

Analysis of Economic Cost of Secondary Level Education In Nepal

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Abstract

Investing on educations seeks a large span of time to get its return. Investment on education is the prime factor for transformation of a society. Educational cost is a measure of what a student, an institution of learning, or the public must give up educating an individual or a group of people. The opportunity cost represents the sacrifice of alternative opportunities to use the resource, either for present consumption or for some other forms of investment. The educational system uses up other resources which have alternative uses, even though these are not reflected in normal expenditure on education. The most obvious example of the opportunity cost is the time of students, who deprive the labour market of their services by choosing to continue their education. This represents a loss of current output for the economy, as well as a loss of earnings for the individual. There are, of course, considerable problems involved in measuring the opportunity cost of students. It is also worth emphasizing that estimates of opportunity costs make sense only within a given institutional framework. The concept of opportunity cost and the technique of cost-benefit analysis are not, however, applicable to situations where a total change in the entire educational or economic structure is contemplated. Better educated population relates to lower expenditures in other public sectors: e.g., better educated people tend to use health system less often since they would possess more information and knowledge on sickness prevention, if faced with unemployment they tend to stay unemployed for shorter periods of time thus relying less on welfare support etc. Per unit cost been assessed NRs 30,000/-which comprises unit cost+ average drop-out cost+ direct cost of guardians.Opportunity cost is assessed NRs.58,333/-and total education cost is assessed NRs 88,333/- i.e., \$803. The net return from education must exceed NRs 88,333/-.

Keywords: Unit cost, opportunity cost, net return from education & cost-benefit.

1. Introduction

1.1 Background:

Economic costs on education comprised direct costs and indirect costs that accrue in imparting education in a society. Investing on educations seeks a large span of time to get its return. If a society must be transformed, investment on education is the prime agenda. The direct educational cost is a measure of what a student, an institution of learning, or the public has to give up educating an individual or a group of people. Educational cost is a measure of what a student, an institution of learning, or the public must give up educating an individual or a group of people. When a community offers a piece of land to an institution of

learning for buildingschool, the cost to the community, the owner of the land, is represented by the consumption foregone, while the institution of learning incurs a precise and measurable money cost.(B., 1995). The word 'cost of education' is often loosely equated with 'expenditure on education'. The opportunity cost represents the sacrifice of alternative opportunities to use the resource, either for present consumption or for some other forms of investment. Thus, budgetary expenditures are significant only because they represent the purchase of teachers' labour, school buildings and equipment, or other goods and services which have alternative uses. At the same time, the educational system uses up other resources which have alternative uses, even though these are not reflected in normal expenditure on education. The most obvious example of the opportunity cost is the time of students, who deprive the labour market of their services by choosing to continue their education. This represents a loss of current output for the economy, as well as a loss of earnings for the individual. This opportunity of current output or income is forgone in the expectation that education will increase the productive capacity of the students in the future. However, this present loss of income is accounted as one of the opportunity costs of education since it does represent a sacrifice of real resources. In developing countries, the land and even buildings for a school may be donated by the local community. However, these buildings or land may have alternative uses, and the decision to build a school may mean the sacrifice of an opportunity to build a hospital or community development centres. For budgetary purposes, donated land may be ignored; but for the purposes of cost-benefit calculation, it is essential that the sacrifice of alternative opportunities to use land or buildings should be counted as a part of the real cost of the social investment. The social investment includes the value of teacher's time, books, teaching materials and other goods and services, the value of the use of buildings and capital equipment, and finally the value of students' time measured in terms of alternative uses. The simplest measure of the value of teachers' time is expenditure on salaries. Since the study confines the community school, government pays full salary to the teachers. However, the opportunity cost is accrued on teachers when they devote their time in the next best project, it is taken as granted in the community schools. The value of books, stationery, and writing materials, can also be measured in terms of money expenditure. In the context of Nepal books are financed out of public funds and provided free. If the students manage their additional study materials, proper estimates of assessing on such aid is to be adopted. It is rather difficult to estimate the annual value of buildings and equipment. In most cases buildings are not rented in community schools, so some estimate is required of the annual value of the use of capital, an annual rent must be imputed for the buildings or equipment. The simplest method of allowing for the costs of capital services is to calculate the annual amortization of the building, over its expected life. Amortization represents not only the annual depreciation of the building and equipment, but also a notional payment to cover interest charges, and therefore provides a good measure of the imputed annual rent of a building. A simple depreciation of a building does not reflect the imputed annual rent of a building. However, this would be to ignore the fact that buildings are financed, in a single year, by investment funds, while their services are enjoyed over several years, and that the decision to build a school means a sacrifice of alternative opportunities to use the investment funds to earn

interest. Finally, the opportunity cost of students' time must be measured, in terms of the earnings foregone by students when they continue their education, rather than enter the labour force. These foregone earnings represent a real cost to the individual and, in the case of social costs, are a proxy measure for the output foregone by society. Thus, the cost of education includes both actual money expenditure, such as teachers' salaries, and notional items, such as imputed rent for buildings, and foregone earnings. In fact, all items are alike in being approximate measures of the opportunity cost of physical resources.

There are, of course, considerable problems involved in measuring the opportunity cost of students' time; it is necessary, for example, to take account of unemployment when measuring earnings foregone. It is also worth emphasizing that estimates of opportunity costs make sense only within a given institutional framework. The concept of opportunity cost and the technique of cost-benefit analysis are not, however, applicable to situations where a total change in the entire educational or economic structure is contemplated (Woodhall, 1992).

