

Economic bearing of school dropouts on human capital

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Abstract: This paper explores the economic consequences of school dropouts in terms of human capital and national productivity. By studying the experiences of school graduates, it becomes clear that they often face limited job opportunities early in their adulthood and frequently find themselves in low-skilled and informal work due to inadequate qualifications. The effect of dropping out is directly related to high unemployment, reduced income, and increased demand for government social assistance, which also adds pressure on public spending. The consequences of decreased labor productivity and workforce competence, which are directly related to educational neglect, are assessed in the report. Exploring the environmental and social factors behind school dropout reveals that environmental impact is closely tied to long-term economic outcomes. Taking deliberate steps to manage school dropout rates includes providing instruction in vocational education and skills development programs that help more children enter college, secure effective employment, and develop the skills they will need as they gain employment. Effective management of school dropouts can help create capable, innovative workforces that can sustain and drive lasting progress for their country.

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INTRODUCTION

Everyone is entitled to attend school, complete their studies, and secure a suitable job. Still, not everyone is given these opportunities, as certain life aspects and challenges may hinder them from achieving these goals. Education is crucial for economic expansion, social advancement, and human capital development. It provides individuals with the knowledge, skills, and competencies necessary for productive participation in the workforce and making significant contributions to society. A school dropout is a student who stops attending the level of study they are enrolled in without moving to another educational institution and continuing their education. Although it can sometimes occur, this break in formal schooling is most common during secondary education (Parreño, S. J., 2023). Although sometimes regarded as a personal decision or situation, dropping out has extensive repercussions that affect communities and economies at large (UNESCO, 2024; Childhope Philippines, 2024).

School dropouts have a significant impact on the economic cost of human capital formation. The total stock of knowledge and skills possessed by people in human capital has a significant impact on a country's productivity and competitiveness. School dropouts are less likely to acquire the qualifications and skills needed for productive work. It limits their earning potential and creates a less skilled and innovative workforce (Parreño, 2023). The total economic cost of school dropouts to the global economy is substantial. UNESCO (2024) states that educational deficits and out-of-school children incur an estimated \$10 trillion in annual costs, resulting from foregone income, unemployment, and unrealized human potential. Most countries' early school leavers come from economically underprivileged homes, which helps to continue the cycle of poverty and inequality (Childhope Philippines, 2024).

The effects of these losses extend beyond the individual level, adding additional strain to national economies through higher dependency ratios and overall reduced productivity. With human capital underdeveloped due to disruptions in learning, nations struggle to achieve economic objectives, mitigate labor shortages, and drive sustained long-term growth (Parreño, 2023; UNESCO, 2024). Furthermore, the fact that school dropouts are most prevalent in impoverished communities exacerbates the trend, perpetuating cycles of poverty and inequality, and generating social and economic disparities that are even more difficult to contain (Childhope Philippines, 2024; Philippine Institute for Development Studies, 2018).

There is an increasing acknowledgment of the economic and social consequences of school dropouts; however, literature still lacks some areas, particularly in understanding the multifaceted economic burden of school dropouts on human capital. Yet, a relatively large body of literature exists that examines the causes and individual consequences of school dropouts. However, only a few studies have investigated the impact of dropouts on the broader economic system, particularly within a developing context. There is a limited understanding, particularly about the relationship between socioeconomic factors, dropout rates, and long-term labor market productivity, especially in fast-growing economies in Asia, Africa, and Latin America. This section of research is relatively thin, although it is complemented by a wealth of work conducted at the urban level and in well-resourced settings. Little, however, is known about the problems students face in rural and underprivileged areas. This research will consequently provide a detailed examination of how school dropouts contribute to the production of a less skilled workforce, increased government dependency, and reduced productivity. In doing so, the research will provide policymakers and educators with highly relevant insights for designing more targeted interventions to mitigate the adverse effects of school dropout on human capital and long-term economic growth.

Statement of the problem

The study will examine the economic impact of school dropout on human capital. Particularly, this research aims to answer the following objectives:

- 1) Examine the effects of school dropouts on limited job opportunities and increased engagement in informal work.
- 2) Explore how school dropouts contribute to dependence on government support and social assistance.
- 3) Assess the impact of school dropouts on labor productivity and the development of workforce skills.
- 4) Identify socioeconomic factors that influence school dropout rates and their subsequent economic consequences.

