



Education Financing Model: Analysis of Effectiveness and Cost Efficiency of Education

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ABSTRACT

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The efficiency and cost-effectiveness of education have become major foci in efforts to improve the accessibility and quality of education in various countries. This research aims to investigate the relationship between the efficiency and cost-effectiveness of education in the context of achieving learning goals. Through a literature analysis approach, the study explores models and factors that influence the efficiency and effectiveness of education costs, including budget allocation, financial management strategies, and the quality of resource use. These findings provide important insights for education policies to improve resource management, strengthen effective learning practices, and create inclusive and sustainable education systems.

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A. INTRODUCTION

The effectiveness and cost efficiency of education are central issues in the development and maintenance of quality and sustainable education systems in various parts of the world. Amid the complexity of economic and social challenges, improving accessibility and the quality of education is a priority for many countries. Efficiency and cost effectiveness are key to ensuring that investment in education yields maximum results with limited resources.

Cost efficiency in education refers to the ability to achieve desired educational outcomes by optimally using available resources. It involves careful budget

management, effective allocation of funds, and reducing waste. Meanwhile, the cost-effectiveness of education highlights the extent to which the desired educational outcome has been achieved relative to the cost spent. In this context, effectiveness not only focuses on academic achievement but also involves achieving broader learning goals, such as the development of skills, attitudes, and values.

In an era of globalization and technological advancement, the dynamics of education continue to grow. However, challenges such as educational disparities, teacher quality, inadequate educational infrastructure, and accessibility remain major obstacles to achieving inclusive and equal educational goals. Therefore, an in-depth understanding of how the efficiency and effectiveness of education costs are interrelated and how they can be improved is essential for policymakers, educational practitioners, and researchers.

By digging deeper into the concepts of efficiency and cost-effectiveness of education and the factors that influence them, we can develop more effective strategies and policies to improve the quality and accessibility of education. The research will delineate related literature as well as analyze important findings in this regard, with the aim of contributing to a better understanding of the crucial role of educational efficiency and cost effectiveness in achieving sustainable educational goals.

B. METHOD

This research uses a qualitative approach to a *literature review*. This type of research is conducted to review with a method of systematic study that is transparent to find the research articles that have been published and then to evaluate by extraction and analysis, and then the final step is to make a synthesis.

C. FINDINGS AND DISCUSSION

Education costs

The cost of education is the total financial sacrifice made by the student for his or her needs during the course of education, from the beginning to the end of education.¹ According to Supriyadi, the cost of education is one of the instrumental input components that is very important in the maintenance of education in the school. In this

¹ Muhammad Rivandi and Elvonika Retno Kemala, "The Impact of Motivation, Education Costs, and Education Length on Interests of Accounting Students Following Accounting Education (PPAk) at the University of Dharma Andalas," *Journal of Economics and Business Dharmas Andalas*, 23, No. 1 (Januari 2021).

case, the cost has a fairly broad understanding, that is, all kinds of expenditure related to education maintenance, whether in the form of money, goods, or energy.²

According to Supriyono, expenditure is an economic sacrifice made to obtain goods or services. According to Levin in Dinda, the financing of education is a process in which the income and resources available are used to organize and run educational institutions in different regions with different levels of education.³ According to Nanang Fattah, the cost of education is the amount of money generated and spent for various educational needs that include teacher salaries, improvement of professional equipment, procurement of tools and textbooks, office writing tools (ATK), extracurricular activities, education management activities, and supervision of education.⁴ The cost of education is a very important instrumental investment component in school education and training.⁵

The cost of education is a very important part of the maintenance of education. It can be said that without financial support, the educational process cannot work. In the context of educational planning, an understanding of the anatomy and problems of education funding is required. (Atmaja et al., 2016). Based on this understanding, a more appropriate and equitable education funding policy can be formulated to meet the objectives of education, both quantitative and qualitative.⁶ From some of the above, it can be concluded that the cost of education is any financial sacrifice made by students, educational institutions, and the government to meet educational needs. This includes various types of expenditure, such as school fees, teacher salaries, education equipment, and extracurricular activities.

Education costs are not only an important instrumental aspect in the maintenance of education but also a crucial investment for the future of education and the development of the community. Without adequate financial support, the educational process cannot run effectively; therefore, a deep understanding of the cost structure and the problems of

² Muhammad Rivandi and Elvonika Retno Kemala, "The Impact of Motivation, Education Costs, and Education Length on Interests of Accounting Students Following Accounting Education (PPAk) at the University of Dharma Andalas," *Journal of Economics and Business Dharmas Andalas*, 23, No. 1 (Januari 2021).

