



# Economic Evaluation of Government Subsidy Program for Private Production of Primary Education in Lebanon: A Critical Review

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## Abstract

**Aim:** Based on Barr's conceptual paradigm of the welfare state and social justice in the context of education, the paper will critically examine the significance of state involvement in primary education.

**Methodology:** This paper will perform a methodical literature review of academic literature, policy papers, and official reports in the field to partly defend the Lebanese government's funding program for private education on the principles of efficiency and fairness.

**Findings:** It has been determined that the most effective way to address inefficiency and fairness is for the government to subsidize commercial primary education output. Although the Lebanese government created a system of financing allowances to lessen parents' financial strain in providing for their children's education, the subsidy program has not succeeded in ensuring equitable access for the lowest rungs of society because there are still large disparities. In order to ensure more equal access to the funding scheme, the government should substitute the existing subsidy program with an income and needs-based funding allocation program, an example of which can be a constrained voucher scheme.

**Implications/Novel Contribution:** The article provides a critical analysis and economic assessment of the Lebanese government's primary education financing allotment program's effectiveness and fairness. For policymakers to genuinely comprehend the issues and make informed decisions, the document offers in-depth knowledge about the subject.

*Keywords:* Public financing, basic education, Lebanese schooling system, educational equity, economics of education.

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## INTRODUCTION

Public finance for primary schooling is a long-standing barrier to access to quality education in Lebanon. In many countries, private schooling is mainly associated with wealthy households, whereas in Lebanon, the market is the primary provider of school education to both high- and middle-income families on a paid basis (Baroudi, 2019). Lebanese public education weakened significantly after the breakout of the 1975 civil war and political upheaval, followed by a decrease in public expenditures, creating a pathway for privatization of the general education sector (Tfaily, Diab, & Kulczycki, 2013). Following this, to alleviate the burden and prevent inequality in access to private education, the Division of Private Education under the Ministry of Education and Higher Education (MEHE) of Lebanon, which regulates and monitors private schools, designed a funding allowance system in the 1980s (Abdul-Hamid & Yassine, 2020). Since then, under this funding program, the Lebanese government has provided school allowances to cover the total cost of primary private education (Frayha, 2009). Current government subsidy program takes employment status (public servants) as a proxy for equitable funding instead of basing it on other equity criteria like income level, parents' education level or children's socio-economic/ethnic background (Baroudi, 2019; Waheed & Jam, 2010). It should be highlighted that Lebanese Central Administration of Statistics (2013) data indicated that the poorest two quintiles (40%) of the parents received only 16% of these education allowances, while the wealthiest quintile received 47% of total education allowances provided by the government (Abdul-Hamid & Yassine, 2020). Furthermore, although such school allowances made up 21% of all government expenditure over the 2013-2015 period, according to World Bank Group (2017) data, Lebanon, on average, spends about 2.1% of its

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GDP on education, which is 3 times lower than the countries with similar GDP per capita in Middle East region, e.g., Morocco, Yemen.

Moreover, primary education receives US\$ 500 and US\$200 less per student than tertiary and secondary education, respectively, which shows that the government prioritizes higher levels of education (World Bank Group, 2017). Today, Lebanon is in the top 2 percent of countries in the world regarding the private sector's share of education expenditures, with 60% of schools operating privately (World Bank Group, 2017). Only 29.2% of Lebanese school-age students from the lowest socio-economic groups attend public schools, whereas the rest attend costly private schools (Shuayb, 2016). World Bank Group (2017) study found that poverty rates are proportionally higher in regions like Beqqa and North Lebanon, which have almost no access to quality private schooling compared to Beirut and Southern Lebanon, with predominantly wealthy households. Moreover, although it is challenging to quantify 'good' education, international tests like Program for International Student Assessment results reflect high achievement gaps between students of private and public schools in Lebanon, equal to 64 points = 2 per year of schooling in 2018 (Center for Educational Research and Development, CERD, 2018a). In addition, given that public schools are attended by the most disadvantaged, a student from an economically advantaged background scored 45 points higher in math and 63 points higher in science compared to his economically disadvantaged peer, meaning well-resourced private schools yielded better outcomes (Abdul-Hamid & Yassine, 2020; Ho, 2020; Khan, Jam, Akbar, Khan, & Hijazi, 2011).

