

A REVIEW OF COST ANALYSIS FOR EDUCATIONAL POLICYMAKING

Sushil Kumar*

*Assistant Professor,
Department of Education, Teerthanker Mahaveer University,
Moradabad, Uttar Pradesh, INDIA
Email id: sushilkumarmpi@gmail.com

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ABSTRACT

Given the significant difficulty of enhancing education while working under tight financial limitations, educational authorities in developing nations are worried about educational expenses today. This article examines the problems and synthesizes the results from a wide range of research on the costs of education in poor nations, using an economic framework. There are four major concerns about educational costs: (a) What are the educational costs? (a) What are the main factors that influence educational costs? (c) How can cost analysis help with educational policymaking? and (d) What are the informational requirements for educational cost analysis? The article finds that, although cost analysis may help people make better educational choices, more work needs to be done to improve the factual foundation of cost analysis and to integrate it into educational policymaking.

KEYWORDS: *Cost Analysis, Educational Cost, Educational Plan, Factual Foundation, Policymaking.*

1. INTRODUCTION

What are the educational costs? What are the main factors that influence schooling costs? In what ways may cost analysis aid educational policymaking? What information is required for cost analysis in education? These are the main points to think about in this review. These are essential issues to consider in light of the current main problem for educational decision makers in developing nations, which is to improve education while working under severe financial limitations[1]. It is generally acknowledged that education plays a critical role in national development. Individuals and society gain from education in a variety of ways, both economically and non-economically. Education spending in poor nations has been proven to be a highly lucrative investment, with greater rates of return than physical-capital investment, according to studies. Education is also seen as a fundamental human necessity. Because of the significance of education, developing nations have spent a significant part of their resources on it in the past two decades. Between 1960 and 1979, for example, average public spending on education in developing nations rose from 2.3 percent of GNP to about 4.0 percent of GNP, or from 11 percent to 15 percent of overall public expenditure[2].

In today's money, public education spending has risen by a factor of 10. Despite the fact that overall enrolment in school has risen substantially in developing nations during the last two decades, present educational circumstances are less from ideal. Many developing nations, particularly those in Africa, have poor primary school enrolment rates (less than 50%), and universal attendance will remain a distant dream. High dropout and repeat rates, as well as poor quality, afflict primary schools[3]. Not only is higher education still difficult to get, but the distribution of educational opportunities and resources across various socioeconomic classes is extremely uneven. Furthermore, many school graduates are either jobless or underemployed. In developing nations, there are significant issues with inefficiency and inequality in education[4].

Education, on the other hand, does not seem to have a bright future.

Developing nations are finding it challenging to raise or even maintain their present level of education spending due to slow educational development and severe demographic and budgetary constraints. As a result, both quantity and quality advances in education must be achieved under extremely tight financial limitations, not to mention additional political, cultural, and human-resources constraints. Policies that encourage the effective use of current educational resources are unquestionably necessary[5]. Analyses of educational costs can reveal the cost implications of a policy, diagnose past cost patterns such as cost determinants and sources of variation in costs and forecast future cost requirements, as well as compare the relative cost-efficiency of different educational policies or interventions. As a result, cost studies in education may help to enhance educational policies.

A review of these investigations in developing nations is presented in this article. We provide an economic methodology for evaluating and integrating the results of this literature, as well as a short summary of cost studies in education in poor countries. In the late 1960s, a significant push to encourage the use of cost analysis in educational planning in developing nations started. UNESCO coordinated the initiative, which included 19 nations, 12 of which were from the Third World. It includes the writing of monographs on cost analysis technique in educational planning. Cost analysis was used in education to determine the economic viability of expansion plans, to cost educational changes and innovations, and to guide the effective deployment of limited educational resources[6]. The emphasis was on formal education. This endeavor took place amid a time of high growth in enrollment and public educational spending, fueled in part by popular confidence in education's significant economic worth. The recognition by educational officials that educational expenditure was an investment activity susceptible to economic calculation was reflected in the use of cost analysis to educational planning. However, sluggish economic development and severe budgetary restrictions have turned focus to the management and/or reduction of educational expenses, as well as the use of alternate methods for funding education, since the late 1970s and particularly in the last few years.

There have been studies published that address these issues. In poor nations, there is a lot of literature on educational cost analysis. It covers research on a variety of topics, including forms of educational delivery formal and non-formal, levels of schooling, kinds of education public and private, geographic locations urban and rural, trends through time, and the size of educational interventions an educational project, an educational innovation, and an educational plan[7]. The various kinds of economic analysis that these studies engage in, such as costing, economic feasibility testing, cost reduction, cost-effectiveness comparison, cost-benefit comparison, and others, add to the variety of the research. Despite the variety and clearly enormous quantity of the literature, a substantial percentage of research are difficult to find or retrieve. This is due to the fact that some of these studies were performed by or for developing country governments, include one or more ministries in these nations, and are often not publicized[8]. Language may sometimes be a stumbling block. This article has restricted itself to cost studies of formal education and focused on the results for public education to keep the review reasonable, but it has made no restrictions on the kind of economic analysis to be examined[9].