In terms of economic development, higher education is often seen to increase productivity, primarily through the increase of human capital, i.e., more, and better educated workforce. In addition to this, within a knowledge economy, production of knowledge, together with effective and efficient transfer of knowledge to industry (in broad terms) is seen as one of the key factors of economic growth in developed countries. Finally, it is often said that better educated population relates to lower expenditures in other public sectors: e.g., better educated people tend to use health system less often since they would possess more information and knowledge on sickness prevention, if faced with unemployment they tend to stay unemployed for shorter periods of time thus relying less on welfare support etc. (Babin et al., 2009).

1.1.1. Classification of Educational Cost

A. Explicit and Implicit Costs of Education:

Explicit cost of education involves actual payment to other educational transactors while implicit cost represents the value of foregone opportunities but does not involve any actual cash payment to other educational transactors (producers, consumers, buyers, or sellers). Opportunity cost is the return from the uses of resources from alternative purposes. It is the sacrificed cost that a resource would retain from the alternative purpose. The major difference between these two costs of education is that while explicit cost is reflected in accounting statement, implicit is not. Nevertheless, the knowledge of opportunity cost is useful for decision making concerning education.

B. Incremental Costs of Education:

These are costs connected with educational decisions to change the level or nature of an educational activity. They are total additional costs of implementing a change in the level or nature of an activity. The difference between sunk and incremental costs is simply that while decisions to change are not affected by the sunk costs, decisions are affected by incremental costs. Furthermore, incremental costs encompass both marginal costs and other

cost variations that arise from non-output changes. However, they do not include overhead expenses which would not be affected by a particular decision. In other words, the decision to change the level or nature of educational activity, affected by sunk costs or fixed expenses are excluded from incremental costs.

Incremental costs = marginal costs (cost variations resulting from output changes)+other cost variations that arise from non-output changes –sunk costs (unaffected overhead).

C. Direct and Indirect costs:

Direct Costs are costs which can be identified directly with an educational activity. Such costs are directly traceable to that activity. Those costs which can be associated directly with teaching activities are called direct teaching costs. Indirect Costs are those costs that cannot be traced directly to an educational product, function, or service. In an educational institution, such indirect costs may include those on general administration, maintenance, library rents and insurance. They are jointly borne by various units performing different functions of teaching, research, and community services. When we add together both direct and indirect costs, the result will be the total cost of education at the desired level of analysis. Total direct cost can be referred to as prime cost while total indirect cost as overhead cost. Educational costs can be classified into three elements. That is, materials labour and expense. Each of these elements can further be classified either as direct or indirect, depending on whether they can be allocated to cost units. Thus, we can talk of direct material and labours costs and expenses. At the same time, we can talk of indirect material and labour costs and expenses. Prime cost will, therefore, be an addition of the direct material and labour costs and expenses. On the other hand, overhead cost will be the addition of the indirect material and labour costs and expenses.

D. Variable and Fixed Cost:

Variable costs are costs that vary with volume or size of an educational activity. The cost of library books, stationery and student services are expected to increase when enrolment increased therefore can be said to be variable costs. Fixed costs are those that must be incurred whether there is teaching, learning and other educational activities. They remain fixed at all levels of production in the education system. Most of the indirect costs could be regarded as fixed costs.

E. Current and Capital Costs:

Current education costs are expenditures on educational goods and services that bring short-lived benefits. Resource inputs which are current in nature must be renewed periodically. Hence, expenditures on them are referred to as recurrent. Capital educational costs are expenditures on durable resource inputs such as furniture, equipment, and buildings which can be used for a very long period if well maintained.

F. Unit Costs of Education:

In the education system, the most used measurement is the unit cost per student. This is calculated by dividing the total expenditure per session by the number of students enrolled in the educational category. Apart from the cost per student enrolled, analysis can calculate

the unit cost per graduate to measure the cost of dropouts and those repeating a class. Costs can also be related to a variety of other units.

G. Private, Institutional and Social Cost:

Private cost on education is borne by students and their family. They relate to both direct and indirect costs of education which are borne through tuition fees, earnings foregone, additional living costs, books uniforms and transport. Institutional Costs of Education These are costs borne by the institution of learning. They consist of capital and recurrent costs. The former includes the costs of furniture, equipment and building while the latter is made of costs on scholarship, salaries, and other consumables. Social costs of education are borne by the public through the government. These cover all items under private and institutional costs minus scholarships and tuition.

H. Drop out cost:

Drop out is an act or instance of dropping out a student who withdraws before completing a course of instruction. A student who withdraws from high school after having reached the legal age to do so or a person who withdraws from established society, especially to pursue an alternate lifestyle is known as drop out. A growing body of evidence is demonstrating that dropping out of high school is a major social problem that can often have devastating effects. Despite advances in knowledge made to date, few people recognize the full extent to which low educational attainment affects society. Educational inequity is an issue of justice and fairness. However, it is also an issue with significant economic costs to the state, which are associated with lost opportunities for those who fail to complete high school.

1.2. Significance of the Study:

Community school mostly run-on government fund. Remaining amount would be contributed by the community and donor agencies. Despite free education policy adopted by the government of Nepal up to tenth grade, some cases highlight that guardian are also paying educational charges. By aggregating all direct expenditure on education by various sources, we calculate direct educational cost. Many independent scholars and donor agencies concentrate on direct educational cost. Government of Nepal, Human Resources Department is charged to compile all educational data and publishes comprehensive annual report on education. Different dimensions of education are well elaborated by this agency. Still some dimensions are missing. One of those dimensions is opportunity cost. The students who pass SEE cannot continue their further education, at least +2 level, due to various factors. As a result, they are either bound to carry out domestic activities forcibly where their financial contribution is invisible (table -1 and table-3) or involve in different money generating activities as shown in table-4. It is necessary to assess the opportunity cost to calculate total economic cost accurately. All aspects of social cost need to be assessed. Finally, we come to per unit education cost. When per unit cost is attained, we seek its return accurately. If net return is positive, expenditure on education would end up in economic development. Inversely, if net return is negative, it is the indication that we need to reevaluate existing education system.

