The Options Matrix Tool (OMT): A Strategic Decision-making Tool to Evaluate Decision Alternatives

Cathy A. Enz
Cornell University School of Hotel Administration, cae4@cornell.edu

Gary Thompson
gmt1@cornell.edu

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Abstract
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Keywords
Cornell, tools, managers, decision making

Disciplines
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The Options Matrix Tool: A Strategic Decision-making Tool

by Cathy A. Enz, Ph.D. and Gary M. Thompson, Ph.D.
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A Strategic Decision-making Tool to Evaluate Decision Alternatives

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EXECUTIVE SUMMARY

The options matrix tool (OMT) is a spreadsheet-based decision making tool designed to help managers apply a set of decision criteria to a variety of alternatives or strategic options. It is particularly useful for decisions that require substantial judgment and for which numbers may not be available. By working through a series of decision-process steps, managers can establish criteria for the assessment and comparison of different possible alternatives and then compare choices. The tool allows managers to list and weight various decision criteria deemed important for a given business situation or problem alternative. The most desirable option is then identified in a final spreadsheet along with an evaluation of each option. While the OMT is self-explanatory and designed to be easy to use, this report offers a brief description and examples of how to use the tool. Making judgment-based decisions among a variety of viable options is made easier when a systematic process is utilized such as the one offered in this tool.
ABOUT THE AUTHORS

Cathy A. Enz, Ph.D., is a professor of strategy and holds The Louis G. Schaeneman Jr. Professorship of Innovation and Dynamic Management at the Cornell University School of Hotel Administration (cae4@cornell.edu). She has been on the faculty at Cornell since 1990, and previously was on the faculty of the Kelley School of Business at Indiana University. Her research focuses on hospitality strategy, competitive dynamics, innovation and change management. She has published over ninety journal articles, book chapters, and four books including the *Cornell School of Hotel Administration Handbook of Applied Hospitality Strategy* and the popular textbook, *Hospitality Strategic Management: Concepts and Cases*, 2nd edition. She has served as associate dean for industry research and affairs, and was executive director of the Center for Hospitality Research from 2000–2003.

Gary M. Thompson, Ph.D., is a professor of operations management in the School of Hotel Administration at Cornell University, where he teaches graduate and undergraduate courses in service operations management (gmt6@cornell.edu). Prior to joining Cornell in 1995, he spent eight years on the faculty of the David Eccles School of Business at the University of Utah. His current research focuses on restaurant revenue management, food and beverage forecasting in lodging operations, workforce staffing and scheduling decisions, wine cellars, scheduling conferences, and course scheduling in post-secondary and corporate training environments. His research has appeared in the *Cornell Hospitality Quarterly, Decision Sciences, Journal of Operations Management, Journal of Service Research, Management Science, Naval Research Logistics,* and *Operations Research.* He has consulted for several prominent hospitality companies and is the founder and president of Thoughtimus® Inc., a small software development firm focusing on scheduling products. From July 2003 through June 2006 he served as executive director of the school’s Center for Hospitality Research.
Generating and evaluating options is a key component of business decision making. Managers frequently engage in the process of selecting from among two or more viable options in the course of their planning and management responsibilities. A variety of different approaches exist to help managers who wish to examine competing alternatives often based on multiple criteria that involves various ratings and weights.\(^1\) While many decisions are data-driven and can take advantage of past information to help forecast or predict viable outcomes, other decisions rely more on judgment and qualitative assessments,\(^2\) particularly when little or no historic data can be found that directly speaks to a situation. To help hospitality managers’ structure decisions when uncertainty is great and judgment-based decisions are needed, we have devised a simple multiple criteria evaluation process called the Options Matrix Tool (OMT). The OMT is a spreadsheet-based approach to evaluating decision options that is simple and easy to use. The tool permits managers or management teams to list and attach weights to decision criteria and then rate different options or alternatives with respect to the defined criteria. Weights are the magnitude or value we give each criterion, while ratings are the assessments we give each option on a specific set of criteria. The tool highlights the strongest choices on each criterion using a color code, and provides a summary matrix showing the most desirable option. The worksheets allow managers to establish up to six different decision criteria and five alternatives to compare. We believe that considering more options does not improve the decision and may, in fact, diminish the decision-making process.