A limited number of official papers, as well as published and unpublished works in the public domain, were used as sources for the review. Almost all of the sources are in English. A significant portion of these projects were funded by the World Bank or the United Nations Educational, Scientific, and Cultural Organization. In economic production, inputs are converted into desired outputs based on production goals, pricing, and technology. A production function, which is a relationship showing the greatest quantity of outputs that can be generated for given inputs, represents the internal process that converts inputs to outputs. Consider how this paradigm may be used to schooling[10].

2. DISCUSSION

The tasks that education must complete in order to meet the demands of the polity are referred to as educational goals. They may include broad goals like "developing decent citizens" and "learning cultural heritage," as well as more particular ones like computational and reading abilities. Education impacts, such as cognitive and non-cognitive abilities acquired by pupils, are examples of educational outputs. These abilities are most likely in line with the educational goals. Aside from these outcomes, education may also result in advantages such as increased productivity and profits. Students, instructors, instructional materials, equipment, physical facilities, and other inputs to education are all components utilized to produce outputs. The expenses of education are the resources allocated to these inputs. The internal process including the curriculum, instructional techniques, school structure, administration, and monitoring procedure is referred to as educational technology. There are many educational technologies available, including conventional schooling and out-of-school remote learning. An educational production function represents the connection between inputs and outcomes (EPF). We may identify various notions of educational efficiency in which cost analysis can be performed using this educational production framework. Internal efficiency, external efficiency, technical efficiency, and economic efficiency are examples of these ideas. The internal efficiency of education measures the expense of education in relation to its outputs or consequences, such as the development of cognitive and non-cognitive abilities. When education production can generate more desirable outputs with the same resources, it is said to be more internally efficient.

The external efficiency of education compares the expenses of education to the advantages of education that are not directly related to educational output, such as increased productivity and earnings in post-secondary employment. It is a metric for determining the return on investment in education. External and internal efficiency are defined in terms of the border of educational production, while technical and economic efficiency are described in terms of the nature of educational production. Consider the following scenario: you have a certain quantity of financial resources. This sum of money may be used to buy a specific combination of inputs at current market pricing. Educational production is technically efficient when the greatest quantity of school result outputs or benefits is generated, that is, when a school is functioning on the production-function "curve" given this combination of inputs and technology. When any of the provided inputs are underused, educational production may be technically inefficient. When a school is technically inefficient, the school's performance may be improved without incurring new costs by maximizing the use of current resources. Thus, "technical" and/or "economic" methods may be used to improve the efficiency of education, either internally or externally. The preceding examination of educational efficiency was limited to a single schooling technique. This does not have to be the case, though. It is feasible to improve school outcomes by creating and implementing alternative technologies in terms of changes in organization, administration, curriculum, or pedagogy, given sufficient resources.

The expenses and outcomes of alternative education may be compared to those of conventional schooling. So far, we've looked at educational efficiency through the lens of a production system, utilizing an educational production function to link school output to inputs. An educational cost function is an alternate but comparable method to analyze efficiency. An ECF is a relationship that shows the lowest cost required to achieve a certain degree of result under current technology and input costs. It's easy to understand how an ECF may be used to evaluate the various efficiency principles stated above. When the cost of attaining a given level of external benefit or internal impact may be lowered, external or internal efficiency is improved. Technically, educational production is efficient when, given input prices, input combinations, and technology, the least amount of money is spent to achieve a given level of school result, i.e., when the school follows the ECF "curve." When a school is inefficient in terms of technology, educational costs may be

lowered by reducing surplus inputs while maintaining a high level of school performance. Finally, economic efficiency is achieved when the appropriate combination of inputs is selected to create a certain level of educational result at current input prices and technologies at the lowest possible cost. When a school is not cost-effective, the mix of inputs may be changed without impacting the degree of school performance. We may easily categorize educational cost studies into three categories if we consider education (or a portion of it) as a manufacturing system: (a) research on educational costing and feasibility, (b) studies on the behavioral features of educational expenses, and (c) studies on cost-benefit and cost-effectiveness. The first group of studies focuses only on educational inputs.

The main goals are to discover, categorize, and calculate the costs of different educational inputs. These studies are carried out for a variety of purposes, including estimating the short-term and long-term cost impacts of a project, costing and testing the economic feasibility of an educational plan, measuring the start-up and operating costs of a major educational intervention, and estimating the short-term and long-term costs of a project. The second group of studies is concerned with the connections between inputs and how they are used in the educational production process. The main objectives are to determine the cost distribution among education levels and educational inputs, identify the various factors affecting total and unit costs, estimate the cost impacts of different levels of educational input utilization, and analyze the relationship between educational costs and the size of an educational establishment. These studies offer a diagnostic of educational costs' behavioral features. They evaluate resource usage and, as a result, possibilities to improve technical efficiency. They may also highlight expense trends that need to be addressed in order to improve economic efficiency. Finally, research in the third category link educational outcomes to inputs. By weighing the costs and advantages of various educational options, decision makers may make the most effective use of educational resources. Studies that examine improvements in economic efficiency via the use of various mixes of inputs under a particular technology of educational production, such as more textbooks or lower class sizes in conventional schools, are included in this study.