1.3. Objectives

The specific objectives of the study are to:

- i) assess the per unit cost in the secondary education in Nepal.
- ii) estimate the opportunity cost in the secondary education in Nepal.
- iii) evaluate net economic cost in the secondary education in Nepal.

1.4. Limitations

The study does not cover the entire secondary level education in the country. It limits the study of discontinued students after SEE from Sindhupalchowk, Parasi and Palpa districts. It is quite difficult to meet all students who discontinued after SEE in Nepal. So, few students are sampled and interviewed through designed questionnaire. The researcher should have assessed through empirical observations but due to budget, time and manpower constraints per unit cost and drop out cost have been taken from published studies considering data of 2016 and 2017. Different dimensions of social cost on education could have covered but due to some constraints, all dimensions couldn't be empirically recovered in this research. More sophisticated statistical tool could exhibit the data accurately, but simple mathematical calculation has been made to evaluate opportunity cost that could reflect on total education cost of secondary level education in Nepal. The analysis of cost created by crime is a complex task. Estimates on the basis of damages that drop out students made or harm they have created in the society couldn't be included in the current study. The cost on secondary education on technical stream couldn't be estimated since those who discontinued are from poor family.

2. Review of Literature

Chrine, C. Hapompwe and others have published an article in a journal and found that between 2005 and 2013, the proportion of public expenditure on education in the total government expenditure was between 15.3 percent and 22.6 percent, which is translated to between 3.7 percent and 4.6 percent of GDP respectively. The ratio of government expenditure in education to GDP was found strong and was projected to be higher in 2014 and 2015, exceeding 5 percent of GDP as the determination and momentum from central administration was decisively firm. This was relatively on the higher side in the region and comparable with other emerging economies. In real and nominal terms, government expenditure on education grew from ZMW1.5 billion in 2006 to ZMW5.2 billion in 2013. Furthermore, the budgetary allocations for 2014 and 2015 increased even higher to ZMW8.6 billion and ZMW9.4 billion respectively. Using the constant price of 2013, the public education expenditure also grew from ZMW 3.0 billion to ZMW5.2 billion between 2006 and 2013. Referring to various resources they state that in 2010, the public spending on education was at 17.21% of the government expenditure in Kenya, 19.20 per cent in South Africa, 24.4 per cent in Ghana, 18.33 per cent in Tanzania, 25.1 per cent in Burundi, 15.04 per cent in Uganda and 18.2 per cent in Rwanda. This shows a gruesome and impressive picture of countries' pre-occupation to financing this sector, which averaged 19.6 per cent, while in 2010, Zambia's expenditure on education was progressing upwards at 20 per cent (Chrine et al., 2020).

Odaga and Heneveld stated that parents worry about wasting money on the education of girls because they are most likely to get married and that once married, girls become part of another family and the parental investment in them is lost. Therefore, this factor perpetuates parents to discourage the girl child from continuing with school. The UNICEF has identified 25 priority countries including Nepal to reduce the number of girls currently out of school in the year 2005. The countries were selected with the following selection criteria: female primary school net enrolment rate below 70percent, gender gap in primary education above 10percent, more than 1 million girls out of school, included in the Education for All Fast Track Initiative of the World Bank and affected by crises like HIV/AIDS and military conflict(Odaga & Heneveld, 1995).

Ivana Batarelo and others have published an article entitled 'Financing Education in Croatia' in 2007 in which they observed costing practice in Croatia. They assert that fiscal decentralization of the education sector in Croatia began in 2001 with changes to three key laws on primary schools, secondary schools, and local government financing. They minutely observed the reform practice in Croatia which entailed the central government withdrawing its total financing for material costs and expenditure while continuing to pay salaries in full. The remaining financial obligations were taken by local governments, newly empowered to have a percentage of income tax within their authority in addition to grants from a national equalization fund for municipalities requiring a top-up in the financial capacity to fund their schools. Qualified local governments that could take this burden stood to gain a 10 percent increase in income tax revenues: 2.9 percent of this financed on primary education and 2 percent on secondary schools. Since 2007, this rate has increased to 3.1 and 2.2 percent, respectively (Batarelo et al., 2007).

Tamasevski on her Manual on "Right-based Education" attempts translate globally accepted human rights standard into guidelines for national education strategies she developed a conceptual framework which provides "4 A (four A) Approach- she further highlighted the role of state to protect, respect and fulfil the right to education in term of making education available, accessible, acceptable and adaptable. This demands a holistic approach to education, which reflects universality and indivisibility of all human rights. She describes Right Based Education' approach which is known as '4 A's Approach' (Tomasevski, 2004).

Availability: Education must be made available to all. School must be in physical proximity to students and education must be affordable for all should be free from discrimination. Adequate school facilities and programs that support children must be made available.

Accessibility: Adopting a life cycle approach providing available and accessible schools, removing the economic barrier to education promoting inclusion and ending discrimination.

Acceptability: Free and compulsory education for all children requirements of international human rights law for government to respect parental freedom of choice. Educational environments should be emotionally, intellectually, physically, and culturally safe and nurturing school has to maintain minimum standards for quality and safety.

Adaptability: Child Rights that education should respond and adapt to the best interests of each child school must adapt or change to meet the needs of children from different communities and respond to the needs of students from diverse social and cultural setting.