This shows that the government subsidy program is not reaching its goal of equalizing access for the poorest layers of society as significant inequalities remain. Therefore, the Lebanese government, namely, MEHE, Parliamentary Commission for Education and the Center for Educational Research and Development, the central policy and decision-makers in education, are responsible for addressing this challenge (Abdul-Hamid & Yassine, 2020; Kolodziejczak, Szarska, & Edelmuller, 2019; Mughal, Ross, & Fearon, 2017). Given that the Lebanese government already regulates and partially finances private schools through funding allowances, making this allocation equitable and efficient is the right course of action. This paper will partially justify the Lebanese government subsidy program for private education on efficiency and equity grounds and why it must be maintained, provided that it will be revised. Policy recommendations will follow on tackling this issue, leading to economic efficiency and social justice as outcomes of revised state intervention.

## RESEARCH METHODOLOGY

The approach to the research was that of systematic review (EPPI-Centre, 2007) to establish a reliable analytical and critical evidence base for educational policy-makers, administrators and school leaders. A systematic review has been defined as: "a scientific process governed by a set of explicit and demanding rules oriented towards demonstrating comprehensiveness, immunity from bias, and transparency and accountability of technique and execution" (Dixon-Woods, 2010). Although this approach has been criticized as employing a reductionist perspective on research evidence, characterized by limited findings (MacLure, 2005), the recently increased significance attached to meta-analytical studies can address this perceived narrowness of scope.

Table 1: Inclusion Criteria for the Review

Topic	Literature must relate to one of the keywords: public financing of education, basic education, Lebanese education system, equitable education, the economics of education, the welfare state and education, Lebanese government education subsidy program.
Recency	Literature should have been published between 2000 and 2022 (although some older papers were reviewed to conceptualize public and private financing of primary education and analyze educational policy reforms in Lebanon dating back to the late 20th century).
Geographical spread	Literature should relate primarily to studies in the Lebanese context, together with examples from other countries with similar education systems or where the study context was similar to that in the Lebanese schooling system.
Research-base	Literature must be based on empirical research (mainly qualitative).
Reliability/validity	As far as can be determined, the findings upon which the literature is based must be valid and reliable, considering the type of study.

To ensure that the review was systematic, they carried out the following steps, as recommended by EPPI-Centre (2007):

1. Scoping the review: Developed the explicit criteria for specifying which studies would be included in the review (Table 1).
2. Searching for studies: Relevant studies in particular types of literature (peer-reviewed journal articles, book chapters, policy documents, official reports) were identified using a prescribed set of search terms (public financing of education, basic education, Lebanese education system, equitable education, economics of education, welfare state and education, Lebanese government education subsidy program).
3. Screening studies: each piece of literature was screened against the inclusion criteria. This helped to avoid hidden bias by having clear, consistent rules about which studies were being used. By appraising each study against the same criteria and recording the results, the basis for the review's conclusions was made transparent.
4. Describing and mapping: The methodology and findings were outlined from each included study, including population focus, study design and critical findings.
5. Quality and relevance appraisal: Each paper was evaluated in terms of a) The trustworthiness of the results judged by the quality of the study within the accepted norms for undertaking the particular type of research design used in the study (methodological quality); b) The appropriateness of the use of that study design for addressing their particular research question (methodological relevance); c) The appropriateness of focus of the research for answering the review question (topic relevance).
6. Synthesizing study findings: All the existing studies' findings were critically analyzed and triangulated with data from policy documents.
7. Conclusions/recommendations: A set of recommendations were drawn up based on the synthesis and critical analysis of the findings from the reviewed literature.