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Steps in the Options Matrix Tool

This report describes the steps in developing an options matrix using the OMT and offers examples to illustrate how it might be used. The development of an options matrix involves several steps, as follows:

1. Identify options (alternatives) you are considering;
2. Select criteria that are the most important for evaluating your options;
3. Assign weights (worth or magnitude) to each of the criteria;
4. Select minimum acceptable scores for each criterion; and
5. Rate or evaluate each option on the criteria using a scale from 1 to 10 (unfavorable to favorable).

Step One: Select Options

The first step in making strategic decisions is to decide how many options or alternatives you wish to compare (we suggest selecting from two to five) and then provide a written description of each. Be sure to give yourself several solid alternatives, meaning those that are seriously viable and specific. Avoid creating alternatives that you have no intention of selecting or that are easy to dismiss. If you have too few options you may restrict your choices, but too many alternatives may lead to overlap and redundancy, as well as slowing your decision process. A comprehensive look at possible choices for both the short term and the long term can help ensure that your alternatives are detailed, with elaboration and specifics included. All of your alternatives should be viable and contain rich detail. You may wish to have one of your options be the status quo.

In Exhibit 1 we provide an example of a strategic decision on growth in which senior management must decide whether to enter emerging markets using a master franchisee and joint ventures or focus on same store sales and multiple franchisees in established markets. Note that the two decisions are not overlapping and offer some detail.

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Step Two: Identify Criteria
The second step in the process is to establish the key issues or factors (select between 2 and 6) that you will use to evaluate and select the best choice. These criteria are the standards by which you will judge different decisions. The most important or relevant evaluation criteria should be included, but once again be careful not to create too few or too many factors. If you have too many criteria you may be introducing unnecessary complexity or get caught up in minor issues. Choosing too few criteria may signal a simplistic assessment of the decision process or a failure to consider important nuances. Typical criteria are those that address increases in sales or profits and reduction in costs. Product and service quality, partner collaboration, and implementation issues such as staffing and training are also typical criteria of interest in strategic decisions.

For example (see Exhibit 2), if you were examining whether to outsource your laundry to two different vendors or to handle it in-house you might consider cost, quality, efficiency, service delivery, and employee motivation and training issues. Begin your OMT analysis by listing the evaluation criteria.

Step Three: Assign Weights to the Criteria
For each criterion you also need to assign a weight representing just how important each criterion is to the decision at hand. Be sure that you give different weights to each of your criteria, with the most important criterion being given the greatest weight. Allocate weights so that they sum to 100 percent and only give equal weights to criteria if they are truly equally important. The tool will let you know if you have not correctly assigned weights.

Step Four: Determine the Minimum Desired Score for Alternatives
The OMT applies a rating scale ranging from 1 (very unfavorable) to 10 (very favorable) so that each alternative can be evaluated on the criteria. For example, a rating of 8 (very favorable) on a criterion of staffing, motivating and training crew would mean that the option proposed would score high on this criterion. You can include other managers in the decision process or compare separately conducted OMT analyses, if you wish. While these rating are clearly subjective and based on your own best judgment (or that of others), keep in mind that this systematic process is useful to order and organize your thinking. You will need to rate all of your options on each decision criterion. If you have a minimum level of performance that you consider acceptable you can specify this value by completing the minimum desired score row of the spreadsheet. This option allows you to identify the minimum acceptable score for each criterion using the rating scale (1–10).

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Exhibit 2

Decision criteria and weights

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Cost</th>
<th>Quality</th>
<th>Efficiency</th>
<th>Service Delivery</th>
<th>Employee Motivation</th>
<th>Training</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (out of 100 pts):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Outsource Laundry to Prime Contract Services</td>
<td>40</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>12</td>
<td>18</td>
<td>100</td>
</tr>
<tr>
<td>Minimum Desired Score (/10):</td>
<td>Remove</td>
<td>Remove</td>
<td>Remove</td>
<td>Remove</td>
<td>Remove</td>
<td>Remove</td>
<td>Remove</td>
</tr>
</tbody>
</table>

Some ratings (scores) are missing
Provide values in the cells of this color
Rate (score) the options in the cells of this color, on a scale of 0 (worst) to 10 (best)

---

Step Five: Evaluate the Options

In Exhibit 3 we return to the strategic growth example, in which six decision criteria (including profit, growth, cost, HR and brand issues) and corresponding weights are provided for the two decision options. As the example shows, each criterion is weighted, minimum desired scores are provided, and each option is evaluated and ranked on the six criteria. The greatest weight is attached to the growth criteria (40%), and the emerging markets with master franchisee option is rated 3 out of 10 (closer to unfavorable), while the same store sales in established markets is given a rating of 7 out of 10 (more favorable on the growth criteria).