Man Prasad Wagle and other researchers have published a book named 'Cost of Public Education' in 2017 containing their empirical observation in the field of education. They collected three categories of financial data from the sample schools, viz. annual funding for the community schools between the years 2012/13 to (May) 2016/17, annual expenditure details of community schools between the years 2012/13 to (May) 2016/17, and fee structures of the 28 community schools (wherever applicable) and ten institutional schools for all grades of basic education for the year 2015/16. Furthermore, researchers also compiled annual student enrolment, repetition, pass-out and retention data for eight years between the years 2010/11 to 2016/17. From the data obtained through primary survey, researchers calculated the cost per child in the surveyed community schools. Three types of cost per child, namely, general cost (GC) per child, retention-based cost (RBC) per child and outcome-based cost (OBC) per child were calculated. In this paper, general cost (GC) per child has been defined as the cost per child who is enrolled in any class at the beginning of an academic year. In order to measure general cost per child, researchers have calculated total funds from various sources that go to the surveyed schools in a year and divided that evenly across each student enrolled at the beginning of the academic session. Retention-based cost (RBC) per child has been calculated by only considering the students who have been retained until the end of the academic year and not considering the students who have dropped-out in between the academic year. By dividing the total funds received by the schools by the total number of retained students, researchers have obtained retention-based cost per child. Similarly, outcome-based cost (OBC) per child which accounts for the students who have been able to pass the final exam in that academic year. It has been calculated by simply dividing the total funds received by the schools from various sources by total number of students who have managed to pass the final exam. They concluded that the average per child cost in institutional schools was found to be NRs. 28,312.27, where the per child cost between grades 1-5 was NRs. 26,180.79 and that between grades 6-8 was NRs. 32,797.43. (Wagle et al., 2017).

N. Manandhar, states that the overall primary school dropout rate was 4.26 percent in Chitwan and Nawalparasi districts. The dropout rate for girl (4.04 %) was less than boy (4.50 %). More boys (52.6 %) dropped out than girls (47.6 %). Dalit caste comprised of around 30.5 percent of dropout children. The maximum (42.2 %) of the actual dropout was due to illiteracy and negligence of parents in the education of their children. From logistic regression analysis of child related variable, grade, age, and work at home were found to be significant variable and among family related variables, parents' apathy towards their children's education, education status of father, education status of mother, occupation status of father and number of children in family were found to be significant (Manandhar, 2012).

Ram Rekha Roy and Bishnu Prasad Sharma have studied Economic Cost of Absentee and Drop-out Students. They observed that absentees and dropouts impose a large resource cost on the educational system and the society. The study examines the economic cost of absentee and dropout students in public schools of Parsa District of Nepal. The study estimates the unit cost of absentee and dropout students by level. Cost of human resource, stationery, utility and fixed costs of building and furniture were the components for estimating unit costs. The findings reveal that the unit cost of students was equivalent to U.S. \$295, 130 and 143 for primary, lower-secondary, and secondary levels respectively, and an average of U.S. \$189 overall. The resource loss due to dropout was around 28, 12, and 11 percent of the total resource spent for primary, lower secondary and secondary levels respectively with an average of around 16 percent. The combined resource loss from dropouts and absentees were found to be 39, 23 and 20 percent for the different levels. On average, 26 percent of the public-school resource was lost due to dropouts and absentees. The main causes of dropout and absenteeism were the lack of interest, motivation of parents and the children to attend the school. The study suggests the need for more comprehensive and in-depth study for effective policy formulation to address this problem (Roy & Sharma, 2019).

3. Methodology

3.1 Theoretical Framework

To carry on research in the topic, certain methodology has to be ascertained. The philosophical linkage has been established. The epistemology of the information is physical environment. So, it is positive inquiry into the nature of the data that the researcher seeks to obtain. Almost all the research focus on how the cost on school level education is assessed and they relate the exact finding to the purchasing power of the guardians or opportunity cost of the fund that has been borne by the government. So, the source of data in all such reports and findings of research articles that come up from within the atmosphere. While discussing on the ontology, it is rather different. The researcher treats with social costing on education. It is essential to evaluate the opportunity cost of government fund. A question may be raised here, what if the social return is lower than its opportunity cost. For this, it needs to evaluate social cost of education in the secondary level education of Nepal. The opportunity cost of the public fund needs to be evaluated plus some other factors are to be included. Finally, the net social return on the secondary level education system is derived. If the net return from the secondary level education is less than the net social cost, it needs to resort for some new policy recommendation, or some introspective approaches are needed to be carried out. If the net social return from the investment in the education system is greater than the net social cost, the system is functioning well, no reformation is required. The ontology lies on the very point whether the system needs to be reformed or it should be continued.

3.2. Research Design

The researcher calculates the amount offered by government in the community schools plus guardian's contribution to derive social cost on school level education. A group of students

pass SEE from a school every year. Most of them continue further education, at least +2, but few of them cannot continue their education due to various reasons. As a result, they involve in various income generating activities or remain economically idle. If they involve in income generating activities, they earn low amount from low grade service. Or some of them might go for foreign jobs. Whatever they earn in an average is the cost is added to a student continuing education because it is the amount which he/she could earn if discontinued studies. The study includes the opportunity cost based on discontinued students of SEE. It reflects total education cost on normal streams of + level. The research is qualitative cross-sectional based on the survey strategy. The philosophy of the research is explorative based on inductive approach to generalize the findings.

3.3. Introduction of the Study Area

The schools from Sindhupalchowk, Nawal-Parasi(West) and Palpa district are taken as the study area. Sindhupalchowk district falls on Bagmati province, Nawal-Parasi(West) and Palpa districts lie on Lumbini province. Palpa and Sindhupalchowk districts are on hilly region and Nawal-Parasi(West) lie on Terai region of Nepal.