## **FINDINGS AND ANALYSIS**

### **A Case for State Intervention in Primary Education in Lebanon on Efficiency Grounds**

Compulsory education should be a universal fundamental right (Daviet, 2016). Mounting evidence on the economics of education highlights the link between poverty and low educational outcomes, which stems from unequal access to quality education (Barr, 2020; Ben David & Kimhi, 2017; Raffo et al., 2009). Researchers have long established positive economic and social impacts of education: access to quality education and good educational outcomes lead to economic growth and social cohesion (Barr, 2020; Becker, 2009; Ben David & Kimhi, 2017). Although the benefits of compulsory education are hard to quantify and existing research mostly correlates post-compulsory education with higher premium wages, evidence suggests that high-quality primary education eventually leads to higher enrollment rates in post-basic education (Hanushek & Kimko, 2000). For example, by age 17, 87 percent of Lebanese children from the wealthiest population quintile were in post-compulsory education, while the rate is 25% for the poorest quintile (Abdul-Hamid & Yassine, 2020). That is, children from poorer backgrounds in public schools have higher drop-out rates and end up not participating in post-compulsory education, which leads to lower earnings, making an insufficient public investment in primary education inefficient.

Moreover, 20 percent poorest children comprise nearly half of all over-aged children, indicating high repetition rates for the poorest children at the primary education level in public schools. Repetition, in turn, means extra state funding and resources for the same school year for the same children. Instead, state funding could be better utilized if the Lebanese government provided equitable funding for private education, leading to greater efficiency and better outcomes. Thus, state involvement in and financing quality private primary education is justified on economic efficiency grounds at the macro level to reap total market and non-market benefits according to the principles of welfare economics. Even though pure market mechanism in providing primary education is mainly justified by increased competition, which drives efficiency, provides a range of choices and improves quality, it still widens socio-economic differences and is incompatible with equity and social justice (Plank & Davis, 2010).

Moreover, according to the first best assumptions, the market fails to provide primary education efficiently and equitably to a maximum level due to imperfect information, incomplete capital markets, imperfect competition, behavioural issues and externalities, especially for low socio-economic groups (Barr, 2020). Therefore, state involvement in one form or another is necessary for providing schooling services based on assumptions of the first best economic theory. Because the school system in Lebanon operates on a competitive basis, deviations from other first-best assumptions will be discussed to argue for state intervention.

### **Complete Information**

One of the prerequisites of efficient market operation is complete information where buyers and sellers are equally informed about the price and quality of the product (Barr, 2020). In the case of the education market, despite the availability of information on price, information asymmetry on the side of consumers (children and parents) exists about the quality of the product (Plank & Davis, 2010). It should be noted that primary education in Lebanon includes children aged 6 to 14 (Ministry of Education and Higher Education, 2013). As Barr (2020) argues, children are not well-informed about the nature of the product, thus, leaving the choice and decision to parents. However, as analyzed in production function theory, education is highly ambiguous because of its uncertain outputs and future pay-offs (Brown, 1992). The production process is highly complex and poorly understood, making it difficult to define the quality of products/services the school is providing (Stiglitz & Stiglitz, 2000). Therefore, even parents have limited information on what they are paying for, which maximizes the cost of making a mistake. To be more exact, primary education is a once-in-a-lifetime purchase, and given that not all children going to private schools are from wealthy households, enrolling a child in a “wrong” school will be significantly more costly for lower- and middle-income families in Lebanon, who spend much more of their income on education compared to wealthy parents (Hirshleifer, 1965).

Lebanese government subsidy program is thus justified; however, not entirely. Incomplete information is not necessarily solved by state intervention if the allowance scheme does not involve the poorest quintile of the population. There is a risk that parents from the lowest socio-economic groups do not have access to information about the availability of such programs, which leads to only better-off families benefiting from education allowances, a case already happening in the Lebanese school system. Moreover, even providers of education allowances risk not possessing enough accurate information on who needs these subsidies most, which causes information asymmetry on the supply side.

### **Rational Behaviour**

Stemming from complete information in an efficiently functioning market system, rational choice is assumed to be made by agents to maximize the utility of the product/service (Barr, 2020). As discussed above, incomplete information in the education market causes uncertainty about the benefits of investment in basic education. This is further exacerbated because of the varying socio-economic backgrounds of parents, as poorer households are more limited in their ability to make rational choices given their limited knowledge (Brewer, Hentschke, & Eide, 2010). Moreover, even if the information is available to poorer households, they are not always well-informed about the long-term benefits of quality primary education because of the complexity of the product/service schools provide. Thus, bounded rationality and bounded willpower, as Barr (2020) argues, may bring irrational choices of parents on behalf of their children. Therefore, Lebanese state intervention to provide funding is justified when parents (from low socio-economic backgrounds) cannot make rational choices.

