Collaboration Costs and Collaboration Premiums

Victor Wiebe

Collaboration Costs and Collaboration Premiums

When Internal Collaboration is Bad for Your Company (Hansen, 2009) is an article written by Morten T. Hansen of the University of California at Berkeley for the Harvard Business Review. The author's main argument is that, despite a management culture of encouraging employees across business units to collaborate in an effort to boost sales and development and reduce costs, the truth is that due to a variety of factors excessive collaboration can, in fact, result in a situation where costs are increased, not reduced, and neither sales nor development are increased at desired levels (Hansen, 2009).

The author agrees that cross business-unit collaboration, when does correctly, can lead to increased benefits. In fact, during an economic recession, Hansen identifies three forms of collaboration which are "especially valuable" (Hansen, p. 86):

1. "Cross-selling" between business units;
2. "Best-practice transfer" between business units;
3. "Cross-unit product innovation" (Hansen, p. 86).

However, despite the potential benefits that this collaboration could achieve, there are a variety of factors that could impact success, including the following:

1. Conflict between groups;
2. Competing individual objectives;
3. Organizational challengs (Hansen, p. 85).

The end result of collaboration gone bad can include delays, budget overruns, lost sales, lower quality, and damaged customer relations (Hansen, p 85).

Identifying when collaboration should and should not take place is key. The author

proposes that in addition to the standard analyses to predict cash flow, a further analysis utilizing *opportunity cost* and *collaboration cost* also be completed:

- Collaboration Premium = Projected Return – Opportunity Cost – Collaboration Cost (Hansen, p 85).

Where projected return is equal to the cash flow the collaboration project will generate, opportunity cost is the cash flow not realized by passing on the next best option, and collaboration cost being equal to all the costs of the collaboration including travel time, meeting time, money and time spent on sharing information, and any other action performed for the purpose of the collaboration project (Hansen, p 85). In terms of overall project analysis, the collaboration premium should be examined simultaneously, or immediately after, any cash flow simulation, with any negative result indicating the collaboration may not have the desired results.

The argument that not all collaboration that does take place should take place is an idea brought up by others as well. In 2009, Bhaskaran and Krishna examined the workings of innovation and development collaborations between otherwise competing firms. Unlike Hansen, they argued that, although collaboration can lead to negative – or not as positive – outcomes as originally desired, by utilizing economies of scale, co-development (and hence collaboration) in a new-revenue project is beneficial to both parties involved (Bhaskaran and Krishna, p. 1165). In fact, they argue further through an in-depth scientific study that since "the entire value that firms seek to maximize is a direct consequence of the development work that is undertaken" that not only should collaboration be encouraged, but that "it becomes very important for the firms to choose mechanisms that induce **higher** investment levels" (emphasis added) (Bhaskaran and Krishna, p. 1165).

Granted, Bhaskaran and Krishna's study focused on collaboration between corporations, not collaboration between units within a corporation, but the conclusion that collaboration in new research usually yields higher results can be applied within a corporation as well. Despite this, they did not come to reach a formula for actually calculating the "collaboration cost" that Hansen identifies as part of his Collaboration Premium formula. Wang, Xu, and Zhan (2009), however, do attempt to identify a formula that can be used to calculate collaboration costs.

According to Wang, Xu, and Zhan, collaboration is a series of tasks with relationships between each node in the network of tasks (Wang, Xu, and Zhan, p 862). Each of these tasks, or flow from one node to the next, is comprised of one of three possible classifications:

1. Logistics flow;
2. Information flow;
3. Capital flow (Wang, Xu, and Zhan, p 862).

Acknowledging the complexity of the network of tasks and the process design behind each flow of task, the author's present a simulation analysis as the best method for computing collaboration cost (Wang, Xu, and Zhan, p 875 shows a table with some of the simulation results).

All the studies examined agree with the premise of collaboration as providing benefit, and one goes so far as to present a formula for identifying the costs to collaboration. For the purpose of new project projections, however, is an attempt to identify collaboration costs useful?