3.4. Source of Data

Primary and secondary data is being used in the current study. The reports from government agency and different research findings are taken as secondary data. As primary data, information from students' survey is obtained. The schools are chosen purposively to serve the objectives.

3.5. Method of Data Collection

Secondary data has been gathered from the flash-II Report of the Centre for Education and Human Resource Development(CEDRD, 2020). and other sources. The survey is carried out to get actual information of those students who could not continue further education after SEE. 86 students from 12 schools (ANNEX-B) are sampled and interviewed through designed questionnaire (ANNEX-A). Hence, the purposive sampling method has been carried out to serve the purpose. The students' opinion is analysed as the primary data which becomes key tool to analyse economic cost on education. The secondary data includes the five successive year information i.e. from 2016 to 2020 on the issue. The survey questionnaire covers information of the respondents from the batch of SEE, 2075 to 2077.

3.6. Techniques of Data Analysis

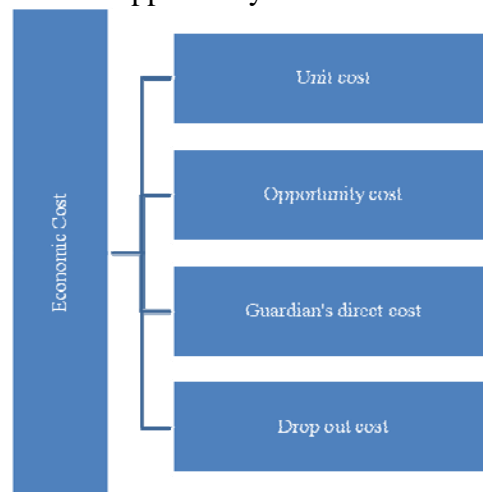
Mixed method has been adopted to analyse the data. Unit cost on secondary level education is ascertained from the Centre for Education and Human Resource Development. Different findings on students drop out cost has been incorporated. Wagle's finding on per unit cost of secondary level education in Nepal has been incorporated as a baseline of the study which is NRs 27,833/. The other findings support Wagle's conclusion. Wagle's report exhibits a detailed calculation of government expenditure in community schools which is taken as the benchmark value in the present study. After adjusting the cost with the average inflation

(i.e., 6 per cent) that has been increased between the period 2016 to 2021 (O'Neill, 2022), the cost reaches to NR30,000/-.

Economic cost = unit cost + average drop out cost + Direct cost of guardians + average opportunity cost. The benchmark cost (NRs.30000/-) is unit cost. The opportunity cost is assessed from the primary sources.

3.7. Conceptual Framework

The different variables are attributing to the economic cost on education of community schools. Unit cost, opportunity cost, guardian's direct cost and drop out cost comprises the net economic cost. This is calculated by dividing the total expenditure per academic year by the number of students enrolled in the educational category. The economic cost in the society is enormous due to the students' drop-out. The risk factors for non-completion of school level education is related to socio-economic status, family structure, school type, geographic locale, excessive employment, and psychological variables such as low self-esteem and aggression. All sorts of cost accrue in the society in intangible way is known as drop out cost. Guardians contribute for their children's education. They bear uniform cost, stationery costs, tuition fee and so on for the children's education. This is additional contribution from the parents above the state on education. Opportunity cost is the return from the uses of resources from alternative purposes. When a student continues studies and at the same time his/her batch mates earn some money annually by discontinuing studies, the same amount has been sacrificed by the student while carrying out studies. This sacrificed earning is counted as the opportunity cost.

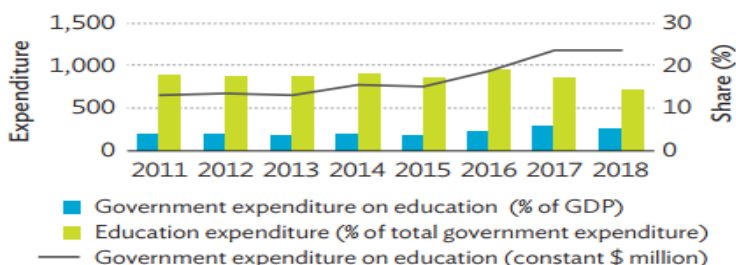


4. Analysis of the Data

4.1. Trends in Education Sector Spending

Nepal’s total public expenditure has increased over the years and faster than gross domestic product (GDP) growth. Government expenditure on education has increased an average of 11.4 percent per year during 2011–2018 (Figure 1), equivalent to an increase in the education sector’s share of GDP from 3.8 percent in 2011 to 5.2 percent in 2018.

Figure 1: Trend in Government Expenditure on Education, 2011–2018

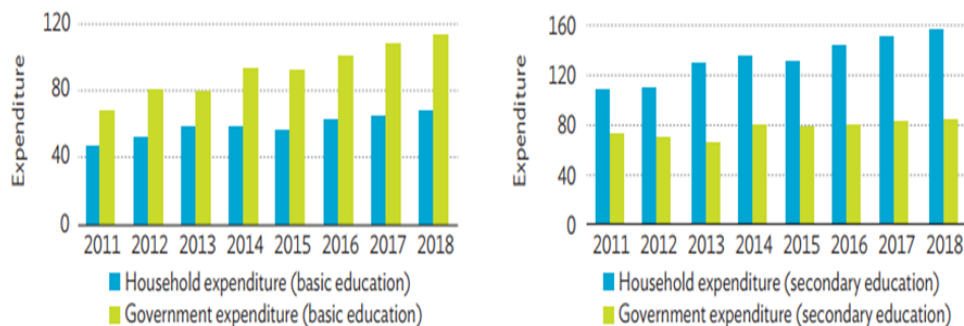


GDP = gross domestic product.