### **Complete Markets**

The market for education finance is incomplete, given that children cannot finance their education. For the education market to be efficient, children or their parents should be able to “buy the socially efficient amount of education”, which is basic literacy and numeracy skills taught in primary schools (Barr, 2020). Children cannot offer collateral for loans to borrow against their future earnings, leading to under-investment in primary education (Brown, 1992). In Lebanon, where 71% of primary schools are financed from private household income, no state intervention would cause potential under-consumption of quality basic education by the poorest layers of society (Abdul-Hamid & Yassine, 2020). Moreover, little certainty about the benefits of basic education makes parents risk-averse in borrowing to pay for primary education (Plank & Davis, 2010). Thus, the Lebanese subsidy program

mitigates such inconsistencies in imperfect capital markets by providing education allowances that cover the total cost of quality private schooling. However, a market system for education is more incomplete for poor households than wealthier ones, which suggests a change to the current Lebanese subsidy program to reach the poorest.

### **Externalities**

According to [McMahon \(2004\)](#) taxonomy, education is proven to have private market/non-market and public market/non-market benefits for broader society. Regarding private market benefits, [Psacharopoulos and Patrinos \(2018\)](#) suggest that private rate of return to an additional year of schooling is 8.8%, implying higher earning levels for more years of schooling. In Lebanon, CAS household survey data estimated that in 2011–12 at the secondary and tertiary levels of education, the shares of the 20 percent poorest students decreased to 11 percent and 4 percent, respectively, while the poverty rates among the population aged 22 and above were at 34 percent for individuals with primary education only, 16 percent for those with secondary education, and 9 percent for those with university education ([Abdul-Hamid & Yassine, 2020](#)). Thus “low quality of primary schooling > low participation in higher education > lower earnings” correlation for disadvantaged students hold, and according to the originator of human capital theory, ([Becker, 2009](#)), this can be referred to as lost human capital which in turn is a potential loss in GDP as discussed below. Moreover, private non-market benefits of education, like better health and lifestyle standards, are also lost for poor children because of the abovementioned reasons ([Hermannsson, 2016](#); [Raffo et al., 2009](#)). In terms of public market benefits, as various studies have indicated, more quality education is linked to more economic growth by contributing to a more productive workforce. As [Barr \(2020\)](#) argues, though education is not the only factor contributing to economic growth, “no country has experienced a substantial degree of economic development without first achieving a level of basic literacy in a substantial proportion of its population”. This suggests that quality primary education through a skilled workforce ultimately leads to higher earnings, tax dividends, productivity, innovation and economic growth ([Becker, 2009](#)). [Hanushek and Woessmann \(2020\)](#) found that one year less schooling can cause up to a 1.5% loss in the country’s GDP, thus justifying state intervention for the Lebanese government from economic growth and efficiency viewpoint. Furthermore, public market benefits yield non-market benefits as better educated citizens create a more democratic, healthy, cohesive and less violent society ([Hermannsson, 2016](#)). Despite being challenging to monetize and quantify positive social externalities, [Pradhan, Suzuki, Martínez, Schäferhoff, and Jamison \(2018\)](#) found that the social rate of return for one year of extra schooling in low-income countries is around 16%, suggesting that by investing in quality primary education, the Lebanese government can save up in other areas like crime or social services. Based on these arguments, government subsidy of quality private schooling promises high market and social returns to investment; still, inconsistency highlighted in the Lebanese funding program, if not revised, most possibly will annul these benefits.

### **The Case for State Intervention on Equity/Adequacy Grounds**

From social justice point of view, the Lebanese school system can be characterized as inequitable both on horizontal and vertical equity grounds. As [Barr \(2020\)](#) identifies, horizontal equity can be achieved when there is perfect information on the side of children and parents to make a rational choice and equal power in the form of financial, social and cultural capital to enforce that choice. In Lebanon, operated mainly by market mechanisms, primary education is provided on a paid basis, where the poorest have no choice but to choose underfunded and weak public schools due to unaffordability. Moreover, according to [Berne and Stiefel \(1999\)](#) definition, horizontal equity is not achieved because, in Lebanon, school-age children with similar needs have completely different opportunities for access to quality education. Parents from low socio-economic backgrounds, although occasionally well-informed about their school choice, cannot enforce that choice because they lack the resources to do so.

