

1.011 Project Evaluation • Assignment 6 Debriefing • Lexcie Lu • MIT Center for Transportation Studies

How to structure an Evaluation Spreadsheet

In general, you structure the spreadsheet similar to the Skyscraper example, but not exactly the same. You should have a number of different activities that incur costs, and a number of different activity that generate revenues. Thus you need both a cost model and a revenue model.

The Lexcie Dumbo Project Cash Flow Model								
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Discount Rate		i%						
Length of Project		20 months						
Period	Costs			Benefits			(B - C)	PV
	Activity 1	Activity 2	Activity 3	Category 1	Category 2	Category 3		
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
							NPV =	

Some of thought that the percentage of each cost category would be similar in different projects. This is very dangerous – sometimes it is valid, and sometimes it is not. In general, you should try to do activity based costing – breaking costs down to materials, labor, and other large cost items like land rights, and project management. You could also divide the material into different categories: material for the foundations, materials for the actual bridge, and materials for the deck on top (asphalt or rails and ties). This way you can change the project specifications (length of bridge, location of bridge, type of carrier) and watch the project NPV change.

Same with revenues. Some of you broke the revenue down to different type of cars that would go across a bridge, paying different amount of tolls. This is good. Some of you talked about electricity pricing being dependent on two things, the generating capacity and the actual power produced. This is good.

Sensitivity Analyses

Sensitivity Analyses required you to change some of the variables and see what would happen to the project’s NPV. When doing sensitivity, it is good to have a table that looks like one on the previous handout (See Notes from Lecture 29).