Source: Government of Nepal, Ministry of Finance.

Government spending on education as a share of total government expenditure declined from 18 percent to 14 percent during the same period, as total public expenditure increased faster for other sectors than for education. Government spending on basic and secondary education covers grants for community (public) schools, while institutional (private) schools do not receive public funding. Government expenditure per student enrolled in public schools has increased, with a 66 percent increase in spending per basic level student from 2011 to 2018 (Figure 2).

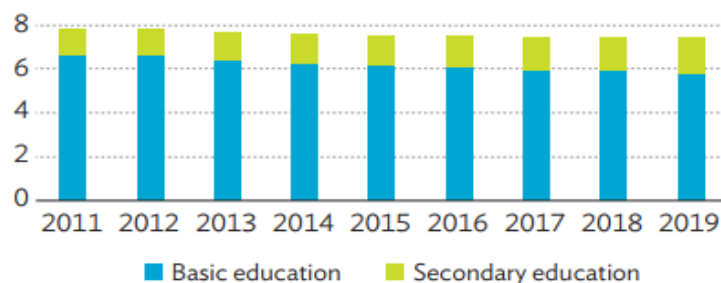
Figure 2: Nepal—Government and Household Annual Expenditure per Basic Student and per Secondary Student, 2011–2018 (constant \$)



Source: Government of Nepal, Ministry of Finance and Central Bureau of Statistics.

However, the increase in government expenditure per basic level student is primarily due to a decline in the schoolage population at the basic level, without a commensurate decline in the number of basic level teachers (Figure 3).

Figure 3: Students Enrolled in Basic and Secondary Education, 2011–2019 (million)



Sources: Government of Nepal, Ministry of Education, Science and Technology. 2011–2019. *School Statistics Information Form (Flash I)*. Kathmandu; and Government of Nepal, Ministry of Education, Science and Technology. 2011–2019. *School Statistics Information Form (Flash II)*. Kathmandu.

During the same period, household expenditure per student increased, most prominently for secondary education. Household expenditure per secondary education student increased 53 percent, while government expenditure increased 16 percent during the same period (Central Bureau of statistics, 2018). The increase in household expenditure can be attributed to the increase in enrolment in private secondary schools also called institutional schools. Of the total expenditure on secondary education in 2019, households spent approximately 66 percent while the government covered the rest. Government spending on secondary education has also increased, but at a lower rate than growth in enrolment.

4.2. Per Student Cost in Nepal:

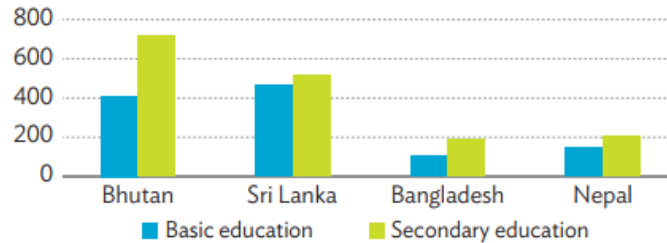
United Nations Educational, Scientific and Cultural Organization, UNESCO Institute for Statistics Databank has published a report on Government Spending per Students Enrolled on Public Schools in 2020. The report shows per student government spending on basic level and secondary level public schools. The basic level per student government spending is US\$180 whereas secondary level government spending is US\$ 200. Converting it to Nepalese currency it becomes NRs 19800/- and NRs 22,000 respectively (UNESCO, 2020). Wagle and other have carried out research in Jhapa district of Nepal. The survey results demonstrated that expenditure in community schools is financed through multiple sources – central and local government, community, NGOs/INGOs, individual donors, etc. Including funding – both cash and in-kind from all these sources – the general cost per child in community schools was NRs. 27833 in the year 2015/16 (Wagle et al., 2017). Similarly, another research by Roy and Bishnu's research conducted in Rautahat district of Nepal reveals that per child cost was accounted to be NRs 30,333.00 (Roy & Sharma, 2019).

4.3. Per Student Cost in Neighbouring Countries

United Nations Educational, Scientific and Cultural Organization, UNESCO Institute for Statistics Databank (UNESCO, 2020) has published a comparative report in 2020 on Government Spending per Students Enrolled on Public Schools in different South Asian Countries. Bhutan's per student cost is highest among the others. The basic education cost

of Bhutan is US\$400 and secondary level cost reaches US\$700. Likewise, Sri-Lanka's basic education cost and secondary level education cost is US\$4400 and US\$ 4600 respectively. Similarly, Bangladesh's cost is shown to be US\$100 and US\$ 200 respectively. The comparative cost on education is shown in the figure (4) below:

Figure 4: Government Spending per Student Enrolled in Public Schools, 2019 (\$, constant 2015 prices)



Source: United Nations Educational, Scientific and Cultural Organization. UNESCO Institute for Statistics Databank. <http://data.uis.unesco.org/> (accessed 15 April 2020).

The table shows that Nepal's education cost on basic and secondary level is lower than Bhutan and Sri-Lanka and almost like Bangladesh.

4.4. Survey Report Analysis

Opportunity cost on +2 level education has been analysed by gathering information from the students who stopped their further education after SEE. The average earning is calculated from the survey data. The average earning made by those students has been ascertained as the opportunity cost of their batch mates who continue +2 level of education. It is logically stringent that if the students left the further studies, they would have earned the same amount in average every year. But they abandoned their perspective income for the sake of studies. So, this amount is calculated as the opportunity cost to generalize total education cost.