Three Reasons to Calculate Collaboration Costs

1) Collaboration Costs allow comparison to Return on Collaboration.

As Hansen argues, cash flow and collaboration premium are two different and distinct

numbers (Hansen, p 85), just as 'cash flow break even' and 'accounting break even' are two different numbers. In this line of reasoning, after examining projected cash flow from a future collaboration project, the finance manager should then take cash flow and further analyze it against opportunity cost and collaboration cost. Assuming that the total collaboration cost can actually be calculated, the resulting collaboration premium would allow the finance manager to further analyze cash flow compared to return on collaboration.

2) Insights into difference between expected cash flow and actual cash flow.

If the project is approved and proceeds – and fails – we will be able to use collaboration costs as a post-mortem to help identify where cash flow may have been a problem. This is particularly true if the original project analysis showed cash flow to be positive and the end result is not. If sales and depreciation were on target, then current costs are the other place to look.

3) Calculate Return on Innovation

Bhaskaran and Krishna (2009) provide a formula for calculating the total fixed costs and variable costs in a development collaboration; they also provide a formula for identifying total value on innovation (Bhaskaran and Krishna, p. 1155). By analyzing Total Value of Innovation against Total Cost of collaboration, the financial manager should be able to also identify a Return on Collaboration value to determine if, ultimately, the collaboration brought enough return to make the costs worthwhile.

Three Reasons Not to Calculate Collaboration Costs

1) Collaboration Costs are already included

Hansen's argument is that by summing all collaboration costs and subtracting those from the original return, or original cash flow value, we can then identify the "collaboration premium." However, it can be argued that collaboration costs are merely another form of

fixed and variable costs and, as such, have already been calculated in the original return value. By subtracting collaboration cost from return, we would be guilty of subtracting fixed and variable costs twice, which would lead to faulty data.

2) What constitutes a Collaboration Cost?

Even the auther admits that not all collaboration costs can “be precisely quantified” (Hansen, p. 85), especially before a project is underway and just in the planning stages. In particular, there are unknown factors that could make this cost vary widely, such as the ‘buy in’ from the business units, how much they agree to help and participate, and ‘turf wars’ which are hard to quantify or qualify at the best of times. According to Hansen, a Collaboration Cost is defined as cash flow we would “lose owing to problems associated with cross-unit work” (Hansen, p. 85), yet not all cash flow losses could necessarily be attributed to cross-unit work. The best the finance manager could do in many circumstances is a logical, educated guess, or a detailed simulation analysis which might suffer from Garbage In Garbage Out problems.

3) Collaboration Cost is Really Opportunity Cost

Collaboration Cost is cash flow lost due to collaboration work, and Opportunity Cost is cash flow not realized on the next best project. An argument can be made that, in the absence of the collaboration project, the next best project for the organizations to do is their normal day to day operations; in such a case the cash flow lost is equivalent to the cash flow not realized from the next best project, which is not collaborating in the first place. Collaboration Cost is just another term for Opportunity Cost, which the finance manager is already aware of.

References

Bhaskaran, S. R., & Krishnan, V. V. (2009). Effort, Revenue, and Cost Sharing Mechanisms for Collaborative New Product Development. *Management Science*, *55*(7), 1152-1169.

Colazo, J. A. (2010). Collaboration Structure and Performance in New Software Development:: Findings From the Study of Open Source Projects. *International Journal Of Innovation Management*, *14*(5), 735-758.

Hansen, M. T. (2009). When Internal Collaboration Is Bad for Your Company. *Harvard Business Review*, *87*(4), 82-88.

Wang, Z. J., Xu, X. F., & Zhan, D. C. (2009). Genetic algorithm for collaboration cost optimization-oriented partner selection in virtual enterprises. *International Journal Of Production Research*, *47*(4), 859-881. doi:10.1080/00207540701528743