benefits to neighbourhood : an educated person can guide and assist in many ways to the illiterate, less educated or elderly people in his or her neighbourhood.
- ii. Reduction in social and economic crimes due to increased sense of responsibility towards society.
- iii. Benefits to owners and co workers at work place.
- iv. Benefits to immediate and extended family as the person may become an ideal for investing in education.
- v. Benefits to nation in the form of aware tax payers, voters, law abiders, possible contribution to improving social equity, strengthening national cohesiveness, reducing environmental stress through its effects on fertility and population growth.<sup>6</sup>

Numerous studies suggest that the rate of returns to education in the United States was around 9 percent in the 1990s <sup>7</sup>(Borjas 2004). The rate of returns to education varies from individual to individual due to differences in age, ability, quality and quantity of education, and socioeconomic status. For example, it is often assumed that more able individuals benefit more from an additional year of education. Also, better-quality education is likely to enhance the productivity of

individuals by improving cognitive skills, thereby increasing the rate of returns to education. It is also assumed that the rate of returns to education is a decreasing function of the quantity of education. In other words, the additional earnings generated from an extra year of education are likely to be higher for people with low levels of education than for those with high levels of education. The rate of returns to education may also vary between individuals from different races, ethnicity, or gender due to discrimination. However, the empirical evidence on this is mixed. On the one hand, studies by Pedro Carneiro, James Heckman, and Edward Vytlačil (2003)<sup>8</sup> and Christopher Taber (2001)<sup>9</sup> show that the return to education is greater for more able individuals. On the other hand, Orley Ashenfelter and Cecelia Rouse (1998)<sup>10</sup> find some evidence that the rate of return may be even higher for individuals coming from more disadvantaged backgrounds, and Lisa Barrow and Cecelia Rouse (2005)<sup>11</sup> find that returns are similar for African Americans, Hispanics, and whites. The large disparity in education levels between different racial and ethnic demographic groups is considered to be a major reason for the observed inequality in the distribution of income and wealth in the United States. While increased educational opportunities for minority groups will certainly help narrow these inequalities, they are likely to be most effective only if coupled with policies that are aimed at eliminating the barriers to equal access to education for these groups.

The discussion above assumes that education increases individuals' earnings by raising their productivity. An alternative argument is that education can increase earnings even if it does not make individuals more productive.<sup>12</sup> According to this view, education mainly serves as a signal about the qualifications of the workers to potential employers<sup>13</sup>. Employers, especially in situations where they cannot easily observe the abilities or productivity of workers, may rely on education as a signaling device in their hiring decisions.<sup>14</sup> As far as the private rate of returns to education is considered, it may not matter whether it is the productivity or the signaling model that represents a correct picture of the education and earnings relationship because education is positively linked to earnings under either scenario. However, if the signaling model is the correct link between education and earnings, society will not benefit from increased education. In this case, the social rate of return to education will be zero.

## **Conclusion**

There are numerous benefits of investment in education. It can reduce poverty, enhance equality, improve health, reduce crime, and promote rights, to name a few. The benefits of such activities will accrue to the individual and to society over a period of time. The benefits of investment take the form of production of goods and services which, in effect, are treated as incomes. The use of



resources for the development of education is essentially an investment, the benefits of which accrue to society for a relatively longer period of time. Therefore, education, in all countries, is regarded to a large extent as a social responsibility. The task of making provision for adequate and relevant education to suit different types and levels of learners is, therefore, largely assumed by the Government everywhere. Obviously, a great deal of caution has to be exercised in respect of planning and management of physical and financial resources devoted to education.

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