Vertical equity treats children with different needs differently ([Berne & Stiefel, 1999](#)). Children from disadvantaged backgrounds or with special educational needs require more support/funding to the level playing field of primary schooling. Privately operated schools in Lebanon do not offer any “special” opportunities for such children, which directly threatens vertical equity in access to quality schooling. Although the Lebanese subsidy program aims to ensure equitable access to quality private schools, poor and wealthy children have unequal access to quality education even after introducing the subsidy program, as mostly better-off families receive education



allowances (Abdul-Hamid & Yassine, 2020). Parallel to equity, the concept of adequacy in school finance suggests that children should reach at least minimum standards for funding to be equitable and efficient (Berne & Stiefel, 1999). However, Trends in International Mathematics and Science Study 2011 results showed that 66 percent of the wealthiest quintile of Lebanese students achieved minimum proficiency in math, while only 22 percent of the poorest quintile achieved this proficiency (Center for Educational Research and Development, CERD, 2018b). Therefore, it can be said that the Lebanese school system needs more substantial state intervention to provide adequate funding to the poorest children to bridge the gap.

## DISCUSSION

Firstly, based on the above mentioned efficiency and equity arguments, government subsidy for the private production of primary education is the most preferred method of solving inefficiency and inequity. However, the current Lebanese government subsidy program must be replaced by an income and needs-based funding allowance program, an example of which can be a constrained voucher scheme proposed by Jencks and Areen (1970). Under this scheme, essential vouchers will cover the total average cost of private schools and will be distributed based on the income level of families receiving them. While topping up is not allowed in this voucher system, to ensure equity, parents/children belonging to lower socio-economic backgrounds will be entitled to larger voucher amounts so that schools with a more significant share of disadvantaged students will get extra resources (McEwan, 2000). Effective information mechanisms should be in place for providers and recipients of funding allowances to ensure it reaches the poorest layers of society. Using an evidence-based approach, subsidies should be targeted at the poorest quintile who need access to quality education. At the same time, subsidy program information must be available and accessible to the poorest households. Another feature of the voucher system must involve reserving elements to make it equitable. That is, oversubscribed private schools must allocate at least half their places by ballot to prevent schools from choosing wealthier students (Jencks & Areen, 1970). Empirical research in this field indicates that in countries like Belgium and the Netherlands, where the socio-economic gap in access to quality education is minimal, the benefits of the dominant private education sector have been well-leveraged without compromising equity in learning outcomes (OECD, 2017). 85% and 96% of private schooling costs are financed by the government in Belgium and the Netherlands through well-designed, income and needs-based subsidy programs (OECD, 2017).

Secondly, it should be noted that providing equal access to education is only one part of the challenge, while the other half lies in achieving equity in learning outcomes. While it was said that private schools perform much better in terms of educational attainment than public schools, providing access to private schools for the poorest children does not directly lead to better student performance (Hanushek, 1986). The Lebanese government should design funding formulas that last beyond access to private education. Raffo et al. (2009) argue that quality schooling is one of many factors like family background, parental and community support and peer education that yield good learning outcomes. Further state intervention to reduce the attainment gap based on the socio-economic background is needed to make such substantial public investment in education efficient and equitable. However, funding allowances for improving access and learning outcomes must be accompanied by other policies to solve poverty, as primary education is part of the bigger picture.

## CONCLUSION

The article provides a critical analysis and economic assessment of the Lebanese government's primary education financing allotment program's effectiveness and fairness. It has been determined that the most effective way to address inefficiency and fairness is for the government to subsidize commercial primary education output. Although the Lebanese government created a system of financing allowances to lessen parents' financial strain in providing for their children's education, the subsidy program has not succeeded in ensuring equitable access for the lowest rungs of society because there are still large disparities. In order to ensure more equal access to the funding scheme, the government should substitute the existing subsidy program with an income and needs-based funding allocation program, an example of which can be a constrained voucher scheme. Financing provisions for bettering access and learning results must, however, be combined with other policies to address poverty, as primary education is only one aspect of the larger issue that merits further study and research.

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