

Decision Making Models

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Management is all about making decisions. If there is no decision to be made, the process is on “autopilot” and will take care of itself, so there is no need to pay a manager. Management decisions are necessarily made with incomplete or imperfect information. After all, if you knew everything about a certain process, it would be on “autopilot”. This is what makes management a challenge. Without a little uncertainty, life is boring.

All decision models are either “absolute” or “relative”. In an absolute model, there is some formula that specifies the relationship between variables. It is the manager’s job to specify the values of the variables and be able to interpret the output of the formula. While specifying the values of the inputs may not be an easy job, it does not classify as rocket science, either. Someone has already figured out the gist of the problem and told you how to find the answer. Unless the inputs are particularly hard to determine, this can get to be very dull very quickly. But the underlying assumption here is that the relationship between the variables is simple enough to be specified.

The Economic Order Quantity equation is a good example of an absolute model. It really does find the lowest cost for managing an inventory of products, given that the manager can specify the relevant values. It is simple, straightforward, and can be derived using only a few assumptions that do not seem unreasonable. This is another key aspect of absolute modeling; there are most likely some assumptions built into the formula. A good manager must be aware of these assumptions to know whether or not the absolute model can be applied in a specific case.

Most processes in business are too complex to be described with an absolute model, regardless of the level of detail of that model. Business involves people making transactions. You are not the same person today that you were yesterday, and tomorrow you will be someone else. This is true for every manager, employee, and customer in every company in every country. This simple fact makes it almost impossible to model the

behavior of the transactions process. Anyone who says he or she can provide such a model is either a whole lot smarter than everyone else ever was or is full of hot air.

The lack of absolute models does not mean that managers must work without any decision making tools. "Relative" models are abundant, and when they are used properly they can be quite powerful. The simplest and most prevalent form of a relative model is breakeven analysis. Breakeven analysis is what management is all about. The idea is to compare where you are now to where you might be if you take a specific action. If you would be worse off, you do not take the action. If you would be better off, you take the action. The outcome is more important than the process. Breakeven analysis is sometimes called cost/benefit analysis, but it is the same process.

In finance, capital budgeting is a prime example of relative modeling. The analyst compares the relative costs and benefits of pursuing an specified action, from the purchase of a machine to a corporate merger. If the projected final state is better than the current state, the relative model gives a "go" to the decision. A machine that costs \$100 and will generate discounted after-tax cash flows of \$1,000,000 is a good deal, and relative modeling provides the ability to make this comparison. This is one meaning of the word "synergy". When an opportunity is considered, if the benefits are greater than the costs, synergy exists. This added value can come about from efficiencies of scale or scope or just plain cost reduction. Relative modeling identifies the existence of this synergy.

The whole trick with using relative modeling techniques is identifying the relevant inputs and their relationships. This is not always easy, and the model will never be complete. From a practical point of view, the decision must be made before all information is available, and the manager is paid to make the decision based on incomplete information. If the manager has good sources of information and can devise a good relative model to use in the situation, the decision will probably be "good" and accomplish what needs to be done. Poor information and poor relative modeling will likely result in a situation that is worse than what went before.

The hard part about decision making is the waiting to know whether you made the correct decisions. If things turn out the way you hoped, the decision is characterized as a “good” decision. When things do not turn out favorably, it is often said that the decision was “bad”, but this is not correct. For a person to make a “bad” decision, this individual would have to be working against his or her own self-interest. This person would be creating a situation that would intentionally be worse than before. Most folks try to make “good” decisions since this means continued employment and possibly even promotion and raises. When a decision is being made, it is neither good nor bad, it is simply a decision. The information on which the decision is based is incomplete and may not be correct. But the manager has to do something “now” based on the available information, and so the decision is made. Only the results can be classified as good or bad. And if the results turn out to be bad, it is usually the responsibility of the manager to try to improve things by making another decision.

Summary

The job of the manager is to make decisions, and if the job is to be done well, it is important for the manager to understand the structure of the decision making models that are being used. While absolute models may be nice, relative models are more abundant. Models of all types often carry the baggage of assumptions, and ignoring the validity of the assumptions will likely yield suboptimal decisions. Decisions are not inherently good or bad, only the results of the decision can be so classified. Though decision making is not easy, it can be rewarding, and a good manager understands the “how” of making decisions.