**Exhibit 3**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Cost</th>
<th>Quality</th>
<th>Efficiency</th>
<th>Service Delivery</th>
<th>Employee Motivation</th>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (out of 100 pts):</td>
<td>40</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Minimum Desired Score (/10):</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Exhibit 4**

**Results option matrix with color coding**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>40</td>
</tr>
<tr>
<td>Quality</td>
<td>15</td>
</tr>
<tr>
<td>Efficiency</td>
<td>5</td>
</tr>
<tr>
<td>Service Delivery</td>
<td>10</td>
</tr>
<tr>
<td>Employee Motivation</td>
<td>12</td>
</tr>
<tr>
<td>Training</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

**Options**

1. Enter emerging markets in China and India with a master franchisee and joint ventures selling new branded products

2. Same store sales growth within established markets with an expanded network of smaller single unit franchisees with an expanded product line.

**Overall Score (/100):**

1. 57.3
2. 59.7

**Ranking:**

1. 2
2. 1

**Potential Problems:**

1. Below the minimum desired score for: Growth
2. Below the minimum desired score for: Staffing, motivating and training crew
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A Restaurant Operations Example for Using the Tool

Here’s a more complete demonstration of how the OMT works. Consider a restaurant that wishes to increase revenue. The restaurant is open daily for dinner from 5:30–10:00 pm. From May through October, it opens a patio that extends the seating capacity by approximately 50 percent. The restaurant takes no reservations but commonly turns tables three times per night, and is regarded as one of the best in the area.

Step one: Identify possible decision options. After deliberation, the following five options have surfaced: opening for lunch on weekdays; opening earlier for dinner on weekdays; opening for Sunday brunch; extending the shoulder season use of the patio (with heat and awnings); and increasing menu prices.

Step two: Set criteria. In the second step management has identified five criteria to use in evaluating the options:

- Increase revenue and profits
- Minimize staffing and scheduling challenges
- Deliver consistent food and service, at a fair price
- Enhance customer satisfaction and loyalty
- Little lifestyle implications for chef/owner

Steps three and four: Determine weights and set cutoffs. Exhibit 5 shows the options and criteria, the weight management assigned to each criterion, the minimum acceptable score for each criterion, and the score assigned to each criterion for each option.
clear benefit from this multi-step process, because it helps managers clarify their choices when faced with limited data or high levels of uncertainty. That is, fuzzy numbers may be better than no numbers at all. Using a decision tool such as the one we have provided can help managers avoid some of the problems of selective attention, cognitive dissonance, and information biases that come from intuitive decision making.

As important, a systematic but simple option tool may help decision makers think about a problem and its solution from different perspectives, thereby enhancing the richness of discussion and broadening of opinions. We encourage users of the OMT to engage with other managers in conducting the analysis. By using the tool to facilitate discussion more managers can be drawn into the decision-making process and encouraged to think strategically about critical strategic choices.

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**Step five: Evaluate the results.** The Results sheet in Exhibit 6 shows the evaluation of the options. Extending the usage of the patio through a longer shoulder period (opening earlier in the spring and closing later in the fall) emerges as the top choice, followed quite closely by opening earlier for dinner. Both of these options meet all minimum score requirements, while the three other options fail to meet the minimum acceptable scores on one or more criteria.

### Concluding Remarks

This two worksheet tool is a simple way to examine decision possibilities. While more complex decision models using statistically derived weights are available, this approach continues to be useful for helping managers consider various choices when faced with a decision where judgment-driven problem solving is required. We grant that this rating and weighting approach to multiple-criteria decision making may result in “fuzzy numbers” because of the imprecision and subjectivity of the process. However, we see a nuclear benefit from this multi-step process, because it helps managers clarify their choices when faced with limited data or high levels of uncertainty. That is, fuzzy numbers may be better than no numbers at all. Using a decision tool such as the one we have provided can help managers avoid some of the problems of selective attention, cognitive dissonance, and information biases that come from intuitive decision making. As important, a systematic but simple option tool may help decision makers think about a problem and its solution from different perspectives, thereby enhancing the richness of discussion and broadening of opinions. We encourage users of the OMT to engage with other managers in conducting the analysis. By using the tool to facilitate discussion more managers can be drawn into the decision-making process and encouraged to think strategically about critical strategic choices.

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5 Ibid., p. 5307.

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