Estimating Techniques

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Good project control starts with a good plan, but to have a good plan PMs must have good estimates for their project. Having a bad estimate means having a bad budget and could cost the company money as well. Usually, the bigger the project the harder it will be to estimate what all the costs.   Estimating how much a project should cost a client is difficult, the only time that a project cost is know is when it is finished. But there are several methods for doing estimates on projects that can assist in estimating costs:

1) Expert Judgement  
2) Comparative estimation  
3) Top-down  
4) Bottom-up  
5) Parametric model estimation

**Expert Judgement:** Talk to those who do the kind of work that the project is about and get their input. At times when I had my construction business, there were people calling, texting, or emailing me to see if I had an interest in a job. They sent me plans and wanted a detailed estimate of what I would charge to do a project. I thought this was what they were doing, at the time, getting information about costs and maybe they would use my company. When I spent a lot of time on one of these bids I was helping their company as well, they were comparing those bids with others.

**Comparative Estimation:** Comparing this project to other projects that were similar is often how estimates are completed. This is useful information, if these projects were profitable and successful. Check lessons learned on these projects also. (Crump, 2015)

**Top-down:** This method uses a high-level WBS from previous projects and then adds the estimates in groups of tasks in the WBS. This method can be useful because it may save time by reminding what is involved in this current project and it is useful in adding to this WBS if the project is larger in scope. (Crump, 2015)

**Bottom-up:** This method uses a very detailed WBS, each task is estimated individually and then those numbers are rolled-up to give a larger profit margin (hopefully). This method hopes to give a bigger picture of the project and is more accurate than the previous methods. It will take more time to work through this estimate. (Crump, 2015)

**Parametric Model Estimating:** This method uses auto-calculations from previous projects, it may compare the times and costs associated with something like what this project is about. Applying how many the widgets you are building to the software and the estimate is completed is just moments. This can be a time-saver, but it must have a great deal of past data to use accurately. This kind of program is not very useful on cross-cultural or international projects, too many unknowns. (Crump, 2015)

Another estimating tool is earned value performance tools. This uses mathematical equations to figure cost variance, cost performance index, schedule variance, and schedule performance index. This information can then be used to fill out an Earned Value Performance Report. (Dow and Taylor)

This information is useful in estimating progress of projects as they are proceeding through their tasks. Performance can be measured as the tasks are completed or even percentages figured to keep up with the schedule of the project. This is how I would track the performance of the project’s progress.

The estimating technique I would use for bidding and budgeting a project would depend on the situation and the project I was involved. For a project, I knew that my company has had numerous similar experiences, I would use some form of computer program to find similar costs, Comparative method, and give a value for the estimated cost of tasks.

For a project, my company did not have experience, I would use expert judgement from other companies or persons who have had the experience. Like the bids from other companies, like those I received when I had a construction company.

When it would be possible, I would use the Bottom-Up method, it seemed to be the most reliable. This method usually takes longer to do the research, but I feel as if it may be more reliable than some of the other methods.

Reference:

Crump, K. (2015). 5 Methods of Project Estimation. Liquid Planner. Retrieved from <https://www.liquidplanner.com/blog/5-methods-of-project-estimation/>

Dow, W. and Taylor, B. (2015). Project Management, Communication Tools. Dow Publishing LLC. Renton, WA.