METHODOLOGY

Research design

This research utilized data mining from existing and published online sources from various countries and continents to examine the impact of school dropouts on human capital. Through thorough readings, reviews, and integration of data gathered, this study aims to understand the different factors that affect the number of school dropouts that led to few economic human capital concerns, such as school dropouts often being hired in informal and limited job opportunities, dropout workers shown less labor productivity in the field compared to the ones who finished their studies and what are the environmental factors that may trigger the students to leave school early.

Respondents and locale of the study

This study employed data mining, and the respondents represented diverse age groups, ethnicities, beliefs, cultural backgrounds, and educational levels. Since the respondents were diverse and not limited to specific focus groups, various global perspectives were evaluated to address the study objectives.

Research instrument

ANOVA, questionnaires, interviews, surveys, and observations are the instruments used to collate the data from the respondents to examine the economic effects of school dropouts to the limited job and informal work opportunities, less labor productivity in the field, and identifying the environmental factors that caused students to leave school early instead of finishing their studies to have a better future and academic records.

Data analyses procedure

The analysis of the data entails classifying the gathered information to synthesize and categorize it according to the aims of this study: understanding the factors that affect school dropouts' hiring in informal and limited job opportunities, the fact that dropout workers show less labor productivity in the field compared to those who finish their studies, and the environmental factors that may trigger the students to leave school early.

DISCUSSION OF FINDINGS

Limited job and informal work opportunities

School dropouts often face significant challenges in their employment, as they commonly encounter limited opportunities due to their limited qualifications. These limited opportunities prevent them from accessing stable and well-paying job opportunities, thereby hindering their economic security. Thus, many individuals engage in informal, casual, or low-wage employment, which typically offers limited job security and benefits. Individuals who drop out of school face a significantly higher disadvantage in the labour market, as employers generally prefer candidates who possess at least a high school diploma or equivalent. Limited formal employment opportunities can also significantly contribute to keeping individuals from breaking the cycle of financial vulnerability and poverty, making it difficult for them to leave their problems behind (Hanushek et al., 2017). According to Chaudhary and Verick (2017), informal employment is

disproportionately prevalent among early school leavers, who earn substantially less than their educated peers.

Several countries prove that school dropouts indeed face this challenge. In the Philippines, young individuals often face limited employment prospects and reduced earning potential due to dropping out of school. Dropouts often accept low-paying, unstable positions that offer limited opportunities for career advancement (Childhope Philippines, 2024). In Italy, an Iranian study found that young people who drop out of school are less likely to be employed and educated 10 years after entering upper secondary education than those who complete their studies (Mussida, C. et al., 2018). Additionally, in Canada, individuals without upper secondary education tend to earn lower incomes and have higher unemployment rates compared to those with more advanced educational backgrounds. The study highlights the social and financial benefits of completing upper secondary school (OECD, 2021). Another research result from the parameterized model in Brazil has shown that companies are less likely to hire long-term unemployed individuals. Not only can individuals with lower educational levels and long-term unemployment experience the "stigma effect" of job searching, but they may also face financial constraints that impact other aspects of their life and well-being (Borges, C. et al., 2023).

A study in Nigeria found that dropouts face limited employment prospects, with many being engaged in informal sectors, such as agriculture, small-scale trading, or manual labor. The research highlights the importance of vocational training in enhancing employability (Okeke, C. I., & Mtyuda, P. N., 2017). Another study in Kenya reveals that many individuals opt for informal work or subsistence agriculture, as school dropouts often struggle to secure regular employment. The study highlights the importance of alternative educational pathways in expanding job opportunities (Muthoni, 2015). Teenagers who drop out of school in Vietnam often work in hazardous employment sectors, including agriculture and low-skilled manufacturing, putting in more than 43 hours a week (HR Reporter, 2023). The majority of Argentine dropouts are employed in informal sectors, such as construction, domestic work, or small-scale commerce, with limited employment options available. The study's findings indicate that it is essential to enhance educational quality and improve student retention rates (Rivas, 2015).

Similarities

A primary concern is the limited employment opportunities available to recent graduates. Recent graduates in the Philippines often face bleak job opportunities. In Canada, however, the unemployment rate is higher for individuals without a high school diploma. In Brazil, long-term jobless people with low qualifications are particularly disadvantaged and are often ignored when it comes to jobs. In Italy, a school dropout can only expect to find a reasonably paying job after a decade. Early school leavers tend to earn less than their educated counterparts in Brazil, Canada, and the Philippines.

Additionally, studies conducted in Canada and Italy suggest that the schooling attained by school dropouts influences their socio-economic mobility in later life, thereby highlighting the role of educational attainment in achieving successful outcomes later in life. Finally, research conducted in Nigeria, Argentina, Vietnam, and Kenya suggests that school dropouts are more likely to be found in the informal economy and have inconsistent employment. Regardless of these contradictions, one thing that stands out for all these countries is the need for educational policies aimed at reducing the adverse effects of dropping out.