4.4.1. Students' Involvement in Earning

Table-1 shows that after stopping their further +2 level studies, 26 out of 42 students from Sindhupalchowk district involve in money generating activities. 10 out of 20 students from Palpa district and 12 out of 24 students from Nawal-Parasi(West) district involve in income generating activities. Remaining students are found involve in domestic work supporting their parents. The average earnings from Sindhupalchowk, Palpa and Parasi is NRs. 85,000/-, NRs.55000/- and NRs.35,000/- respectively. The total average earning is NRs.58,333/-. Students from Sindhupalchowk earn a huge average because they belong to satellite district of Kathmandu, the capital city of Nepal. They are offered with attractive opportunities like mason, sculpture, construction, and driving. But the least average of Nawal-Parasi(West) district shows that after stopping their further studies, they are found involve in daily wage-earning work or some domestic servant where salary or wage is minimum.

Table-1: Average Earning of Students Who Discontinued Study

Districts	No. of Students Involve in Earning	No. of Students Not Involve in Earning	Total No. of Students	Average Earnings of Students
Sindhupalchowk	26	16	42	85,000/-
Palpa	10	10	20	55,000/-
Parasi	12	12	24	35,000/-
Total	48	38	86	58333/-

Source: Field Survey-2022

4.4.2. Financial Condition of Students

Table -2 shows that financial condition of the students who left studies is significant. In Sindhupalchowk district, almost 42 students are financially poor. In Palpa, 6 are very poor and 10 are poor comprising 16 students. Only 4 students are from middle class family. In Parasi, 18 students are from very poor family background, 4 students are from poor family comprising 22 students from poor family. Only 2 students are from middle class family. It is clear that, the main reason behind not pursuing studies is financial condition of their families.

Table-2: Financial Condition of Students

Districts	Very Poor	Poor	Middle Income	Total
Sindhupalchowk	20	22	-	42
Palpa	6	10	4	20
Parasi	18	4	2	24
Total	44	36	6	86

Source: Field Survey 2022.

4.4.3. Reason Behind Discontinuation of + level Studies

Table-3 shows that 42.85 percent of the students from Sindhupalchowk district discontinued study due to financial problem of parents, 33.33 percent left schooling because they got married and 23.80 percent left schooling because they were reluctant in studies. Similarly, 70 percent students from Palpa district stopped education because of financial problem of parents, 10 percent showed marriage was the obstacle for them and 20 percent left studies because they do not see future in this. 42 percent students from Nawal- Parasi(West) district could not continue their further studies due to financial problem, 25 percent shows due to marriage and 33 percent left studies because they were not hopeful from study, meant they were too poor to tackle the course of + 2 level..

Table-3: Reason for Discontinuing Study

Districts	Financial Problem	%	Marriage	%	Other	%	Total	%
Sindhupalchowk	18	42.85	14	33.33	10	23.80	42	100
Palpa	14	70	2	10	4	20	20	100
Parasi	10	42	6	25	8	33	24	100
Total	42	-	22	-	22	-	86	100

Source: Field Survey 2022.

4.4.4. Income Generated by Students

Table-4 reflects the range of money the students earn after they stopped studies. 2 students from Palpa and 4 students from Nawal-Parasi(West) earn around NR. 50,000/- annually. Annual earning between NRs.50,000/- to NRs.1,00,000/- from the students of Sindhupalchowk, Palpa and Nawal-Parasi(West) is 2, 2 and 8 respectively. This shows that the majority of students from Nawal-Parasi(West) earn the least. Surprisingly, 18 students from Sindhupalchowk district earn between 1,50,000/- to 2,00,000/- which is meagre in number in Palpa and nil in Parasi.

Table-4: Income Generation from Students Who Discontinued Study

Income	Sindhupalchowk	Palpa	Nawal-Parasi(West)
Upto 50,000	-	2	4
50,000-1,00,000	2	2	8
1,00,000-1,50,000	2	2	-
1,50,000-2,00,000	18	4	-
Above 2,00,000	4	-	-
Total	26	10	12

Source: Field Survey 2022.

4.4.5. Students Result in Secondary Education Examination(SEE)

Table-5 shows that among the left-out students, 2 students from Sindhupalchowk districts secured marks between 1.5 to 2. Students securing marks between 2-2.5 from Sindhupalchowk, Palpa and Nawal-Parasi(West) are 22, 2 and 30 respectively. The majority of the students, ie, 36, secured marks between 2.5 to 3 in SEE. 16 from Sindhupalchowk, 10 from Palpa and 10 from Nawal-Parasi(West) got the marks in this range. Only 2 students secured the marks between 3-3.5 from Sindhupalchowk district whereas 8 each from Palpa and Nawal-Parasi(West) district.

Table-5: Distribution of Marks Obtained

GPA	Sindhupalchowk	Palpa	Nawal-Parasi(West)	Total
1.5-2	2	-	-	2
2-2.5	22	2	6	30
2.5-3	16	10	10	36
3-3.5	2	8	8	18
Total	42	20	24	86

Source: Field Survey 2022.

4.4.6. Students Planning to Continue in Future

Table-6 reflects the amazing result. Only 10 percent students from Sindhupalchowk district want to join the school for further studies in +2 level but 90 percent of them do not want to continue studies. Conversely, 78 percent from Palpa and 68 percent from Nawal-Parasi(West) are planning to pursue studies. Only 22 percent students from Palpa and 32 percent students from Nawal-Parasi(West) are reluctant for further studies because either they got married or not much interested in studies at all.