³ Surhayati Nurhayati, M. Nasir, Abdul Mukti, A. Safri, and Lias Hasibuan, "Management of Education Financing in Improving the Goodness of Islamic Educational Institutions," *Journal of Education and Social Sciences Management Science*, 3, no. 2 (July 2022), <https://doi.org/10.38035/jmpis.v3i2>.

⁴ Surhayati Nurhayati, M. Nasir, Abdul Mukti, A. Safri, and Lias Hasibuan.

⁵ Armawati & Imron Rosadi, "Factors Affecting the Management of Islamic Educational Institutions: Financing Systems," *Journal of Military Management Sciences*, 2, No. 3 (January 2021), <https://doi.org/10.31933/jimt.v2i3>.

⁶ Armawati & Imron Rosadi, "Factors Affecting the Management of Islamic Educational Institutions: The Financing System."

education funding becomes vital.

In the context of educational planning, this understanding enables the formulation of a more appropriate and equitable education funding policy, with the aim of improving the quantity and quality of education as a whole. Therefore, efficient and effective management of education costs is the key to achieving the extension of access to education and the improvement of education quality in a sustainable manner.

Education Financing Model

In principle, the education funding model has two sides, that is, the allocation side and the income side. The allocation of education costs is determined by the receipt or acquisition of a large amount of costs determined by the funds received by educational institutions from the government, parents, and the community. (Districts and Cities).⁷

With regard to the model of education funding, there are four (four) models of education financing, namely: 1) full subsidy from basic education to higher education; 2) higher education is given free of charge to students up to a certain age; 3) free education is provided until high school, and higher education still pays the cost of education even though it is subsidized; and 4) all levels of education must be self-funded.⁸ Here are some models of education financing, as well as their advantages and disadvantages:⁹

Pure Aid Fund Model (Flat Grant Model)

It's state aid money that goes to schools in the area without taking into account the ability to pay local taxes, based on the number of students to be educated. The advantages of the flat grant model are: (1) Schools can allocate funds for student learning activities; (2) Schools are able to facilitate students' learning activities. The shortcomings of flat grant models are: 1) the government does not accept taxes as a source of foreign exchange; 2) it can increase the disparity of education funds; and 3) there is a level of disparity between schools in each district compared to prosperous areas. The goal is to protect the school from further destruction. (in poor areas).

Planning Path Model (Foundation Plan Model)

The model depicts that the state, regardless of local wealth and taxes, provides more funds per student to poor areas than to rich ones. The advantages of the model

⁷ Akhmad Aflaha dkk., "Standard Analysis of Financing of Education," *Masile: Journal of Studies on Islamic Sciences*, 1, No. 1 (2021).

⁸ Saikul Huda dkk., "Analysis of Models of Management of Education Financing in Improving the Quality of School Institutions," *UNISAN JOURNAL: JORNAL MANAGEMENT & ISLAMIC EDUCATION*, 1, no. 4 (2022), <https://journal.an-nur.ac.id/index.php/unisanjournal>

⁹ Mesiono and Roslaeni.

foundation plan are: (1) Effective, efficient, and accountable education budget purchases; (2) The government accepts taxes as a source of currency for the country. (Hanafiah, 2020).

Tax Safety Tree Planning Model (Guaranteed Tax Base Plan)

This model is limited to defining the interpretation of the assessment per student, which is a state guarantee for the local school territory. State aid varies between the amount received by the district per student and the amount guaranteed by the state per student. The percentage distribution is very high in the poor school districts and low in the rich school districts. The advantages of the Model Guaranteed Tax Base Plan are: (1) the size of the education funds will be detailed; (2) the government accepts taxes as a source of the country's currency.

Percentage Equation Model (Percentage Equalizing Model)

This model was developed in the 1920s, providing a more-needed contribution per student and teacher to less prosperous areas. In the same program, the agreed amount of payment is calculated for each student, each teacher, or any other portion required. The amount required varies according to the needs of each part. (Ramli, 2021). The advantages of the percentage equalization model are: (1) schools in remote areas receive large educational funds; (2) schools in remote regions can supplement school facilities; and (3) there is an increase in the quality of education in each region. The weaknesses of the percentage equalization model are that (1) it will create deviations in the financing of education, and (2) the accountability of educational funds is irresponsible and transparent.

Capacity Equation Planning Model (Power Equalizing Plan)

This model requires the wealthy districts to pay school taxes collected back to the state. The state then used money from the richer school districts to increase school support in the poorer districts. The strengths of the Power Equalizing Plan model are: (1) there is equality in planning the funding capacity of education; and (2) schools can improve the quality of education.

Full State Financing Model (Full State Funding Model)

This model is a plan designed to eliminate local differences in spending and taxation. School funding will be collected at the state level and given to school districts on an equal footing. The basis of justice is the treatment of students and taxpayers, as well as the financing of education based on the level of wealth they possess. Avoid the many children of poor communities who abandoned education and thus created

problems of unemployment and welfare for the next generation. The advantages of the Full State Financing Model are: (1) schools can allocate funds for student learning activities; (2) Schools may improve school facilities and facilities to support student learning; and (3) Schools are able to facilitate students' learning activities.