Disadvantages

School dropouts suffer several disadvantages that have effects on their future welfare. In other countries such as the Philippines, Italy, Canada, and Brazil, school dropouts generally have poor access to employment, low-quality and insecure work, and poor opportunities for occupational mobility. It is further noted that they have a higher chance of being unemployed, earning a lower income, and forfeiting the social and economic benefits associated with higher education. School dropouts can also face social stigma and economic challenges that impact other aspects of their lives, such as their health and overall well-being.

Advantages

Although school dropouts present certain challenges, a significant amount of research suggests that they also have certain advantages, particularly in terms of exploring alternative educational routes and developing valuable skills. In nations like Nigeria and Kenya, most dropouts participate in the informal economy, for instance, in agriculture, commerce, and labor, which, although small in scale, offer immediate monetary rewards and facilitate skill enhancement. Individuals can help others develop skills such as entrepreneurship, self-sufficiency, and resilience. In Kenya and Algeria, the job prospects of dropouts can be enhanced and their employability increased through the use of education, training, and non-formal education pathways. Their findings are that school leavers can achieve sustainable and remunerative livelihoods with proper training and support.

Dependence on government assistance

A high school dropout is much more likely to rely on government assistance programs than their counterparts with greater educational attainment. Without marketable skills or valid certifications, high school dropouts are typically unable to earn a wage sufficient to make ends meet; therefore, they rely extensively on social welfare programs, such as food stamps, housing subsidies, and Medicaid, to merely get by. Such reliance tends to perpetuate long-term economic drains not only for those involved but also for society as a whole, as studies have shown that high school dropouts are statistically more likely to become trapped in poverty and, consequently, depend on constant government assistance throughout their lifetimes (Holzer, 2015). The cyclical nature of this reliance further underscores the utmost importance of completing school to achieve economic self-sufficiency and independence.

Early school leavers in Pakistan are more likely to live jobless or on government support since they cannot find employment (Choudhary, A. I., & L. A., 2015), while early school leavers in Australia are more likely to suffer unemployment, lower income levels, and more dependency on social assistance (Lamb, S., & Huo, S., 2017).

Similarities

Individuals in Pakistan and Australia who don't go to school or drop out early have similar social and economic results. One significant aspect that both groups share is that they are more likely to be unemployed due to difficulties in securing stable employment, often because they lack sufficient qualifications. Also, more people in both countries get their basic needs met by the

government or social services. These trends highlight a global issue: the level of education has a significant impact on economic stability and independence.

Disadvantages

Students in Pakistan who dropped out of school early are jobless and depend on government aid a lot. Early school leavers in Australia have a high unemployment rate and experience a significant drop in their income, which limits the types of living choices they can make. Also, this growing reliance on social welfare programs makes the economy less stable in the long run. The following are just a few ways that not having a proper education can hinder your growth and financial well-being.

Less skilled workforce

School dropouts frequently have limited career opportunities due to a lack of specific skills required by businesses. According to a study conducted by the Philippine Institute for Development Studies (2024), many individuals with limited education are confined to jobs that require only basic or social skills, which are unsuitable for the increasingly complex demands of the labor market. These skills mismatch not only affects individual employability, but it also stifles economic progress by limiting worker productivity (Philippine Institute for Development Studies, 2024).

Several rural Chinese students drop out of school to help their families by participating in child labor. General labor productivity declines due to the situation's impact on the workforce's skill level (Bradley, 2020). Early departures from the school system in India have resulted in a workforce entering the labor market lacking the necessary skills, thereby affecting labor productivity (Singh & Mukherjee, 2021). Students who leave school early in Pakistan are less likely to possess the skills required for higher labor market productivity (Andrabi et al., 2021). Moreover, in Morocco, it was found that the surrounding environment has a significant influence on early school leaving. Often, this early entry into the job market results in a less skilled workforce, which in turn lowers overall output (Ibourk & Raoui, 2024).

Similarities

A common problem associated with early school dropout exists in rural areas of China, India, Pakistan, and Morocco. School dropouts often enter the workforce at a very young age without any formal training. These countries experience a phenomenon known as a 'working population' produced with substandard education and unskilled knowledge, leading to very low productivity and slow economic development in these nations.