Table-6: Students Desire to Continue Study in Future

Districts	Want to Continue(%)	Do not Want to Continue(%)
Sindhupalchowk	10	90
Palpa	78	22
Nawal-Parasi(West)	68	32

Source: Field Survey 2022.

4.4.7. Calculation of Total Economic Cost:

Per unit cost is derived from the published study report from Wagle and others. The survey results demonstrated that the expenditure in community schools is financed through multiple sources – central and local government, community, NGOs/INGOs, individual donors, etc. Including funding – both cash and in-kind from all these sources – the general cost per child in community schools was NRs. 27833 in the year 2015/16 (Wagle et al., 2017). Similarly, another research by Roy and Bishnu's research reveals per student cost was accounted to be NRs 30,333.00 (Roy & Sharma, 2019). Wagle's report was found more scientific and persuasive, so NRs 27833 /- is taken as benchmark unit cost, though the next is supporting to validate the first report. After adjusting the cost with the average inflation (ie. 6 percent) that has been increased between the period 2016 to 2021 (Statistica, 2021), the per unit cost reaches to 30,000/- which is approaching to Roy and Sharma's finding.

Economic cost = unit cost + average drop out cost + Direct cost of guardians + average opportunity cost. Here, the benchmark cost (NPR.30000/-) includes unit cost.

So, Economic Cost = Unit cost + Opportunity cost

Or Economic cost = NRs.30,000 + NRs.58,333 (Table-1).

∴ Economic Cost = NRs.88,333/-.

5. Summary And Conclusion

5.1. Summary

Investing on education seeks a large span of time to get its return. If a society is to be transformed, investment on education is the prime agenda. The direct educational cost is a measure of what a student, an institution of learning, or the public has to give up educating an individual or a group of people. The opportunity cost represents the sacrifice of alternative opportunities to use the resource, either for present consumption or for some other forms of investment. Thus, budgetary expenditures are significant only because they represent the purchase of teachers' labour, school buildings and equipment, or other goods and services which have alternative uses. At the same time, the educational system uses up other resources which have alternative uses, even though these are not reflected in normal expenditure on education. The most obvious example of the opportunity cost is the time of students, who deprive the labour market of their services by choosing to continue their education. This represents a loss of current output for the economy, as well as a loss of earnings for the individual. This opportunity of current output or income is forgone in the expectation that education will increase the productive capacity of the students in the future. There are, of course, considerable problems involved in measuring the opportunity cost of students' time; it is necessary, for example, to take account of unemployment when

measuring earnings foregone. It is also worth emphasizing that estimates of opportunity costs make sense only within a given institutional framework.

Finally, it is often said that better educated population relates to lower expenditures in other public sectors: e.g., better educated people tend to use health system less often since they would possess more information and knowledge on sickness prevention, if faced with unemployment they tend to stay unemployed for shorter periods of time thus relying less on welfare support etc. Community school mostly run-on government fund. Remaining amount would be contributed by the community and donor agencies. Despite free education policy adopted by the government of Nepal up to tenth grade, some cases highlight that guardians are also paying educational charges. By aggregating all direct expenditure on education by various sources, direct educational cost is assessed. Many independent scholars and donor agencies concentrate on direct educational cost. Government of Nepal, Human Resources Department is charged to compile all educational data and publishes comprehensive annual report on direct expenditure on education. Still some dimensions are missing. One of those dimensions is opportunity cost. The students who pass SEE cannot continue their further education, at least +2 level, due to various factors. As a result, they are either bound to handle domestic tasks forcibly or involve in low-grade money-making activities.

5.2. Conclusions

- Per unit cost been assessed NRs 30,000/-
 - Per unit cost comprises, unit cost+ average drop-out cost+ direct cost of guardians.
 - Opportunity cost is assessed NRs. 58,333/-
 - Total economic cost is assessed NRs 88,333/- ie, US\$803.
- The result implies that the net return from education must exceed NRs 88,333/-

ANNEX -A Questionnaire

1. What is your name ?.....
2. What is your parent's name ?
Father.....Mother.....
3. What is your school's name ?.....
4. What is your GPA of SEE ?.....
5. When did you pass SEE ?.....
6. Your permanent address:
Province: District.....
DVC/Municipality..... Ward no.....
7. What is the reason that made you to stop further studies ?.....
8. Financial status of your family:
a. Very poor () b. Lower middle () c. Middle () d. Rich ()
9. What are you doing currently ?.....
10. How much do you earn per month or annually ?.....
11. On what purpose do you spend your earning ?.....
12. Have you planned for further studies ? Yes (), No ()

If yes, then when are your starting ?.....

Which subject would you be choosing as your future career ?.....

ANNEX -B

Names of School Visited in Different Districts

S.N.	Name of School	Districts	Students Passed Year
1.	Bhimeshwori Secondary School	Sindhupalchowk	2075 to 2077
2.	Musikot Secondary School	Sindhupalchowk	2075 to 2077
3.	Sipa Tindhara Janata Secondary	Sindhupalchowk	2075 to 2077
4.	Mahakali Secondary School	Palpa	2075 to 2077
5.	Gyanodaya Ma. Vidhyalaya	Palpa	2075to 2077
6.	Rainadevi Secondary School	Palpa	2075 to 2077
7.	Bhairav Nawadeep Ma.Vidhyalaya	Palpa	2075 to 2077
8.	Nepal Rastriya Ma. Vidhyalaya	Palpa	2075 to 2077
9.	Daunne Devi Ma.Vidhyalaya	Parasi	2075 to 2077
10.	Divya Jyoti Secondary School	Parasi	2075 to 2077
11.	Nawajeewan Secondary School	Parasi	2075 to 2077
12.	Rastriya Ma. Vidhyalaya	Parasi	2075to 2077

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