They also include those who are looking to enhance efficiency by using alternative educational technologies, such as instructional media. The article tries to explain the problems involved, summarize the results, and identify knowledge gaps for future research by examining educational cost studies in each of these three areas. The review's goals are to describe how educational cost analysis may help enhance educational policymaking and to identify the informational requirements for cost analysis. The remaining parts of the paper are split into four groups. The three types of cost studies are discussed in the following three parts. The review's main results are summarized in the last section. Analyze analysis is often used in education to cost educational initiatives and evaluate their economic viability. They are analytically concerned with identifying the different inputs to educational production and calculating their expenses. In this part, we'll go through some of the applications of educational costing before looking at some of the conceptual and practical problems that come up when estimating educational expenses. It is essential to give a short explanation of costing technique before evaluating research in the costing of education initiatives. A simple and logical method called the components or resource approach may be used to determine the cost of an intervention. The components utilized in the intervention are identified and costed using this method. The cost of an ingredient in a cost analysis is its opportunity cost, or the cost paid as a consequence of the ingredient being utilized in a specific intervention and therefore not being accessible for use in other activities. It is calculated as the value of the component when it is used to its full potential.

The overall cost of the intervention is the sum of all the component costs. It's critical to distinguish between the overall cost of an intervention and the expenses borne by those who pay for it when using the components method. Someone pays for each component (e.g., the central government, a

local government, an individual, or foreign aid). As a result, the overall cost of the intervention is often split among various sources of funding. To evaluate the economic viability of an intervention, information regarding the sources of support is required. A common mistake in educational costing is estimating the entire cost of an intervention only based on government expenses. The reform thorough costing revealed that it imposed an undue burden on provincial governments and impoverished rural populations. It also revealed that the potential savings would be less and slower due to the expense of preparing teachers for the new curriculum and the fact that low-paid instructors would not be able to rapidly replace high-paid teachers. As a result, portions of the 1962 reform had to be revised. The lack of relevant information on the breakdown of school enrollments by grade levels and school cycles, the variation of teacher-pupil ratios by different types of schools and grade levels, and the age and salary distribution of the teaching force, according to the study, severely limited cost estimation. A significant issue was the capacity of each participating entity to fund the change.

Nonetheless, the example demonstrates how a good economic analysis may be helpful in alerting decision makers to potentially severe mistakes in educational policies and in identifying the kind of data required for policy development. The study's results backed with the educational strategy in certain ways. The anticipated capital investment for new educational facilities and the planned public funding for recurring expenses of public schools at the pretertiary levels, for example, were sufficient to fulfill the budgetary needs. However, facts surfaced that cast doubt on the feasibility and acceptability of several of the plan's objectives. Higher education, for example, had a recurring cost per student that was ten times that of secondary education. Because the plan planned for a 30 percent rise in university enrolment over the next five years, a large part of the educational budget would have to go into higher education. As a result, one may wonder whether the advantages of higher education in Thailand were significant enough to support the suggested distribution of educational degrees. Furthermore, due to a lack of focus on repeats and dropouts in schools, enrollment goals would fall short of graduation targets. Following that, the plan had to be revised. By integrating cost analysis into the planning stage, the decision-making process might have been enhanced.

3. CONCLUSION

The notion of opportunity cost is a significant contribution of economic study of educational expenses. This allows us to calculate the true cost of education, which includes not just monetary costs but also the worth of other possibilities lost. Total public educational spending, total direct private cost, and total indirect private cost assessed in terms of lost wages make up a country's total cost of education. Previous cost studies have erroneously approximated the cost of education by concentrating only on government spending on education. Previous experience has shown that there is no one answer to the issue of how much education costs. What educational costs to assess in reality is determined by the decision environment in which the cost analysis is conducted? In general, two factors affect cost estimation: who pays the cost and whether to use average-cost or marginal-cost analysis. Educational expenses are often divided into different categories for accounting and analytical reasons, such as recurring and capital costs, as well as personnel and non-personnel expenditures. Educational expenses are often stated in both current and constant dollars to represent changes in the price level. In addition, educational expenses are often compared on a unit-by-unit basis. The educational unit used is determined by the comparison's goal. The most frequent criterion is the cost per enrolled student. In summary, in the last two decades, we have made significant progress in our conceptual understanding of educational expenses. Educational expenses are influenced by a variety of variables. Analytically, these variables may be divided into two groups: those that determine the overall amount of resources allocated to education and those that influence education expenses. The entire amount of money spent on education by the government accounts for a significant percentage of the overall amount

of money spent on education.

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