Advantages

An early school dropout can become a wage-earning individual, providing significant economic relief for families in need, especially in rural sectors where children are expected to assist with chores, including helping to lift their relatives' incomes. These children alleviate some of the burden by spending less time on exams, which is financially beneficial for their families in the short term.

Disadvantages

On the other hand, the deep toll on individuals as well as the economy as a whole serves to be the upfront disadvantage. Given that most high school dropout students lack the requisite capabilities to perform specialized tasks and secure well-paying jobs with moderate to high headcounts, the ability to rely on skill sets plunges to a deep abyss. And since their level of productivity at the same time frames and advanced global positions is also severely lacking, it makes the overall potential productivity of the economy, and the available workforce drag low.

Socioeconomic Factors

Socioeconomic status is one of the most fundamental determinants of school dropout rates, and hence the quality and size of human capital formation in any country. Low-income students generally face the greatest challenges to their educational continuity, which may be due to financial instability, food insecurity, or the need for them to participate in income-generating activities at home. The same reasons further increase the likelihood of a low-income student experiencing early school-leaving incidence, thereby hindering the development of crucial skills and relevant competencies necessary for effective participation in a competitive labor market. Correspondingly, it hinders human capital accumulation, resulting in a less productive and over-skilled workforce for the economy.

In this sense, several key factors in Pakistan contribute to primary-level school dropout, including poverty, large family sizes, and child labor, which, to some extent, directly hinder the country's skilled labor production (Ali et al., 2021). Likewise, in Uganda, household income has been identified as a crucial determinant of a student's ability to persist in school and, consequently, the development of human capital (Lubowa, 2023). In essence, these findings highlight the importance of addressing socioeconomic inequities to reduce school dropout rates and foster sustainable economic growth through a well-educated workforce. Bad economic conditions, low academic performance, parental apathy, inadequate school resources, family instability, orphanages, and parental relocation are among the top reasons for school dropout in Bangladesh (Chowdhury, M. D., 2019).

One of the primary reasons Kenyan children drop out of school is poverty. Children from low-income families often drop out of school to work or because they cannot afford the costs associated with attending (Muthoni, C., 2015). In Mexico, low socio-economic status is a major predictor of school dropout. Financial limitations increase the likelihood that children from low-income families will drop out of school early (Székely, M., 2015). Moreover, a statistical study in Peru has shown a strong correlation between socioeconomic level and the probability of school dropout, indicating that improving families' economic situation can lower the dropout rate (Rodríguez-Triviño et al., 2024).

Similarities

In countries such as Pakistan, Uganda, Bangladesh, Kenya, Mexico, and Peru, socioeconomic status problems are identified as the main contributors to school dropouts. Poverty, low household income, large family size, child labor, and financial constraints are some of the factors repeatedly mentioned as contributing to the premature dropout of students from school in these

nations. These barriers impede the attainment of education and are linked to the underdevelopment of skilled and competitive human resources.

Advantages

While school dropouts are a general disadvantage, it may provide some short-term economic relief to families. For instance, a student who goes to work as a breadwinner will be able to lend a hand and support the family financially more easily in cases like Pakistan and Kenya. It becomes particularly important for families already living below the poverty line or those affected by economic shock.

Disadvantages

The negatives are broad and deep. Socioeconomic pressures that drive students out of school represent a serious wasted opportunity in building human capital for economic development. The early leavers invariably lack the skills and qualifications to access more productive jobs, thereby reducing the average skill level in the labor force. Moreover, persistent dropout rates due to financial constraints and a lack of institutional support (Uganda, Bangladesh, Mexico) tend to perpetuate the cycle of poverty, imposing a constraint on long-term national progress. These disadvantages ultimately lead to lower constraints on sustainable economic growth and social mobility.

CONCLUSION

The economic cost of school dropouts to human capital is significant since the premature termination of education constrains the skills, employability, and income potential of individuals. Heaped upon these are the similarities, advantages, and disadvantages that early school leavers have on society. They also often experience high unemployment rates and low wages due to a lack of qualifications; consequently, their jobs are mostly low-paid and precarious, which reduces labor productivity. It not only constrains personal economic growth but also undercuts national human capital, thereby reducing competitiveness and innovation. Then again, the other side of the coin is that government dependency by dropouts imposes a greater financial burden on the government. Therefore, addressing school dropouts is crucial for developing a skilled labor force that enhances economic productivity and ensures sustainable development. The government, as well as other stakeholders, should encourage school dropouts to participate in national reintegration programs, particularly those affected by socioeconomic factors. Despite not having a formal schooling background, they will still possess skills that are responsive to both economic demands and industry needs.

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