

Is Your Education Worth It? A Benefit-Cost Analysis

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Description of the Learning Activity

The aim of this individual assignment measures the benefit-cost of a student's higher education for their undergraduate education. Putting aside the numerous intangible benefits of acquiring a college education, this assignment addresses the question from a purely economic perspective. Is going to a 4-year college a good investment? To answer this question students will apply a benefit-cost analysis (BCA) is a systematic analysis of the relationship between costs and outcomes for a student's educational program. That is, students will collect cost information and making careful assumptions about their future earnings. Future earning potential is a common outcome measure for BCAs in education. For making fair cost comparisons, it is important to ensure costs and benefits are adjusted for inflation and for time preference, i.e., discounting, especially because the benefits occur in the future.



Learning Objectives

The learning objectives for this activity are

- Learn the general factors that contribute to the benefits and costs of a student's education;
- Identify the components of benefit-cost analysis and carefully assess the data needed to analyze their education;
- Develop assumptions for their future career earnings via valid resources and to justify their assumptions;
- Improve their EXCEL® skills for data analysis;
- Improve written communication skills to summarize and explain their results;
- Improved learning of application of real-life examples from economics.

Preparation by the Instructor

This assignment would be appropriate in a junior or senior level labor economics or public finance course. The topics that the students should be familiar with the concepts related to the development of human capital and the ability to earn a higher wage. Including in these lectures the student will learn that the decision to acquire human capital is an investment that can produce an economic return. The preparation consists of the following:

Cover the appropriate chapters in labor economics on the investments in human capital;

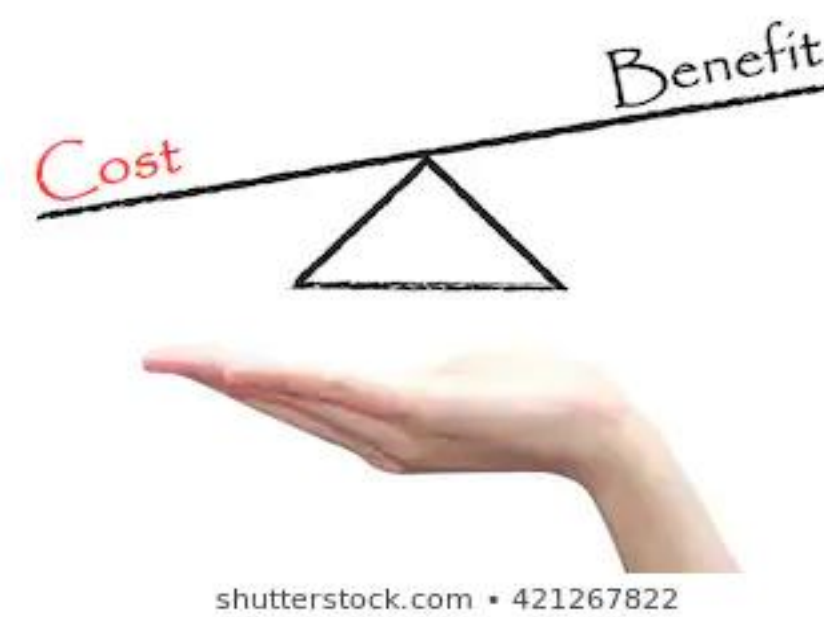
Be sure to cover the terms such as human capital, benefit and cost analysis, net present value (NPV), general vs. specific training and other terms.

Prepare a handout explaining this assignment, the purpose of the assignment, the requirements for this assignment, and the learning outcomes from the assignment. The second part of the handout will have a worksheet that enables the students to enter their data for this analysis for the costs, benefits, and assumptions such as the discount rate, how many years will be in the workforce and other items pertinent to the student.

Note: An example of this two-part handout is provided upon request. Our email is provided above.

Implementation

The implementation of this individual assignment is rather straightforward. The individual assignment will have the following components:



Requirements for the Individual Assignment

Part 1: Students receive this assignment	The students receive the handout regarding the specifics in this assignment and a worksheet to input their information related to their investment in a 4-year college education. This handout will need to breakout each step of the assignment that needs to be completed: <ol style="list-style-type: none"> 1. Define the framework for the analysis, e.g., assumptions on type of occupation, acquiring additional education, certifications, the appropriate discount rate etc.; 2. Identify the benefits and costs; 3. Determining the timeline of the benefits and costs, e.g., how many years in the labor force; 4. Monetize the benefits and costs; 5. Discount the benefits and costs to obtain the present values; 6. Calculate the net present value (NPV).
Part 2: The students complete the worksheet related to their investment in a 4-year college education (Promotes critical thinking and thinking the effectiveness of their assumptions)	In this part of the assignment, the students begin to fill in the worksheet that contains their costs and the benefits of their education as outlined in the handout from part 1.
Part 3: Input their data into EXCEL® for analysis (Develops their EXCEL® skills for use in quantitative analysis)	After carefully compiling their data, the students will enter their data from their worksheet into EXCEL® to monetize the benefits and costs and discount the benefits and costs to obtain the present values. Finally, the NPV is calculated.
Part 4: Reviewing their quantitative results by and modify their assumptions or sensitivity analysis (Promotes Problem Solving and Decision-making awareness)	Steps for this part of the assignment: <ol style="list-style-type: none"> 1. The student will analyze the results from their quantitative analysis. Do these results make sense? 2. What do the results from this analysis mean? That is, be able to interpret the meaning of the net present value analysis (NPV) as it relates to them. 3. Now examining their results and their data, the student will conduct a sensitivity analysis. What do these results reveal? Do these results make sense?
Part 5: Writing up the results from their analysis (Promotes written communication skills)	The students will prepare a report summarizing the results from their analysis. The report will contain an introduction, a brief literature review, the methodology and data sources used in their analysis, summarizing their results, and the conclusions from their analysis.

References

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- Borjas, G. J., & Van Ours, J. C. (2010). *Labor economics*. Boston: McGraw-Hill/Irwin.
- Ihori, T. (2017). *Principles of public finance*. Springer Singapore.