Funding Source Model (The Resources Cost Model)

The model was developed by Hambers and Parrish, who provided the process of determining the financing of education that reflected the different needs of the economic conditions in each region. According to Sergivanni, this model has nothing to do with tax receipts or the wealth of a region. The advantages of the resource cost model are: (1) each district has different sources of funding; (2) schools in remote areas can improve the quality of education; and (3) schools can facilitate student learning activities. The weaknesses of the resource cost model are: 1) schools can charge students a fee; and 2) there are social disparities in each area.

Model Letter of Proof or Acceptance (Models of Choice and Voucher Plans)

This model provides direct education funding to individuals or household institutions based on educational requests. They were given a certificate of acceptance of funds from the school through a voucher system that is a direct subsidy to those in need, namely students. The advantages are: (1) the state gives schools and parents the choice the choice to improve the quality of education; (2) private schools receive additional education fund assistance; while the disadvantages are: (1) social jealousy between public schools; and (2) the transfer of education funds.

Student Weight Plan Model (Weight Student Plan)

This model is one that looks at students based on their proportions. Examples are disabled students, vocational program students, or bilingual students. This model is often referred to as incrementalism, where the cost received by a school refers to last year's admission, only with adjustments. The bidding model is a model in which a school submits a proposal to a funding source with various references, then funding sources examine the incoming proposals and adjust them to the criteria. In the Discretion Model, funders conduct a preliminary study to identify any component that requires priority-based assistance somewhere in the outcome of the exploration.

From the various educational financing models presented, it can be concluded that each model has its own advantages and disadvantages. Each model has different implications depending on the social, economic, and political context of a country. Therefore, choosing the right education financing model must consider all these factors

in order to achieve better educational goals overall.

Factors affecting the cost of education

Rise in price (rising prices). The rising cost of education is a serious problem, and it can lead to the obstruction of access to education. It can also affect equality in educational opportunities by limiting access for individuals from low economic backgrounds.

Relative change in teacher's salary (teacher's salaries). A change in teachers' salaries is a positive step that can give worthy recognition to their important role in shaping the future of future generations. A rise in salaries not only rewards the contribution of teachers but also improves their motivation and well-being, which can ultimately have a positive impact on the overall quality of education.

The change in population and the rise in the percentage of children in state schools. The change in population and the increase in the percentage of children attending public schools are important indicators of social and educational dynamics in a society. Positively, this increase can indicate public awareness of the importance of formal education and better accessibility to public educational institutions.

The rise in educational standards (educational standards). A higher standard ensures that students receive a better education, which in turn can equip them with the knowledge, skills, and readiness to face the challenges of the future.

The increasing age of children leaving school. The rising age of school dropouts is a problem that requires serious attention. Although there are various factors that can influence these decisions, such as economic, social, and personal factors, dropping out of school can have a long-term negative impact on the development of individuals and societies as a whole.

Rising demands for higher education. The increasing need for higher education marks a shift in the dynamics of a society that is increasingly appreciating the value, quality, and relevance of education. It is a positive thing because it shows awareness of the importance of deeper skills and knowledge in the face of the challenges of the complex modern era.¹⁰

D. CONCLUSION

The conclusions of the research on the effectiveness and efficiency of education funding include several important points:

¹⁰ Arta Wida Anastasia Purba dkk, "Problematics of Financing Education in Schools," *Journal of Non-formal Education*, 4, no. 1 (2023), <https://ummaspul.e-journal.id/JENFOL/article/download/6130/2863>.

Importance of Investing in Education: Research shows that financing education is an important investment for the development of individuals and societies. By improving access and quality of education, it can create long-term positive effects in terms of economic growth, increased productivity, and the reduction of social disparities.

Effectiveness Factors: The effectiveness of education funding can be measured by a variety of factors, including improved access, improved quality of education, and its impact on student learning outcomes. Research shows that well-designed educational programs accompanied by adequate support tend to be more effective in achieving these goals.

Efficiency Factor: The efficiency of education funding relates to the optimal use of resources to achieve desired results. The research highlights the importance of good education budget management, choosing efficient spending strategies, and reducing waste and excessive bureaucracy.

Challenges and Recommendations: Although many countries have made huge investments in education, there are still huge challenges to overcome. These include gaps in access to education, poor quality education in some regions, and financial gaps between educational institutions. Recommendations from the research include increased investment in educational infrastructure, empowerment of teachers, improved access for vulnerable groups, and increased transparency and accountability in the management of educational funds.

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